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## Vo(2) transitional response to a crossover from priming exercise

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*University of Nevada, Las Vegas*

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VO<sub>2</sub> TRANSITIONAL RESPONSE TO A  
CROSSOVER FROM PRIMING  
EXERCISE

by

James Navalta

Bachelor of Science  
Brigham Young University-Hawaii Campus  
1996

A thesis submitted in partial fulfillment  
of the requirements for the degree of

**Master of Science**

in

**Exercise Physiology**

**Department of Kinesiology  
University of Nevada, Las Vegas  
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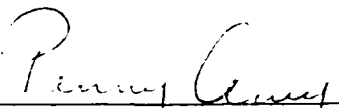
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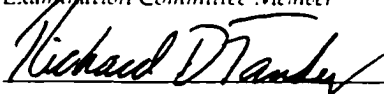
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## ABSTRACT

### **VO<sub>2</sub> Transitional Response to a Crossover from Priming Exercise**

by

James Navalta

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Professor of Kinesiology  
University of Nevada, Las Vegas

The question regarding oxygen uptake kinetics centers on the rate-limiting step. This study was designed to observe the oxygen uptake response that occurs between a crossover of modes of priming exercises. Participants completed three exercise trials. Trial 1 involved cycling from rest to a target workload, Trial 2 entailed cycling from rest to light and then to the target workload, and Trial 3 was from rest to stepping followed by cycling at the target workload. Transitions from rest had similar half-time ( $\frac{1}{2} t$ ) values. Transitions that occurred after a priming exercise produced longer  $\frac{1}{2} t$  to steady state regardless of the mode of exercise: cycling from low to target workload = 62 seconds, cycling after stepping = 76 seconds. This data suggests that when oxygen uptake kinetics is concerned, exercise transitions from rest are more efficient than transitions from a warmed up state regardless of the mode of priming exercise.

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## CHAPTER 1

### INTRODUCTION

During submaximal exercise, the energy cost of the task is met through oxidative energy metabolism. The energy cost of performing a task is incurred at the onset of exercise. However, there is a time delay in the activation of the oxidative energy process, meaning that the energy demand is not immediately met by the energy supply. Analyzing oxygen uptake ( $\text{VO}_2$ ) is a common method used to measure the amount of energy needed to perform a task.

With regard to  $\text{VO}_2$  kinetics there has been a long-standing debate concerning the rate-limiting step in oxygen consumption. One theory holds that the limiting step occurs as a consequence of a blood flow limitation which results in a lack of oxygen being supplied to the exercising muscles. A second theory proposes that the tissues receive adequate blood flow, but that the limiting factor lies with the ability of the muscles to take up and utilize the available oxygen.

Two main models of  $\text{VO}_2$  kinetics have been proposed in the literature. The traditional model, as described by Cerretelli and Di Prampero (1987), holds that  $\text{VO}_2$  is a monoexponential process that begins without delay at the onset of exercise. Since pulmonary  $\text{VO}_2$  ( $\text{pVO}_2$ ) allegedly directly reflects what is happening at the tissues, this model supports oxygen utilization as the rate-limiting step in  $\text{VO}_2$  kinetics. Other authors

(Whipp et al., 1982; and Barstow and Mole, 1987) propose that  $\text{VO}_2$  progresses in three phases. Phase I occurs during the transition from rest or light exercise to a greater intensity and is characterized by an initial increase in oxygen uptake. Phase II is characterized by an exponential increase in oxygen uptake due to the superimposition of an increasing muscle  $\text{VO}_2$  ( $\text{mVO}_2$ ) component. Phase III occurs when steady state is reached.

A study by Di Prampero et al. (1989) attempted to look at the effect of a priming exercise on  $\text{VO}_2$  kinetics at the onset of both stepping and cycling. The authors suggested that much of the controversy surrounding the oxygen uptake kinetics debate, (or utilization vs flow limitation), centered on the mode of exercise used. Davies et al. (1972) and Di Prampero et al. (1970) advocate that light exercise, as opposed to rest, allows a more rapid readjustment of  $\text{VO}_2$  at the start of heavier exercise so that  $\text{pVO}_2$  directly reflects  $\text{mVO}_2$  (representing a utilization limitation). Their studies were conducted using stepping or treadmill exercise. Diamond et al. (1977), Casaburi et al. (1977), and Hughson and Morrissey (1982) proposed that transition from light to heavy exercise shows a time delay from  $\text{mVO}_2$  to  $\text{pVO}_2$  and therefore progresses in three phases (representing a flow limitation). These studies were conducted on a cycle ergometer.

In the experiment conducted by Di Prampero et al. (1989), it was found that the transition from rest to work was almost identical for both stepping and cycling. For stepping, the transitions from rest to work, and from light to heavier work were not significantly different. With cycling however, the transitions from light to heavier work was greater than from rest to work. For cycling,  $\text{VO}_2$  kinetics at the start of exercise became monotonically slower as the intensity of the priming exercise increased from rest

to ~60% of  $\text{VO}_{2\text{ max}}$ . It was suggested that a priming exercise can either enhance or slow down the  $\text{VO}_2$  on-response, depending on the exercise performed.

### **Statement of Problem**

The question regarding the rate-limiting step in oxygen uptake kinetics still remains. The evidence presented to date suggests that some types of activity promote flow limitation as the limiting factor, while other kinds of exercise predispose oxygen utilization as limiting. To date, we have been unable to find in the literature any studies that utilize stepping as the priming exercise, which is then followed by a crossover to cycling while the workload is increased, or vice versa.

### **Statement of Purpose**

The purpose of this study is to observe the oxygen uptake response ( $\text{VO}_2$ ) that occurs when a priming exercise that promotes monoexponential uptake (stepping) is performed, followed by a crossover exercise (cycling) at higher intensity which indicates that a three-phase uptake should occur.

## CHAPTER 2

### REVIEW OF LITERATURE

#### **The Traditional Model of Oxygen Uptake Kinetics**

Di Prampero et al. (1970) conducted a study to look at the  $O_2$  debt contracted during high intensity exercise when starting from rest as compared with starting from a milder exercise. Five participants completed three experimental protocols. In the first protocol, the participants stepped on a 23 cm bench for 5 minutes at a rate of 20 steps per minute, then when steady state was reached they stepped on a 46 cm bench for 5 minutes at the same rate, and finished off with 5 minutes on the 23 cm bench. The second protocol was used as a control, with participants starting from rest and performing 5 minutes of high or low intensity exercise only. In the final protocol, participants reached steady state on a bicycle pedaling at 60 rev/minute at a workload of 502 kg-m/min. then pedal frequency was increased to 100 rev/minute with workload increasing to 713 kg-m/min for 5 minutes, and concluded with reduced pedaling at 85 rev/minute but increased workload at 972 kg-m/min. Their results show that for stepping and cycling, the transition from rest to work produces the same  $O_2$  uptake kinetics regardless of work level ( $t_{1/2}$ =27-30 sec). In the transition from mild to heavier exercise an increased  $O_2$

uptake is seen ( $t_{1/2}=17$  sec). On the other hand,  $O_2$  uptake is slower in the transition from heavy back down to mild work ( $t_{1/2}=40-45$  sec), compared to the transition from work to rest ( $t_{1/2}=30$  sec). In all cases, the behavior of  $O_2$  uptake can be described by an exponential function with no significant difference between types or intensities of work.

Davies et al. (1972) studied the response of cardiac output at the onset of activity from rest or mild exercise, in relation to simultaneous  $VO_2$  changes. Two participants completed three protocols over an eight-week period. The first protocol involved rest to walking at 5.3 km/hr at a 5% grade for 10 minutes and a 6-minute recovery period. The second protocol consisted of rest to walking at 7.8 km/hr at an 8% grade. The third protocol involved the transition between 5.3 km/hr and 5% grade for 10 minutes, and 7.8 km/hr and 8% grade for 10 minutes, or vice versa. The results were matched with the earlier Di Prampero et al. (1970) study and are similar. The half-time ( $t_{1/2}$ ) of  $O_2$  uptake in transition from rest to work, or work to rest is 30 sec regardless of workload.  $O_2$  uptake is higher in the transition from light to heavy exercise ( $t_{1/2}=17$  sec), and lower during the transition from heavy to light work ( $t_{1/2}=45$  sec). In all cases the kinetics of  $O_2$  uptake appeared to follow an exponential function.

### **The Three-Phase Model of Oxygen Uptake Kinetics**

Research by Whipp (1971) intended to determine the rate constant for oxygen uptake kinetics during light exercise. Eight participants exercised on two separate occasions. On one trial, participants pedaled a cycle ergometer at 50 rpm and 300 kg-m/min for 15 minutes. During the other exercise bout, participants cycled at 50 rpm and 450 kg-m/min for 15 minutes. The results show that the rate constant (1.35) is not

different between the two workloads. It was suggested that  $\text{VO}_2$  kinetics during low intensity exercise, or the alactic phase of work, can be described through a simple exponential equation:  $k = \text{VO}_{2\text{ (ss)}} / \text{O}_2 \text{ deficit}$ . The author pointed out, however, that  $\text{VO}_2$  kinetics above the anaerobic threshold involves a more complex equation with two exponential terms that would invalidate the proposed equation.

A follow up study by Whipp and Wasserman (1972) characterized oxygen uptake kinetics for various intensities of constant-load work. Six participants performed six exercise tests in random order. Each test involved a 10-minute rest period followed by cycling at 60 rpm at 50, 75, 100, 125, 150 and 175 W for 6 minutes. At the work rates of 50, 75, and 100 W participants were able to reach steady state  $\text{VO}_2$  within the exercise timeframe. Half times were recorded between 25 and 40 seconds with lower work rates occurring faster, and can be explained as a single exponential function. At work rates of 125, 150 and 175 W steady state was not observed, indicating that time to steady state  $\text{VO}_2$  increases at higher work rates. Another feature of these work rates was that two components were required to fit them to semilogarithmic plot curves.

Casaburi et al. (1977) designed an experiment to look at the ventilatory and gas exchange dynamics in response to sinusoidal work. Five participants performed a 1-minute incremental work test to determine anaerobic threshold, and then exercised sinusoidally between 25 W and 80% of anaerobic threshold on six other occasions. The tests consisted of a rest period followed by cycling at 60 rpm against a fluctuating load for 30 minutes. The sinusoidally varied breaking force was applied at 0.7, 1, 2, 4, 6, and 10-minute intervals. The results show that there is a linear phase lag relationship to the work-rate perturbations. This relationship follows true until the end-tidal response

exhibits complex, nonlinear interactions. The authors suggest that ventilatory dynamics may be described as the sum of a fast component and a slow component.

A study by Diamond et al. (1977) measured the kinetics of gas exchange and ventilation in transitions from rest or prior exercise. Seven participants performed an incremental work test to establish anaerobic threshold, and then completed three experimental tests. One test was composed of a rest period followed by 8-11 minutes of cycling at 60 rpm with workload just below the anaerobic threshold. The second protocol consisted of cycling at 25 W and 60 rpm for 5 minutes and then at the subanaerobic threshold and 60 rpm for 8-11 minutes. The last test protocol involved cycling at 25 W and 40 rpm for 5 minutes followed by 80 rpm for 8-11 minutes at the subanaerobic threshold. Half times were observed to average between 30-35 seconds for transitions below the anaerobic lactate threshold for all three trials. The results show that response kinetics are not altered by prior exercise, as proposed by Davies et al (1972), or by variation of pedaling rate.

Hagberg et al. (1978) designed an experiment to observe the transient oxygen uptake response at the onset of exercise. Eight highly trained and seven control participants completed 10 five-minute experimental rides on a bicycle ergometer. Two trials were completed at workloads of 25, 33, 40, 50, and 70% of  $\text{VO}_2 \text{ max}$ . The data shows that  $\text{VO}_2$  response occurs more slowly at heavier workloads. It was also found that the half time  $\text{VO}_2$  response is a function of workload, so that  $\text{VO}_2$  response increases as workload increases. The authors suggest that the slower rate of adjustment at heavier workloads may be due to greater changes required by circulatory, respiratory, and metabolic functions at higher loads.



Hughson and Morrissey (1982) also looked at the kinetics of respiratory gas exchange in the transition from prior exercise. Six participants performed an incremental power output test to determine anaerobic threshold, and then completed three other tests. In one test, the transition was made from rest to 80% of the anaerobic threshold. In another test, the transition was from rest to 40%, and then 80% of the anaerobic threshold. The final test involved transitions from rest to 40%, and then to 120% of the anaerobic threshold. A computer model was used to analyze the results. According to the model,  $\text{VO}_2$  kinetics are significantly slowed in the transition from one power output to another, both below and above the anaerobic threshold.

Sietsema et al. (1989) studied the early dynamics of  $\text{O}_2$  uptake (phase I) and heart rate as it is affected by exercise work rate. Three hypotheses were proposed: 1.) That the cardiovascular fitness of a participant would cause phase I  $\text{VO}_2$  increases to be a larger proportion of the total exercise  $\text{VO}_2$ , 2.) The phase I responses would be similar across different work rates, so that at very low work rates the total exercise  $\text{VO}_2$  requirements might be achieved without a phase II component, and 3.) The mean response time for  $\text{VO}_2$ , and heart rate at any given work rate might be inversely related to fitness. Ten healthy males performed a cycle ergometer test at 0, 25, 50, 100 and 150 W for six minutes. The results show that the phase I responses are independent of fitness. At very low work rates,  $\text{VO}_2$  and heart rate exceeded their steady state levels in phase I, and no phase II increase in these measures were observed.

A study by Grassi et al. (1996) also looked at phase I kinetics. Six healthy males performed five identical repetitions of an exercise protocol on a cycle ergometer. The protocol consisted of 4-6 minutes of unloaded pedaling, followed by 5 minutes of loaded

pedaling at 50 W less than the ventilatory threshold. The results show that from light to moderate intensity exercise, muscle  $\text{VO}_2$  closely matches arterial  $\text{VO}_2$ .

Barstow et al. (1996) looked at the role of muscle fiber type and pedal frequency on oxygen uptake kinetics during heavy exercise. Since type II fibers are active during a work rate associated with a  $\text{VO}_2$  slow component, and are less energetically efficient than type I fibers, they reasoned that there is a mechanistic link between the two factors (type II fibers and the  $\text{VO}_2$  slow component). To test this hypothesis they decided to study extremes in pedal frequency (45 and 90 rpm) to show if there was an influence of different muscle fiber types on  $\text{VO}_2$  kinetics during heavy exercise. Ten participants completed four experimental laboratory sessions. The first session familiarized the participant with procedures and measured estimated lactic threshold (LT), peak  $\text{VO}_2$ , and the metabolic cost of unloaded cycling at each pedal frequency. In the next session, the participant performed unloaded cycling for four minutes each at pedaling frequencies of 45, 75, and 90 rpm. The participant then performed four minutes of unloaded cycling at 60 rpm, followed by a progressively increasing work rate test to volitional fatigue with pedal rate at 60 rpm. This measurement served as the baseline comparison for all other pedal rates. The other sessions were randomly assigned using the same protocol, but with an rpm of 45, 75 or 90. The result shows that phase I amplitude (slow component) and duration are not significantly affected by changing pedal rate. The phase II amplitude (fast component) is significantly less for the 90-rpm condition, but the time constant is not significantly affected. The  $\text{VO}_2$  slow component characteristics such as the time of onset, amplitude at end-exercise, time constant, and relative contributions to rise in  $\text{VO}_2$  were not significantly affected by pedal frequency.

McCreary et al. (1996) investigated the phase II response of pulmonary oxygen uptake and muscle phosphates during moderate-intensity exercise. Eleven participants performed unilateral ankle plantar flexion from 5° of dorsiflexion to 35° of plantar flexion at a frequency of 0.5 Hz. The protocol consisted of three cycles of six minutes of unloaded exercise, followed by 5 minutes of moderate intensity exercise, and finishing off with 7 minutes of unloaded exercise. The results show that phase II  $\text{VO}_2$  kinetics increase at the same rate as phosphocreatine and inorganic phosphate during the transition to and from moderate intensity exercise. This suggests that pulmonary  $\text{VO}_2$  kinetics could be used to infer metabolic kinetics of specific muscles.

Yoshida et al. (1995) conducted a study that took into account the metabolic status of active muscle on oxygen uptake kinetics. Six healthy males performed two exercise protocols. One consisted of a one-legged constant load exercise test for three 5 minute periods, separated by 5 minute rest periods. The first and second exercise periods were performed with the same leg, and the third exercise period was performed with the opposite leg. The other exercise protocol was an incremental test that consisted of a 5-minute warm-up, 5 minutes of exercise at 50 W, and 5 minutes of exercise at 100 W. The results of the constant load test show that  $\text{VO}_2$  kinetics were significantly accelerated from the first to the second exercise transition using the same leg. The authors suggest that this may be due to the reduced muscle phosphocreatine concentration during repeated exercise. Another possibility could be due to extracted muscle  $\text{O}_2$  stores and faster cardiac output kinetics induced by prior exercise. From the second to the third exercise transition,  $\text{VO}_2$  was significantly slower in the leg that had not been previously exercised. It is proposed that  $\text{VO}_2$  kinetics are not affected by blood flow limitation,

since  $\text{VO}_2$  could be expected to be faster no matter what leg performed the exercise. Since the leg's metabolic condition remained equivalent to the resting condition,  $\text{VO}_2$  kinetics may be influenced to some extent by muscle metabolites and not muscle blood flow.  $\text{VO}_2$  during incremental exercise showed an expected linear increase, and no significant changes were observed during the transition to higher intensity.

### **The Traditional and Three-Phase Model**

Another possible model of  $\text{VO}_2$  kinetics is a synthesis between the traditional and three-phase descriptions. Inman et al. (1987) designed a study to observe mean tissue oxygen consumption at the onset of exercise. Six participants completed a 50 W per minute ramp exercise test to determine maximal  $\text{VO}_2$  and ventilatory threshold. Six repetitions of an experimental protocol were then performed. The test involved a transition from rest to 100 W cycling at 60 rpm and then a transition from 100 W to 200 W. Alveolar  $\text{VO}_2$  ( $\text{VO}_{2A}$ ), tissue  $\text{VO}_2$  ( $\text{VO}_{2T}$ ), and cardiac output were the measured variables. The mean response time of  $\text{VO}_{2T}$  was significantly faster than  $\text{VO}_{2A}$  during both transitions. The mean response times of all variables were faster during the transition from rest-to-work than the transition from work-to-work, contrasting with the findings of Di Prampero et al. (1970) and Davies et al. (1972). Since  $\text{VO}_{2T}$  is faster during rest-to-work transitions than work-to-work, the authors suggest that these transitions do not follow linear first-order control. It is proposed that the  $\text{pVO}_2$  response does occur in three phases, but that the mean tissue  $\text{VO}_2$  kinetics are significantly faster than what is measured at the mouth. A paper by Koga et al. (1996) suggested that under certain conditions, oxygen transport is responsible for limiting  $\text{O}_2$  uptake, and under

different conditions, oxygen utilization is responsible, while a final possibility is that both contribute to some extent. The circumstances differ according to the type of exercise being performed, posture, recruited muscles, and other experimental conditions.

A study by Di Prampero et al. (1989) attempted to look at the effect of a priming exercise on  $\text{VO}_2$  kinetics at the onset of both stepping and cycling. The authors suggested that much of the controversy surrounding the oxygen uptake kinetics debate. (or utilization vs flow limitation), centered on the mode of exercise used. Davies et al. (1972) and Di Prampero et al. (1970) advocate that light exercise, as opposed to rest, allows a more rapid readjustment of  $\text{VO}_2$  at the start of heavier exercise so that  $\text{pVO}_2$  directly reflects  $\text{mVO}_2$  (representing a utilization limitation). Their studies were conducted using stepping or treadmill exercise. Diamond et al. (1977), Casaburi et al. (1977), and Hughson and Morrissey (1982) proposed that transition from light to heavy exercise show a time delay from  $\text{mVO}_2$  to  $\text{pVO}_2$  and therefore progresses in three phases (representing a flow limitation). These studies were conducted on a cycle ergometer.

In the experiment conducted by Di Prampero et al. (1989), six participants completed maximal  $\text{VO}_2$  tests on both the cycle ergometer and the steps. This was done to be able to determine the stepwise increases needed to produce a 5-minute voluntary exhaustion. Three experimental protocols were used on both the steps and the cycle ergometer. Steps were done after 5 minutes of rest on a 30-cm bench, while cycle tests were carried out at a pedal rate of 70 rpm. One protocol consisted of transitions from rest to work that was between 20 and 60% of the participant's  $\text{VO}_{2 \text{ max}}$ . Another protocol was a transition was from low (20 to 65% of  $\text{VO}_{2 \text{ max}}$ ) to heavier work (40 to 85% of  $\text{VO}_{2 \text{ max}}$ ). The final protocol consisted of an inverse transition from higher to lower workloads

and rest. Values were plotted on a graph and depicted as straight regression lines. The transition from rest to work was almost identical for both stepping and cycling. For stepping, the transitions from rest to work, and from light to heavier work were not significantly different. For cycling however, the transitions from light to heavier work were greater than from rest to work. For cycling,  $\text{VO}_2$  kinetics at the start of exercise became monotonically slower as the intensity of the priming exercise increased from rest to ~60% of  $\text{VO}_{2\text{ max}}$ . In stepping, the fastest response was attained for priming loads between 15 and 30% of  $\text{VO}_{2\text{ max}}$ . It was suggested that a priming exercise can either enhance or slow down the  $\text{VO}_2$  on-response, depending on the exercise performed. It was proposed that the determining factors of the direction of the on-response include muscle fiber recruitment, the type of muscle contraction (static vs dynamic), and muscle perfusion.

## CHAPTER 3

### METHODS

#### **Participants**

Participants came primarily from the University of Nevada, Las Vegas Kinesiology Department student population. Sixteen normal healthy male volunteers between the ages of 20 and 30 were used (see table 1). Each one read, understood, and signed an informed consent form detailing the benefits and possible risks associated with the study (see Appendix A).

#### **Equipment**

An electrically braked Quinton cycle ergometer was used in each trial. A 12- inch step bench was used in one trial. A tape recording at 96 beats per minute (24 steps per minute) was used to keep cadence during the stepping trial. All metabolic measurements were taken on the Vista Turbofit 2A Metabolic measurement system. A breathing apparatus, headgear, hosing, and a noseclip were used to collect expired air and direct it into the oxygen and carbon dioxide analyzers.

Table 1

Participant characteristics

Participant	Age	Height	Weight
1	24	68.00	159.00
2	23	67.00	163.70
3	26	69.00	161.00
4	24	67.50	165.00
5	22	70.75	143.00
6	24	70.50	160.60
7	24	72.00	190.25
8	20	70.50	161.50
9	21	75.00	188.00
10	26	72.75	217.00
11	22	74.00	199.50
12	24	71.00	165.40
13	21	74.00	190.00
14	30	73.50	296.00
15	22	67.50	163.50
16	24	70.00	148.00
Mean	24 $\pm$ 1	71 $\pm$ 0.64	179 $\pm$ 9.21

**Experimental Procedures and Protocols**

In order to compare the  $\text{VO}_2$  response observed between the stepping and cycling transitions, it was important that participants performed the same absolute amount of work during each trial. Since stepping is a weight bearing activity, it was necessary to take into account the weight of each participant. Stepping trials were performed on a 12-inch bench to a 96 beat per minute cadence, or 24 steps per minute. The weight of each participant was recorded, and the amount of foot-pounds (Ft. Lbs.) was calculated (see equation 1). To ensure that the same amount of work was performed on the cycle ergometer, Ft. Lbs. were converted into watts (W) (see equations 2 and 3). These values



served as the low intensity work output. The value for higher intensity work, or the target workload, was set at 50 W above these pre-determined values. All weights between 120 and 250 pounds were derived and entered into a conversion table.

$$(1) \text{ Ft. Lbs.} = \text{Lbs.} \times 1(\text{foot}) \times 24 (\text{steps/min})$$

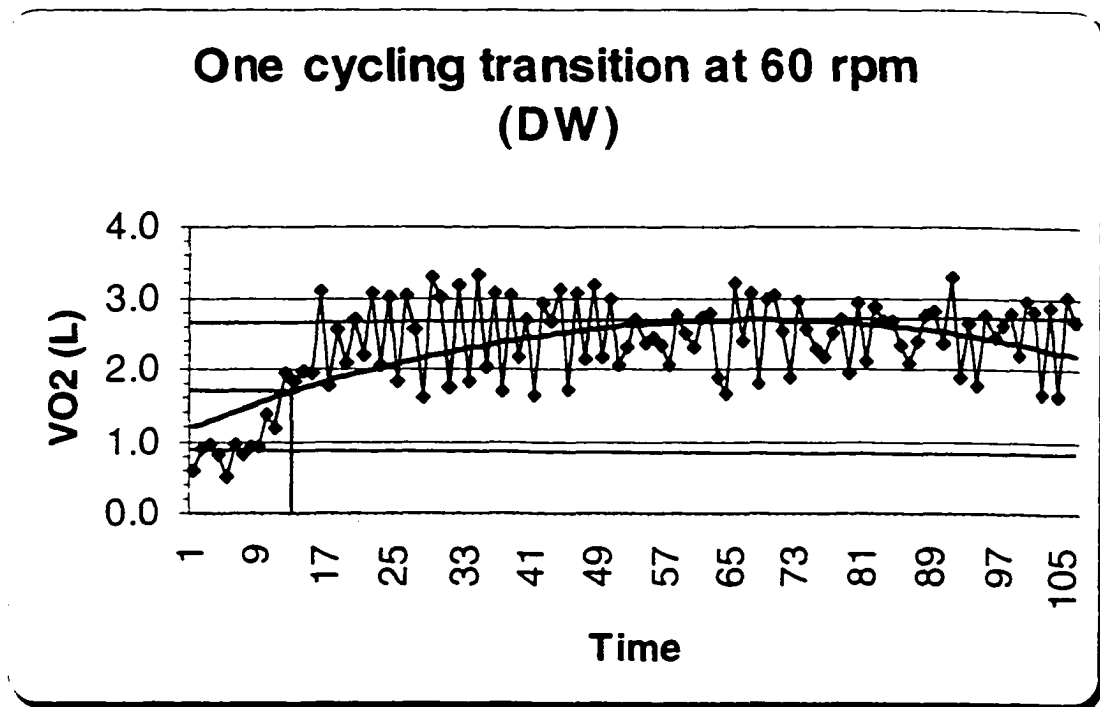
$$(2) \text{ KGM} = \text{Ft. Lbs.} \times 0.1383$$

$$(3) \text{ Watts} = \text{KGM} \times 0.16345$$

Participants reported to the laboratory for testing on three separate occasions. Trials were completed in a randomized manner (see Appendix B). On one occasion, the participant performed a 10-minute cycling transition from rest to the target workload (trial 1). On another trial, the participant was asked to cycle for 5-minutes at low intensity (trial 2a), followed by a 10-minute cycling transition at the target workload (trial 2b). On the last trial the participant completed a 5-minute transition from rest to stepping at low intensity (trial 3a), and then performed a 10-minute transition on the cycle ergometer at the target workload (trial 3b).

The dependent variables measured in this study were time to steady state oxygen consumption expressed as half-times ( $\frac{1}{2} t$ ), and oxygen consumption ( $\text{VO}_2$ ) in liters. Half-time values were obtained by graphing each transition (Microsoft Excel 97). The one-minute pre-exercise period served to give baseline  $\text{VO}_2$  readings. All values within this minute were plotted, and a polynomial trendline was added. The peak of the trendline curve represented the initial oxygen uptake level, and a line was manually drawn on the graph to denote this value. The  $\text{VO}_2$  values of the first five minutes of exercise were then plotted graphically. A polynomial trendline was again added, with the peak designating where steady state oxygen consumption occurred. A second manual

line was drawn on the graph representing the steady state value. A measurement was made half way between the baseline and steady state line. From this value, a line was drawn perpendicular to the y-axis until it reached the trendline. A final line was manually drawn from the trendline to the x-axis. This point on the x-axis was determined to be the half-time ( $\frac{1}{2} t$ ) value recorded. Note that each tick-mark on the x-axis represents a four-second interval.



**Figure 1.** Manual method for determining half-time values.

## CHAPTER 4

### RESULTS

The dependent variables measured in this study were time to steady state oxygen consumption expressed as half-times ( $\frac{1}{2} t$ ), and oxygen consumption ( $\text{VO}_2$ ) in liters. Each measure was analyzed using a one-way analysis of variance (ANOVA). If a significant F value was obtained, a post hoc Tukey's Honestly Significant Difference (HSD) test was performed to determine where the differences occurred.

For transition time to steady state, the F value was 12.02 ( $p < 0.001$ ) (see Appendix C for statistical tables). The post hoc Tukey's HSD test showed differences between the second cycling transition and all other groups. Individual participant half-times to steady state oxygen consumption are shown in table 2.

Table 3 shows the amount of oxygen consumed by each participant during the exercise transitions. For this variable, the obtained F value was 47.00 ( $p < 0.001$ ). A post hoc Tukey's HSD test revealed that differences occurred between the first cycling transition and all other transitions.

Table 2

Half-time transitions in seconds

Participant	Trial 1	Trial 2a	Trial 2b	Trial 3a
1	44	44	52	26
2	36	24	68	28
3	62	56	58	50
4	48	54	76	52
5	56	52	46	56
6	64	62	72	54
7	48	30	62	42
8	46	26	52	48
9	56	66	64	48
10	60	56	52	60
11	54	48	60	44
12	52	40	52	56
13	50	68	88	48
14	48	44	74	56
15	50	48	84	48
16	48	44	64	38
Means	51±1.79	48±3.29	64±3.07	47±2.43

Note. Trial 1 is a cycling transition from rest to the target workload.

Trial 2a is a cycling transition from rest to a mild workload.

Trial 2b is a cycling transition from mild work to the target workload.

Trial 3a is a stepping transition from rest to a mild workload.

Table 3

Steady state VO2 readings in liters

Participant	Trial 1	Trial 2a	Trial 2b	Trial 3a
1	2.30	1.65	2.10	2.30
2	2.70	1.45	2.10	2.10
3	2.20	1.58	2.13	2.15
4	2.30	1.40	1.80	2.40
5	2.40	1.50	2.30	2.20
6	2.05	1.70	2.35	2.08
7	2.70	2.05	2.60	2.60
8	2.40	1.80	2.40	2.20
9	2.70	2.00	2.30	2.70
10	2.70	1.83	2.60	2.65
11	2.73	2.10	2.80	2.50
12	2.30	1.40	2.10	1.10
13	2.60	1.95	2.55	2.65
14	3.20	2.30	2.80	2.75
15	2.40	1.70	2.30	2.03
16	1.90	1.35	1.95	1.85
Means	2.47±0.08	1.74±0.07	2.32±0.07	2.27±0.10

Note. Trial 1 is a cycling transition from rest to the target workload.

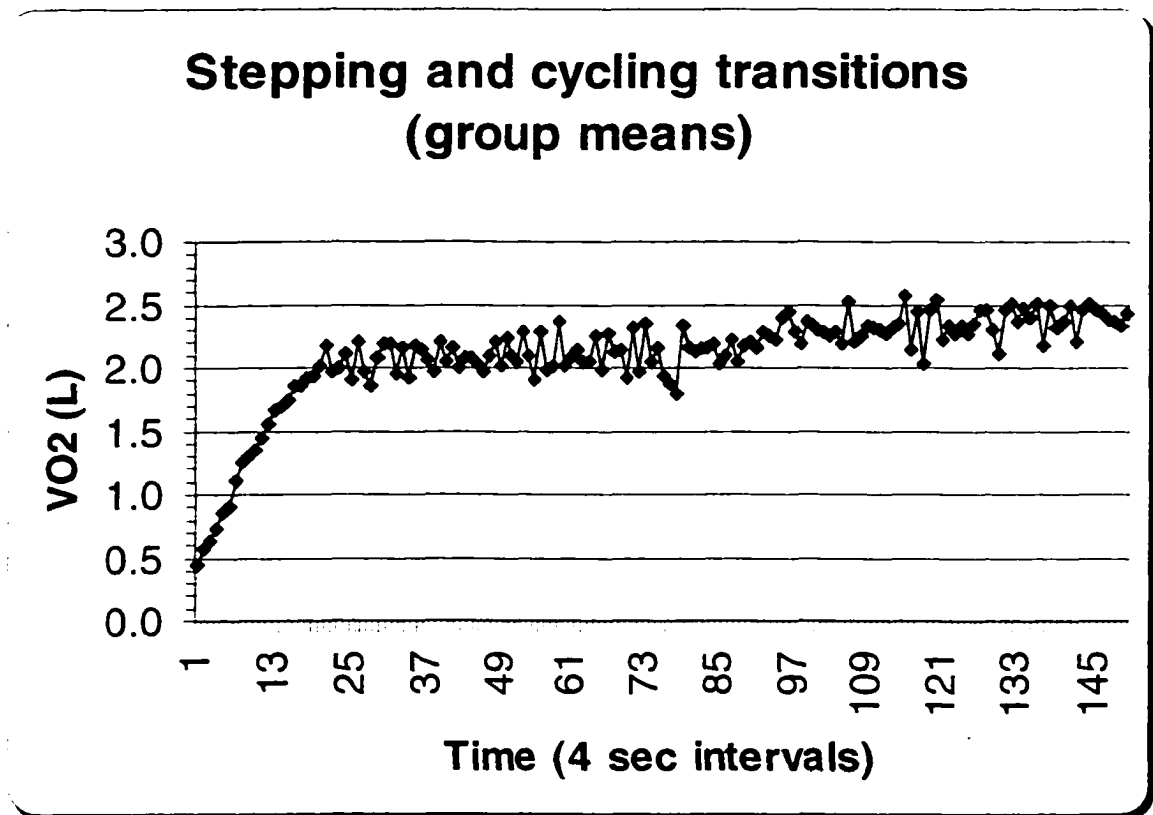
Trial 2a is a cycling transition from rest to a mild workload.

Trial 2b is a cycling transition from mild work to the target workload.

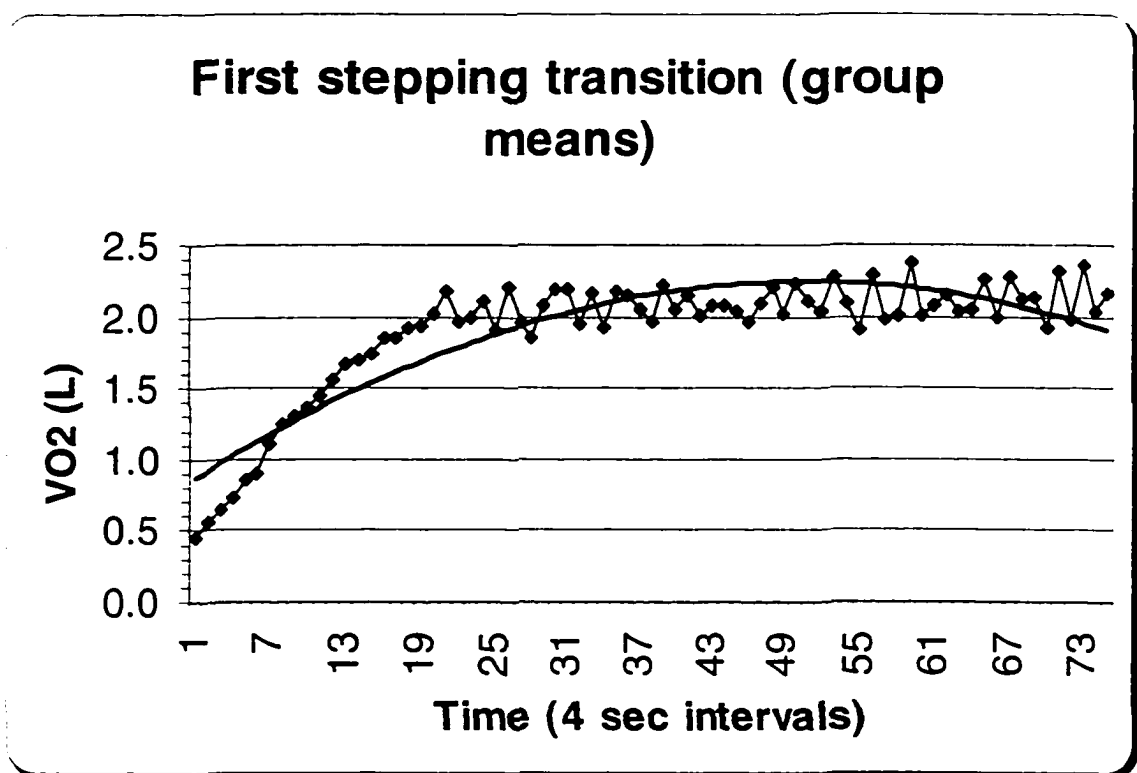
Trial 3a is a stepping transition from rest to a mild workload.

The cycling transition that occurred immediately after stepping could not be analyzed in the same manner. When these data points were plotted, many individual participants showed trendlines where the half-time could not be derived by the method described earlier. A t-test was performed to determine if there was a difference between oxygen consumption during stepping and the cycling period that followed it. The last two minutes of stepping, and the final two minutes of cycling were pooled for every participant. These times were chosen because it was the period by which steady state oxygen consumption was considered to have been reached. A t-value of 8.4163 ( $p < 0.001$ ) was calculated.

Since a statistically significant difference was obtained, the cycling transition that occurred after stepping was also analyzed. This was done by averaging the  $\text{VO}_2$  reading at each time interval for all participants. The averages were plotted, and a half-time of 76 seconds was established by the manual method outlined above. Half-times for the other exercise transitions were also determined in a similar fashion. One cycling transition showed a  $\frac{1}{2} t$  of 50 seconds, the first and second cycling transitions had  $\frac{1}{2} t$  of 48 and 62 seconds respectively, and the stepping transition showed a  $\frac{1}{2} t$  of 48 seconds. Figure 2 shows a graph of the stepping and cycling trial. Figure 3 represents the first five minutes of that trial, or the stepping transition, while figure 4 represents the cycling transition that immediately follows.

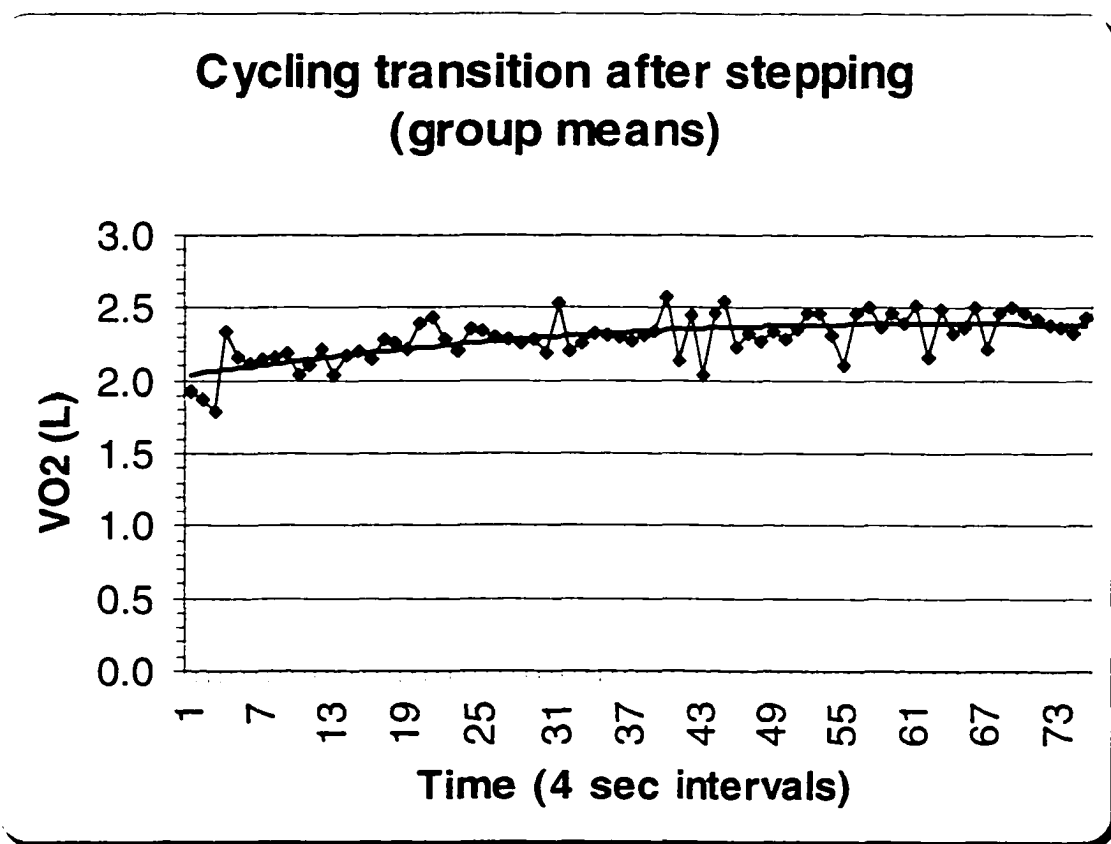


**Figure 2.** Group means for combined stepping and cycling trial.



**Figure 3.** Sample averages for the first five minutes of step exercise.





**Figure 4.** Sample averages for the cycling transition that immediately follows stepping exercise.

## CHAPTER 5

### DISCUSSION

The results for this study were analyzed in two separate ways. First, individual oxygen uptake transitions were plotted and half-times were determined for each participant. The average half-time value for the 16 participants was determined for each exercise transition. The second way used to determine half-time to steady state involved averaging group data at every data point. The averages for the whole group were then plotted, and half-times determined. Table 4 shows a comparison between the two methods of obtaining half-time measurements. As was discussed earlier in this paper, the cycling transition that occurred after stepping exercise was unable to be measured by the first method of deriving half-times. Since the two methods yielded similar measurements for the other four transitions, the author is confident that an accurate value was obtained using the second method for the cycling transition that followed stepping.

Table 4

Comparison of half-time methods (in seconds)

	Trial 1	Trial 2a	Trial 2b	Trial 3a	Trial 3b
Method 1	51 $\pm$ 1.79	48 $\pm$ 3.29	64 $\pm$ 3.07	47 $\pm$ 2.43	x
Method 2	50	48	62	48	76

Exercise transitions that were performed from rest show similar  $\frac{1}{2} t$  values. The  $\frac{1}{2} t$  from rest to cycling at a higher intensity was 50 seconds, the  $\frac{1}{2} t$  from rest to cycling at a lower intensity was 48 seconds, and the  $\frac{1}{2} t$  from rest to stepping (at the same absolute workload as the lower cycling intensity) was 48 seconds. These results are somewhat similar to the findings of Di Prampero et al. (1989) who observed  $\frac{1}{2} t$  values of  $31.1 \pm 10.1$  seconds for stepping and  $29.6 \pm 7.9$  seconds for cycling when the transition was from rest to 40% of the participant's  $\text{VO}_{2 \text{ max}}$ . However, when the transition was from rest to a lower intensity (20% of  $\text{VO}_{2 \text{ max}}$ ),  $\frac{1}{2} t$  values of  $25.4 \pm 8.6$  and  $16.1 \pm 6.1$  were observed for stepping and cycling. In the present study  $\text{VO}_{2 \text{ max}}$  was not measured, but the lower exercise intensity used was probably closer to 40% of  $\text{VO}_{2 \text{ max}}$  than 20% of  $\text{VO}_{2 \text{ max}}$ .

Rest to cycling at low intensity showed a  $\frac{1}{2} t$  of 48 seconds, while rest to cycling at a higher intensity gave a  $\frac{1}{2} t$  value of 50 seconds. The findings of Hughson and Morrissey (1982) are comparable with mean response times for rest to 40% of the anaerobic threshold being 34.8 seconds, while rest to 80% of the anaerobic threshold was 39.0 seconds (not significantly different from each other).

It has been established that cycling exercise performed from lower to higher intensity produces delayed oxygen uptake kinetics. Hughson and Morrissey (1982) showed a mean response time of 34.8 seconds when cycling was performed from rest to 40% of the anaerobic threshold, and a mean response time of 58.2 seconds during the transition from 40-80% of the anaerobic threshold. The same authors also observed a mean response time of 34.2 seconds cycling from rest to 40% of the anaerobic threshold, and a 69.6 second mean response time during the transition from 40-120% of the

anaerobic threshold. In a different study, Hughson and Morrissey (1983) observed similar results. Cycling from rest to 40% of the anaerobic threshold gave a mean response time of  $31.2 \pm 4.9$  seconds, while cycling from 40-80% of the anaerobic threshold showed a mean response time of  $58.8 \pm 11.2$  seconds. The study by Di Prampero et al. (1989) looked at cycling transitions from rest as well as from prior exercise. A cycling transition from rest to 40% of  $\text{VO}_{2\text{ max}}$  had a  $\frac{1}{2} t$  of  $29.6 \pm 7.9$  seconds, cycling from 20-40% of  $\text{VO}_{2\text{ max}}$  gave a  $36.0 \pm 14.0$  second  $\frac{1}{2} t$ , and cycling transitions that occurred between 25-85% of  $\text{VO}_{2\text{ max}}$  were  $49.0 \pm 9.6$  seconds. The findings in the present study agree with the previous reports regarding delayed oxygen uptake kinetics after a cycling priming exercise. Cycling from rest to low intensity produced a  $\frac{1}{2} t$  of 48 seconds, whereas the transition from low to higher intensity cycling gave a  $\frac{1}{2} t$  of 62 seconds.

A study by Di Prampero et al. (1970) found that stepping transitions from mild to heavier work promoted faster oxygen uptake ( $\frac{1}{2} t = 17$  seconds) than transitions from rest to work ( $\frac{1}{2} t = 27-30$  seconds). Davies et al. (1972) also came to the same conclusion showing identical half-times of 17 seconds for the transition from light to heavier work, and 30 seconds in the transition from rest to work. Because of these studies, it was hypothesized that a stepping warm up would also lead to a faster cycling transition performed at a higher workload. The results of the present study, on the other hand, show that delayed oxygen uptake kinetics occurs when cycling is performed after a stepping exercise. The cycling transition that was performed after step exercise exhibited a  $\frac{1}{2} t$  to steady state of 76 seconds. Diamond et al. (1977) looked at the question of whether  $\text{VO}_2$  kinetics is speeded from mild to heavier work. They found that the half-

time for a transition from rest to just below the anaerobic threshold was 32 seconds, while a transition from 25 W to just below the anaerobic threshold was slightly slower at 35 seconds, but not significantly different. The authors concluded that in transitions between work rates, no great speeding of  $\text{VO}_2$  kinetics could be expected.

At the onset of exercise, the balance between oxygen transport and the oxygen requirement is very delicate (Cochrane and Hughson, 1992). Because of this, physiologists have been unable to determine whether the rate-limiting step in oxygen uptake kinetics occurs as a result of a blood flow limitation, or a utilization limitation. Both may contribute to some extent depending on various physiological factors. Koga et al. (1996) suggested that respiratory, circulatory, and metabolic control must be taken into consideration, as well as the type, intensity, and duration of exercise being performed.

Oxygen transport may be the limiting factor in uptake kinetics if oxygen supply to muscles is not evenly distributed, causing local hypoxia (Koga, 1996). Hughson and Morrissey (1983) gave a detailed discussion on the possible factors that were responsible for regulating flow limitation. They concluded that the most likely sites of regulation included the muscle metabolic state in relation to energy supply during exercise, proprioceptive afferent response to cardiovascular exercise, and central nervous system command. Hughson et al. (1993) carried out a study that was designed to assess the affect of blood flow limitation on  $\text{VO}_2$  kinetics. Participants completed three exercise trials from 25 W to 60% of the ventilatory threshold. One trial consisted of an upright cycling transition, another trial was performed in a supine position, and the last trial was completed in a supine position with the application of lower body negative pressure

(LBNP). LBNP in the supine position has been shown to normalize blood flow in a manner that allows the exercise response to be similar to that seen in the upright position (Eiken, 1988). The time constant for the second phase of uptake kinetics was  $40.0 \pm 7.2$  seconds in the supine position,  $24.8 \pm 4.1$  seconds in the upright position, and  $27.4 \pm 5.3$  seconds with supine and LBNP. The authors state that this study was the first time that  $\text{VO}_2$  kinetics were slowed by one maneuver and then returned to normal by another. Since a supine position reduced blood flow and caused delayed  $\text{VO}_2$  kinetics, it was suggested that blood flow was limiting when exercise is performed in this position.

In certain situations oxygen utilization may be the rate-limiting factor. Barstow et al. (1993) noted that steady state  $\text{VO}_2$  represents the equivalent oxygen cost for complete ATP regeneration. In other words, during steady state exercise energy production and ATP utilization reach equilibrium. Davies et al. (1972) hypothesized that during the initial stages of exercise oxygen debt is contracted. This  $\text{O}_2$  debt may be incurred during phosphagen breakdown, oxidation drawn from the body  $\text{O}_2$  stores, or lactic acid production through glycolysis at the onset of exercise (phase 1).  $\text{VO}_2$  kinetics during phase 2 closely follows the kinetics of muscle  $\text{O}_2$  utilization (Barstow and Mole, 1991). Barstow and Mole (1991) propose that the time constant and  $\text{O}_2$  cost during the fast component (phase 2) are unchanged from moderate to heavy exercise and exhibit a linear first-order relationship. Linearity suggests that the extra  $\text{O}_2$  cost arises solely from the slow process (phase 1) with no resulting impact on the magnitude or speed of the fast process (phase 2). If so, the fast oxidative process can be expected to be coupled with phosphocreatine splitting while indirectly stimulating mitochondria respiration. This would suggest that oxygen utilization is the rate-limiting step in uptake kinetics.

Many of the studies cited in the review of literature used breath-by-breath analysis to measure oxygen uptake. Barstow et al. (1996), Di Prampero et al. (1989), Inman et al. (1987), Whipp et al. (1982), Diamond et al. (1977), Casaburi et al. (1977), and Whipp and Wasserman (1972) all utilized breath-by-breath analysis in their research. It was hoped that the Vista Turbofit 2A software used in this study would also be capable of performing breath-by-breath analysis during exercise trials. Unfortunately, the lowest time interval that the software package permitted was two seconds. When the data for the first few participants was looked at, it was noticed that usable data was given only every other line (each line in between gave readings of 0.00). It was decided that for the purposes of this study, oxygen uptake would be measured every four seconds. Other studies have used similar time intervals when observing oxygen uptake. Di Prampero et al. (1970) took  $\text{VO}_2$  readings every 3-5 seconds, Davies et al. (1972) measured oxygen uptake “at frequent intervals”, and Hughson and Morrissey (1982, 1983) recorded  $\text{VO}_2$  every 30 seconds during rest, at 15 seconds intervals during the first five minutes of exercise, and in 30 seconds increments during the final five minutes of exercise.

The study was designed so that the order of each trial was counterbalanced between all participants (see Appendix B). On three occasions however, the order of testing did not follow this counterbalanced design. The reason for this is that three participants in the beginning of the study performed the stepping transition on the wrong height of step. These participants were asked to come back into the laboratory at the end of their testing to complete the trial on the correct bench height.

Participant 14 did not perform the same amount of absolute work as the other participants. Because of his large mass (296 lbs.), his workload was calculated for an 8-inch bench instead of the 12-inch used by the rest of the participants. It was thought that using the 12-inch step would take him above the anaerobic threshold, and therefore beyond the scope of this study. This participant still performed the same amount of relative work cycling at low intensity compared to stepping. Adjustment for the 8-inch bench was calculated out to 120 W at the low intensity cycling workload, and 170 W at the higher intensity, or target workload.

Step or treadmill exercise that is performed from mild to heavier intensity has been shown to speed oxygen uptake kinetics (Di Prampero et al., 1970). On the other hand, researchers have observed delayed kinetics in cycling exercise that occurs from a lower to higher workload (Hughson and Morrissey, 1982). The present study was designed to look at the  $\text{VO}_2$  kinetics that occurs when a stepping warm up is performed followed by cycling at a higher intensity. The results show that a crossover from step to cycling exercise presents a delay in the time needed to reach steady state oxygen consumption. Delayed uptake was also seen when cycling was performed from mild to heavier work. Exercise transitions that occurred from rest reached steady state  $\text{VO}_2$  significantly faster than transitions performed from mild exercise. This data seems to suggest that when oxygen uptake kinetics is concerned, exercise transitions from rest are more efficient than transitions from a warmed up state regardless of the mode of priming exercise. Finally, no inferences can be made from this study concerning the rate-limiting step in  $\text{VO}_2$  kinetics.



## APPENDIX A

### BIOMEDICAL SCIENCES COMMITTEE APPROVAL



DATE: February 25, 1998

TO: James Navalta (KIN)  
M/S: 3034

FROM: *[Signature]*  
Dr. Lawrence Golding  
Chairman, Biomedical Sciences Committee  
of the UNLV Institutional Review Board

RE: Status of Human Subject Protocol entitled:  
"VO2 Transitional Response to a Crossover from Priming  
Exercise"

OSP #504s0298-200b

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This memorandum is official notification that the protocol for the project referenced above has been approved by the Biomedical Sciences Committee of the Institutional Review Board. This approval is approved for a period of one year from the date of this notification, and work on the project may proceed.

Should the use of human subjects described in this protocol continue beyond a year from the date of this notification, it will be necessary to request an extension.

If you have any questions or require any assistance, please Marsha Green at 895-1357.

cc: J. Young (KIN-3034)  
OSP File

Office of Sponsored Programs  
4505 Maryland Parkway • Box 451037 • Las Vegas, Nevada 89154-1037  
(702) 895-1357 • FAX (702) 895-4242

## APPENDIX B

### DATA COLLECTION SHEET: COUNTERBALANCE OF TRIALS

Trial 1: Rest to +50 W of determined workload (cycling)

Trial 2: Rest to workload, then + 50W (cycling)

Trial 3: Rest to stepping, then + 50W (cycling)

	1	2	3	Weight	Height	Age
Participant 1						
Participant 2						
Participant 3						
Participant 4						
Participant 5						
Participant 6						
Participant 7						
Participant 8						

	2	3	1
Participant 9			

---

	2	1	3
Participant 10			

---

	1	3	2
Participant 11			

---

	1	2	3
Participant 12			

---

## APPENDIX C

### STATISTICAL TABLES

Table C1

ANOVA table for half-time transitions

Source	df	SS	MS	F
Between Conditions	3	2978.69	992.90	12.02
Between Subjects	15	3312.94		
Error	45	3718.31	82.63	
Total	63	10009.94		

Table C2

Tukey's HSD test for half-time transitions

Comparison	Mean Difference	Critical Difference	Decision
Trial 2b vs Trial 1	$64 - 51.375 = 12.625$	11.04	Reject Ho
Trial 2b vs Trial 2a	$64 - 47.625 = 16.375$	11.04	Reject Ho
Trial 2b vs Trial 3a	$64 - 47.125 = 16.875$	11.04	Reject Ho
Trial 1 vs Trial 2a	$51.375 - 47.625 = 3.750$	11.04	Retain Ho
Trial 1 vs Trial 3a	$51.375 - 47.126 = 4.250$	11.04	Retain Ho
Trial 2a vs Trial 3a	$47.625 - 47.126 = 0.500$	11.04	Retain Ho

Table C3ANOVA table for steady state VO<sub>2</sub> readings

Source	df	SS	MS	F
Between Conditions	3	4.98	1.66	47
Between Subjects	15	4.99		
Error	45	1.59	0.0353	
Total	63	11.56		

Table C4Tukey's HSD test for steady state VO<sub>2</sub> level

Comparison	Mean Difference	Critical Difference	Decision
Trial 1 vs Trial 2b	$2.4734 - 2.3234 = 0.15$	0.3377	Retain Ho
Trial 1 vs Trial 3a	$2.4734 - 2.2656 = 0.2078$	0.3377	Retain Ho
Trial 1 vs Trial 2a	$2.4734 - 1.7344 = 0.739$	0.3377	Reject Ho
Trial 2b vs Trial 3a	$2.3243 - 2.2656 = 0.0587$	0.3377	Retain Ho
Trial 2b vs Trial 2a	$2.3234 - 1.7344 = 0.589$	0.3377	Reject Ho
Trial 3a vs Trial 2a	$2.2656 - 1.7344 = 0.5312$	0.3377	Reject Ho

Table C5t-test: Trial3Two-Sample Assuming Equal Variances

	<i>Cycling</i>	<i>Stepping</i>
Mean	2.4252	2.0924
Variance	0.3672	0.3363
Observations	450	450
Pooled Variance	0.3517	
df	898	
t Stat	8.4163	
P(T<=t) one-tail	7.6119E-17	
t Critical one-tail	1.6466	
P(T<=t) two-tail	1.5224E-16	
t Critical two-tail	1.9626	

## APPENDIX D

### PARTICIPANT DATA

**One cycling transition**

Last Name	First Name	D.O.B	Weight	Height	Temp	Date
Avarbuch	Greg	09-10-73	165.4 Lbs	71.0 in	21.5 deg C	03-19-1998

TIME(min)	VO2(L)	VCO2(L)	VO2(Kg)	VCO2(Kg)	RER	VE(stpd)
0.13	0.0765	0.0437	1.0179	0.5808	0.5705	6.3341
0.20	0.0725	0.0405	0.9649	0.5389	0.5585	5.9205
0.27	0.0242	0.0127	0.3223	0.1686	0.5230	1.8384
0.33	0.0380	0.0265	0.5056	0.3523	0.6967	3.0649
0.40	0.0389	0.0256	0.5170	0.3406	0.6587	2.4526
0.47	0.0566	0.0433	0.7526	0.5758	0.7650	3.3718
0.53	0.0414	0.0308	0.5503	0.4103	0.7455	2.2454
0.60	0.5444	0.4951	7.2416	6.5858	0.9094	21.0456
0.67	0.3006	0.2695	3.9985	3.5850	0.8966	9.4998
0.73	0.5445	0.4758	7.2431	6.3289	0.8738	16.3393
0.80	0.4837	0.4245	6.4336	5.6467	0.8777	14.0946
0.87	0.5583	0.4705	7.4257	6.2584	0.8428	14.9282
0.93	0.7524	0.6101	10.0076	8.1153	0.8109	17.6766
1.00	0.4853	0.3881	6.4544	5.1619	0.7997	11.4423
1.07	0.0839	0.0650	1.1165	0.8652	0.7749	2.1454
1.13	0.2215	0.1779	2.9463	2.3664	0.8032	5.3081
1.20	0.4499	0.4060	5.9846	5.3997	0.9023	17.9807
1.27	0.7180	0.6146	9.5508	8.1751	0.8560	17.6791
1.33	0.7112	0.4904	9.4602	6.5234	0.6896	18.3868
1.40	0.8287	0.8262	11.0231	10.9900	0.9970	20.4467
1.47	1.2419	1.0011	16.5182	13.3154	0.8061	25.2412
1.53	0.7798	0.6655	10.3719	8.8513	0.8534	19.6207
1.60	0.3536	0.2473	4.7037	3.2893	0.6993	7.2486
1.67	1.6112	1.3067	21.4306	17.3800	0.8110	29.5251
1.73	1.1022	1.0055	14.6602	13.3738	0.9123	25.8401
1.80	1.2778	1.0138	16.9961	13.4846	0.7934	24.4237
1.87	0.7036	0.5291	9.3585	7.0378	0.7520	12.4622
1.93	2.0699	1.4892	27.5320	19.8083	0.7195	30.7681
2.00	1.7514	1.2479	23.2953	16.5980	0.7125	25.9422
2.07	2.4196	1.7155	32.1834	22.8184	0.7090	33.7045
2.13	1.7101	1.2441	22.7467	16.5481	0.7275	26.0264
2.20	1.3059	1.0222	17.3694	13.5962	0.7828	22.9676
2.27	1.3955	1.1222	18.5619	14.9265	0.8041	22.7855
2.33	1.9887	1.5644	26.4524	20.8081	0.7866	32.6922
2.40	2.1192	1.6853	28.1882	22.4170	0.7953	35.7422
2.47	1.9148	1.7719	25.4692	23.5677	0.9253	34.1083
2.53	2.1781	1.7752	28.9713	23.6119	0.8150	34.9108



2.60	2.7570	2.3113	36.6712	30.7433	0.8383	48.2009
2.67	2.2049	1.9540	29.3280	25.9898	0.8862	41.6595
2.73	1.8861	1.6484	25.0876	21.9255	0.8740	34.6285
2.80	1.6832	1.5932	22.3881	21.1914	0.9465	33.0871
2.87	1.8879	1.6672	25.1116	22.1751	0.8831	33.4771
2.93	1.4270	1.3147	18.9802	17.4873	0.9213	27.5611
3.00	1.9032	1.7568	25.3150	23.3675	0.9231	34.8231
3.07	3.7936	3.3336	50.4589	44.3404	0.8787	63.6212
3.13	1.8110	1.5674	24.0889	20.8483	0.8655	32.2835
3.20	3.5215	3.2964	46.8401	43.8453	0.9361	67.4089
3.27	1.8888	1.7555	25.1237	23.3507	0.9294	41.1546
3.33	2.2830	2.3483	30.3659	31.2345	1.0286	55.1786
3.40	2.1319	2.1239	28.3566	28.2504	0.9963	46.7261
3.47	1.7529	1.7744	23.3152	23.6019	1.0123	39.5152
3.53	1.6843	1.6822	22.4032	22.3750	0.9987	37.9679
3.60	2.5545	2.5016	33.9771	33.2747	0.9793	52.7745
3.67	2.4390	2.3079	32.4420	30.6981	0.9462	49.1542
3.73	2.7180	2.6452	36.1525	35.1846	0.9732	58.6464
3.80	1.8727	1.8711	24.9087	24.8876	0.9992	43.5574
3.87	1.6251	1.6981	21.6152	22.5865	1.0449	37.9417
3.93	2.1015	2.1408	27.9521	28.4750	1.0187	47.3055
4.00	1.3193	1.3138	17.5479	17.4746	0.9958	29.8883
4.07	1.4887	1.4346	19.8011	19.0820	0.9637	31.6312
4.13	3.1064	2.8138	41.3183	37.4261	0.9058	57.4225
4.20	2.4686	2.0444	32.8349	27.1931	0.8282	45.7311
4.27	1.6126	1.5571	21.4498	20.7105	0.9655	35.5036
4.33	2.7589	2.5593	36.6961	34.0414	0.9277	60.9239
4.40	1.3104	1.2901	17.4299	17.1598	0.9845	30.3858
4.47	2.7723	2.6056	36.8748	34.6568	0.9398	55.3750
4.53	1.5227	1.4141	20.2534	18.8096	0.9287	30.8064
4.60	3.1239	2.8262	41.5518	37.5919	0.9047	62.2454
4.67	1.3931	1.3517	18.5295	17.9785	0.9703	30.7851
4.73	2.2190	2.1218	29.5146	28.2228	0.9562	47.1991
4.80	2.6542	2.5605	35.3040	34.0578	0.9647	55.9626
4.87	1.9500	1.8846	25.9374	25.0675	0.9665	42.0156
4.93	2.4677	2.1811	32.8236	29.0111	0.8838	46.6016
5.00	2.0367	1.7998	27.0903	23.9399	0.8837	47.5994
5.07	1.7346	1.8828	23.0725	25.0426	1.0854	41.1941
5.13	1.6495	1.4820	21.9401	19.7118	0.8984	35.7028
5.20	1.1635	1.1925	15.4758	15.8621	1.0250	27.1304
5.27	1.7302	1.6375	23.0132	21.7807	0.9464	37.4234
5.33	2.8164	2.6586	37.4606	35.3619	0.9440	58.8116

5.40	2.1163	1.9657	28.1489	26.1461	0.9288	44.5175
5.47	1.6947	1.4945	22.5419	19.8790	0.8819	35.2007
5.53	1.6913	1.6227	22.4958	21.5842	0.9595	37.6009
5.60	3.1064	2.8583	41.3184	38.0189	0.9201	59.9830
5.67	2.0344	1.8463	27.0596	24.5584	0.9076	39.6607
5.73	1.8691	1.6692	24.8606	22.2018	0.8931	37.3372
5.80	1.9463	1.7872	25.8874	23.7721	0.9183	41.5084
5.87	2.3550	2.2740	31.3245	30.2468	0.9656	54.3914
5.93	1.3426	1.3087	17.8578	17.4067	0.9747	31.3391
6.00	1.8233	1.5907	24.2518	21.1574	0.8724	32.3298
6.07	2.4704	2.1891	32.8590	29.1173	0.8861	45.3681
6.13	2.1696	1.7727	28.8584	23.5785	0.8170	40.1913
6.20	2.3753	2.2079	31.5943	29.3671	0.9295	47.5797
6.27	2.2089	1.9023	29.3805	25.3021	0.8612	43.8241
6.33	1.6584	1.5493	22.0591	20.6068	0.9342	35.2056
6.40	2.4268	2.2779	32.2792	30.2987	0.9386	47.1601
6.47	1.8506	1.6296	24.6157	21.6757	0.8806	35.6946
6.53	2.5431	2.3144	33.8257	30.7846	0.9101	49.2403
6.60	2.7702	2.4615	36.8466	32.7400	0.8885	52.8737
6.67	1.7967	1.5573	23.8979	20.7134	0.8667	36.8082
6.73	1.5050	1.5181	20.0179	20.1927	1.0087	33.4355
6.80	2.8642	2.6891	38.0970	35.7683	0.9389	60.2195
6.87	1.7552	1.5292	23.3464	20.3399	0.8712	35.8062
6.93	1.7240	1.6241	22.9308	21.6022	0.9421	35.6126
7.00	1.9045	1.7897	25.3321	23.8048	0.9397	39.9438
7.07	2.6206	2.4397	34.8563	32.4502	0.9310	54.5721
7.13	1.8677	1.6347	24.8420	21.7434	0.8753	35.8062
7.20	2.4107	2.1292	32.0648	28.3200	0.8832	47.5732
7.27	2.0945	1.9752	27.8593	26.2717	0.9430	43.5011
7.33	2.2571	2.1526	30.0218	28.6323	0.9537	52.3004
7.40	2.5036	2.2373	33.3012	29.7583	0.8936	53.2584
7.47	1.7731	1.6110	23.5844	21.4287	0.9086	46.3406
7.53	1.4575	1.7261	19.3860	22.9588	1.1843	44.9364
7.60	1.4211	1.4619	18.9017	19.4446	1.0287	37.4735
7.67	2.0084	1.9863	26.7137	26.4200	0.9890	46.3470
7.73	1.6692	1.5105	22.2019	20.0909	0.9049	35.7865
7.80	1.7012	1.6859	22.6272	22.4248	0.9911	43.1064
7.87	1.9734	1.9434	26.2481	25.8497	0.9848	49.6267
7.93	2.5884	2.3536	34.4286	31.3056	0.9093	54.2225
8.00	1.2916	1.0694	17.1801	14.2238	0.8279	29.0485

**Two cycling transitions (GA)**

Last Name	First Name	D.O.B	Weight	Height	Temp	Date
Avarbuch	Greg	09-10-73	165.4 Lbs	71.0 in	21.4 deg C	04-01-1998

TIME(min)	VO2(L)	VCO2(L)	VO2(Kg)	VCO2(Kg)	RER	VE(stpd)
0.13	0.0045	0.0017	0.0596	0.0231	0.3874	0.6095
0.20	0.0729	0.0331	0.9701	0.4409	0.4545	8.7301
0.27	0.1393	0.0981	1.8522	1.3051	0.7046	12.5911
0.33	0.2000	0.1562	2.6605	2.0770	0.7807	10.3515
0.40	0.2729	0.2059	3.6303	2.7383	0.7543	10.1513
0.47	0.1953	0.1660	2.5981	2.2085	0.8500	6.7017
0.53	0.2646	0.2236	3.5200	2.9735	0.8447	7.9213
0.60	0.2802	0.2340	3.7264	3.1122	0.8352	7.7171
0.67	0.3023	0.2504	4.0210	3.3308	0.8283	8.5259
0.73	1.1505	0.9313	15.3027	12.3873	0.8095	27.0212
0.80	0.4431	0.3582	5.8942	4.7639	0.8082	8.9406
0.87	0.1675	0.1257	2.2280	1.6722	0.7505	3.8602
0.93	0.3402	0.2666	4.5253	3.5459	0.7836	8.4314
1.00	0.5031	0.3918	6.6913	5.2117	0.7789	10.9710
1.07	0.1722	0.1304	2.2900	1.7351	0.7577	3.8575
1.13	0.3498	0.2720	4.6522	3.6174	0.7776	8.6286
1.20	0.8255	0.6777	10.9797	9.0135	0.8209	18.4831
1.27	0.9306	0.6738	12.3775	8.9619	0.7240	18.4780
1.33	0.4320	0.3524	5.7464	4.6869	0.8156	11.9769
1.40	1.2914	1.4454	17.1768	19.2257	1.1193	33.9242
1.47	0.2922	0.2466	3.8864	3.2797	0.8439	7.9235
1.53	0.5336	0.4388	7.0976	5.8366	0.8223	11.6821
1.60	0.8411	0.6495	11.1877	8.6393	0.7722	14.8271
1.67	0.8349	0.6049	11.1057	8.0453	0.7244	13.7138
1.73	0.8516	0.6502	11.3269	8.6485	0.7635	16.2511
1.80	0.8759	0.7498	11.6499	9.9730	0.8561	15.6525
1.87	2.1171	1.5480	28.1601	20.5903	0.7312	30.5935
1.93	1.6782	1.1923	22.3224	15.8592	0.7105	25.8057
2.00	1.1236	0.8424	14.9453	11.2046	0.7497	20.1246
2.07	1.1501	0.9776	15.2975	13.0028	0.8500	23.3545
2.13	1.1228	0.8656	14.9339	11.5134	0.7710	19.0013
2.20	0.2874	0.2398	3.8227	3.1898	0.8344	6.7054
2.27	1.7557	1.4698	23.3527	19.5505	0.8372	31.1060
2.33	2.0688	1.6062	27.5174	21.3646	0.7764	30.0812
2.40	1.5368	1.1520	20.4406	15.3228	0.7496	23.1323
2.47	1.1889	0.8643	15.8139	11.4961	0.7270	20.7972
2.53	0.9615	0.8181	12.7887	10.8813	0.8509	20.9435

2.60	1.0060	0.9412	13.3816	12.5190	0.9355	20.5933
2.67	1.3954	1.2578	18.5607	16.7300	0.9014	26.9028
2.73	1.0235	0.9121	13.6135	12.1321	0.8912	17.9377
2.80	1.2954	1.1346	17.2302	15.0916	0.8759	23.9609
2.87	1.1884	1.0069	15.8064	13.3928	0.8473	19.8797
2.93	1.1588	0.9904	15.4130	13.1734	0.8547	20.8933
3.00	1.0069	0.8692	13.3930	11.5615	0.8632	17.7388
3.07	1.1842	1.0405	15.7508	13.8402	0.8787	22.0205
3.13	1.7206	1.5757	22.8863	20.9591	0.9158	36.0942
3.20	1.2750	1.1226	16.9591	14.9320	0.8805	23.3868
3.27	2.0134	1.6567	26.7809	22.0355	0.8228	30.2615
3.33	1.3301	1.1114	17.6919	14.7830	0.8356	23.0336
3.40	1.4523	1.1452	19.3175	15.2326	0.7885	26.1129
3.47	1.0579	0.9768	14.0715	12.9929	0.9234	20.3922
3.53	1.2094	1.1235	16.0865	14.9439	0.9290	23.4543
3.60	1.3030	1.1874	17.3307	15.7941	0.9113	24.4571
3.67	1.3149	1.2531	17.4899	16.6675	0.9530	28.2510
3.73	1.4677	1.3978	19.5216	18.5923	0.9524	30.3844
3.80	1.4340	1.3364	19.0742	17.7757	0.9319	30.2657
3.87	1.8536	1.7025	24.6555	22.6452	0.9185	36.2213
3.93	1.4231	1.2506	18.9294	16.6344	0.8788	29.0791
4.00	1.0200	0.9457	13.5669	12.5791	0.9272	22.4594
4.07	0.9416	1.0210	12.5243	13.5808	1.0844	21.4267
4.13	1.0760	0.9961	14.3117	13.2495	0.9258	22.0358
4.20	1.0852	1.1107	14.4344	14.7734	1.0235	25.2969
4.27	1.4639	1.4052	19.4716	18.6903	0.9599	29.3648
4.33	1.2199	1.1542	16.2265	15.3517	0.9461	24.8992
4.40	1.6963	1.4927	22.5621	19.8549	0.8800	30.4012
4.47	1.1033	1.0132	14.6745	13.4767	0.9184	20.5933
4.53	1.1774	0.9054	15.6609	12.0423	0.7689	20.0947
4.60	1.1007	1.1408	14.6406	15.1739	1.0364	24.0661
4.67	1.5529	1.4141	20.6550	18.8086	0.9106	26.9103
4.73	1.7201	1.5037	22.8792	20.0005	0.8742	30.1035
4.80	1.2890	1.1928	17.1450	15.8652	0.9254	26.3278
4.87	1.3560	1.1519	18.0361	15.3222	0.8495	22.7436
4.93	1.0924	0.9580	14.5306	12.7425	0.8769	20.4035
5.00	1.6475	1.5406	21.9131	20.4914	0.9351	26.8195
5.07	1.5289	1.2877	20.3360	17.1283	0.8423	22.8551
5.13	1.8303	1.5080	24.3444	20.0578	0.8239	28.9730
5.20	1.2438	1.0764	16.5444	14.3168	0.8654	20.8001
5.27	1.3084	1.1683	17.4027	15.5395	0.8929	24.0628
5.33	1.1608	1.0565	15.4396	14.0531	0.9102	24.2567

5.40	1.0910	1.0352	14.5115	13.7688	0.9488	25.1809
5.47	1.3524	1.2971	17.9877	17.2526	0.9591	27.5371
5.53	0.6474	0.6201	8.6108	8.2475	0.9578	14.2686
5.60	1.8272	1.6862	24.3035	22.4280	0.9228	31.6079
5.67	1.6032	1.4445	21.3248	19.2128	0.9010	27.7257
5.73	1.3506	1.1599	17.9643	15.4280	0.8588	22.2214
5.80	1.0921	0.9377	14.5259	12.4725	0.8586	17.7437
5.87	1.9493	1.6984	25.9273	22.5908	0.8713	34.5552
5.93	1.5003	1.2439	19.9560	16.5457	0.8291	25.8874
6.00	1.0524	0.9036	13.9980	12.0194	0.8587	16.9232
6.07	2.2587	1.8500	30.0429	24.6072	0.8191	34.4533
6.13	1.2140	1.0225	16.1474	13.6000	0.8422	19.7777
6.20	2.3407	1.9492	31.1335	25.9263	0.8327	36.6755
6.27	1.1804	0.9727	15.7004	12.9374	0.8240	19.3565
6.33	1.9713	1.5805	26.2201	21.0226	0.8018	34.6572
6.40	1.5502	1.4326	20.6197	19.0546	0.9241	31.4127
6.47	1.1579	1.1313	15.4007	15.0472	0.9770	24.6712
6.53	2.0495	1.8886	27.2606	25.1209	0.9215	37.9243
6.60	0.7714	0.6861	10.2607	9.1253	0.8893	13.6666
6.67	2.0095	1.8595	26.7283	24.7329	0.9253	36.2831
6.73	2.7814	2.4709	36.9963	32.8660	0.8884	47.2472
6.80	1.9791	1.8763	26.3236	24.9566	0.9481	41.6905
6.87	1.1057	0.9857	14.7074	13.1105	0.8914	21.8046
6.93	1.0976	0.9573	14.5998	12.7335	0.8722	21.8287
7.00	1.3862	1.3966	18.4373	18.5763	1.0075	26.9364
7.07	2.6347	2.3773	35.0438	31.6205	0.9023	43.6635
7.13	1.4079	1.2171	18.7261	16.1894	0.8645	22.4377
7.20	2.1718	1.9829	28.8872	26.3750	0.9130	40.3025
7.27	2.0998	1.8853	27.9292	25.0767	0.8979	36.6091
7.33	1.8300	1.7495	24.3410	23.2704	0.9560	38.1123
7.40	1.8732	1.7688	24.9153	23.5274	0.9443	35.6617
7.47	2.0413	1.8949	27.1519	25.2048	0.9283	36.3032
7.53	0.0998	0.0851	1.3271	1.1323	0.8532	1.8366
7.60	2.5793	2.6253	34.3076	34.9191	1.0178	49.1657
7.67	2.5650	2.1893	34.1169	29.1198	0.8535	49.9194
7.73	1.4504	1.4889	19.2917	19.8038	1.0265	34.0267
7.80	1.4839	1.5373	19.7373	20.4473	1.0360	35.4972
7.87	1.5978	1.5541	21.2520	20.6708	0.9727	33.7444
7.93	1.3629	1.4550	18.1275	19.3532	1.0676	31.6967
8.00	1.5477	1.5722	20.5863	20.9120	1.0158	31.4127
8.07	3.5450	3.2993	47.1521	43.8846	0.9307	61.1597
8.13	1.6527	1.5250	21.9823	20.2837	0.9227	29.7561

8.20	2.7946	2.5491	37.1711	33.9064	0.9122	49.3082
8.27	1.5662	1.4146	20.8318	18.8163	0.9033	30.3550
8.33	1.7874	1.7619	23.7743	23.4349	0.9857	35.1673
8.40	2.5444	2.3372	33.8436	31.0875	0.9186	48.9958
8.47	2.0468	2.0311	27.2250	27.0160	0.9923	38.0027
8.53	1.7102	1.5684	22.7472	20.8619	0.9171	29.4836
8.60	2.9409	2.8568	39.1178	37.9989	0.9714	58.8412
8.67	1.4023	1.2796	18.6526	17.0206	0.9125	24.8001
8.73	2.2592	2.0427	30.0505	27.1698	0.9041	41.2657
8.80	2.7282	2.5799	36.2876	34.3153	0.9456	48.5883
8.87	1.5104	1.3961	20.0906	18.5691	0.9243	26.0233
8.93	3.1247	2.9442	41.5614	39.1605	0.9422	59.1788
9.00	2.0095	1.8738	26.7279	24.9234	0.9325	38.4357
9.07	1.3740	1.2864	18.2762	17.1106	0.9362	26.6879
9.13	1.4786	1.3949	19.6668	18.5541	0.9434	26.3210
9.20	2.0353	1.9777	27.0721	26.3052	0.9717	37.2816
9.27	2.8219	2.6060	37.5339	34.6627	0.9235	50.0213
9.33	2.2412	1.8370	29.8101	24.4344	0.8197	38.5910
9.40	1.9797	2.0215	26.3328	26.8884	1.0211	40.6333
9.47	1.5734	1.4740	20.9273	19.6055	0.9368	29.0729
9.53	1.9218	1.9333	25.5625	25.7144	1.0059	42.4384
9.60	2.4425	2.3731	32.4880	31.5647	0.9716	48.6278
9.67	2.0365	2.0630	27.0873	27.4407	1.0130	46.3028
9.73	1.1532	1.1916	15.3393	15.8493	1.0332	28.8457
9.80	1.3487	1.3132	17.9391	17.4673	0.9737	26.2121
9.87	1.6872	1.6700	22.4420	22.2132	0.9898	31.6012
9.93	2.8558	2.4880	37.9859	33.0930	0.8712	50.0598
10.00	1.8231	1.7752	24.2491	23.6122	0.9737	36.6767
10.07	1.5240	1.4521	20.2709	19.3147	0.9528	29.2762
10.13	2.8156	2.6347	37.4511	35.0440	0.9357	50.3784
10.20	1.4585	1.3551	19.3994	18.0239	0.9291	26.4153
10.27	3.0286	2.6294	40.2834	34.9738	0.8682	53.1722
10.33	1.3488	1.2476	17.9407	16.5938	0.9249	28.3496
10.40	1.8903	2.0572	25.1434	27.3624	1.0883	46.1188
10.47	2.6581	2.5854	35.3553	34.3886	0.9727	50.5466
10.53	2.1293	1.9994	28.3220	26.5947	0.9390	36.9610
10.60	1.5765	1.4493	20.9696	19.2772	0.9193	28.7560
10.67	2.5123	2.2896	33.4160	30.4538	0.9114	43.4476
10.73	1.6521	1.4984	21.9744	19.9305	0.9070	29.8490
10.80	2.1509	1.9513	28.6093	25.9550	0.9072	36.1387
10.87	1.9382	1.6868	25.7801	22.4364	0.8703	31.1818
10.93	1.7670	1.6599	23.5036	22.0784	0.9394	32.2946

11.00	3.3278	2.9561	44.2636	39.3192	0.8883	52.1418
11.07	1.8958	1.6040	25.2168	21.3349	0.8461	30.8472
11.13	3.3867	3.0060	45.0471	39.9829	0.8876	57.6436
11.20	1.7345	1.5601	23.0711	20.7511	0.8994	31.8707
11.27	2.3290	2.1755	30.9783	28.9368	0.9341	41.0113
11.33	1.7677	1.6565	23.5130	22.0337	0.9371	34.5097
11.40	2.5559	2.4726	33.9966	32.8878	0.9674	48.4352
11.47	1.5082	1.3885	20.0613	18.4681	0.9206	26.6001
11.53	2.4358	2.1543	32.3992	28.6548	0.8844	42.5340
11.60	1.7332	1.6749	23.0533	22.2786	0.9664	32.6827
11.67	2.5645	2.2400	34.1108	29.7940	0.8734	44.5766
11.73	2.2600	2.2583	30.0601	30.0377	0.9993	45.2561
11.80	2.0866	1.9382	27.7537	25.7803	0.9289	35.8292
11.87	1.7538	1.5812	23.3274	21.0314	0.9016	29.5567
11.93	2.8550	2.5153	37.9745	33.4556	0.8810	48.8413
12.00	2.6649	2.4221	35.4466	32.2171	0.9089	46.9876

**Stepping and cycling transitions**

Last Name	First Name	D.O.B	Weight	Height	Temp	Date
Avarbuch	Greg	09-10-73	165.4 Lbs	71.0 in	20.5 deg C	04-02-1998

TIME(min)	VO2(L)	VCO2(L)	VO2(Kg)	VCO2(Kg)	RER	VE(stpd)
0.13	0.0247	0.0136	0.3281	0.1804	0.5500	2.6622
0.20	0.0328	0.0126	0.4363	0.1672	0.3832	3.9944
0.27	0.0285	0.0141	0.3793	0.1874	0.4942	3.2802
0.33	0.0206	0.0082	0.2739	0.1089	0.3975	2.5602
0.40	0.1216	0.0484	1.6179	0.6436	0.3978	17.6116
0.47	0.0148	0.0070	0.1975	0.0933	0.4722	1.8467
0.53	0.0488	0.0221	0.6490	0.2938	0.4526	5.7420
0.60	0.0398	0.0201	0.5287	0.2668	0.5047	4.5122
0.67	0.0338	0.0174	0.4494	0.2317	0.5156	4.1025
0.73	0.0330	0.0154	0.4385	0.2043	0.4659	3.8920
0.80	0.0193	0.0081	0.2565	0.1077	0.4200	2.2520
0.87	0.1180	0.1032	1.5691	1.3728	0.8748	14.5499
0.93	0.2271	0.1815	3.0200	2.4145	0.7995	13.0256
1.00	0.1595	0.1196	2.1221	1.5910	0.7497	8.2005
1.07	0.0897	0.0738	1.1931	0.9810	0.8222	3.6913
1.13	0.1252	0.0872	1.6656	1.1595	0.6961	7.1814
1.20	0.1047	0.0644	1.3929	0.8572	0.6154	5.1197
1.27	0.1538	0.1134	2.0464	1.5083	0.7370	7.9933
1.33	0.2391	0.1918	3.1806	2.5506	0.8019	13.3296
1.40	0.3321	0.2763	4.4169	3.6752	0.8321	17.6165
1.47	0.3736	0.3379	4.9688	4.4943	0.9045	18.0387
1.53	0.2496	0.2288	3.3206	3.0428	0.9163	12.3110
1.60	0.1925	0.2181	2.5601	2.9009	1.1331	10.2493
1.67	0.4047	0.3886	5.3828	5.1694	0.9604	16.2095
1.73	0.6019	0.5718	8.0065	7.6054	0.9499	20.2963
1.80	0.4994	0.3399	6.6431	4.5210	0.6806	11.0646
1.87	0.3455	0.4175	4.5955	5.5529	1.2083	13.5459
1.93	0.9479	0.9211	12.6083	12.2520	0.9717	30.6836
2.00	0.6993	0.6416	9.3011	8.5333	0.9175	17.8386
2.07	0.8618	0.5742	11.4634	7.6375	0.6662	20.0969
2.13	0.6649	0.7726	8.8437	10.2759	1.1619	21.1871
2.20	1.3172	1.2304	17.5203	16.3655	0.9341	30.7520
2.27	0.8180	0.6334	10.8807	8.4250	0.7743	19.4790
2.33	0.6588	0.5990	8.7626	7.9679	0.9093	14.5721
2.40	0.3038	0.2544	4.0412	3.3833	0.8372	7.6923
2.47	1.6730	1.4036	22.2533	18.6690	0.8389	39.1902
2.53	0.7070	0.7384	9.4044	9.8215	1.0443	22.1630



2.60	1.2203	1.0249	16.2316	13.6318	0.8398	28.9390
2.67	0.6411	0.6293	8.5272	8.3708	0.9817	16.1114
2.73	0.6261	0.5451	8.3280	7.2504	0.8706	14.7671
2.80	1.5731	1.2336	20.9238	16.4088	0.7842	40.4213
2.87	0.6290	0.7655	8.3658	10.1824	1.2172	20.8233
2.93	0.8447	0.7096	11.2351	9.4388	0.8401	27.5858
3.00	0.8009	0.9036	10.6534	12.0182	1.1281	23.8014
3.07	0.7318	0.6460	9.7333	8.5931	0.8829	24.6358
3.13	0.8330	1.0094	11.0797	13.4255	1.2117	25.4499
3.20	0.9855	0.9526	13.1089	12.6701	0.9665	26.7840
3.27	1.1909	1.0524	15.8405	13.9986	0.8837	27.1869
3.33	1.0495	1.0355	13.9594	13.7728	0.9866	24.4169
3.40	0.7635	0.8334	10.1558	11.0852	1.0915	23.8014
3.47	1.3600	1.3493	18.0897	17.9471	0.9921	33.9358
3.53	0.5435	0.4571	7.2294	6.0794	0.8409	17.0397
3.60	1.3902	1.6903	18.4907	22.4822	1.2159	36.5431
3.67	0.8183	0.7528	10.8847	10.0125	0.9199	19.8030
3.73	1.6819	1.5422	22.3710	20.5127	0.9169	40.3060
3.80	0.5806	0.6376	7.7229	8.4811	1.0982	17.8535
3.87	0.4463	0.4900	5.9360	6.5173	1.0979	17.0303
3.93	1.2408	1.1671	16.5044	15.5239	0.9406	30.3450
4.00	0.6499	0.6778	8.6447	9.0158	1.0429	18.5130
4.07	1.4209	1.2988	18.8991	17.2760	0.9141	35.0914
4.13	1.3735	1.1678	18.2688	15.5327	0.8502	30.1663
4.20	1.3668	1.6016	18.1796	21.3027	1.1718	35.3902
4.27	0.8160	0.6897	10.8533	9.1739	0.8453	22.0573
4.33	1.0319	1.1482	13.7248	15.2728	1.1128	28.5206
4.40	0.7260	0.7022	9.6565	9.3402	0.9672	19.8003
4.47	1.4643	1.2987	19.4764	17.2747	0.8870	34.3471
4.53	1.2880	1.2672	17.1320	16.8556	0.9839	31.5940
4.60	1.3282	1.3080	17.6659	17.3983	0.9849	32.2896
4.67	1.1966	1.1594	15.9163	15.4209	0.9689	27.8973
4.73	1.0333	1.0348	13.7438	13.7643	1.0015	33.2537
4.80	0.8624	1.0896	11.4712	14.4926	1.2634	29.0457
4.87	0.5588	0.4112	7.4323	5.4692	0.7359	15.3867
4.93	0.8528	1.2432	11.3435	16.5354	1.4577	31.1880
5.00	1.0428	1.0932	13.8697	14.5403	1.0484	32.7133
5.07	1.6136	1.5580	21.4632	20.7234	0.9655	43.9937
5.13	0.8711	0.9888	11.5865	13.1516	1.1351	22.8844
5.20	1.1302	1.0453	15.0331	13.9034	0.9248	29.6409
5.27	0.9980	1.0145	13.2745	13.4944	1.0166	24.7997
5.33	0.3234	0.3333	4.3018	4.4338	1.0307	11.8957

5.40	2.1291	2.2564	28.3189	30.0126	1.0598	53.7135
5.47	0.5588	0.5955	7.4326	7.9210	1.0657	16.5127
5.53	1.3008	1.0652	17.3015	14.1683	0.8189	32.9092
5.60	0.6495	0.8456	8.6389	11.2474	1.3019	22.1292
5.67	1.8035	1.7494	23.9880	23.2684	0.9700	44.1085
5.73	0.6685	0.8047	8.8917	10.7038	1.2038	20.9230
5.80	1.3851	1.2325	18.4239	16.3934	0.8898	34.4614
5.87	1.1442	1.1739	15.2196	15.6144	1.0259	28.3154
5.93	0.7214	0.8824	9.5954	11.7374	1.2232	21.5443
6.00	0.9485	0.8954	12.6155	11.9093	0.9440	29.3373
6.07	0.6918	0.8404	9.2020	11.1778	1.2147	22.9838
6.13	0.9713	0.9106	12.9191	12.1117	0.9375	21.8582
6.20	1.0147	1.0831	13.4961	14.4060	1.0674	27.6922
6.27	0.6236	0.5827	8.2948	7.7502	0.9343	20.6096
6.33	1.2717	1.5477	16.9148	20.5864	1.2171	35.7798
6.40	1.1130	1.0339	14.8047	13.7514	0.9288	30.8460
6.47	1.1077	1.0308	14.7334	13.7108	0.9306	21.5413
6.53	0.9634	1.0262	12.8144	13.6500	1.0652	33.1372
6.60	0.9195	1.2392	12.2309	16.4822	1.3476	31.3627
6.67	1.6851	1.4740	22.4140	19.6054	0.8747	44.3075
6.73	0.9482	1.2044	12.6123	16.0193	1.2701	31.9777
6.80	1.2298	1.3862	16.3571	18.4383	1.1272	36.2773
6.87	0.6069	0.4898	8.0726	6.5147	0.8070	17.4165
6.93	0.8169	1.0794	10.8662	14.3578	1.3213	28.6232
7.00	0.8628	0.9473	11.4756	12.6003	1.0980	24.5982
7.07	0.5815	0.6625	7.7347	8.8114	1.1392	17.6360
7.13	1.3512	1.5547	17.9724	20.6790	1.1506	41.2249
7.20	1.6755	1.8592	22.2858	24.7290	1.1096	47.7186
7.27	0.9720	0.9057	12.9293	12.0464	0.9317	29.5301
7.33	0.4832	0.6193	6.4269	8.2370	1.2816	18.0462
7.40	1.5472	1.8100	20.5796	24.0756	1.1699	42.1361
7.47	0.9383	0.9437	12.4802	12.5522	1.0058	28.4101
7.53	0.7062	0.9375	9.3936	12.4692	1.3274	21.2307
7.60	1.5582	1.3258	20.7264	17.6343	0.8508	42.4672
7.67	1.2222	1.7092	16.2571	22.7345	1.3984	41.1280
7.73	1.4998	1.7872	19.9496	23.7715	1.1916	42.6961
7.80	1.2166	1.0993	16.1825	14.6213	0.9035	32.0802
7.87	0.9725	1.1689	12.9355	15.5482	1.2020	33.0072
7.93	0.9854	1.3672	13.1073	18.1855	1.3874	31.2819
8.00	1.9401	2.2450	25.8054	29.8611	1.1572	50.5568
8.07	1.1150	0.9594	14.8307	12.7617	0.8605	27.4794
8.13	1.1453	1.6510	15.2342	21.9605	1.4415	39.1630

8.20	1.4067	1.2207	18.7110	16.2367	0.8678	36.2050
8.27	0.9803	1.4149	13.0390	18.8198	1.4433	32.5217
8.33	1.9492	2.0577	25.9262	27.3696	1.0557	55.6689
8.40	0.6183	0.6467	8.2234	8.6024	1.0461	20.9172
8.47	1.2219	1.5080	16.2520	20.0576	1.2342	37.3631
8.53	0.8156	1.0413	10.8484	13.8510	1.2768	28.9149
8.60	1.5950	1.8614	21.2156	24.7581	1.1670	47.7748
8.67	0.9043	1.0831	12.0284	14.4066	1.1977	26.2199
8.73	1.7673	1.9026	23.5070	25.3071	1.0766	41.1791
8.80	1.6380	1.6730	21.7878	22.2521	1.0213	43.5533
8.87	1.7369	1.8048	23.1027	24.0061	1.0391	43.9033
8.93	1.2510	1.2905	16.6403	17.1652	1.0315	36.1849
9.00	1.7385	1.9291	23.1243	25.6590	1.1096	45.4357
9.07	1.5875	1.6393	21.1151	21.8048	1.0327	38.7475
9.13	1.4969	1.6129	19.9104	21.4529	1.0775	40.6670
9.20	0.6653	0.8852	8.8486	11.7738	1.3306	23.2561
9.27	1.5288	1.6693	20.3348	22.2038	1.0919	43.2339
9.33	1.2716	1.3985	16.9131	18.6019	1.0998	36.2673
9.40	1.7371	1.7011	23.1056	22.6262	0.9793	47.4972
9.47	1.3557	1.9024	18.0321	25.3036	1.4033	44.1314
9.53	1.1493	1.0571	15.2867	14.0602	0.9198	39.3353
9.60	0.8508	1.3049	11.3168	17.3572	1.5338	30.5555
9.67	1.9372	2.1420	25.7667	28.4904	1.1057	50.7479
9.73	0.8383	1.0061	11.1503	13.3821	1.2002	30.9399
9.80	2.0122	2.1644	26.7643	28.7884	1.0756	58.3182
9.87	1.0894	1.0626	14.4908	14.1334	0.9753	27.3428
9.93	0.8962	1.2832	11.9206	17.0673	1.4318	31.9511
10.00	1.9567	1.8345	26.0256	24.4007	0.9376	49.9678
10.07	1.5246	1.7826	20.2786	23.7109	1.1693	43.9510
10.13	1.5913	1.7677	21.1661	23.5123	1.1108	43.5291
10.20	1.0348	1.2871	13.7644	17.1203	1.2438	34.1756
10.27	1.3347	1.4082	17.7534	18.7302	1.0550	37.5887
10.33	1.7861	2.1569	23.7570	28.6895	1.2076	57.8842
10.40	0.3312	0.3100	4.4056	4.1230	0.9359	13.8212
10.47	1.0887	1.4562	14.4805	19.3696	1.3376	35.2525
10.53	0.7214	0.7610	9.5952	10.1216	1.0549	23.9534
10.60	1.5956	1.8001	21.2238	23.9427	1.1281	42.3966
10.67	0.8460	0.7976	11.2528	10.6093	0.9428	28.3629
10.73	1.1167	1.5984	14.8531	21.2609	1.4314	37.3838
10.80	1.3369	1.4143	17.7829	18.8124	1.0579	37.8040
10.87	2.1210	2.1887	28.2113	29.1124	1.0319	53.6986
10.93	0.9132	1.1798	12.1464	15.6924	1.2919	29.0877

11.00	1.4200	1.4056	18.8877	18.6965	0.9899	40.1437
11.07	0.8531	0.9741	11.3468	12.9561	1.1418	21.1047
11.13	1.8200	1.9895	24.2074	26.4629	1.0932	50.6102
11.20	1.9143	2.1330	25.4621	28.3715	1.1143	44.9506
11.27	1.0711	0.9250	14.2467	12.3038	0.8636	30.1119
11.33	1.0852	1.3597	14.4337	18.0851	1.2530	30.3462
11.40	1.4610	1.4591	19.4335	19.4074	0.9987	41.9696
11.47	1.4197	1.5719	18.8836	20.9079	1.1072	38.4240
11.53	1.0612	1.1775	14.1147	15.6618	1.1096	27.7332
11.60	2.5416	2.3155	33.8062	30.7989	0.9110	54.8599
11.67	1.9336	2.0872	25.7193	27.7621	1.0794	45.4688
11.73	1.1131	1.1477	14.8060	15.2653	1.0310	26.1392
11.80	2.0681	2.0162	27.5086	26.8173	0.9749	42.5778
11.87	1.5427	1.3225	20.5195	17.5908	0.8573	33.5571
11.93	1.5638	1.8762	20.8005	24.9554	1.1998	38.6832
12.00	1.2151	1.1313	16.1621	15.0471	0.9310	23.6903
12.07	0.8299	0.7844	11.0389	10.4331	0.9451	17.1997
12.13	1.1453	1.1899	15.2331	15.8270	1.0390	26.7061
12.20	3.0060	2.7946	39.9830	37.1708	0.9297	56.9148
12.27	1.1981	1.1222	15.9357	14.9271	0.9367	26.2163
12.33	1.9026	1.7537	25.3071	23.3265	0.9217	36.8411
12.40	1.9645	1.8490	26.1300	24.5933	0.9412	38.4785
12.47	1.7294	1.6569	23.0025	22.0389	0.9581	35.0282
12.53	1.2522	1.1908	16.6557	15.8393	0.9510	24.5778
12.60	2.3241	2.1431	30.9134	28.5055	0.9221	45.4500
12.67	2.0599	1.9386	27.3992	25.7853	0.9411	41.1563
12.73	1.7932	1.6751	23.8520	22.2801	0.9341	34.3946
12.80	1.5306	1.4794	20.3587	19.6783	0.9666	32.3699
12.87	1.5565	1.5148	20.7034	20.1491	0.9732	33.5849
12.93	2.5558	2.3391	33.9944	31.1125	0.9152	54.3256
13.00	1.9711	1.8070	26.2177	24.0351	0.9168	40.9232

**One cycling transition**

Last Name	First Name	D.O.B	Weight	Height	Temp	Date
Bailey	Craig	12-31-73	190.3 Lbs	72.0 in	21.5 deg C	04-01-1998

TIME(min)	VO2(L)	VCO2(L)	VO2(Kg)	VCO2(Kg)	RER	VE(stpd)
0.13	0.1110	0.0953	1.2834	1.1015	0.8583	7.5099
0.20	0.3147	0.2968	3.6377	3.4314	0.9433	13.5050
0.27	0.3891	0.3615	4.4982	4.1791	0.9290	11.3789
0.33	0.4437	0.4070	5.1298	4.7057	0.9173	10.7649
0.40	0.6075	0.5422	7.0237	6.2684	0.8925	13.2058
0.47	0.7828	0.6914	9.0502	7.9927	0.8831	16.2646
0.53	0.5445	0.4691	6.2952	5.4230	0.8614	10.9710
0.60	0.7649	0.6470	8.8429	7.4798	0.8459	15.4385
0.67	0.6483	0.5449	7.4945	6.2989	0.8405	13.2058
0.73	0.5345	0.4557	6.1797	5.2682	0.8525	11.1804
0.80	1.1785	0.9766	13.6243	11.2897	0.8286	24.6541
0.87	0.5909	0.5050	6.8308	5.8387	0.8548	12.4982
0.93	0.5865	0.4923	6.7803	5.6918	0.8395	12.3983
1.00	0.5258	0.4423	6.0788	5.1133	0.8412	11.1804
1.07	1.1504	1.0090	13.2992	11.6651	0.8771	23.6820
1.13	0.6550	0.5586	7.5720	6.4582	0.8529	13.0045
1.20	0.7791	0.6574	9.0071	7.6002	0.8438	15.5573
1.27	1.0180	0.8616	11.7692	9.9603	0.8463	20.9836
1.33	1.1992	0.9907	13.8630	11.4526	0.8261	25.6238
1.40	1.0392	0.8285	12.0144	9.5785	0.7972	20.1302
1.47	1.3703	1.0352	15.8412	11.9680	0.7555	23.6320
1.53	2.1225	1.5794	24.5378	18.2590	0.7441	34.9388
1.60	1.6252	1.1981	18.7879	13.8514	0.7372	25.8200
1.67	2.1523	1.6160	24.8818	18.6819	0.7508	33.7351
1.73	1.9559	1.4801	22.6113	17.1112	0.7568	29.7809
1.80	2.4559	1.8568	28.3924	21.4654	0.7560	36.7314
1.87	2.2501	1.6954	26.0133	19.6000	0.7535	33.3090
1.93	2.5277	1.9086	29.2221	22.0652	0.7551	37.9453
2.00	2.3129	1.7860	26.7384	20.6477	0.7722	34.6476
2.07	2.6529	2.0827	30.6699	24.0774	0.7850	40.2467
2.13	2.1943	1.7453	25.3672	20.1764	0.7954	33.6285
2.20	2.6789	2.1489	30.9699	24.8429	0.8022	42.5531
2.27	2.5875	2.1067	29.9130	24.3554	0.8142	40.7901
2.33	2.5411	2.1076	29.3769	24.3650	0.8294	40.6881
2.40	2.4835	2.0971	28.7110	24.2436	0.8444	40.5636
2.47	1.7186	1.4729	19.8688	17.0274	0.8570	28.3256
2.53	2.7510	2.3285	31.8036	26.9185	0.8464	44.9524

2.60	2.3068	1.9636	26.6684	22.7009	0.8512	36.8088
2.67	2.9198	2.3888	33.7552	27.6166	0.8181	45.3312
2.73	1.8407	1.5600	21.2793	18.0348	0.8475	29.7726
2.80	3.3989	2.9340	39.2932	33.9195	0.8632	55.6245
2.87	1.7003	1.4758	19.6569	17.0617	0.8680	27.5104
2.93	3.5979	3.0979	41.5944	35.8141	0.8610	58.7314
3.00	1.6769	1.4616	19.3857	16.8972	0.8716	27.8415
3.07	3.1280	2.7390	36.1621	31.6653	0.8756	52.4243
3.13	1.7584	1.5570	20.3279	17.9998	0.8855	29.6582
3.20	2.8714	2.5763	33.1955	29.7840	0.8972	48.6584
3.27	2.4601	2.1691	28.4408	25.0759	0.8817	39.8392
3.33	2.3673	2.0626	27.3680	23.8455	0.8713	38.8102
3.40	1.6618	1.4765	19.2118	17.0695	0.8885	27.3448
3.47	2.8256	2.4491	32.6662	28.3136	0.8668	46.9650
3.53	2.6154	2.2529	30.2364	26.0457	0.8614	41.5706
3.60	2.2085	1.9197	25.5323	22.1931	0.8692	35.1624
3.67	3.0859	2.6287	35.6746	30.3896	0.8519	50.1683
3.73	1.8868	1.6568	21.8130	19.1532	0.8781	31.1732
3.80	3.2751	2.8736	37.8619	33.2202	0.8774	53.3165
3.87	1.6741	1.4572	19.3541	16.8458	0.8704	27.2131
3.93	3.3812	2.9319	39.0885	33.8944	0.8671	55.8477
4.00	1.9423	1.7525	22.4538	20.2604	0.9023	32.1886
4.07	1.9212	1.6683	22.2106	19.2866	0.8684	31.8088
4.13	3.5814	3.1872	41.4029	36.8468	0.8900	61.1194
4.20	2.0547	1.7935	23.7533	20.7339	0.8729	34.1958
4.27	2.3617	2.0615	27.3024	23.8329	0.8729	40.0700
4.33	2.9289	2.5558	33.8600	29.5471	0.8726	47.7310
4.40	2.1410	1.8881	24.7515	21.8275	0.8819	35.6262
4.47	2.8290	2.4835	32.7055	28.7115	0.8779	46.2517
4.53	2.1294	1.8754	24.6177	21.6805	0.8807	34.4764
4.60	1.9877	1.7177	22.9793	19.8579	0.8642	31.8707
4.67	3.6576	3.1499	42.2842	36.4150	0.8612	57.4327
4.73	2.4793	2.0410	28.6625	23.5953	0.8232	38.7673
4.80	2.5521	2.2252	29.5045	25.7244	0.8719	43.2923
4.87	3.0371	2.6845	35.1107	31.0343	0.8839	52.3302
4.93	1.4329	1.2899	16.5652	14.9122	0.9002	24.4545
5.00	2.0050	1.7748	23.1792	20.5183	0.8852	33.4577
5.07	3.2631	2.8328	37.7239	32.7493	0.8681	50.0115
5.13	2.1844	1.8157	25.2537	20.9904	0.8312	32.9554
5.20	3.0138	2.5147	34.8418	29.0713	0.8344	47.0501
5.27	2.0950	1.8038	24.2194	20.8533	0.8610	33.4994
5.33	2.3375	2.0049	27.0227	23.1780	0.8577	36.8238

5.40	2.5707	2.2251	29.7194	25.7239	0.8656	39.8451
5.47	3.7669	3.2564	43.5478	37.6467	0.8645	59.4293
5.53	2.0260	1.7795	23.4223	20.5719	0.8783	33.5452
5.60	3.0090	2.6683	34.7858	30.8472	0.8868	50.8753
5.67	2.3585	2.0823	27.2662	24.0724	0.8829	39.9300
5.73	2.4833	2.2297	28.7084	25.7764	0.8979	43.2956
5.80	2.2112	1.9923	25.5632	23.0320	0.9010	37.1026
5.87	2.4030	2.1048	27.7808	24.3329	0.8759	40.3620
5.93	2.7080	2.3702	31.3061	27.4006	0.8752	44.8069
6.00	2.8468	2.4043	32.9107	27.7952	0.8446	46.0171
6.07	2.1144	1.8235	24.4437	21.0813	0.8624	34.6696
6.13	2.7620	2.3604	31.9311	27.2882	0.8546	45.3075
6.20	2.2130	1.9373	25.5842	22.3966	0.8754	37.0085
6.27	3.6839	3.2036	42.5885	37.0358	0.8696	59.9963
6.33	1.7996	1.5768	20.8045	18.2288	0.8762	30.0356
6.40	3.5508	3.1730	41.0491	36.6817	0.8936	60.3830
6.47	2.0506	1.8163	23.7064	20.9979	0.8857	34.9641
6.53	2.6078	2.3346	30.1484	26.9895	0.8952	45.6431
6.60	1.6669	1.5377	19.2701	17.7765	0.9225	28.5833
6.67	2.9714	2.5941	34.3510	29.9892	0.8730	49.9838
6.73	3.1051	2.6426	35.8976	30.5503	0.8510	50.5782
6.80	2.0258	1.7468	23.4197	20.1943	0.8623	33.8540
6.87	3.3273	2.9661	38.4659	34.2902	0.8914	56.0731
6.93	1.9131	1.6910	22.1163	19.5490	0.8839	31.8472
7.00	3.2942	2.9257	38.0827	33.8232	0.8882	56.8116
7.07	1.7235	1.5416	19.9248	17.8220	0.8945	29.5056
7.13	2.9045	2.5283	33.5775	29.2291	0.8705	48.6234
7.20	2.1158	1.8855	24.4601	21.7981	0.8912	35.5782
7.27	2.7347	2.3983	31.6145	27.7254	0.8770	45.5531
7.33	2.1973	1.9229	25.4027	22.2297	0.8751	35.9775
7.40	2.7458	2.3702	31.7439	27.4017	0.8632	44.4727
7.47	3.1480	2.6819	36.3927	31.0044	0.8519	50.6522
7.53	1.9032	1.5914	22.0028	18.3982	0.8362	31.3590
7.60	3.3993	2.9560	39.2983	34.1735	0.8696	56.4150
7.67	2.0321	1.7808	23.4921	20.5870	0.8763	33.3499
7.73	2.6764	2.3304	30.9414	26.9416	0.8707	44.0563
7.80	2.4412	2.1284	28.2224	24.6061	0.8719	40.6207
7.87	2.5806	2.2831	29.8338	26.3937	0.8847	43.2419
7.93	3.1885	2.7713	36.8614	32.0380	0.8691	52.6888
8.00	1.8998	1.6476	21.9627	19.0475	0.8673	31.1180

**Two cycling  
transitions**

Last Name	First Name	D.O.B	Weight	Height	Temp	Date
Bailey	Craig	12-31-73	190.3 Lbs	72.0 in	21.7 deg C	03-20-1998

TIME(min)	VO2(L)	VCO2(L)	VO2(Kg)	VCO2(Kg)	RER	VE(stpd)
0.13	0.0952	0.0757	1.1003	0.8755	0.7957	2.6460
0.20	0.3797	0.3054	4.3896	3.5307	0.8043	9.7670
0.27	0.4564	0.3706	5.2765	4.2847	0.8120	10.9924
0.33	0.3769	0.3046	4.3566	3.5216	0.8083	8.3426
0.40	0.2717	0.2180	3.1406	2.5198	0.8023	5.6966
0.47	0.3104	0.2461	3.5889	2.8448	0.7927	6.3079
0.53	0.3881	0.3052	4.4862	3.5281	0.7864	7.8329
0.60	0.5439	0.4236	6.2876	4.8976	0.7789	10.7904
0.67	0.5444	0.4239	6.2940	4.9009	0.7787	10.5824
0.73	0.4781	0.3705	5.5268	4.2835	0.7750	9.1692
0.80	0.4546	0.3508	5.2552	4.0549	0.7716	8.7556
0.87	0.4100	0.3173	4.7399	3.6686	0.7740	7.9412
0.93	0.4522	0.3500	5.2283	4.0465	0.7740	8.7593
1.00	0.3883	0.3001	4.4885	3.4688	0.7728	7.5371
1.07	1.0509	0.8175	12.1497	9.4513	0.7779	21.1735
1.13	0.5331	0.4262	6.1626	4.9276	0.7996	11.1111
1.20	0.8152	0.6545	9.4245	7.5663	0.8028	17.3316
1.27	1.0315	0.8401	11.9254	9.7121	0.8144	21.3978
1.33	0.9150	0.7250	10.5778	8.3816	0.7924	18.3963
1.40	1.2317	0.9540	14.2394	11.0290	0.7745	22.2862
1.47	1.5412	1.1456	17.8175	13.2443	0.7433	25.1486
1.53	1.3545	1.0131	15.6590	11.7125	0.7480	21.2609
1.60	2.2589	1.6655	26.1149	19.2548	0.7373	35.8153
1.67	1.1885	0.8899	13.7397	10.2879	0.7488	18.8130
1.73	1.9496	1.4523	22.5389	16.7891	0.7449	30.9629
1.80	1.6636	1.2471	19.2324	14.4169	0.7496	26.5033
1.87	1.8988	1.4242	21.9511	16.4645	0.7501	29.4545
1.93	1.5993	1.1951	18.4886	13.8166	0.7473	24.7431
2.00	2.1311	1.6159	24.6370	18.6806	0.7582	33.9451
2.07	1.4987	1.1507	17.3256	13.3028	0.7678	23.9219
2.13	1.8163	1.3894	20.9977	16.0624	0.7650	28.3256
2.20	1.8941	1.4404	21.8974	16.6520	0.7605	28.6364
2.27	1.9749	1.4964	22.8312	17.2992	0.7577	29.9576
2.33	2.1536	1.6354	24.8969	18.9064	0.7594	33.3409
2.40	1.2905	0.9982	14.9189	11.5400	0.7735	20.4545
2.47	2.1994	1.7249	25.4266	19.9409	0.7843	35.3815



2.53	1.7212	1.3518	19.8977	15.6274	0.7854	27.9282
2.60	2.0650	1.6281	23.8725	18.8225	0.7885	32.3048
2.67	2.0235	1.5688	23.3930	18.1363	0.7753	31.6286
2.73	2.1233	1.7241	24.5474	19.9323	0.8120	33.9404
2.80	2.2331	1.7929	25.8158	20.7274	0.8029	35.2597
2.87	1.6936	1.3564	19.5793	15.6808	0.8009	27.4015
2.93	2.2456	1.8507	25.9612	21.3955	0.8241	37.5393
3.00	1.3946	1.1580	16.1223	13.3878	0.8304	23.3945
3.07	2.5805	2.1433	29.8329	24.7782	0.8306	42.7382
3.13	1.3712	1.1205	15.8524	12.9538	0.8172	22.5000
3.20	2.5490	2.1171	29.4678	24.4750	0.8306	42.2152
3.27	1.4769	1.2301	17.0742	14.2206	0.8329	25.3356
3.33	2.5546	2.1674	29.5333	25.0562	0.8484	45.5783
3.40	2.1357	1.8684	24.6906	21.6001	0.8748	39.1271
3.47	1.7771	1.5707	20.5447	18.1585	0.8839	33.2405
3.53	2.1936	1.9824	25.3590	22.9183	0.9038	42.3116
3.60	1.3219	1.2088	15.2816	13.9742	0.9144	25.7442
3.67	1.9141	1.7370	22.1283	20.0808	0.9075	36.6820
3.73	1.5323	1.3653	17.7146	15.7842	0.8910	28.5025
3.80	1.9128	1.6701	22.1132	19.3080	0.8731	34.1535
3.87	2.1395	1.7995	24.7346	20.8039	0.8411	36.6870
3.93	1.8187	1.5098	21.0259	17.4538	0.8301	30.3771
4.00	2.2826	1.8990	26.3880	21.9540	0.8320	39.2347
4.07	1.5153	1.2723	17.5175	14.7085	0.8396	26.2050
4.13	2.3538	1.9992	27.2111	23.1120	0.8494	40.8822
4.20	1.4466	1.2249	16.7238	14.1603	0.8467	25.2803
4.27	2.4832	2.1103	28.7078	24.3962	0.8498	43.9165
4.33	1.3631	1.1586	15.7583	13.3946	0.8500	24.1623
4.40	2.1784	1.8672	25.1841	21.5866	0.8572	38.9398
4.47	1.3692	1.1500	15.8292	13.2949	0.8399	26.3724
4.53	2.3927	2.0822	27.6609	24.0712	0.8702	42.4056
4.60	1.4233	1.1938	16.4549	13.8016	0.8388	24.6652
4.67	2.2801	1.9544	26.3598	22.5944	0.8572	40.7577
4.73	1.4692	1.2765	16.9853	14.7578	0.8689	26.5109
4.80	2.0526	1.7797	23.7293	20.5741	0.8670	36.7686
4.87	1.5616	1.3335	18.0529	15.4161	0.8539	27.5790
4.93	2.1392	1.8064	24.7309	20.8829	0.8444	36.7889
5.00	1.4199	1.1843	16.4149	13.6912	0.8341	24.4175
5.07	2.3160	1.9468	26.7740	22.5058	0.8406	39.4474
5.13	1.8268	1.5448	21.1193	17.8588	0.8456	31.0821
5.20	1.9567	1.6459	22.6212	19.0273	0.8411	33.1157
5.27	1.7615	1.4679	20.3647	16.9702	0.8333	29.9569

5.33	1.7250	1.4503	19.9424	16.7666	0.8408	29.4475
5.40	2.3313	1.9382	26.9517	22.4073	0.8314	39.7168
5.47	1.5456	1.2863	17.8676	14.8708	0.8323	26.2778
5.53	1.8297	1.5119	21.1521	17.4781	0.8263	30.6660
5.60	2.4862	2.0604	28.7418	23.8199	0.8288	41.9631
5.67	1.7008	1.4083	19.6628	16.2808	0.8280	28.8281
5.73	1.9133	1.5958	22.1193	18.4489	0.8341	32.9028
5.80	1.7470	1.4792	20.1968	17.1010	0.8467	30.5303
5.87	1.7798	1.5044	20.5755	17.3923	0.8453	30.9545
5.93	2.1959	1.8660	25.3860	21.5725	0.8498	37.3952
6.00	1.0209	0.8567	11.8020	9.9045	0.8392	17.3077
6.07	2.1323	1.8083	24.6510	20.9056	0.8481	36.4580
6.13	2.4481	1.9807	28.3012	22.8981	0.8091	39.1058
6.20	2.4729	2.0380	28.5886	23.5611	0.8241	40.6390
6.27	1.8073	1.5140	20.8942	17.5033	0.8377	30.4327
6.33	2.4465	2.0847	28.2828	24.1011	0.8521	41.3234
6.40	1.6512	1.4103	19.0890	16.3036	0.8541	28.5186
6.47	2.9364	2.5062	33.9465	28.9731	0.8535	50.3750
6.53	1.3891	1.1970	16.0586	13.8377	0.8617	23.8202
6.60	2.8895	2.4747	33.4042	28.6088	0.8564	49.4933
6.67	1.8703	1.5972	21.6222	18.4644	0.8540	31.8797
6.73	2.9466	2.4815	34.0651	28.6883	0.8422	49.8799
6.80	2.0331	1.7481	23.5044	20.2089	0.8598	35.7106
6.87	2.3761	2.0686	27.4696	23.9148	0.8706	41.8323
6.93	2.4134	2.0940	27.9008	24.2080	0.8676	41.7132
7.00	2.4495	2.1437	28.3176	24.7828	0.8752	43.2632
7.07	2.6877	2.3438	31.0722	27.0958	0.8720	47.0167
7.13	1.8382	1.6132	21.2506	18.6497	0.8776	32.5567
7.20	3.1462	2.7293	36.3722	31.5528	0.8675	54.8604
7.27	1.5091	1.3131	17.4461	15.1806	0.8701	25.4244
7.33	3.1488	2.7061	36.4027	31.2847	0.8594	52.7011
7.40	1.9242	1.6470	22.2450	19.0404	0.8559	32.0435
7.47	2.8765	2.4570	33.2545	28.4045	0.8542	47.4796
7.53	2.4862	2.0969	28.7427	24.2417	0.8434	40.5997
7.60	2.4597	2.1057	28.4358	24.3435	0.8561	41.4926
7.67	2.6750	2.3028	30.9248	26.6217	0.8609	45.4650
7.73	2.0430	1.7798	23.6180	20.5757	0.8712	35.1050
7.80	3.2041	2.7576	37.0412	31.8794	0.8606	54.9318
7.87	1.6488	1.4315	19.0618	16.5487	0.8682	28.0685
7.93	3.0515	2.6499	35.2777	30.6347	0.8684	52.0619
8.00	1.6645	1.4419	19.2433	16.6691	0.8662	28.0801
8.07	2.8954	2.4771	33.4733	28.6364	0.8555	48.5231

8.13	2.5413	2.1980	29.3790	25.4107	0.8649	42.3120
8.20	2.7848	2.3727	32.1939	27.4303	0.8520	45.3696
8.27	2.8944	2.4436	33.4616	28.2493	0.8442	48.3880
8.33	2.0702	1.8085	23.9324	20.9072	0.8736	36.3876
8.40	3.0707	2.6825	35.4989	31.0116	0.8736	53.9736
8.47	1.6846	1.4740	19.4749	17.0407	0.8750	29.4217
8.53	2.7928	2.4398	32.2871	28.2058	0.8736	49.0902
8.60	2.7924	2.4350	32.2819	28.1500	0.8720	47.8863
8.67	2.8351	2.3871	32.7758	27.5970	0.8420	47.8863
8.73	2.5845	2.1962	29.8784	25.3901	0.8498	44.0129
8.80	2.6573	2.2573	30.7202	26.0962	0.8495	45.6480
8.87	2.3867	2.0239	27.5915	23.3979	0.8480	40.2773
8.93	2.5062	2.0884	28.9730	24.1435	0.8333	41.9779
9.00	2.3875	2.0168	27.6010	23.3158	0.8447	40.1758
9.07	2.1353	1.7759	24.6857	20.5310	0.8317	35.9860
9.13	2.4581	2.1022	28.4179	24.3029	0.8552	42.0020
9.20	2.7900	2.3578	32.2548	27.2580	0.8451	46.5517
9.27	2.8085	2.3710	32.4678	27.4104	0.8442	46.3548
9.33	2.4171	1.9956	27.9430	23.0702	0.8256	38.7501
9.40	2.2938	1.8970	26.5180	21.9308	0.8270	37.6395
9.47	2.5511	2.1562	29.4921	24.9271	0.8452	40.5704
9.53	2.1796	1.7961	25.1971	20.7638	0.8241	33.4799
9.60	2.6039	2.1067	30.1027	24.3553	0.8091	40.6719
9.67	2.7685	2.2578	32.0063	26.1019	0.8155	44.8427
9.73	2.7432	2.2578	31.7133	26.1016	0.8230	44.2279
9.80	2.7567	2.3139	31.8690	26.7503	0.8394	46.8395
9.87	3.0049	2.5436	34.7383	29.4052	0.8465	51.0239
9.93	2.7323	2.3202	31.5877	26.8232	0.8492	45.6292
10.00	2.5841	2.1582	29.8736	24.9505	0.8352	43.2075
10.07	2.7616	2.3209	31.9264	26.8316	0.8404	46.9344
10.13	2.4855	2.0962	28.7336	24.2330	0.8434	42.1758
10.20	1.9249	1.6361	22.2530	18.9143	0.8500	32.8530
10.27	2.4737	2.1239	28.5979	24.5537	0.8586	41.4833
10.33	2.7378	2.2980	31.6506	26.5659	0.8394	45.2360
10.40	3.0029	2.4812	34.7152	28.6843	0.8263	49.4755
10.47	2.8758	2.3981	33.2464	27.7238	0.8339	47.8665
10.53	2.4201	2.0576	27.9784	23.7869	0.8502	40.4244
10.60	1.7616	1.4718	20.3650	17.0150	0.8355	29.5838
10.67	3.2793	2.7778	37.9109	32.1138	0.8471	54.0452
10.73	1.7548	1.4603	20.2865	16.8821	0.8322	28.0569
10.80	3.0750	2.5746	35.5491	29.7643	0.8373	50.0424
10.87	2.3065	1.9207	26.6642	22.2043	0.8327	37.1875

10.93	2.4127	2.0293	27.8920	23.4596	0.8411	39.2141
11.00	2.9706	2.4908	34.3421	28.7958	0.8385	49.1781
11.07	2.9196	2.4761	33.7524	28.6257	0.8481	50.5837
11.13	2.7132	2.3385	31.3659	27.0347	0.8619	46.6303
11.20	2.5443	2.1655	29.4140	25.0343	0.8511	44.0129
11.27	2.3898	2.0485	27.6281	23.6824	0.8572	42.2365
11.33	2.6872	2.3365	31.0658	27.0110	0.8695	48.2722
11.40	1.5013	1.3236	17.3560	15.3020	0.8817	27.0398
11.47	2.9663	2.5669	34.2928	29.6755	0.8654	49.6042
11.53	2.3894	2.0082	27.6234	23.2164	0.8405	38.5101
11.60	2.3637	1.9884	27.3257	22.9877	0.8412	38.4995
11.67	3.0561	2.6031	35.3307	30.0935	0.8518	50.2059
11.73	1.8866	1.6107	21.8102	18.6211	0.8538	31.0065
11.80	3.1565	2.6854	36.4916	31.0456	0.8508	51.8444
11.87	2.8766	2.4260	33.2557	28.0467	0.8434	48.8134
11.93	2.3624	2.0570	27.3112	23.7803	0.8707	40.4133
12.00	2.4146	2.0460	27.9145	23.6530	0.8473	40.9197
12.07	2.0966	1.7969	24.2379	20.7732	0.8571	36.1543
12.13	2.6593	2.2496	30.7429	26.0069	0.8459	44.8575
12.20	3.0040	2.5184	34.7280	29.1140	0.8383	49.6235
12.27	2.9330	2.4135	33.9072	27.9023	0.8229	47.9834
12.33	2.4163	2.0022	27.9345	23.1470	0.8286	40.6947
12.40	2.7043	2.3308	31.2633	26.9462	0.8619	46.4777
12.47	2.7619	2.3624	31.9294	27.3105	0.8553	47.8204
12.53	1.6815	1.4812	19.4395	17.1232	0.8808	30.0738
12.60	3.1433	2.7589	36.3385	31.8953	0.8777	54.6872
12.67	2.4409	2.0852	28.2183	24.1064	0.8543	40.8072
12.73	2.1683	1.8093	25.0672	20.9171	0.8344	35.3392
12.80	2.2694	1.8826	26.2361	21.7644	0.8296	37.5773
12.87	3.0706	2.5159	35.4978	29.0861	0.8194	50.6223
12.93	2.6151	2.1555	30.2322	24.9196	0.8243	42.3494
13.00	1.9872	1.6390	22.9734	18.9476	0.8248	31.9184

**Stepping and cycling transitions**

Last Name	First Name	D.O.B	Weight	Height	Temp	Date
Bailey	Craig	12-31-73	190.3 Lbs	72.0 in	22.2 deg C	03-16-1998

TIME(min)	VO2(L)	VCO2(L)	VO2(Kg)	VCO2(Kg)	RER	VE(stpd)
0.13	0.5752	0.5365	6.6498	6.2022	0.9327	16.8346
0.20	0.3389	0.2992	3.9179	3.4592	0.8829	8.2627
0.27	0.5818	0.5258	6.7259	6.0784	0.9037	13.4950
0.33	0.5428	0.4877	6.2748	5.6385	0.8986	11.8788
0.40	0.3168	0.2825	3.6619	3.2659	0.8919	6.6459
0.47	0.3505	0.3155	4.0520	3.6470	0.9001	7.2510
0.53	0.9178	0.8345	10.6099	9.6473	0.9093	18.7293
0.60	0.4642	0.4211	5.3661	4.8683	0.9072	9.6681
0.67	0.1598	0.1464	1.8471	1.6928	0.9165	3.4246
0.73	0.1916	0.1724	2.2155	1.9934	0.8997	4.2304
0.80	0.3331	0.3115	3.8509	3.6010	0.9351	7.4504
0.87	0.3110	0.2842	3.5951	3.2858	0.9140	6.8473
0.93	0.2203	0.2017	2.5471	2.3317	0.9154	5.0348
1.00	0.4749	0.4373	5.4904	5.0556	0.9208	10.4723
1.07	0.5568	0.5092	6.4370	5.8870	0.9146	12.0934
1.13	0.8102	0.7255	9.3666	8.3868	0.8954	18.0195
1.20	0.6638	0.5710	7.6744	6.6016	0.8602	14.9049
1.27	1.4201	1.1899	16.4173	13.7555	0.8379	30.4225
1.33	0.7370	0.6059	8.5198	7.0048	0.8222	14.1051
1.40	1.4513	1.1375	16.7776	13.1500	0.7838	25.4724
1.47	1.1124	0.8649	12.8606	9.9987	0.7775	19.5429
1.53	1.8061	1.3832	20.8794	15.9910	0.7659	30.3974
1.60	1.4538	1.0907	16.8066	12.6089	0.7502	23.6568
1.67	1.9288	1.4441	22.2981	16.6953	0.7487	30.5945
1.73	1.9179	1.4288	22.1727	16.5183	0.7450	30.3343
1.80	1.9440	1.4568	22.4743	16.8414	0.7494	29.7296
1.87	2.1231	1.5644	24.5444	18.0852	0.7368	31.1319
1.93	1.9488	1.4270	22.5299	16.4973	0.7322	28.0087
2.00	2.3262	1.7148	26.8926	19.8245	0.7372	33.7236
2.07	1.6417	1.2019	18.9789	13.8947	0.7321	23.6829
2.13	3.0983	2.2675	35.8188	26.2141	0.7319	45.0355
2.20	1.9265	1.4257	22.2719	16.4816	0.7400	27.6835
2.27	3.2253	2.3866	37.2865	27.5908	0.7400	46.4333
2.33	1.8159	1.3843	20.9931	16.0035	0.7623	27.0907
2.40	2.9401	2.3199	33.9892	26.8200	0.7891	45.3565
2.47	2.0152	1.5784	23.2969	18.2474	0.7833	30.6198
2.53	2.8532	2.2502	32.9850	26.0143	0.7887	43.2339

2.60	1.9211	1.5202	22.2088	17.5742	0.7913	29.0122
2.67	2.7442	2.1728	31.7250	25.1189	0.7918	42.1913
2.73	2.5368	2.0242	29.3277	23.4013	0.7979	39.7691
2.80	2.1185	1.7186	24.4910	19.8682	0.8112	33.3072
2.87	2.6348	2.1632	30.4597	25.0083	0.8210	41.6821
2.93	2.0678	1.7019	23.9057	19.6755	0.8230	33.3393
3.00	2.9945	2.4708	34.6186	28.5644	0.8251	46.8426
3.07	1.8379	1.5046	21.2476	17.3946	0.8187	28.3109
3.13	3.0294	2.4721	35.0217	28.5796	0.8161	46.8232
3.20	1.6135	1.3417	18.6534	15.5107	0.8315	25.1738
3.27	2.9376	2.4000	33.9603	27.7454	0.8170	45.4135
3.33	1.5895	1.3048	18.3760	15.0842	0.8209	24.6432
3.40	2.9608	2.3942	34.2293	27.6791	0.8086	44.7970
3.47	2.1556	1.7491	24.9201	20.2209	0.8114	34.0303
3.53	2.8629	2.3561	33.0970	27.2382	0.8230	44.5834
3.60	2.1509	1.7760	24.8665	20.5324	0.8257	33.4492
3.67	2.5208	2.0888	29.1426	24.1479	0.8286	39.8643
3.73	2.4101	2.0183	27.8625	23.3333	0.8374	38.2642
3.80	2.2282	1.8518	25.7601	21.4086	0.8311	35.5454
3.87	2.7891	2.3300	32.2437	26.9364	0.8354	44.8093
3.93	1.8245	1.5245	21.0927	17.6246	0.8356	29.8058
4.00	3.2778	2.7738	37.8941	32.0671	0.8462	53.4471
4.07	1.6426	1.4039	18.9900	16.2299	0.8547	26.6659
4.13	3.1071	2.6388	35.9204	30.5066	0.8493	51.3404
4.20	1.6470	1.4274	19.0402	16.5019	0.8667	27.0870
4.27	2.7235	2.3243	31.4861	26.8704	0.8534	44.5711
4.33	1.8517	1.5802	21.4068	18.2678	0.8534	29.6207
4.40	2.8670	2.3820	33.1446	27.5377	0.8308	44.9039
4.47	2.1117	1.7801	24.4131	20.5790	0.8429	33.4308
4.53	2.4589	2.0525	28.4270	23.7282	0.8347	39.6630
4.60	2.3251	1.9674	26.8795	22.7444	0.8462	36.5372
4.67	2.5858	2.1463	29.8941	24.8124	0.8300	40.5746
4.73	2.4740	2.1077	28.6012	24.3663	0.8519	38.9261
4.80	1.8257	1.5452	21.1062	17.8632	0.8463	29.1009
4.87	3.4435	2.8768	39.8087	33.2577	0.8354	53.1305
4.93	1.8094	1.5061	20.9184	17.4113	0.8323	28.1791
5.00	3.3661	2.8516	38.9147	32.9668	0.8472	53.5551
5.07	1.5662	1.3414	18.1063	15.5072	0.8565	25.3822
5.13	3.2236	2.8036	37.2672	32.4119	0.8697	53.0517
5.20	1.7504	1.5364	20.2358	17.7624	0.8778	29.1009
5.27	3.0200	2.6248	34.9129	30.3445	0.8691	49.9036
5.33	1.9949	1.7454	23.0623	20.1780	0.8749	33.2157

5.40	2.4998	2.1961	28.8992	25.3879	0.8785	41.8316
5.47	2.3983	2.1023	27.7263	24.3041	0.8766	39.4453
5.53	2.2083	1.9114	25.5300	22.0967	0.8655	36.6177
5.60	2.2538	1.9840	26.0553	22.9368	0.8803	37.6496
5.67	2.2810	1.9763	26.3697	22.8469	0.8664	37.0456
5.73	2.7339	2.3481	31.6061	27.1453	0.8589	43.6070
5.80	1.8585	1.5774	21.4861	18.2354	0.8487	29.1049
5.87	3.4533	2.9255	39.9223	33.8204	0.8472	54.9417
5.93	1.4822	1.2724	17.1358	14.7097	0.8584	24.2834
6.00	2.9706	2.5853	34.3422	29.8874	0.8703	48.6895
6.07	2.0235	1.7529	23.3930	20.2650	0.8663	32.1959
6.13	2.9556	2.4746	34.1687	28.6085	0.8373	48.0992
6.20	2.0713	1.8275	23.9451	21.1272	0.8823	35.5209
6.27	2.3095	1.9647	26.6992	22.7130	0.8507	36.6228
6.33	2.3982	2.0258	27.7250	23.4201	0.8447	38.3701
6.40	2.3504	2.0097	27.1721	23.2330	0.8550	38.3174
6.47	2.6482	2.2616	30.6146	26.1458	0.8540	43.1626
6.53	2.9009	2.4873	33.5367	28.7549	0.8574	47.5150
6.60	2.6241	2.2557	30.3364	26.0780	0.8596	43.0916
6.67	2.5601	2.2374	29.5963	25.8662	0.8740	43.4465
6.73	2.8168	2.4756	32.5645	28.6192	0.8788	48.5889
6.80	1.8945	1.6891	21.9023	19.5274	0.8916	32.4843
6.87	2.5146	2.2626	29.0702	26.1569	0.8998	42.4524
6.93	2.5927	2.2991	29.9732	26.5795	0.8868	43.8367
7.00	2.8388	2.5628	32.8184	29.6282	0.9028	49.0048
7.07	2.0641	1.8836	23.8630	21.7753	0.9125	34.5004
7.13	2.0403	1.7887	23.5874	20.6792	0.8767	33.0053
7.20	2.7469	2.4672	31.7565	28.5224	0.8982	46.1619
7.27	2.6676	2.3843	30.8389	27.5641	0.8938	45.0742
7.33	2.8898	2.6018	33.4080	30.0782	0.9003	50.5211
7.40	2.5990	2.3937	30.0461	27.6725	0.9210	45.3371
7.47	2.6627	2.4530	30.7831	28.3580	0.9212	48.1455
7.53	2.2679	2.1459	26.2181	24.8077	0.9462	40.0375
7.60	2.1222	1.9629	24.5336	22.6929	0.9250	37.7139
7.67	2.8336	2.6137	32.7581	30.2167	0.9224	49.8830
7.73	2.6578	2.4720	30.7266	28.5786	0.9301	46.8659
7.80	2.1080	1.9537	24.3703	22.5862	0.9268	36.8992
7.87	2.1072	1.9544	24.3604	22.5946	0.9275	36.8088
7.93	2.2893	2.1217	26.4656	24.5283	0.9268	40.3385
8.00	2.6263	2.4004	30.3621	27.7504	0.9140	44.9544
8.07	2.7531	2.5258	31.8272	29.2001	0.9175	47.5699
8.13	2.2974	2.0883	26.5592	24.1421	0.9090	38.5323

8.20	2.7591	2.5002	31.8966	28.9041	0.9062	46.3465
8.27	2.3435	2.1292	27.0927	24.6156	0.9086	40.3288
8.33	2.1933	2.0207	25.3566	23.3603	0.9213	39.1236
8.40	2.2607	2.0860	26.1347	24.1157	0.9227	40.4277
8.47	2.3375	2.1343	27.0229	24.6743	0.9131	40.6172
8.53	2.5908	2.3491	29.9514	27.1571	0.9067	45.6590
8.60	2.4148	2.2223	27.9163	25.6913	0.9203	41.9325
8.67	2.4914	2.1901	28.8026	25.3186	0.8790	41.5198
8.73	2.7873	2.4610	32.2233	28.4505	0.8829	45.6192
8.80	1.9519	1.6980	22.5653	19.6300	0.8699	32.8127
8.87	2.7713	2.4977	32.0383	28.8746	0.9013	48.7834
8.93	2.8955	2.6348	33.4739	30.4598	0.9100	49.9510
9.00	2.7807	2.5273	32.1464	29.2176	0.9089	49.0281
9.07	2.4454	2.2171	28.2706	25.6310	0.9066	42.4341
9.13	2.4723	2.2684	28.5813	26.2247	0.9175	44.2632
9.20	2.6588	2.4169	30.7380	27.9411	0.9090	49.8830
9.27	1.5117	1.4058	17.4764	16.2525	0.9300	28.0888
9.33	3.3807	3.1459	39.0832	36.3685	0.9305	60.5582
9.40	2.3236	2.1743	26.8619	25.1365	0.9358	40.3053
9.47	2.1395	1.9322	24.7342	22.3379	0.9031	37.5930
9.53	2.3230	2.0950	26.8551	24.2199	0.9019	39.8313
9.60	2.2513	1.9819	26.0269	22.9118	0.8803	37.6085
9.67	2.2220	1.9396	25.6882	22.4229	0.8729	36.9814
9.73	2.6573	2.3081	30.7202	26.6828	0.8686	44.0910
9.80	2.8442	2.4450	32.8813	28.2661	0.8596	45.7470
9.87	2.1394	1.8302	24.7324	21.1588	0.8555	34.3084
9.93	2.2905	1.9556	26.4798	22.6084	0.8538	36.4201
10.00	2.9639	2.5401	34.2643	29.3655	0.8570	48.3395
10.07	2.4728	2.1331	28.5875	24.6596	0.8626	39.7985
10.13	2.1279	1.8220	24.6000	21.0631	0.8562	34.7718
10.20	3.0310	2.6561	35.0399	30.7068	0.8763	49.7436
10.27	2.9913	2.6083	34.5815	30.1540	0.8720	49.3560
10.33	2.0775	1.8342	24.0178	21.2041	0.8829	35.4781
10.40	2.3355	2.0464	27.0002	23.6575	0.8762	38.9805
10.47	2.6071	2.2831	30.1401	26.3944	0.8757	43.3250
10.53	2.6883	2.3458	31.0792	27.1192	0.8726	45.9073
10.60	2.8681	2.5082	33.1568	28.9961	0.8745	49.8644
10.67	2.6073	2.3752	30.1425	27.4593	0.9110	46.3019
10.73	2.4763	2.2276	28.6274	25.7529	0.8996	42.7174
10.80	2.5538	2.2472	29.5232	25.9789	0.8799	43.6782
10.87	2.7177	2.3928	31.4182	27.6625	0.8805	46.6900
10.93	1.3545	1.2009	15.6590	13.8828	0.8866	23.4548



11.00	3.3517	2.9402	38.7484	33.9911	0.8772	55.9538
11.07	2.4830	2.1817	28.7052	25.2217	0.8786	40.5169
11.13	2.4090	2.0936	27.8498	24.2031	0.8691	39.3921
11.20	2.4322	2.1460	28.1176	24.8097	0.8824	40.9958
11.27	2.8237	2.4967	32.6444	28.8631	0.8842	48.3395
11.33	2.9153	2.5838	33.7034	29.8706	0.8863	49.9304
11.40	1.6424	1.4570	18.9877	16.8434	0.8871	28.0733
11.47	3.0823	2.7308	35.6332	31.5700	0.8860	51.3341
11.53	2.3295	2.0118	26.9301	23.2574	0.8636	37.8886
11.60	2.6190	2.2825	30.2776	26.3877	0.8715	43.8545
11.67	2.7737	2.4446	32.0657	28.2608	0.8813	46.3449
11.73	2.3911	2.1280	27.6428	24.6009	0.8900	40.8066
11.80	2.9396	2.6873	33.9837	31.0668	0.9142	51.0915
11.87	2.2349	2.0264	25.8369	23.4264	0.9067	39.3867
11.93	2.4807	2.2385	28.6787	25.8781	0.9023	43.6782
12.00	2.4719	2.2298	28.5774	25.7777	0.9020	43.4242
12.07	2.7688	2.4743	32.0096	28.6051	0.8936	48.6604
12.13	2.3748	2.1178	27.4538	24.4828	0.8918	40.4558
12.20	2.7347	2.3805	31.6146	27.5201	0.8705	46.6772
12.27	2.6350	2.2852	30.4625	26.4191	0.8673	44.4613
12.33	2.4655	2.1254	28.5024	24.5706	0.8621	40.6784
12.40	2.3749	2.0357	27.4554	23.5336	0.8572	39.6438
12.47	1.7782	1.5625	20.5576	18.0638	0.8787	30.0786
12.53	2.9743	2.5941	34.3854	29.9901	0.8722	48.2666
12.60	3.0622	2.6397	35.4015	30.5166	0.8620	49.4818
12.67	2.6098	2.2713	30.1716	26.2578	0.8703	42.7766
12.73	2.2969	2.0273	26.5540	23.4368	0.8826	38.8013
12.80	2.4745	2.1702	28.6064	25.0889	0.8770	42.3875
12.87	2.2592	1.9856	26.1184	22.9553	0.8789	38.6321
12.93	2.5478	2.2602	29.4548	26.1290	0.8871	43.9305
13.00	2.8267	2.5015	32.6784	28.9190	0.8850	48.2931

**One cycling transition**

Last Name	First Name	D.O.B	Weight	Height	Temp	Date
Barto	Geoff	11-23-77	161.5 Lbs	70.5 in	21.6 deg C	03-19-1998

TIME(min)	VO2(L)	VCO2(L)	VO2(Kg)	VCO2(Kg)	RER	VE(stpd)
0.13	0.2478	0.2124	3.3753	2.8938	0.8573	7.1356
0.20	0.3422	0.2959	4.6620	4.0305	0.8646	9.3873
0.27	0.2973	0.2583	4.0494	3.5187	0.8689	7.8589
0.33	0.4577	0.4273	6.2346	5.8210	0.9337	11.4217
0.40	0.4025	0.3727	5.4830	5.0765	0.9259	9.4920
0.47	0.3579	0.3269	4.8756	4.4527	0.9133	8.3681
0.53	0.4335	0.3879	5.9051	5.2836	0.8947	10.0064
0.60	0.3754	0.3297	5.1139	4.4913	0.8782	8.3658
0.67	0.4209	0.3649	5.7338	4.9713	0.8670	8.9755
0.73	0.6454	0.5517	8.7912	7.5150	0.8548	13.4688
0.80	0.5504	0.4695	7.4977	6.3961	0.8531	11.4217
0.87	0.6800	0.5765	9.2634	7.8528	0.8477	13.8380
0.93	0.6151	0.5111	8.3792	6.9624	0.8309	12.3430
1.00	0.5078	0.4229	6.9172	5.7609	0.8328	10.3000
1.07	0.6919	0.5745	9.4250	7.8257	0.8303	14.2870
1.13	0.5787	0.4865	7.8837	6.6272	0.8406	12.6490
1.20	0.7006	0.6046	9.5444	8.2360	0.8629	15.5180
1.27	1.1101	0.9787	15.1218	13.3323	0.8817	24.8968
1.33	0.8683	0.7796	11.8280	10.6205	0.8979	19.4862
1.40	0.4408	0.3854	6.0045	5.2501	0.8744	9.5967
1.47	1.2680	1.1445	17.2732	15.5913	0.9026	26.7371
1.53	1.2132	1.0139	16.5272	13.8119	0.8357	22.0398
1.60	1.0300	0.7962	14.0305	10.8461	0.7730	17.5550
1.67	1.4112	1.0310	19.2243	14.0445	0.7306	21.8417
1.73	1.0724	0.7710	14.6083	10.5030	0.7190	16.4210
1.80	2.5727	1.7713	35.0463	24.1298	0.6885	36.8248
1.87	0.7566	0.5034	10.3071	6.8571	0.6653	10.3042
1.93	2.6922	1.7631	36.6746	24.0180	0.6549	36.3148
2.00	2.5194	1.7294	34.3197	23.5577	0.6864	34.7258
2.07	2.2651	1.5987	30.8552	21.7780	0.7058	30.6277
2.13	2.1198	1.5299	28.8770	20.8407	0.7217	29.9986
2.20	2.9319	2.0971	39.9394	28.5673	0.7153	40.5251
2.27	1.6069	1.1736	21.8891	15.9876	0.7304	23.1718
2.33	2.6793	2.0031	36.4976	27.2875	0.7477	38.7844
2.40	2.2224	1.7304	30.2737	23.5727	0.7787	33.6672

2.47	2.0401	1.5770	27.7912	21.4820	0.7730	29.9820
2.53	2.2327	1.7021	30.4148	23.1864	0.7623	33.1800
2.60	1.2948	0.9770	17.6381	13.3096	0.7546	18.7720
2.67	2.1337	1.6250	29.0652	22.1356	0.7616	30.8064
2.73	2.5070	1.9311	34.1512	26.3058	0.7703	36.3349
2.80	1.8764	1.4457	25.5614	19.6933	0.7704	28.2640
2.87	2.1141	1.6861	28.7984	22.9682	0.7976	33.7553
2.93	2.5009	2.0727	34.0674	28.2354	0.8288	40.2875
3.00	2.4778	2.0295	33.7527	27.6471	0.8191	39.1818
3.07	1.9037	1.5711	25.9332	21.4016	0.8253	30.8362
3.13	1.6749	1.3996	22.8156	19.0651	0.8356	27.7691
3.20	1.7942	1.5689	24.4415	21.3716	0.8744	29.1904
3.27	1.7985	1.4811	24.5002	20.1755	0.8235	27.3532
3.33	2.9399	2.2754	40.0476	30.9968	0.7740	43.9715
3.40	2.6041	2.0333	35.4739	27.6986	0.7808	37.9731
3.47	2.2002	1.7424	29.9719	23.7356	0.7919	32.8465
3.53	3.2027	2.6079	43.6288	35.5258	0.8143	49.5827
3.60	2.4538	2.0203	33.4259	27.5205	0.8233	38.4464
3.67	1.3152	1.0895	17.9154	14.8413	0.8284	21.7247
3.73	1.7035	1.4462	23.2058	19.6999	0.8489	29.0682
3.80	1.8866	1.6402	25.7000	22.3437	0.8694	32.8375
3.87	2.5224	2.1563	34.3604	29.3734	0.8549	42.4470
3.93	2.0452	1.8094	27.8601	24.6476	0.8847	34.2699
4.00	3.0716	2.6329	41.8428	35.8659	0.8572	51.2746
4.07	1.3292	1.1732	18.1072	15.9813	0.8826	22.6489
4.13	2.7093	2.3809	36.9066	32.4334	0.8788	47.1472
4.20	2.9637	2.6457	40.3723	36.0401	0.8927	49.6404
4.27	1.7446	1.5163	23.7650	20.6559	0.8692	30.2963
4.33	2.1124	1.9123	28.7755	26.0503	0.9053	37.1337
4.40	1.6731	1.4711	22.7920	20.0391	0.8792	29.7781
4.47	2.8252	2.4856	38.4853	33.8589	0.8798	50.0611
4.53	1.0174	0.9061	13.8589	12.3430	0.8906	17.7494
4.60	3.0958	2.7017	42.1719	36.8030	0.8727	52.4103
4.67	2.8651	2.4399	39.0296	33.2369	0.8516	44.8959
4.73	2.9285	2.4694	39.8924	33.6383	0.8432	48.3251
4.80	2.2799	2.0045	31.0572	27.3061	0.8792	40.5767
4.87	1.4846	1.3720	20.2232	18.6898	0.9242	27.9424
4.93	2.3165	2.1200	31.5560	28.8797	0.9152	42.0228
5.00	2.8294	2.4445	38.5424	33.2999	0.8640	48.1212
5.07	1.8470	1.5691	25.1603	21.3749	0.8495	32.1531

5.13	2.2123	1.9314	30.1365	26.3105	0.8730	39.8631
5.20	2.4466	2.1502	33.3286	29.2907	0.8788	42.2031
5.27	2.2011	1.8578	29.9836	25.3080	0.8441	36.7166
5.33	2.2598	2.0017	30.7833	27.2672	0.8858	39.5590
5.40	1.1795	1.0354	16.0678	14.1041	0.8778	20.3416
5.47	2.3298	2.0263	31.7371	27.6032	0.8697	41.1014
5.53	3.1749	2.6839	43.2495	36.5615	0.8454	49.9839
5.60	2.1853	1.8093	29.7686	24.6471	0.8280	35.2704
5.67	2.3417	1.9510	31.8993	26.5773	0.8332	38.5580
5.73	2.6052	2.2979	35.4882	31.3026	0.8821	44.5774
5.80	2.6178	2.2813	35.6609	31.0760	0.8714	45.9929
5.87	2.2767	2.0079	31.0134	27.3515	0.8819	41.1014
5.93	2.4563	2.1765	33.4603	29.6496	0.8861	44.6918
6.00	2.4329	2.2052	33.1415	30.0395	0.9064	44.4587
6.07	1.1112	1.0053	15.1376	13.6943	0.9047	20.5366
6.13	3.1164	2.7883	42.4528	37.9828	0.8947	56.1584
6.20	1.6199	1.4353	22.0664	19.5523	0.8861	28.6777
6.27	1.9867	1.7632	27.0639	24.0183	0.8875	35.5831
6.33	2.5964	2.2510	35.3694	30.6638	0.8670	45.9848
6.40	2.4766	2.1423	33.7375	29.1834	0.8650	43.9440
6.47	1.5016	1.3402	20.4558	18.2564	0.8925	27.0469
6.53	1.8463	1.6520	25.1504	22.5046	0.8948	33.5776
6.60	2.2316	2.0145	30.4001	27.4425	0.9027	42.0113
6.67	2.2842	2.0662	31.1163	28.1468	0.9046	40.8754
6.73	1.4483	1.2732	19.7288	17.3445	0.8791	24.8202
6.80	2.2699	2.0070	30.9214	27.3393	0.8842	40.2598
6.87	3.2216	2.7556	43.8859	37.5382	0.8554	53.3024
6.93	2.3623	1.9881	32.1803	27.0826	0.8416	40.7806
7.00	2.1478	1.9187	29.2583	26.1371	0.8933	39.9713
7.07	2.2057	1.9152	30.0466	26.0900	0.8683	40.4464
7.13	1.4906	1.3269	20.3048	18.0760	0.8902	28.0521
7.20	2.8527	2.5370	38.8602	34.5594	0.8893	53.2951
7.27	2.4557	2.1014	33.4521	28.6265	0.8557	42.7115
7.33	2.1531	1.8747	29.3300	25.5377	0.8707	39.1361
7.40	2.1100	1.8591	28.7427	25.3256	0.8811	37.8250
7.47	1.3811	1.1723	18.8131	15.9695	0.8489	25.1011
7.53	1.9390	1.6688	26.4140	22.7334	0.8607	34.3726
7.60	3.1582	2.6352	43.0216	35.8971	0.8344	50.0059
7.67	2.5727	2.0690	35.0463	28.1844	0.8042	39.0398
7.73	2.0967	1.7507	28.5624	23.8487	0.8350	33.4758

7.80	2.8687	2.3999	39.0787	32.6924	0.8366	46.8745
7.87	1.9110	1.6199	26.0319	22.0672	0.8477	32.5287
7.93	2.1083	1.8329	28.7203	24.9687	0.8694	37.4441
8.00	3.1644	2.7308	43.1070	37.1999	0.8630	54.3989

**Two cycling  
transitions**

Last Name	First Name	D.O.B	Weight	Height	Temp	Date
Barto	Goeff	11-23-77	161.5 Lbs	70.5 in	22.0 deg C	03-26-1998

TIME(min)	VO2(L)	VCO2(L)	VO2(Kg)	VCO2(Kg)	RER	VE(stpd)
0.13	0	0	0	0	0	0
0.20	0.0259	0.0036	0.3522	0.0492	0.1396	7.2194
0.27	0.0655	0.0093	0.8927	0.1265	0.1417	16.8837
0.33	0.0869	0.0344	1.1832	0.4683	0.3958	17.6450
0.40	0.0468	0.0279	0.6375	0.3803	0.5966	5.4262
0.47	0.0653	0.0436	0.8901	0.5936	0.6668	6.2309
0.53	0.1007	0.0734	1.3717	1.0002	0.7292	8.4477
0.60	0.2375	0.2226	3.2351	3.0320	0.9372	13.3411
0.67	0.2650	0.2483	3.6103	3.3828	0.9370	9.8251
0.73	0.1678	0.1542	2.2858	2.1000	0.9187	5.4146
0.80	0.4597	0.4339	6.2615	5.9107	0.9440	12.8691
0.87	0.4813	0.4412	6.5569	6.0107	0.9167	11.8572
0.93	0.4076	0.3682	5.5520	5.0152	0.9033	9.4253
1.00	0.6474	0.5798	8.8192	7.8989	0.8956	14.2786
1.07	0.9806	0.8316	13.3580	11.3289	0.8481	19.7504
1.13	1.1142	0.9876	15.1774	13.4540	0.8864	24.3206
1.20	0.6859	0.5795	9.3435	7.8935	0.8448	13.6640
1.27	0.7494	0.6492	10.2085	8.8435	0.8663	15.4725
1.33	1.0517	0.9284	14.3263	12.6472	0.8828	22.2598
1.40	0.3904	0.3725	5.3175	5.0740	0.9542	8.6208
1.47	1.2224	1.1063	16.6518	15.0702	0.9050	25.5160
1.53	0.7413	0.6617	10.0988	9.0137	0.8926	15.6399
1.60	1.5877	1.3795	21.6287	18.7924	0.8689	30.2500
1.67	1.3819	1.0583	18.8244	14.4171	0.7659	23.3092
1.73	0.9153	0.7248	12.4681	9.8730	0.7919	15.8404
1.80	1.8029	1.4125	24.5593	19.2415	0.7835	31.0750
1.87	1.0407	0.7993	14.1769	10.8878	0.7680	18.5845
1.93	1.1812	0.9085	16.0908	12.3754	0.7691	21.2968
2.00	1.7137	1.2828	23.3441	17.4743	0.7486	27.4663
2.07	1.8008	1.3179	24.5314	17.9533	0.7318	28.3405
2.13	0.9256	0.7147	12.6084	9.7362	0.7722	16.2785
2.20	2.5632	1.8967	34.9164	25.8369	0.7400	39.5122
2.27	1.5206	1.1126	20.7140	15.1566	0.7317	24.0290
2.33	2.2951	1.6754	31.2650	22.8234	0.7300	35.1598

2.40	0.8578	0.6404	11.6856	8.7244	0.7466	13.7721
2.47	1.1391	0.8585	15.5178	11.6951	0.7537	19.2903
2.53	1.3227	1.0005	18.0179	13.6295	0.7564	20.8003
2.60	1.2932	0.9716	17.6162	13.2352	0.7513	20.9152
2.67	2.5989	1.9531	35.4033	26.6052	0.7515	38.9833
2.73	1.5122	1.0982	20.5993	14.9593	0.7262	22.2070
2.80	2.0442	1.4585	27.8469	19.8677	0.7135	29.2571
2.87	2.0734	1.4116	28.2439	19.2289	0.6808	32.2599
2.93	0.3091	0.2834	4.2104	3.8600	0.9168	7.5436
3.00	2.0144	1.5272	27.4401	20.8046	0.7582	32.2867
3.07	1.8787	1.6000	25.5917	21.7957	0.8517	30.4777
3.13	2.0706	1.5732	28.2070	21.4303	0.7598	30.3421
3.20	2.3084	1.6946	31.4454	23.0838	0.7341	33.9590
3.27	1.2500	0.9550	17.0282	13.0096	0.7640	19.6501
3.33	1.7676	1.4136	24.0786	19.2565	0.7997	32.1594
3.40	2.0831	1.6531	28.3762	22.5189	0.7936	35.5859
3.47	1.7013	1.4226	23.1760	19.3790	0.8362	29.2706
3.53	1.5748	1.2912	21.4523	17.5890	0.8199	27.2388
3.60	1.8384	1.5129	25.0433	20.6092	0.8229	31.7487
3.67	1.3101	1.0742	17.8463	14.6331	0.8199	23.1242
3.73	2.3260	1.8842	31.6849	25.6670	0.8101	39.7905
3.80	1.7061	1.3961	23.2411	19.0175	0.8183	29.1744
3.87	1.4289	1.1768	19.4655	16.0312	0.8236	25.4155
3.93	1.0071	0.8183	13.7196	11.1477	0.8125	19.0947
4.00	2.5186	2.0292	34.3092	27.6421	0.8057	43.9181
4.07	1.0261	0.8947	13.9773	12.1873	0.8719	18.4840
4.13	0.9987	0.8198	13.6045	11.1671	0.8208	17.2392
4.20	1.9559	1.6629	26.6436	22.6520	0.8502	32.6698
4.27	1.1446	0.9484	15.5922	12.9189	0.8285	18.9483
4.33	1.8661	1.4693	25.4207	20.0148	0.7873	28.9515
4.40	1.8364	1.4364	25.0163	19.5665	0.7821	27.5703
4.47	1.4489	1.1017	19.7379	15.0080	0.7604	22.2568
4.53	1.7143	1.3514	23.3521	18.4090	0.7883	27.8342
4.60	2.6801	2.0800	36.5091	28.3343	0.7761	41.3110
4.67	1.4072	1.1101	19.1689	15.1224	0.7889	23.4437
4.73	2.2924	1.8557	31.2278	25.2787	0.8095	38.6987
4.80	0.6892	0.5724	9.3882	7.7970	0.8305	12.3613
4.87	1.8997	1.6640	25.8781	22.6674	0.8759	33.7862
4.93	2.4199	1.9822	32.9650	27.0025	0.8191	38.9825
5.00	2.1707	1.7155	29.5696	23.3685	0.7903	35.2603

5.07	1.2083	0.9587	16.4592	13.0598	0.7935	20.5496
5.13	1.4619	1.3061	19.9143	17.7927	0.8935	26.7646
5.20	2.0030	1.6726	27.2855	22.7841	0.8350	35.4710
5.27	2.0631	1.7140	28.1046	23.3487	0.8308	35.3756
5.33	0.9901	0.8075	13.4868	11.0004	0.8156	16.7358
5.40	1.9332	1.5990	26.3347	21.7814	0.8271	34.5691
5.47	1.6094	1.3375	21.9241	18.2198	0.8310	28.1563
5.53	2.2678	1.8640	30.8931	25.3921	0.8219	38.4717
5.60	1.6191	1.4275	22.0565	19.4462	0.8817	29.1623
5.67	1.7064	1.4181	23.2454	19.3176	0.8310	32.4828
5.73	1.2092	1.1073	16.4724	15.0837	0.9157	22.5054
5.80	1.6735	1.4486	22.7965	19.7336	0.8656	29.5632
5.87	0.9709	0.8156	13.2262	11.1105	0.8400	16.6447
5.93	2.1890	1.8940	29.8196	25.8010	0.8652	40.6849
6.00	0.9555	0.7862	13.0165	10.7101	0.8228	15.3412
6.07	1.8830	1.5836	25.6509	21.5717	0.8410	30.1645
6.13	2.4333	1.9327	33.1478	26.3275	0.7942	38.2713
6.20	1.9529	1.5413	26.6024	20.9962	0.7893	31.6482
6.27	1.3756	1.1220	18.7393	15.2849	0.8157	24.2585
6.33	2.7454	2.2815	37.3982	31.0793	0.8310	48.0291
6.40	1.9510	1.6481	26.5777	22.4515	0.8448	33.2620
6.47	1.8644	1.5630	25.3978	21.2921	0.8383	31.6721
6.53	1.7826	1.4853	24.2836	20.2325	0.8332	32.7475
6.60	2.2334	1.8091	30.4239	24.6443	0.8100	37.3003
6.67	2.4134	1.9148	32.8758	26.0838	0.7934	39.4790
6.73	2.6061	2.0662	35.5015	28.1461	0.7928	43.2687
6.80	0.7715	0.6233	10.5094	8.4903	0.8079	13.8334
6.87	2.4399	1.9666	33.2370	26.7894	0.8060	41.7951
6.93	1.2780	1.0721	17.4087	14.6048	0.8389	22.8583
7.00	3.4298	2.6148	46.7213	35.6193	0.7624	50.4801
7.07	2.7942	2.1627	38.0639	29.4609	0.7740	41.7121
7.13	2.2164	1.7505	30.1922	23.8454	0.7898	35.2560
7.20	2.3780	1.9183	32.3941	26.1319	0.8067	40.3836
7.27	1.7753	1.4791	24.1839	20.1492	0.8332	29.6716
7.33	2.5736	2.1226	35.0583	28.9148	0.8248	41.3372
7.40	3.0781	2.4326	41.9310	33.1380	0.7903	48.0763
7.47	2.3902	1.8960	32.5598	25.8275	0.7932	38.8510
7.53	2.5286	1.9789	34.4459	26.9566	0.7826	43.9698
7.60	1.5093	1.2983	20.5597	17.6859	0.8602	28.2215
7.67	1.9567	1.6651	26.6542	22.6823	0.8510	35.0895



7.73	1.9803	1.6315	26.9762	22.2250	0.8239	33.5348
7.80	2.0060	1.5898	27.3259	21.6566	0.7925	32.9478
7.87	2.4484	1.9675	33.3529	26.8020	0.8036	39.3896
7.93	2.1468	1.7453	29.2446	23.7750	0.8130	35.0460
8.00	2.4726	1.9312	33.6827	26.3073	0.7810	38.9350
8.07	2.0605	1.7052	28.0689	23.2290	0.8276	33.0479
8.13	2.8257	2.2296	38.4927	30.3719	0.7890	43.5050
8.20	1.9982	1.6181	27.2204	22.0426	0.8098	31.7286
8.27	2.7826	2.2015	37.9049	29.9901	0.7912	43.3808
8.33	2.3624	1.9231	32.1815	26.1977	0.8141	38.6561
8.40	2.7621	2.2684	37.6267	30.9014	0.8213	45.4597
8.47	2.1868	1.8182	29.7891	24.7684	0.8315	35.6174
8.53	1.7095	1.3873	23.2871	18.8977	0.8115	29.5144
8.60	2.8766	2.4329	39.1856	33.1422	0.8458	48.4169
8.67	2.6286	2.2217	35.8072	30.2650	0.8452	42.3206
8.73	2.0563	1.6865	28.0114	22.9734	0.8201	33.7629
8.80	2.6751	2.2050	36.4407	30.0367	0.8243	44.8157
8.87	2.3210	1.8634	31.6167	25.3841	0.8029	38.6188
8.93	2.1537	1.7609	29.3388	23.9870	0.8176	36.3427
9.00	2.0996	1.7882	28.6020	24.3597	0.8517	36.5681
9.07	1.4846	1.2417	20.2232	16.9141	0.8364	26.0019
9.13	2.5177	2.0853	34.2962	28.4066	0.8283	42.8622
9.20	2.4428	2.0301	33.2759	27.6548	0.8311	38.9672
9.27	2.7411	2.0576	37.3405	28.0297	0.7506	40.9481
9.33	1.9866	1.6723	27.0625	22.7811	0.8418	33.9212
9.40	2.4482	2.0463	33.3500	27.8757	0.8359	41.9320
9.47	2.0575	1.6918	28.0284	23.0456	0.8222	34.4547
9.53	2.4093	2.0171	32.8200	27.4774	0.8372	41.4601
9.60	2.5241	2.1175	34.3841	28.8455	0.8389	43.8395
9.67	2.5419	2.0630	34.6270	28.1030	0.8116	41.1370
9.73	2.0354	1.6512	27.7263	22.4937	0.8113	33.4255
9.80	1.8977	1.5778	25.8511	21.4929	0.8314	31.8418
9.87	1.8928	1.5398	25.7843	20.9752	0.8135	31.9112
9.93	2.6570	2.1123	36.1939	28.7747	0.7950	42.9327
10.00	2.9067	2.2793	39.5960	31.0489	0.7841	46.4674
10.07	1.6819	1.3645	22.9116	18.5876	0.8113	27.6211
10.13	2.3213	1.8855	31.6210	25.6849	0.8123	38.1291
10.20	2.5397	2.0181	34.5969	27.4906	0.7946	40.4420
10.27	2.4214	2.0095	32.9848	27.3734	0.8299	39.6739
10.33	1.9733	1.6103	26.8815	21.9359	0.8160	31.0579

10.40	2.3365	1.8577	31.8283	25.3059	0.7951	37.8341
10.47	3.1273	2.5565	42.6006	34.8248	0.8175	52.6546
10.53	2.4592	1.9099	33.4993	26.0174	0.7767	40.0802
10.60	1.7057	1.5076	23.2351	20.5368	0.8839	31.0194
10.67	2.4044	2.0821	32.7533	28.3635	0.8660	41.7261
10.73	2.7042	2.2118	36.8373	30.1303	0.8179	45.0467
10.80	1.9177	1.6314	26.1231	22.2240	0.8507	32.2423
10.87	2.1050	1.6681	28.6748	22.7229	0.7924	35.7928
10.93	1.8172	1.5837	24.7539	21.5740	0.8715	31.0237
11.00	2.6016	2.1391	35.4403	29.1398	0.8222	41.3372
11.07	1.7332	1.4164	23.6105	19.2948	0.8172	26.4274
11.13	2.5676	2.0037	34.9770	27.2949	0.7804	38.6082
11.20	2.7453	2.1638	37.3974	29.4764	0.7882	40.7142
11.27	2.7988	2.2093	38.1261	30.0951	0.7894	42.0031
11.33	1.9569	1.5601	26.6572	21.2519	0.7972	30.9236
11.40	2.6754	2.1892	36.4450	29.8216	0.8183	44.0033
11.47	2.7740	2.2896	37.7887	31.1902	0.8254	45.0281
11.53	2.7766	2.2882	37.8233	31.1710	0.8241	48.0697
11.60	2.1521	1.8471	29.3159	25.1617	0.8583	37.6183
11.67	2.2461	1.9312	30.5974	26.3075	0.8598	39.4518
11.73	2.5102	2.1008	34.1943	28.6171	0.8369	43.0032
11.80	2.1995	1.8351	29.9621	24.9989	0.8344	37.4131
11.87	2.5624	2.1668	34.9056	29.5167	0.8456	43.5973
11.93	2.1606	1.8140	29.4325	24.7107	0.8396	35.3269
12.00	2.8122	2.2252	38.3086	30.3124	0.7913	45.6908
12.07	2.3523	1.8783	32.0439	25.5868	0.7985	38.6869
12.13	2.5105	2.0340	34.1988	27.7073	0.8102	41.1314
12.20	2.0765	1.6673	28.2867	22.7128	0.8030	34.6264
12.27	1.7680	1.4951	24.0841	20.3668	0.8457	30.8896
12.33	2.6349	2.1715	35.8929	29.5811	0.8242	42.5798
12.40	1.7325	1.4389	23.6000	19.6005	0.8305	29.1262
12.47	2.2600	1.8453	30.7858	25.1368	0.8165	36.6128
12.53	2.7053	2.1807	36.8517	29.7061	0.8061	43.0973
12.60	2.6982	2.1406	36.7554	29.1600	0.7934	42.5149
12.67	3.1288	2.4971	42.6216	34.0155	0.7981	50.8038
12.73	2.2291	1.8299	30.3660	24.9276	0.8209	37.8069
12.80	1.9839	1.6332	27.0257	22.2474	0.8232	34.4168
12.87	2.1956	1.8748	29.9092	25.5385	0.8539	39.2191
12.93	2.4629	2.0597	33.5508	28.0576	0.8363	41.8204
13.00	2.8315	2.3040	38.5721	31.3851	0.8137	46.9229

**Stepping and cycling transitions**

Last Name	First Name	D.O.B	Weight	Height	Temp	Date
Barto	Geoff	11-23-77	161.5 Lbs	70.5 in	22.0 deg C	03-17-1998

TIME(min)	VO2(L)	VCO2(L)	VO2(Kg)	VCO2(Kg)	RER	VE(stpd)
0.13	0.3724	0.2989	5.0732	4.0722	0.8027	8.4768
0.20	0.3169	0.2543	4.3170	3.4638	0.8024	7.1497
0.27	0.2221	0.1771	3.0256	2.4119	0.7972	5.5385
0.33	0.5590	0.4377	7.6148	5.9629	0.7831	12.3775
0.40	0.3469	0.2789	4.7251	3.7999	0.8042	7.6500
0.47	0.2514	0.2059	3.4247	2.8050	0.8191	5.4385
0.53	0.4626	0.3742	6.3020	5.0978	0.8089	9.7679
0.60	0.5129	0.4249	6.9865	5.7881	0.8285	10.6999
0.67	0.4882	0.4069	6.6507	5.5426	0.8334	10.1693
0.73	0.5372	0.4507	7.3181	6.1396	0.8390	11.4798
0.80	0.4955	0.4158	6.7501	5.6640	0.8391	10.7964
0.87	0.3848	0.3238	5.2425	4.4104	0.8413	8.4839
0.93	0.5805	0.4814	7.9072	6.5571	0.8293	12.5152
1.00	0.5298	0.4349	7.2171	5.9237	0.8208	11.2768
1.07	0.3213	0.2605	4.3773	3.5487	0.8107	6.8622
1.13	0.5666	0.4557	7.7184	6.2081	0.8043	12.1165
1.20	0.6943	0.5532	9.4583	7.5358	0.7967	14.9056
1.27	0.5856	0.4670	7.9774	6.3616	0.7974	13.4328
1.33	0.7472	0.6108	10.1786	8.3204	0.8174	16.9129
1.40	0.8992	0.7363	12.2490	10.0307	0.8189	18.9237
1.47	1.0879	0.8631	14.8198	11.7579	0.7934	20.7942
1.53	1.0923	0.8446	14.8795	11.5055	0.7732	19.1712
1.60	1.4340	1.0702	19.5340	14.5790	0.7463	23.3145
1.67	1.7752	1.2366	24.1828	16.8459	0.6966	27.6621
1.73	1.6089	1.1701	21.9175	15.9393	0.7272	25.2426
1.80	0.8279	0.5762	11.2781	7.8494	0.6960	12.5117
1.87	1.9669	1.3889	26.7934	18.9195	0.7061	29.2070
1.93	2.0531	1.4299	27.9679	19.4785	0.6965	29.6649
2.00	1.7268	1.1561	23.5235	15.7492	0.6695	24.5189
2.07	2.2041	1.4221	30.0244	19.3718	0.6452	31.1827
2.13	1.7102	1.0907	23.2966	14.8578	0.6378	24.1546
2.20	1.6228	1.0608	22.1061	14.4508	0.6537	22.9596
2.27	3.0989	2.0818	42.2136	28.3593	0.6718	44.5280
2.33	2.1537	1.4234	29.3386	19.3902	0.6609	29.4084
2.40	1.6923	1.1073	23.0533	15.0839	0.6543	23.1159

2.47	1.5608	1.0434	21.2621	14.2130	0.6685	22.8036
2.53	1.9272	1.2986	26.2522	17.6893	0.6738	27.8640
2.60	1.3277	0.8905	18.0864	12.1305	0.6707	18.7857
2.67	2.1354	1.4672	29.0889	19.9868	0.6871	29.4915
2.73	1.9592	1.2780	26.6887	17.4091	0.6523	26.8470
2.80	1.9894	1.3163	27.1007	17.9317	0.6617	26.3533
2.87	1.6431	1.0778	22.3827	14.6817	0.6559	20.7470
2.93	2.1987	1.4353	29.9509	19.5517	0.6528	27.7893
3.00	2.8881	1.9188	39.3425	26.1384	0.6644	37.5507
3.07	1.6688	1.1236	22.7324	15.3056	0.6733	21.4432
3.13	2.6973	1.8432	36.7435	25.1084	0.6833	35.6527
3.20	2.7049	1.8491	36.8471	25.1894	0.6836	36.3293
3.27	1.7929	1.2273	24.4230	16.7192	0.6846	24.5223
3.33	1.9777	1.3797	26.9409	18.7946	0.6976	28.0991
3.40	2.3876	1.7125	32.5239	23.3281	0.7173	34.5258
3.47	1.4339	1.0375	19.5332	14.1327	0.7235	20.6463
3.53	1.3311	0.9721	18.1323	13.2425	0.7303	19.2310
3.60	1.8558	1.3658	25.2797	18.6047	0.7360	26.4433
3.67	3.5008	2.4629	47.6884	33.5497	0.7035	47.2282
3.73	1.2167	0.8349	16.5737	11.3726	0.6862	16.1486
3.80	1.6991	1.2122	23.1451	16.5131	0.7135	24.3171
3.87	2.7630	2.0440	37.6381	27.8435	0.7398	40.0785
3.93	2.1421	1.5499	29.1809	21.1138	0.7235	30.2141
4.00	0.7874	0.5785	10.7268	7.8806	0.7347	11.0724
4.07	1.9861	1.4488	27.0558	19.7354	0.7294	28.0504
4.13	1.6716	1.2051	22.7704	16.4166	0.7210	24.5189
4.20	3.0042	2.1265	40.9242	28.9681	0.7078	39.7879
4.27	2.8296	1.9480	38.5451	26.5364	0.6885	36.8612
4.33	1.8903	1.3362	25.7507	18.2020	0.7069	26.1747
4.40	1.9020	1.3687	25.9100	18.6442	0.7196	27.6772
4.47	1.7737	1.3102	24.1625	17.8475	0.7386	25.9698
4.53	2.7439	2.0204	37.3783	27.5219	0.7363	39.7714
4.60	1.9293	1.4291	26.2821	19.4680	0.7407	27.8862
4.67	2.5028	1.8956	34.0942	25.8219	0.7574	35.6330
4.73	2.2285	1.6871	30.3568	22.9820	0.7571	32.8236
4.80	1.1088	0.8462	15.1040	11.5278	0.7632	16.5125
4.87	3.1777	2.4168	43.2876	32.9222	0.7605	47.2963
4.93	1.6519	1.2508	22.5025	17.0382	0.7572	24.0540
5.00	2.0858	1.5666	28.4138	21.3414	0.7511	30.2744
5.07	1.2938	0.9816	17.6242	13.3720	0.7587	19.3237

5.13	2.2936	1.7832	31.2447	24.2918	0.7775	33.9359
5.20	1.2889	0.9772	17.5583	13.3118	0.7581	18.5262
5.27	2.0583	1.5747	28.0393	21.4513	0.7650	29.9676
5.33	2.1739	1.6521	29.6132	22.5057	0.7600	30.6823
5.40	2.2450	1.6678	30.5820	22.7198	0.7429	30.7177
5.47	2.5125	1.8632	34.2257	25.3807	0.7416	35.1232
5.53	2.0830	1.5525	28.3756	21.1481	0.7453	29.7989
5.60	2.1041	1.6134	28.6626	21.9782	0.7668	30.5874
5.67	1.9651	1.4997	26.7694	20.4300	0.7632	29.6690
5.73	1.2466	0.9697	16.9821	13.2092	0.7778	19.0323
5.80	2.9697	2.2507	40.4537	30.6592	0.7579	44.0883
5.87	2.4127	1.8188	32.8666	24.7763	0.7538	34.6455
5.93	1.7295	1.2872	23.5602	17.5342	0.7442	24.9701
6.00	1.7584	1.3484	23.9535	18.3682	0.7668	27.0489
6.07	1.4876	1.1737	20.2644	15.9889	0.7890	23.8560
6.13	1.6137	1.2804	21.9828	17.4414	0.7934	24.6232
6.20	2.4462	1.8984	33.3233	25.8612	0.7761	37.6306
6.27	2.2973	1.8184	31.2941	24.7714	0.7916	35.0387
6.33	1.9477	1.5447	26.5323	21.0422	0.7931	30.3778
6.40	1.7915	1.4733	24.4046	20.0698	0.8224	28.0643
6.47	2.3179	1.9027	31.5746	25.9185	0.8209	35.9350
6.53	2.2021	1.7673	29.9972	24.0752	0.8026	33.6013
6.60	1.6409	1.3057	22.3523	17.7863	0.7957	25.4525
6.67	2.3443	1.9170	31.9347	26.1137	0.8177	36.7605
6.73	1.7257	1.4066	23.5074	19.1613	0.8151	26.6671
6.80	1.4277	1.1242	19.4488	15.3143	0.7874	21.2930
6.87	2.3429	1.8874	31.9155	25.7104	0.8056	35.1491
6.93	2.5002	1.9409	34.0585	26.4392	0.7763	35.9449
7.00	1.9710	1.5114	26.8501	20.5882	0.7668	28.1726
7.07	2.8840	2.2705	39.2861	30.9298	0.7873	42.7621
7.13	2.2687	1.8373	30.9044	25.0286	0.8099	33.8705
7.20	2.1758	1.7799	29.6394	24.2462	0.8180	33.1166
7.27	1.6491	1.3537	22.4648	18.4406	0.8209	25.5672
7.33	2.5529	2.1679	34.7760	29.5323	0.8492	40.2245
7.40	1.6572	1.3485	22.5747	18.3690	0.8137	25.3484
7.47	2.0575	1.6678	28.0275	22.7192	0.8106	30.6043
7.53	2.7439	2.2636	37.3779	30.8357	0.8250	40.2466
7.60	3.0500	2.4713	41.5484	33.6651	0.8103	45.0190
7.67	2.1397	1.7680	29.1478	24.0844	0.8263	33.0801
7.73	2.7493	2.3381	37.4516	31.8498	0.8504	43.9513

7.80	1.8947	1.6222	25.8101	22.0980	0.8562	31.2875
7.87	2.5963	2.2864	35.3674	31.1455	0.8806	42.7385
7.93	1.5143	1.3226	20.6280	18.0165	0.8734	24.6307
8.00	2.8967	2.5276	39.4591	34.4318	0.8726	46.3396
8.07	2.4405	2.1198	33.2457	28.8765	0.8686	38.6155
8.13	1.5655	1.3476	21.3252	18.3573	0.8608	25.2374
8.20	2.3936	2.0258	32.6058	27.5967	0.8464	38.6261
8.27	1.8634	1.5815	25.3834	21.5442	0.8488	30.5917
8.33	2.2599	1.9192	30.7853	26.1433	0.8492	35.6085
8.40	2.3951	1.9961	32.6265	27.1918	0.8334	37.3830
8.47	2.0412	1.6886	27.8061	23.0032	0.8273	32.0746
8.53	2.0205	1.6781	27.5237	22.8595	0.8305	31.9652
8.60	2.5297	2.1189	34.4606	28.8640	0.8376	40.2466
8.67	1.8820	1.5711	25.6368	21.4016	0.8348	29.5609
8.73	1.9257	1.6068	26.2330	21.8883	0.8344	30.0637
8.80	2.3243	1.9333	31.6620	26.3356	0.8318	36.9314
8.87	2.5371	2.1066	34.5608	28.6963	0.8303	39.4146
8.93	2.2785	1.8884	31.0380	25.7243	0.8288	35.5987
9.00	2.0756	1.7416	28.2746	23.7241	0.8391	31.9873
9.07	2.4315	2.0528	33.1227	27.9635	0.8442	37.2928
9.13	1.6355	1.3512	22.2791	18.4062	0.8262	25.2339
9.20	1.7257	1.4482	23.5076	19.7284	0.8392	27.3526
9.27	1.9229	1.5546	26.1945	21.1774	0.8085	30.9686
9.33	2.7062	2.2569	36.8652	30.7439	0.8340	41.4141
9.40	1.6280	1.2895	22.1768	17.5657	0.7921	23.6189
9.47	2.8247	2.2263	38.4785	30.3269	0.7882	41.8104
9.53	2.1211	1.7244	28.8948	23.4903	0.8130	32.5684
9.60	2.3065	1.8680	31.4200	25.4471	0.8099	35.1819
9.67	2.5494	2.0616	34.7291	28.0834	0.8086	39.4200
9.73	2.0273	1.6981	27.6166	23.1315	0.8376	32.2535
9.80	3.2065	2.6321	43.6797	35.8548	0.8209	51.4590
9.87	2.8670	2.4142	39.0550	32.8864	0.8421	47.1988
9.93	1.5477	1.3414	21.0836	18.2725	0.8667	26.2248
10.00	2.3155	2.0104	31.5429	27.3861	0.8682	38.6628
10.07	2.0950	1.8306	28.5385	24.9375	0.8738	35.1722
10.13	2.8428	2.4543	38.7250	33.4334	0.8634	45.2027
10.20	2.1333	1.7670	29.0611	24.0712	0.8283	33.0619
10.27	2.4983	2.0787	34.0328	28.3164	0.8320	40.4423
10.33	2.0782	1.8183	28.3093	24.7689	0.8749	33.6741
10.40	2.5158	2.0974	34.2710	28.5715	0.8337	38.8797

10.47	2.9924	2.4948	40.7636	33.9843	0.8337	46.2454
10.53	2.2177	1.8267	30.2099	24.8833	0.8237	34.9616
10.60	2.5388	2.1210	34.5837	28.8923	0.8354	41.3856
10.67	1.9312	1.6139	26.3071	21.9846	0.8357	31.1568
10.73	2.6547	2.1769	36.1629	29.6547	0.8200	43.4951
10.80	2.5385	2.1344	34.5798	29.0753	0.8408	40.5798
10.87	2.0911	1.7420	28.4862	23.7296	0.8330	34.3588
10.93	2.5100	2.1497	34.1913	29.2832	0.8565	40.6769
11.00	2.5472	2.0787	34.6992	28.3165	0.8161	39.3712
11.07	1.9510	1.5981	26.5766	21.7696	0.8191	31.4280
11.13	2.2699	1.9069	30.9211	25.9767	0.8401	36.8856
11.20	2.2307	1.8227	30.3869	24.8291	0.8171	34.5550
11.27	2.9767	2.3695	40.5496	32.2776	0.7960	45.1779
11.33	2.4220	1.9579	32.9927	26.6708	0.8084	38.0550
11.40	2.4298	2.0116	33.0997	27.4027	0.8279	39.7948
11.47	2.6738	2.2320	36.4232	30.4045	0.8348	44.4175
11.53	2.5659	2.1545	34.9531	29.3490	0.8397	42.5793
11.60	1.6814	1.4192	22.9041	19.3324	0.8441	28.4119
11.67	2.5724	2.1990	35.0414	29.9555	0.8549	43.2882
11.73	3.2137	2.6250	43.7777	35.7589	0.8168	52.3958
11.80	2.4437	2.0668	33.2884	28.1551	0.8458	41.6698
11.87	1.6413	1.3835	22.3579	18.8471	0.8430	28.8528
11.93	2.3026	1.9648	31.3670	26.7654	0.8533	39.4146

**One cycling transition**

Last Name	First Name	D.O.B	Weight	Height	Temp	Date
Davis	Danny	10-24-75	163.5 Lbs	67.5 in	20.4 deg C	04-02-1998

TIME(min)	VO2(L)	VCO2(L)	VO2(Kg)	VCO2(Kg)	RER	VE(stpd)
0.13	0.0526	0.0029	0.7072	0.0387	0.0547	14.3589
0.20	0.0543	0.0199	0.7313	0.2678	0.3662	13.7340
0.27	0.0501	0.0305	0.6743	0.4102	0.6083	7.1795
0.33	0.0920	0.0604	1.2386	0.8122	0.6558	9.2243
0.40	0.4816	0.5541	6.4803	7.4554	1.1505	25.7363
0.47	0.2880	0.2422	3.8756	3.2584	0.8408	8.0000
0.53	0.4092	0.3417	5.5066	4.5979	0.8350	10.2564
0.60	0.4497	0.3521	6.0516	4.7383	0.7830	10.7632
0.67	0.4802	0.4106	6.4615	5.5247	0.8550	11.8957
0.73	0.1367	0.1142	1.8400	1.5362	0.8349	3.2793
0.80	0.3363	0.2872	4.5254	3.8640	0.8538	7.5844
0.87	0.4517	0.3743	6.0782	5.0362	0.8286	10.0443
0.93	0.7215	0.5959	9.7078	8.0178	0.8259	16.8018
1.00	0.3657	0.3054	4.9205	4.1090	0.8351	8.6106
1.07	0.5397	0.4569	7.2621	6.1477	0.8465	12.5128
1.13	0.5145	0.4272	6.9231	5.7485	0.8303	11.2836
1.20	0.5287	0.4311	7.1138	5.8006	0.8154	11.4919
1.27	0.8405	0.6791	11.3089	9.1372	0.8080	18.4461
1.33	1.0155	0.8566	13.6640	11.5262	0.8435	21.5443
1.40	1.2089	1.0171	16.2665	13.6853	0.8413	24.5025
1.47	0.9114	0.6915	12.2630	9.3048	0.7588	15.3824
1.53	0.9524	0.7168	12.8153	9.6446	0.7526	16.1961
1.60	1.4682	1.1638	19.7551	15.6598	0.7927	26.2381
1.67	1.0594	0.8318	14.2556	11.1921	0.7851	18.8586
1.73	1.7103	1.2895	23.0137	17.3513	0.7540	28.2762
1.80	1.6374	1.2116	22.0321	16.3035	0.7400	26.1392
1.87	1.4305	1.0604	19.2480	14.2690	0.7413	23.3813
1.93	2.4434	1.8202	32.8781	24.4914	0.7449	37.1074
2.00	1.4574	1.1038	19.6105	14.8524	0.7574	22.9711
2.07	1.1554	0.9252	15.5461	12.4496	0.8008	18.6536
2.13	3.0478	2.4704	41.0103	33.2414	0.8106	48.2049
2.20	1.6239	1.3397	21.8507	18.0269	0.8250	25.7649
2.27	1.8760	1.5452	25.2433	20.7913	0.8236	31.0897
2.33	1.3795	1.1968	18.5623	16.1041	0.8676	23.5831
2.40	2.5740	2.2731	34.6345	30.5866	0.8831	43.6739



2.47	1.2503	1.0889	16.8233	14.6523	0.8710	21.0226
2.53	2.7154	2.4122	36.5376	32.4573	0.8883	45.7307
2.60	1.3393	1.2433	18.0206	16.7295	0.9284	24.3076
2.67	2.1772	2.0286	29.2963	27.2967	0.9317	39.5457
2.73	1.7805	1.6483	23.9584	22.1784	0.9257	31.3671
2.80	1.8162	1.6382	24.4381	22.0436	0.9020	30.0345
2.87	1.7732	1.5509	23.8602	20.8681	0.8746	30.5597
2.93	2.3368	2.2149	31.4427	29.8027	0.9478	40.9059
3.00	2.0735	1.8649	27.8998	25.0940	0.8994	33.6362
3.07	2.0519	1.8807	27.6093	25.3054	0.9166	33.4079
3.13	2.3812	2.2043	32.0406	29.6601	0.9257	41.9485
3.20	1.5860	1.5134	21.3413	20.3635	0.9542	29.4154
3.27	1.4980	1.3955	20.1564	18.7780	0.9316	26.6591
3.33	2.8199	2.6546	37.9438	35.7190	0.9414	48.4454
3.40	1.8163	1.7220	24.4389	23.1707	0.9481	31.6570
3.47	2.4165	2.3694	32.5160	31.8822	0.9805	44.9630
3.53	2.0369	1.9745	27.4074	26.5680	0.9694	37.2918
3.60	2.1476	2.1342	28.8970	28.7171	0.9938	39.1630
3.67	2.4339	2.4080	32.7495	32.4008	0.9894	43.9449
3.73	1.4860	1.4383	19.9955	19.3527	0.9679	27.4490
3.80	2.6649	2.6726	35.8586	35.9611	1.0029	49.8183
3.87	1.7428	1.7928	23.4511	24.1227	1.0286	32.1603
3.93	2.0969	2.0695	28.2149	27.8467	0.9870	37.0920
4.00	2.4666	2.3305	33.1894	31.3586	0.9448	42.9622
4.07	1.4142	1.3854	19.0288	18.6416	0.9797	25.0325
4.13	2.8861	2.8072	38.8338	37.7721	0.9727	52.2784
4.20	2.3763	2.2768	31.9740	30.6360	0.9582	40.4453
4.27	2.0737	1.9489	27.9031	26.2233	0.9398	36.1598
4.33	2.1464	2.1017	28.8817	28.2798	0.9792	37.9065
4.40	3.0226	2.8216	40.6717	37.9670	0.9335	51.7300
4.47	1.5512	1.5265	20.8722	20.5397	0.9841	28.1659
4.53	2.7365	2.6340	36.8212	35.4425	0.9626	48.1581
4.60	2.1442	2.0647	28.8515	27.7813	0.9629	37.0049
4.67	1.8709	1.7705	25.1737	23.8228	0.9463	32.6679
4.73	2.9460	2.8845	39.6397	38.8124	0.9791	53.0764
4.80	1.6532	1.5355	22.2447	20.6609	0.9288	27.6691
4.87	3.1896	2.9584	42.9185	39.8074	0.9275	55.7173
4.93	1.7993	1.7176	24.2101	23.1112	0.9546	31.7507
5.00	2.7389	2.6175	36.8539	35.2196	0.9557	49.4353
5.07	2.8573	2.7964	38.4464	37.6269	0.9787	53.2666

5.13	2.6257	2.6073	35.3310	35.0830	0.9930	50.3844
5.20	2.3392	2.3686	31.4748	31.8715	1.0126	47.3253
5.27	1.5302	1.6101	20.5897	21.6652	1.0522	30.9056
5.33	2.9714	2.9513	39.9820	39.7120	0.9932	58.2698
5.40	1.7527	1.7800	23.5841	23.9511	1.0156	34.1993
5.47	2.4332	2.3799	32.7408	32.0232	0.9781	44.5287
5.53	2.5014	2.4135	33.6580	32.4751	0.9649	46.2817
5.60	2.7807	2.6785	37.4166	36.0410	0.9632	54.0561
5.67	2.1508	2.1570	28.9403	29.0233	1.0029	44.4263
5.73	2.4621	2.5415	33.1294	34.1980	1.0323	50.7799
5.80	2.1267	2.1270	28.6168	28.6205	1.0001	41.4635
5.87	2.0989	2.0622	28.2426	27.7479	0.9825	39.6206
5.93	2.3623	2.2742	31.7868	30.6011	0.9627	42.9932
6.00	2.2794	2.1724	30.6713	29.2305	0.9530	42.2649
6.07	1.9953	1.9279	26.8487	25.9415	0.9662	36.7591
6.13	2.8996	2.6907	39.0162	36.2051	0.9280	52.1470
6.20	1.9313	1.8589	25.9865	25.0129	0.9625	35.7154
6.27	2.2724	2.1837	30.5771	29.3826	0.9609	42.4025
6.33	1.7069	1.6474	22.9672	22.1675	0.9652	30.9399
6.40	2.4671	2.3316	33.1968	31.3738	0.9451	44.3301
6.47	1.8538	1.7722	24.9445	23.8455	0.9559	32.5791
6.53	3.5033	3.1376	47.1390	42.2181	0.8956	57.7337
6.60	2.4706	2.2452	33.2435	30.2111	0.9088	42.8908
6.67	1.8351	1.6968	24.6929	22.8310	0.9246	32.9797
6.73	2.1048	1.9885	28.3213	26.7568	0.9448	39.4159
6.80	1.8474	1.7395	24.8582	23.4068	0.9416	32.9478
6.87	2.6037	2.3846	35.0342	32.0865	0.9159	42.4733
6.93	2.2211	1.9545	29.8867	26.2994	0.8800	35.7347
7.00	2.4814	2.1946	33.3887	29.5300	0.8844	41.8440
7.07	2.5297	2.2238	34.0386	29.9222	0.8791	40.0357
7.13	3.0542	2.6907	41.0967	36.2046	0.8810	49.1487
7.20	2.2920	2.0632	30.8405	27.7624	0.9002	39.7175
7.27	2.8241	2.5601	38.0001	34.4483	0.9065	51.2538
7.33	2.1582	2.0930	29.0393	28.1628	0.9698	40.2516
7.40	2.2342	2.1255	30.0626	28.5996	0.9513	41.7996
7.47	1.8250	1.7528	24.5568	23.5853	0.9604	33.5803
7.53	1.9683	1.8597	26.4851	25.0232	0.9448	35.5255
7.60	2.6800	2.5541	36.0618	34.3672	0.9530	45.8594
7.67	2.4791	2.2589	33.3577	30.3955	0.9112	40.2349
7.73	3.2483	2.7930	43.7082	37.5817	0.8598	52.9006

7.80	1.7605	1.5814	23.6890	21.2782	0.8982	31.5327
7.87	2.5121	2.3942	33.8020	32.2162	0.9531	46.0450
7.93	3.1138	2.8490	41.8976	38.3353	0.9150	51.8521
8.00	2.9633	2.6980	39.8735	36.3028	0.9104	53.2149

**Two cycling  
transitions**

Last Name	First Name	D.O.B	Weight	Height	Temp	Date
Davis	Danny	10-24-75	163.5 Lbs	67.5 in	20.7 deg C	03-31-1998

TIME(min)	VO2(L)	VCO2(L)	VO2(Kg)	VCO2(Kg)	RER	VE(stpd)
0.13	0.2969	0.2524	3.9951	3.3960	0.8500	11.6155
0.20	0.2053	0.1821	2.7619	2.4503	0.8872	9.2530
0.27	0.3027	0.2905	4.0733	3.9085	0.9595	9.5804
0.33	0.4057	0.3600	5.4589	4.8437	0.8873	12.6432
0.40	0.3632	0.3989	4.8868	5.3672	1.0983	11.6918
0.47	0.2297	0.2248	3.0913	3.0246	0.9784	7.8262
0.53	0.4494	0.4195	6.0470	5.6444	0.9334	11.6155
0.60	0.2128	0.1928	2.8628	2.5938	0.9060	6.2145
0.67	0.4347	0.3889	5.8497	5.2334	0.8946	11.5184
0.73	0.5702	0.4716	7.6719	6.3458	0.8271	13.2421
0.80	0.4497	0.4494	6.0514	6.0466	0.9992	12.2235
0.87	0.9481	0.8358	12.7572	11.2467	0.8816	21.7599
0.93	0.1538	0.1293	2.0692	1.7403	0.8411	3.1577
1.00	0.3033	0.2481	4.0809	3.3378	0.8179	6.1160
1.07	0.3624	0.3075	4.8759	4.1374	0.8485	7.3371
1.13	0.8780	0.7079	11.8145	9.5249	0.8062	17.8935
1.20	0.6847	0.5658	9.2134	7.6130	0.8263	14.6722
1.27	0.5441	0.4415	7.3217	5.9412	0.8114	11.8177
1.33	1.4624	1.2748	19.6782	17.1531	0.8717	31.8220
1.40	0.6397	0.5123	8.6079	6.8936	0.8009	12.4324
1.47	0.4365	0.3499	5.8733	4.7078	0.8016	8.6583
1.53	0.9849	0.8172	13.2519	10.9964	0.8298	21.4148
1.60	1.1092	0.7745	14.9247	10.4211	0.6982	21.5048
1.67	0.9062	0.9402	12.1941	12.6513	1.0375	24.2567
1.73	1.0053	0.8470	13.5267	11.3970	0.8426	20.3809
1.80	1.2693	0.9545	17.0793	12.8436	0.7520	19.5792
1.87	1.2101	0.9113	16.2829	12.2628	0.7531	19.7887
1.93	1.6433	1.3080	22.1113	17.5999	0.7960	25.6978
2.00	1.3796	1.0320	18.5634	13.8868	0.7481	20.4772
2.07	0.8491	0.6749	11.4249	9.0818	0.7949	15.8040
2.13	1.7368	1.3840	23.3695	18.6220	0.7969	27.1104
2.20	1.7373	1.3322	23.3771	17.9262	0.7668	26.7249
2.27	1.2999	1.0234	17.4914	13.7702	0.7873	20.0863
2.33	1.8393	1.4707	24.7492	19.7899	0.7996	28.6703

2.40	1.3302	0.9999	17.8983	13.4546	0.7517	22.3669
2.47	0.9221	0.8603	12.4079	11.5763	0.9330	22.5147
2.53	1.1384	0.9459	15.3176	12.7277	0.8309	19.5630
2.60	2.3019	1.8465	30.9741	24.8456	0.8021	33.0354
2.67	2.0694	1.5921	27.8454	21.4222	0.7693	29.2681
2.73	1.4559	1.1760	19.5905	15.8236	0.8077	22.0236
2.80	1.5698	1.2912	21.1232	17.3743	0.8225	24.2499
2.87	1.4582	1.2084	19.6208	16.2593	0.8287	23.4413
2.93	1.5364	1.3106	20.6729	17.6354	0.8531	25.6238
3.00	0.9885	0.8492	13.3012	11.4261	0.8590	19.1660
3.07	1.9950	1.8360	26.8436	24.7041	0.9203	34.6428
3.13	0.9132	0.8144	12.2882	10.9589	0.8918	18.2384
3.20	1.7727	1.5437	23.8532	20.7721	0.8708	30.6605
3.27	1.4999	1.2639	20.1820	17.0072	0.8427	22.8172
3.33	1.7876	1.3322	24.0531	17.9257	0.7453	25.6203
3.40	1.4953	1.3424	20.1201	18.0630	0.8978	24.8613
3.47	1.4822	1.2467	19.9440	16.7755	0.8411	23.7935
3.53	1.6227	1.3741	21.8339	18.4901	0.8469	26.0269
3.60	1.7438	1.4827	23.4643	19.9513	0.8503	27.2085
3.67	1.2717	0.9668	17.1115	13.0084	0.7602	23.7771
3.73	1.4761	1.4642	19.8623	19.7020	0.9919	29.0810
3.80	1.1157	0.9939	15.0119	13.3733	0.8908	20.1799
3.87	1.7405	1.5680	23.4201	21.0982	0.9009	28.5372
3.93	1.9598	1.6756	26.3706	22.5465	0.8550	29.9517
4.00	1.1606	1.0224	15.6164	13.7573	0.8810	21.7985
4.07	1.3334	1.1905	17.9411	16.0188	0.8929	24.2952
4.13	1.3893	1.2012	18.6944	16.1627	0.8646	22.3700
4.20	2.0807	1.7133	27.9978	23.0540	0.8234	30.1679
4.27	1.8657	1.4866	25.1039	20.0030	0.7968	27.4047
4.33	0.6367	0.5734	8.5671	7.7157	0.9006	9.9825
4.40	1.4117	1.1786	18.9954	15.8595	0.8349	21.9095
4.47	2.4701	2.1601	33.2372	29.0659	0.8745	38.8203
4.53	2.2300	1.8983	30.0061	25.5427	0.8513	33.3367
4.60	1.4988	1.1833	20.1672	15.9219	0.7895	22.6260
4.67	1.4104	1.4561	18.9778	19.5922	1.0324	28.4393
4.73	1.1673	1.0841	15.7074	14.5873	0.9287	23.4381
4.80	1.5513	1.4938	20.8740	20.0996	0.9629	31.2163
4.87	1.6081	1.3520	21.6381	18.1927	0.8408	26.0269
4.93	1.6696	1.5534	22.4653	20.9018	0.9304	31.3180
5.00	1.2768	1.0887	17.1798	14.6491	0.8527	21.2020

5.07	1.4853	1.3384	19.9851	18.0089	0.9011	25.5186
5.13	1.1519	1.0279	15.5002	13.8314	0.8923	20.3753
5.20	1.2700	1.1273	17.0880	15.1681	0.8876	24.0595
5.27	2.1921	1.9522	29.4966	26.2686	0.8906	37.9085
5.33	1.1518	0.9920	15.4978	13.3484	0.8613	20.3279
5.40	2.2420	1.9846	30.1675	26.7040	0.8852	36.7884
5.47	1.7681	1.5415	23.7914	20.7424	0.8718	28.8696
5.53	1.7818	1.5499	23.9746	20.8546	0.8699	28.5451
5.60	1.6151	1.4268	21.7320	19.1988	0.8834	26.1105
5.67	1.8811	1.6081	25.3116	21.6374	0.8548	30.6020
5.73	2.3145	1.9856	31.1437	26.7177	0.8579	36.9099
5.80	1.6699	1.4848	22.4691	19.9795	0.8892	27.1972
5.87	1.9289	1.7470	25.9544	23.5065	0.9057	33.2453
5.93	1.8554	1.4478	24.9660	19.4815	0.7803	31.8873
6.00	1.5810	1.3687	21.2731	18.4162	0.8657	28.2480
6.07	1.1849	1.2089	15.9439	16.2668	1.0202	23.8919
6.13	2.3037	2.3066	30.9975	31.0362	1.0012	42.1710
6.20	1.3119	1.2971	17.6525	17.4537	0.9887	23.7372
6.27	2.1839	2.3275	29.3854	31.3181	1.0658	38.9280
6.33	1.6535	1.5926	22.2486	21.4300	0.9632	29.0388
6.40	0.7773	0.7693	10.4597	10.3517	0.9897	17.9927
6.47	1.9839	1.8941	26.6942	25.4866	0.9548	40.7744
6.53	2.0755	1.9282	27.9274	25.9458	0.9290	37.0830
6.60	1.1162	0.9900	15.0195	13.3210	0.8869	17.9852
6.67	1.9473	1.6433	26.2021	22.1120	0.8439	32.0032
6.73	1.9517	1.7343	26.2620	23.3358	0.8886	30.8899
6.80	2.6509	2.2267	35.6699	29.9612	0.8400	39.8372
6.87	1.8466	1.5991	24.8468	21.5163	0.8660	28.7371
6.93	1.8936	1.6548	25.4793	22.2669	0.8739	29.3445
7.00	2.2040	1.9437	29.6562	26.1540	0.8819	36.0642
7.07	1.0792	1.0355	14.5216	13.9332	0.9595	23.9936
7.13	1.4864	1.4238	20.0003	19.1580	0.9579	28.4473
7.20	1.0729	0.9893	14.4367	13.3115	0.9221	18.8445
7.27	2.9326	2.5944	39.4602	34.9089	0.8847	43.5732
7.33	3.1628	2.6786	42.5569	36.0417	0.8469	45.8331
7.40	1.9097	1.6635	25.6962	22.3831	0.8711	30.6655
7.47	2.7700	2.5304	37.2727	34.0487	0.9135	47.9275
7.53	1.9982	1.7875	26.8876	24.0516	0.8945	35.3608
7.60	1.5447	1.6327	20.7852	21.9684	1.0569	33.1162
7.67	1.8549	1.8378	24.9585	24.7283	0.9908	34.0351

7.73	2.2043	2.1026	29.6599	28.2924	0.9539	37.4843
7.80	1.0885	1.0084	14.6465	13.5686	0.9264	18.6408
7.87	1.9170	1.7884	25.7940	24.0639	0.9329	31.9104
7.93	2.7751	2.5606	37.3410	34.4548	0.9227	43.8901
8.00	2.7961	2.4736	37.6234	33.2838	0.8847	40.9268
8.07	2.6275	2.2354	35.3544	30.0781	0.8508	43.1550
8.13	1.8966	1.8442	25.5207	24.8147	0.9723	34.1226
8.20	1.3502	1.2584	18.1683	16.9324	0.9320	22.7578
8.27	3.1375	3.0083	42.2177	40.4782	0.9588	53.8690
8.33	2.2775	2.1018	30.6447	28.2817	0.9229	38.3932
8.40	1.4227	1.3715	19.1433	18.4547	0.9640	26.8143
8.47	2.5911	2.5601	34.8644	34.4483	0.9881	45.8444
8.53	1.9538	1.8387	26.2892	24.7406	0.9411	34.5313
8.60	2.3689	2.2746	31.8749	30.6062	0.9602	43.2865
8.67	2.3222	2.0726	31.2474	27.8878	0.8925	40.4414
8.73	1.1468	1.1225	15.4309	15.1035	0.9788	21.7328
8.80	1.9897	1.9359	26.7725	26.0487	0.9730	33.1253
8.87	3.5174	3.1555	47.3294	42.4599	0.8971	55.6600
8.93	1.5722	1.4241	21.1555	19.1616	0.9058	26.5206
9.00	2.7433	2.5192	36.9125	33.8976	0.9183	46.3979
9.07	2.0398	1.9008	27.4464	25.5759	0.9318	33.7350
9.13	3.0792	2.7973	41.4320	37.6397	0.9085	52.1922
9.20	1.2469	1.1636	16.7778	15.6573	0.9332	22.5515
9.27	1.4378	1.3717	19.3462	18.4569	0.9540	27.6269
9.33	2.5918	2.5362	34.8748	34.1263	0.9785	43.4717
9.40	3.4524	3.0486	46.4550	41.0209	0.8830	52.5693
9.47	1.6467	1.4861	22.1581	19.9965	0.9024	26.7312
9.53	1.3406	1.2453	18.0390	16.7568	0.9289	23.1706
9.60	3.1004	2.9496	41.7186	39.6892	0.9514	52.5838
9.67	2.0234	1.9062	27.2258	25.6485	0.9421	33.3286
9.73	2.0539	1.8681	27.6363	25.1368	0.9096	31.8839
9.80	2.3836	2.1994	32.0728	29.5942	0.9227	37.4739
9.87	3.1580	2.8626	42.4927	38.5184	0.9065	51.3067
9.93	1.7714	1.6423	23.8352	22.0987	0.9271	30.8728
10.00	2.4800	2.3343	33.3694	31.4101	0.9413	43.3521
10.07	2.3550	2.1290	31.6881	28.6471	0.9040	41.0227
10.13	2.1515	2.0489	28.9497	27.5697	0.9523	38.3720
10.20	2.4170	2.2512	32.5219	30.2911	0.9314	41.6147
10.27	1.9712	1.7434	26.5237	23.4584	0.8844	34.1179
10.33	1.7820	1.6996	23.9776	22.8697	0.9538	30.9615

10.40	3.1494	2.8658	42.3771	38.5615	0.9100	49.6743
10.47	1.8394	1.6087	24.7507	21.6460	0.8746	29.4388
10.53	2.9905	2.6692	40.2391	35.9156	0.8926	50.8441
10.60	1.3116	1.2122	17.6482	16.3116	0.9243	22.7452
10.67	3.2879	3.0208	44.2412	40.6462	0.9187	55.0278
10.73	2.2129	1.9716	29.7756	26.5285	0.8909	35.9804
10.80	2.7707	2.4971	37.2814	33.5996	0.9012	49.5453
10.87	1.8073	1.7303	24.3179	23.2828	0.9574	33.6977
10.93	1.7858	1.6767	24.0294	22.5617	0.9389	30.7968
11.00	1.6480	1.4755	22.1745	19.8534	0.8953	27.7361
11.07	2.6153	2.3827	35.1904	32.0610	0.9111	43.8840
11.13	2.1790	1.8876	29.3195	25.3988	0.8663	32.4932
11.20	3.0596	2.6148	41.1691	35.1841	0.8546	45.1671
11.27	2.2501	1.9301	30.2760	25.9706	0.8578	34.4082
11.33	2.8557	2.5028	38.4258	33.6765	0.8764	46.4802
11.40	2.6148	2.3551	35.1840	31.6893	0.9007	44.4382
11.47	2.0346	1.8976	27.3775	25.5328	0.9326	35.7376
11.53	2.7879	2.5483	37.5129	34.2888	0.9141	47.4132
11.60	2.1868	1.9873	29.4248	26.7408	0.9088	37.1487
11.67	2.4211	2.2285	32.5773	29.9860	0.9205	40.7068
11.73	2.3335	2.1301	31.3991	28.6621	0.9128	39.0880
11.80	2.9471	2.6893	39.6551	36.1857	0.9125	50.6481
11.87	2.3031	2.1555	30.9899	29.0037	0.9359	40.4814
11.93	2.1892	1.9897	29.4569	26.7731	0.9089	37.7577
12.00	3.1087	2.8659	41.8295	38.5629	0.9219	57.2613



**Stepping and cycling transitions**

Last Name	First Name	D.O.B	Weight	Height	Temp	Date
Davis	Danny	10-24-75	163.5 Lbs	67.5 in	21.4 deg C	04-03-1998

TIME(min)	VO2(L)	VCO2(L)	VO2(Kg)	VCO2(Kg)	RER	VE(stpd)
0.13	0.0159	0.0029	0.2136	0.0391	0.1830	3.0596
0.20	0.0788	0.0393	1.0607	0.5282	0.4980	11.2263
0.27	0.0272	0.0186	0.3661	0.2497	0.6820	2.8576
0.33	0.3706	0.3206	4.9865	4.3142	0.8652	19.2754
0.40	0.2456	0.2197	3.3048	2.9557	0.8944	8.3606
0.47	0.4113	0.3596	5.5342	4.8391	0.8744	11.6313
0.53	0.2648	0.2273	3.5629	3.0590	0.8586	6.9379
0.60	0.2394	0.2019	3.2211	2.7162	0.8432	5.5134
0.67	0.3021	0.2508	4.0653	3.3746	0.8301	6.7395
0.73	0.9005	0.7636	12.1175	10.2744	0.8479	20.5191
0.80	0.2947	0.2420	3.9651	3.2563	0.8212	6.3249
0.87	0.3166	0.2625	4.2604	3.5319	0.8290	6.9418
0.93	0.3840	0.3234	5.1668	4.3512	0.8421	8.5633
1.00	0.2455	0.2079	3.3038	2.7973	0.8467	5.5126
1.07	0.5997	0.5084	8.0695	6.8407	0.8477	13.8663
1.13	0.5141	0.4454	6.9176	5.9927	0.8663	11.6248
1.20	0.6927	0.5884	9.3212	7.9171	0.8494	15.2980
1.27	0.5905	0.4969	7.9462	6.6867	0.8415	13.0561
1.33	1.5471	1.2798	20.8171	17.2200	0.8272	32.2678
1.40	0.4852	0.3775	6.5286	5.0797	0.7781	8.9760
1.47	1.2449	0.9215	16.7515	12.4000	0.7402	23.0617
1.53	0.8639	0.6849	11.6237	9.2155	0.7928	15.5105
1.60	1.2313	0.9152	16.5675	12.3143	0.7433	21.0354
1.67	1.5994	1.1735	21.5205	15.7904	0.7337	26.7278
1.73	0.9611	0.6968	12.9319	9.3763	0.7251	15.9253
1.80	1.8952	1.3960	25.5012	18.7836	0.7366	30.8127
1.87	1.4492	1.0715	19.5000	14.4177	0.7394	22.8449
1.93	1.6284	1.2027	21.9112	16.1836	0.7386	25.5072
2.00	1.7334	1.2945	23.3236	17.4179	0.7468	27.5401
2.07	1.6744	1.2759	22.5302	17.1685	0.7620	26.9170
2.13	1.9544	1.4950	26.2982	20.1157	0.7649	31.7046
2.20	1.2674	0.9907	17.0531	13.3299	0.7817	20.8110
2.27	2.3417	1.8408	31.5097	24.7698	0.7861	39.4158
2.33	1.0647	0.8419	14.3267	11.3289	0.7908	17.6315
2.40	1.8002	1.4639	24.2226	19.6975	0.8132	30.8169

2.47	1.8555	1.4637	24.9673	19.6949	0.7888	32.2366
2.53	0.9998	0.8178	13.4524	11.0046	0.8180	17.0200
2.60	2.6156	2.0793	35.1948	27.9783	0.7950	42.1757
2.67	1.4940	1.2216	20.1025	16.4379	0.8177	24.7793
2.73	1.4092	1.1712	18.9621	15.7599	0.8311	23.5426
2.80	1.5323	1.2863	20.6185	17.3082	0.8394	25.7006
2.87	2.2949	1.9111	30.8800	25.7145	0.8327	38.6849
2.93	2.2195	1.8476	29.8642	24.8603	0.8324	36.6948
3.00	1.4817	1.2426	19.9370	16.7205	0.8387	25.2821
3.07	1.7114	1.4786	23.0277	19.8951	0.8640	30.7064
3.13	2.1520	1.9226	28.9563	25.8704	0.8934	38.0725
3.20	1.4364	1.2499	19.3282	16.8181	0.8701	24.6773
3.27	1.9772	1.7102	26.6050	23.0123	0.8650	34.6898
3.33	1.9507	1.7021	26.2480	22.9034	0.8726	35.7199
3.40	1.7096	1.5292	23.0041	20.5766	0.8945	31.8241
3.47	1.6271	1.4783	21.8939	19.8919	0.9086	29.2741
3.53	2.3814	2.1036	32.0432	28.3058	0.8834	41.2082
3.60	2.5828	2.2786	34.7533	30.6607	0.8822	45.8939
3.67	2.2340	2.0060	30.0601	26.9917	0.8979	41.6162
3.73	1.4104	1.2757	18.9784	17.1650	0.9045	27.3437
3.80	1.9908	1.8662	26.7881	25.1103	0.9374	41.1911
3.87	1.0610	0.9883	14.2763	13.2980	0.9315	20.8928
3.93	1.6536	1.5761	22.2504	21.2068	0.9531	31.6158
4.00	2.3152	2.0982	31.1531	28.2327	0.9063	40.9815
4.07	1.6690	1.4250	22.4576	19.1738	0.8538	27.4305
4.13	1.6212	1.3846	21.8146	18.6301	0.8540	27.3361
4.20	1.5714	1.3501	21.1437	18.1660	0.8592	27.1096
4.27	2.0926	1.7992	28.1577	24.2093	0.8598	38.0357
4.33	2.2291	1.9539	29.9939	26.2910	0.8765	38.0146
4.40	1.8725	1.6026	25.1959	21.5637	0.8558	30.4687
4.47	2.3119	1.9911	31.1080	26.7916	0.8612	38.2185
4.53	2.2595	2.0025	30.4031	26.9446	0.8862	38.0357
4.60	1.6863	1.4879	22.6909	20.0210	0.8823	28.6701
4.67	1.6652	1.5026	22.4064	20.2184	0.9024	29.7841
4.73	1.8233	1.6647	24.5337	22.3998	0.9130	32.8351
4.80	2.0145	1.8254	27.1071	24.5625	0.9061	35.8992
4.87	1.5832	1.4259	21.3027	19.1864	0.9007	27.3172
4.93	2.6915	2.3882	36.2157	32.1346	0.8873	45.7088
5.00	2.4224	2.1873	32.5953	29.4321	0.9030	42.1874
5.07	2.0608	1.9237	27.7300	25.8843	0.9334	38.3204

5.13	1.6187	1.5591	21.7806	20.9786	0.9632	31.0887
5.20	2.0545	1.9773	27.6445	26.6055	0.9624	39.0770
5.27	1.8077	1.7437	24.3243	23.4630	0.9646	34.5638
5.33	1.6837	1.6124	22.6547	21.6955	0.9577	31.6158
5.40	2.1441	2.0333	28.8497	27.3594	0.9483	38.9911
5.47	1.7165	1.6088	23.0967	21.6472	0.9372	30.7914
5.53	1.7934	1.6495	24.1316	22.1946	0.9197	32.3431
5.60	1.7668	1.6701	23.7741	22.4721	0.9452	31.3944
5.67	2.3404	2.1017	31.4918	28.2792	0.8980	39.5817
5.73	2.1151	1.8964	28.4604	25.5176	0.8966	37.1128
5.80	2.3013	2.1574	30.9649	29.0293	0.9375	42.1378
5.87	1.8422	1.7075	24.7884	22.9749	0.9268	33.3495
5.93	1.9405	1.8447	26.1110	24.8214	0.9506	37.5310
6.00	2.1052	2.0175	28.3264	27.1470	0.9584	41.8990
6.07	1.9716	1.9202	26.5287	25.8378	0.9740	40.8965
6.13	1.5322	1.5365	20.6164	20.6749	1.0028	31.8110
6.20	1.9328	1.8929	26.0075	25.4707	0.9794	39.0284
6.27	1.3993	1.3788	18.8286	18.5531	0.9854	28.7244
6.33	1.7895	1.7791	24.0791	23.9394	0.9942	35.7972
6.40	2.3071	2.1891	31.0442	29.4556	0.9488	42.8402
6.47	1.1927	1.1027	16.0481	14.8374	0.9246	22.8292
6.53	2.2389	2.1315	30.1260	28.6804	0.9520	43.6321
6.60	1.6376	1.4831	22.0354	19.9556	0.9056	28.8542
6.67	2.1925	1.9130	29.5019	25.7408	0.8725	38.5296
6.73	1.5883	1.4387	21.3714	19.3582	0.9058	29.3599
6.80	2.2421	1.9903	30.1694	26.7803	0.8877	39.1790
6.87	2.7543	2.4035	37.0611	32.3402	0.8726	47.9734
6.93	2.3835	2.1267	32.0712	28.6157	0.8923	43.2243
7.00	2.1434	1.9170	28.8410	25.7939	0.8943	40.5682
7.07	1.9833	1.8252	26.6859	24.5596	0.9203	40.1549
7.13	1.8164	1.7002	24.4410	22.8775	0.9360	35.9813
7.20	1.7595	1.6076	23.6755	21.6315	0.9137	33.0436
7.27	2.5446	2.3365	34.2394	31.4389	0.9182	46.0851
7.33	2.0955	1.9180	28.1957	25.8086	0.9153	38.9050
7.40	1.5619	1.4520	21.0159	19.5378	0.9297	29.5720
7.47	2.2236	2.0143	29.9204	27.1040	0.9059	40.1660
7.53	2.2440	2.0520	30.1946	27.6104	0.9144	40.7946
7.60	2.2327	2.0819	30.0421	28.0137	0.9325	40.4662
7.67	2.2403	2.0402	30.1449	27.4526	0.9107	40.6018
7.73	2.0594	1.9444	27.7103	26.1629	0.9442	38.9265

7.80	2.2682	2.1765	30.5208	29.2863	0.9596	43.0145
7.87	2.6751	2.4825	35.9947	33.4034	0.9280	49.1099
7.93	1.9230	1.8231	25.8754	24.5306	0.9480	36.9038
8.00	2.0220	1.9834	27.2070	26.6875	0.9809	39.5489
8.07	1.5071	1.4646	20.2784	19.7071	0.9718	27.9250
8.13	2.1454	2.0364	28.8682	27.4016	0.9492	37.4032
8.20	2.2842	2.0432	30.7349	27.4925	0.8945	37.3219
8.27	2.8407	2.5166	38.2240	33.8630	0.8859	45.3902
8.33	2.2453	1.9586	30.2116	26.3536	0.8723	36.8171
8.40	2.2833	2.0224	30.7235	27.2132	0.8857	38.9319
8.47	2.4221	2.2087	32.5908	29.7197	0.9119	43.6080
8.53	2.4989	2.3321	33.6239	31.3799	0.9333	47.6901
8.60	2.3036	2.1965	30.9963	29.5551	0.9535	44.6886
8.67	2.5552	2.4351	34.3824	32.7655	0.9530	52.3631
8.73	1.8454	1.8903	24.8311	25.4350	1.0243	37.8056
8.80	1.5112	1.4730	20.3348	19.8208	0.9747	29.0260
8.87	2.8702	2.6660	38.6207	35.8724	0.9288	53.6949
8.93	2.2983	2.2688	30.9256	30.5279	0.9871	43.6321
9.00	1.4677	1.3724	19.7483	18.4661	0.9351	26.4945
9.07	1.9595	1.8576	26.3661	24.9958	0.9480	35.1513
9.13	2.3121	2.1195	31.1102	28.5195	0.9167	40.0309
9.20	2.2336	2.0487	30.0542	27.5671	0.9172	36.2971
9.27	2.3620	2.1022	31.7827	28.2863	0.8900	38.7174
9.33	3.0506	2.7613	41.0475	37.1558	0.9052	52.0059
9.40	2.4555	2.2134	33.0405	29.7833	0.9014	42.2834
9.47	2.4631	2.3375	33.1429	31.4525	0.9490	46.0596
9.53	1.5918	1.5297	21.4186	20.5826	0.9610	30.0528
9.60	2.7563	2.6707	37.0873	35.9358	0.9690	51.7590
9.67	2.7538	2.5524	37.0543	34.3444	0.9269	50.5433
9.73	2.4925	2.3200	33.5379	31.2172	0.9308	46.8684
9.80	1.5910	1.5017	21.4078	20.2066	0.9439	29.6494
9.87	2.5422	2.3467	34.2070	31.5769	0.9231	45.5690
9.93	2.8040	2.5305	37.7292	34.0500	0.9025	48.2948
10.00	2.4098	2.1429	32.4256	28.8348	0.8893	41.9372
10.07	1.8501	1.6938	24.8943	22.7917	0.9155	33.6416
10.13	2.6425	2.4278	35.5569	32.6677	0.9187	46.6904
10.20	2.5772	2.3661	34.6780	31.8376	0.9181	45.0282
10.27	2.7591	2.4272	37.1255	32.6591	0.8797	47.0852
10.33	1.5646	1.3954	21.0529	18.7760	0.8918	26.8872
10.40	2.3659	2.1452	31.8344	28.8645	0.9067	41.6951

10.47	1.6466	1.4977	22.1567	20.1520	0.9095	27.9173
10.53	3.0558	2.7095	41.1174	36.4580	0.8867	49.5380
10.60	3.0013	2.5788	40.3841	34.7000	0.8592	48.0711
10.67	2.8868	2.5150	38.8442	33.8406	0.8712	49.6057
10.73	2.5758	2.3210	34.6593	31.2312	0.9011	45.6457
10.80	2.2374	2.0278	30.1054	27.2858	0.9063	41.8528
10.87	1.8690	1.7273	25.1483	23.2420	0.9242	34.4428
10.93	2.4980	2.2620	33.6121	30.4371	0.9055	45.0158
11.00	2.7176	2.5108	36.5671	33.7838	0.9239	47.6448
11.07	1.7276	1.5413	23.2464	20.7388	0.8921	29.7553
11.13	2.7963	2.5428	37.6261	34.2144	0.9093	49.0896
11.20	2.8150	2.5471	37.8772	34.2729	0.9048	49.7007
11.27	1.7118	1.5746	23.0331	21.1869	0.9198	30.2523
11.33	2.5368	2.3137	34.1337	31.1328	0.9121	45.0593
11.40	2.5717	2.3495	34.6042	31.6136	0.9136	44.2071
11.47	2.5775	2.3047	34.6822	31.0119	0.8942	44.0277
11.53	2.7472	2.4312	36.9656	32.7132	0.8850	47.3466
11.60	1.6764	1.4962	22.5565	20.1330	0.8926	30.4729
11.67	1.4583	1.3784	19.6230	18.5470	0.9452	28.4486
11.73	2.5076	2.3710	33.7410	31.9028	0.9455	43.5873
11.80	2.9904	2.5860	40.2384	34.7957	0.8647	47.7590
11.87	1.8569	1.6278	24.9857	21.9028	0.8766	31.3951
11.93	2.8423	2.4851	38.2444	33.4385	0.8743	50.3048
12.00	2.4211	2.2264	32.5772	29.9581	0.9196	41.8528
12.07	2.1951	1.9380	29.5368	26.0766	0.8829	37.4860
12.13	2.4199	2.2106	32.5620	29.7454	0.9135	41.8701
12.20	2.7546	2.4921	37.0643	33.5322	0.9047	48.9607
12.27	2.5009	2.3018	33.6517	30.9728	0.9204	45.9451
12.33	1.9019	1.7810	25.5910	23.9642	0.9364	35.0591
12.40	2.1561	1.9752	29.0114	26.5770	0.9161	38.5030
12.47	3.0961	2.7706	41.6602	37.2797	0.8949	52.3270
12.53	1.4201	1.2199	19.1080	16.4140	0.8590	23.4148
12.60	2.8973	2.5578	38.9850	34.4163	0.8828	50.7999
12.67	2.9387	2.5826	39.5418	34.7509	0.8788	48.4575
12.73	2.4276	2.1420	32.6654	28.8224	0.8824	40.9193
12.80	2.3478	2.0913	31.5906	28.1405	0.8908	40.3361
12.87	2.6282	2.3832	35.3639	32.0674	0.9068	47.0527
12.93	2.6566	2.3739	35.7462	31.9426	0.8936	47.8608
13.00	2.5135	2.2801	33.8202	30.6803	0.9072	46.9143

**One cycling transition**

Last Name	First Name	D.O.B	Weight	Height	Temp	Date
Eyestone	Barry	04-24-71	217.0 Lbs	72.8 in	28.5 deg C	03-23-1998

TIME(min)	VO2(L)	VCO2(L)	VO2(Kg)	VCO2(Kg)	RER	VE(stpd)
0.13	0.0379	0.0086	0.3840	0.0874	0.2277	8.6276
0.20	0.0455	0.0164	0.4610	0.1665	0.3613	8.4304
0.27	0.1179	0.0725	1.1955	0.7349	0.6148	12.7299
0.33	0.1328	0.0818	1.3467	0.8293	0.6158	9.4107
0.40	1.0667	1.0435	10.8150	10.5790	0.9782	33.1066
0.47	0.2333	0.1680	2.3657	1.7028	0.7198	4.7028
0.53	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.60	0.3956	0.2789	4.0105	2.8276	0.7051	7.8422
0.67	0.4814	0.3422	4.8806	3.4690	0.7108	10.4904
0.73	0.3984	0.2903	4.0392	2.9427	0.7285	8.8178
0.80	0.1460	0.0855	1.4797	0.8665	0.5856	3.5281
0.87	0.0216	0.0212	0.2192	0.2150	0.9808	1.1759
0.93	0.3533	0.2620	3.5822	2.6561	0.7415	7.9349
1.00	0.4919	0.3539	4.9875	3.5881	0.7194	9.9935
1.07	0.2897	0.2131	2.9371	2.1603	0.7355	7.6451
1.13	0.6910	0.6054	7.0057	6.1376	0.8761	16.2682
1.20	0.7724	0.5595	7.8303	5.6721	0.7244	14.7962
1.27	0.4843	0.3527	4.9095	3.5757	0.7283	11.1722
1.33	1.1929	0.8385	12.0941	8.5008	0.7029	21.5487
1.40	0.9447	0.6606	9.5775	6.6971	0.6993	18.0420
1.47	0.3567	0.3010	3.6164	3.0517	0.8439	10.0942
1.53	0.6714	0.4678	6.8070	4.7426	0.6967	16.0636
1.60	1.8628	1.3137	18.8860	13.3191	0.7052	28.4954
1.67	1.4910	0.9961	15.1157	10.0987	0.6681	21.8661
1.73	1.3372	0.8899	13.5573	9.0225	0.6655	19.6003
1.80	1.6670	0.9185	16.9009	9.3116	0.5510	26.2679
1.87	1.5612	1.3177	15.8279	13.3595	0.8440	27.4515
1.93	1.6910	1.1199	17.1442	11.3540	0.6623	24.1084
2.00	1.5314	1.0381	15.5254	10.5242	0.6779	26.0754
2.07	2.9676	2.1334	30.0861	21.6286	0.7189	43.0110
2.13	1.5929	1.1784	16.1490	11.9471	0.7398	27.6252
2.20	2.0185	1.5158	20.4644	15.3671	0.7509	33.4939
2.27	2.5013	1.7170	25.3592	17.4073	0.6864	38.0246
2.33	1.1066	0.9715	11.2189	9.8493	0.8779	24.5884
2.40	2.7586	2.0836	27.9669	21.1240	0.7553	44.0947

2.47	1.7754	1.4619	17.9995	14.8216	0.8234	35.4765
2.53	1.8535	1.4561	18.7910	14.7620	0.7856	30.3969
2.60	1.4905	1.2896	15.1106	13.0742	0.8652	29.0084
2.67	2.3921	1.8345	24.2512	18.5991	0.7669	43.3108
2.73	1.6283	1.6514	16.5084	16.7423	1.0142	34.8744
2.80	2.5903	2.1425	26.2611	21.7207	0.8271	39.9738
2.87	2.0104	1.6697	20.3822	16.9278	0.8305	36.0597
2.93	2.7977	2.3764	28.3635	24.0923	0.8494	47.4327
3.00	2.9104	2.3920	29.5059	24.2511	0.8219	47.6030
3.07	3.1103	2.5390	31.5326	25.7413	0.8163	52.2418
3.13	1.8673	1.6249	18.9309	16.4735	0.8702	34.4965
3.20	1.7336	1.4382	17.5759	14.5805	0.8296	31.1603
3.27	3.1520	2.7788	31.9554	28.1720	0.8816	57.8287
3.33	2.2721	1.9472	23.0348	19.7407	0.8570	37.4467
3.40	2.7249	2.2644	27.6253	22.9567	0.8310	48.4323
3.47	3.1406	2.7037	31.8397	27.4103	0.8609	56.4412
3.53	1.7575	1.5757	17.8180	15.9750	0.8966	36.4271
3.60	1.9770	1.7798	20.0429	18.0443	0.9003	35.6677
3.67	2.8039	2.5095	28.4269	25.4424	0.8950	50.6463
3.73	3.3784	2.7653	34.2508	28.0348	0.8185	59.2089
3.80	1.5057	1.3962	15.2654	14.1553	0.9273	34.5945
3.87	2.2173	2.1108	22.4799	21.4002	0.9520	39.0204
3.93	4.0316	3.4023	40.8733	34.4929	0.8439	66.2579
4.00	2.7077	2.3193	27.4517	23.5140	0.8566	50.4708
4.07	1.6878	1.5385	17.1114	15.5976	0.9115	34.1091
4.13	2.7819	2.5471	28.2032	25.8232	0.9156	56.8485
4.20	3.3171	2.9911	33.6294	30.3242	0.9017	60.0012
4.27	2.3487	2.0477	23.8114	20.7596	0.8718	43.6107
4.33	2.5310	2.1584	25.6602	21.8825	0.8528	49.4974
4.40	1.9024	1.8173	19.2866	18.4246	0.9553	38.7054
4.47	2.7744	2.4810	28.1277	25.1533	0.8943	52.0107
4.53	3.5457	3.1167	35.9468	31.5980	0.8790	65.4738
4.60	3.0605	2.7235	31.0280	27.6113	0.8899	60.1810
4.67	1.1649	1.0307	11.8099	10.4496	0.8848	29.9925
4.73	2.5068	2.6185	25.4141	26.5469	1.0446	55.6498
4.80	2.7038	2.4127	27.4122	24.4609	0.8923	47.8247
4.87	3.3939	2.9267	34.4084	29.6713	0.8623	64.8857
4.93	2.0151	1.8586	20.4300	18.8428	0.9223	42.3309
5.00	2.0291	1.9376	20.5711	19.6441	0.9549	39.6638
5.07	2.9580	2.6836	29.9885	27.2070	0.9072	56.1397

5.13	1.3960	1.2775	14.1528	12.9519	0.9152	31.2667
5.20	3.0709	2.8131	31.1331	28.5199	0.9161	57.2922
5.27	3.2697	2.8862	33.1494	29.2610	0.8827	61.1447
5.33	1.9726	1.7129	19.9986	17.3656	0.8683	39.5979
5.40	3.3979	3.1730	34.4490	32.1686	0.9338	65.9639
5.47	2.2065	1.8000	22.3696	18.2485	0.8158	43.6792
5.53	1.8116	1.8419	18.3661	18.6732	1.0167	38.0143
5.60	3.4374	3.0201	34.8495	30.6186	0.8786	59.1610
5.67	2.9573	2.5507	29.9823	25.8601	0.8625	55.3260
5.73	2.8405	2.5437	28.7979	25.7891	0.8955	58.4010
5.80	2.9829	2.7463	30.2410	27.8426	0.9207	61.0220
5.87	2.6539	2.4851	26.9063	25.1941	0.9364	54.1948
5.93	2.5368	2.3263	25.7187	23.5843	0.9170	51.0657
6.00	2.9801	2.6987	30.2129	27.3599	0.9056	59.2408
6.07	2.6540	2.4186	26.9069	24.5207	0.9113	54.4668
6.13	2.5421	2.3249	25.7724	23.5708	0.9146	52.8923
6.20	2.5790	2.3831	26.1464	24.1604	0.9240	54.7754
6.27	3.1071	2.7966	31.5004	28.3531	0.9001	63.1215
6.33	1.5368	1.3823	15.5805	14.0143	0.8995	34.8979
6.40	2.2655	2.2498	22.9682	22.8087	0.9931	46.8194
6.47	3.5432	3.1141	35.9218	31.5719	0.8789	63.4878
6.53	3.0166	2.5489	30.5833	25.8418	0.8450	55.1674
6.60	2.6039	2.3250	26.3991	23.5712	0.8929	50.9814
6.67	2.9755	2.5793	30.1665	26.1499	0.8669	57.5036
6.73	2.9447	2.5338	29.8540	25.6881	0.8605	58.7108
6.80	0.7126	0.6992	7.2245	7.0888	0.9812	22.0444
6.87	2.6989	2.5733	27.3618	26.0888	0.9535	50.1632
6.93	3.8034	3.1969	38.5601	32.4111	0.8405	65.6433
7.00	2.9115	2.4989	29.5174	25.3342	0.8583	57.4366
7.07	2.6831	2.4066	27.2022	24.3982	0.8969	55.7628
7.13	1.4411	1.3068	14.6106	13.2491	0.9068	34.8838
7.20	2.6103	2.4736	26.4640	25.0775	0.9476	50.9470
7.27	3.7373	3.1637	37.8892	32.0746	0.8465	65.1622
7.33	2.6590	2.2734	26.9571	23.0487	0.8550	51.2548
7.40	2.9465	2.5933	29.8720	26.2919	0.8802	58.4010
7.47	3.3625	2.9637	34.0899	30.0469	0.8814	65.9996
7.53	2.8397	2.5231	28.7891	25.5797	0.8885	57.9934
7.60	2.7466	2.4727	27.8462	25.0685	0.9002	56.3813
7.67	3.1002	2.7458	31.4306	27.8372	0.8857	62.4660
7.73	2.3112	2.0725	23.4311	21.0114	0.8967	49.8693



7.80	2.0225	1.8626	20.5041	18.8834	0.9210	47.9292
7.87	2.7670	2.6090	28.0530	26.4504	0.9429	57.0215
7.93	3.3325	3.0158	33.7859	30.5745	0.9049	64.2976
8.00	3.2089	2.7887	32.5323	28.2724	0.8691	59.2669

**Two cycling transitions**

Last Name	First Name	D.O.B	Weight	Height	Temp	Date
Eyestone	Barry	04-24-71	217.0 Lbs	72.8 in	21.8 deg C	03-18-1998

TIME(min)	VO2(L)	VCO2(L)	VO2(Kg)	VCO2(Kg)	RER	VE(stpd)
0.13	0.0759	0.0694	0.7699	0.7036	0.9139	11.2046
0.20	0.1151	0.1044	1.1670	1.0588	0.9072	8.5334
0.27	0.2809	0.2507	2.8479	2.5414	0.8924	13.2065
0.33	0.4505	0.3914	4.5673	3.9686	0.8689	14.6206
0.40	0.5131	0.4259	5.2017	4.3177	0.8301	13.4059
0.47	0.5525	0.4429	5.6010	4.4904	0.8017	13.2345
0.53	0.4571	0.3823	4.6337	3.8761	0.8365	10.7654
0.60	0.5737	0.4663	5.8168	4.7277	0.8128	13.2046
0.67	0.5583	0.4533	5.6603	4.5957	0.8119	13.0015
0.73	0.6028	0.4948	6.1115	5.0165	0.8208	13.8160
0.80	0.4444	0.3696	4.5054	3.7466	0.8316	10.3620
0.87	0.4366	0.3617	4.4266	3.6668	0.8284	10.5861
0.93	0.6381	0.5395	6.4695	5.4694	0.8454	15.6756
1.00	0.3796	0.2978	3.8485	3.0195	0.7846	9.9543
1.07	0.8477	0.8636	8.5938	8.7550	1.0188	30.2774
1.13	0.8021	0.6912	8.1318	7.0072	0.8617	19.7108
1.20	0.2761	0.2351	2.7990	2.3835	0.8516	6.9217
1.27	0.7833	0.7315	7.9414	7.4165	0.9339	20.1172
1.33	1.2210	1.1215	12.3789	11.3705	0.9185	28.7494
1.40	0.4312	0.3793	4.3713	3.8459	0.8798	9.9795
1.47	0.9139	0.7531	9.2649	7.6349	0.8241	17.7162
1.53	1.0255	0.7820	10.3964	7.9280	0.7626	18.5932
1.60	1.1193	0.8361	11.3475	8.4762	0.7470	21.9370
1.67	1.5927	1.2485	16.1471	12.6577	0.7839	29.9343
1.73	1.4674	1.1559	14.8771	11.7188	0.7877	26.6909
1.80	1.4904	1.1504	15.1099	11.6629	0.7719	24.7909
1.87	0.0487	0.0392	0.4942	0.3973	0.8039	1.8330
1.93	2.1088	1.7212	21.3791	17.4495	0.8162	36.0434
2.00	0.8356	0.6539	8.4718	6.6294	0.7825	15.4741
2.07	1.7235	1.3348	17.4731	13.5324	0.7745	27.3234
2.13	1.6350	1.2218	16.5756	12.3870	0.7473	25.2954
2.20	2.7138	1.8550	27.5131	18.8062	0.6835	37.5876
2.27	0.1032	0.1115	1.0458	1.1304	1.0809	4.3683
2.33	1.6699	1.3298	16.9302	13.4821	0.7963	31.3951
2.40	2.4491	1.9119	24.8298	19.3833	0.7806	40.1218

2.47	2.0977	1.7209	21.2674	17.4470	0.8204	32.7807
2.53	1.8446	1.5027	18.7006	15.2350	0.8147	30.5738
2.60	1.0724	0.8485	10.8721	8.6018	0.7912	18.0702
2.67	0.6169	0.5109	6.2539	5.1797	0.8282	16.9064
2.73	1.9351	1.7197	19.6190	17.4352	0.8887	35.6410
2.80	2.0046	1.6014	20.3231	16.2349	0.7988	33.3255
2.87	2.1441	1.7684	21.7376	17.9286	0.8248	36.2370
2.93	2.3333	2.0067	23.6560	20.3448	0.8600	38.4817
3.00	1.4296	1.1982	14.4934	12.1482	0.8382	25.6841
3.07	0.5261	0.4528	5.3333	4.5906	0.8608	11.8809
3.13	1.7871	1.5034	18.1182	15.2420	0.8413	32.5037
3.20	1.6762	1.4656	16.9938	14.8587	0.8744	32.2079
3.27	2.9733	2.5358	30.1443	25.7086	0.8528	48.3493
3.33	1.4432	1.2577	14.6311	12.7507	0.8715	28.1957
3.40	1.9164	1.6062	19.4293	16.2839	0.8381	31.9959
3.47	1.7688	1.4876	17.9328	15.0814	0.8410	31.1519
3.53	0.3923	0.3456	3.9774	3.5034	0.8808	10.1588
3.60	1.6462	1.5355	16.6899	15.5678	0.9328	39.1114
3.67	2.2873	2.0933	23.1888	21.2219	0.9152	40.0257
3.73	2.1852	1.8384	22.1543	18.6382	0.8413	37.0643
3.80	1.1689	1.0125	11.8503	10.2647	0.8662	21.9370
3.87	2.1026	1.7403	21.3167	17.6432	0.8277	37.9521
3.93	1.7595	1.6376	17.8387	16.6020	0.9307	34.7288
4.00	1.9192	1.6328	19.4570	16.5537	0.8508	34.3368
4.07	1.8082	1.3376	18.3319	13.5613	0.7398	32.6979
4.13	0.7938	0.9245	8.0477	9.3725	1.1646	23.8502
4.20	2.2758	1.9384	23.0724	19.6525	0.8518	39.1997
4.27	1.9297	1.6907	19.5635	17.1407	0.8762	33.4133
4.33	1.9596	1.5881	19.8665	16.1002	0.8104	31.5721
4.40	1.7122	1.4244	17.3583	14.4407	0.8319	30.8615
4.47	1.4260	1.1967	14.4572	12.1326	0.8392	25.9851
4.53	1.7788	1.3408	18.0339	13.5933	0.7538	35.6476
4.60	0.9493	1.0951	9.6242	11.1025	1.1536	27.0001
4.67	1.7610	1.5390	17.8538	15.6024	0.8739	31.6649
4.73	2.2897	1.9415	23.2135	19.6832	0.8479	37.6632
4.80	1.0773	0.6942	10.9221	7.0383	0.6444	24.1713
4.87	0.0568	0.1129	0.5757	1.1447	1.9881	5.2811
4.93	1.9449	1.8013	19.7176	18.2618	0.9262	38.1603
5.00	3.1137	2.5739	31.5675	26.0953	0.8267	48.4308
5.07	2.6953	2.1031	27.3261	21.3221	0.7803	40.2916

5.13	1.9715	1.5256	19.9875	15.4672	0.7738	32.6663
5.20	2.2081	1.9215	22.3865	19.4805	0.8702	40.7934
5.27	1.8603	1.5152	18.8602	15.3619	0.8145	33.4825
5.33	0.3362	0.4483	3.4090	4.5450	1.3332	14.3141
5.40	2.0390	1.8406	20.6719	18.6602	0.9027	37.1454
5.47	2.7687	2.4422	28.0700	24.7594	0.8821	47.3763
5.53	2.5435	2.0991	25.7862	21.2809	0.8253	42.6200
5.60	1.4568	1.2753	14.7691	12.9295	0.8754	27.3948
5.67	1.6879	1.4988	17.1128	15.1952	0.8879	32.0576
5.73	2.5794	2.2331	26.1511	22.6394	0.8657	48.1747
5.80	1.5105	1.1675	15.3140	11.8360	0.7729	29.6229
5.87	0.3183	0.4560	3.2268	4.6231	1.4327	14.9170
5.93	1.9497	1.7655	19.7664	17.8993	0.9055	35.1350
6.00	2.8377	2.4699	28.7691	25.0403	0.8704	47.0029
6.07	2.3186	1.8928	23.5070	19.1897	0.8163	38.9454
6.13	1.8224	1.5277	18.4761	15.4879	0.8383	33.2796
6.20	1.5873	1.3639	16.0923	13.8271	0.8592	31.6388
6.27	2.7314	2.3947	27.6914	24.2784	0.8767	50.4128
6.33	1.8792	1.6511	19.0517	16.7396	0.8786	33.5932
6.40	2.3782	2.0372	24.1111	20.6537	0.8566	43.8075
6.47	2.1862	1.8050	22.1645	18.2998	0.8256	40.2861
6.53	0.3584	0.4011	3.6335	4.0668	1.1193	12.7878
6.60	2.5065	2.2311	25.4112	22.6191	0.8901	46.2859
6.67	2.6812	2.3258	27.1830	23.5793	0.8674	47.7070
6.73	1.9919	1.8296	20.1942	18.5488	0.9185	36.4099
6.80	3.0306	2.5854	30.7250	26.2116	0.8531	51.7600
6.87	2.0371	1.7977	20.6526	18.2257	0.8825	36.6127
6.93	2.7687	2.4520	28.0700	24.8588	0.8856	52.5574
7.00	2.4030	2.1428	24.3626	21.7241	0.8917	45.3474
7.07	0.2091	0.1942	2.1198	1.9687	0.9287	8.1159
7.13	2.2129	2.3240	22.4351	23.5618	1.0502	46.7612
7.20	3.1769	2.8343	32.2079	28.7348	0.8922	49.8180
7.27	2.3887	2.0150	24.2174	20.4286	0.8435	40.0997
7.33	2.1371	1.9416	21.6661	19.6849	0.9086	38.4489
7.40	3.0746	2.5991	31.1714	26.3501	0.8453	55.7104
7.47	2.2015	2.1948	22.3190	22.2512	0.9970	43.2051
7.53	2.7058	2.5109	27.4322	25.4558	0.9280	48.6617
7.60	2.1027	1.9161	21.3180	19.4257	0.9112	39.7513
7.67	3.1186	2.9166	31.6171	29.5690	0.9352	59.3996
7.73	1.5719	1.4680	15.9362	14.8826	0.9339	32.3308

7.80	2.7582	2.6697	27.9635	27.0664	0.9679	53.9333
7.87	2.9575	2.8351	29.9838	28.7426	0.9586	56.4756
7.93	0.4061	0.4211	4.1168	4.2687	1.0369	15.8150
8.00	3.3482	3.6262	33.9452	36.7634	1.0830	67.7208
8.07	2.8693	2.6057	29.0895	26.4173	0.9081	49.5877
8.13	2.7413	2.4582	27.7917	24.9214	0.8967	53.3177
8.20	1.2543	1.2804	12.7166	12.9810	1.0208	29.9108
8.27	2.7326	2.6886	27.7042	27.2580	0.9839	48.8442
8.33	3.5924	3.2547	36.4204	32.9969	0.9060	64.4501
8.40	2.2777	2.1221	23.0917	21.5147	0.9317	43.6641
8.47	2.5470	2.4062	25.8226	24.3950	0.9447	49.5604
8.53	1.2752	1.2831	12.9287	13.0087	1.0062	33.5794
8.60	3.1576	3.2147	32.0125	32.5913	1.0181	61.9422
8.67	3.4508	3.0899	34.9848	31.3259	0.8954	63.0574
8.73	1.9959	1.9153	20.2350	19.4177	0.9596	39.7349
8.80	2.6778	2.5718	27.1484	26.0735	0.9604	54.5416
8.87	2.9607	2.8521	30.0166	28.9154	0.9633	61.5957
8.93	2.0832	2.0103	21.1205	20.3810	0.9650	42.3645
9.00	2.9278	2.7331	29.6825	27.7086	0.9335	57.5355
9.07	1.6574	1.5937	16.8036	16.1577	0.9616	32.5246
9.13	3.1911	2.9504	32.3521	29.9116	0.9246	60.2105
9.20	2.5007	2.3243	25.3526	23.5639	0.9294	49.3441
9.27	0.4008	0.4577	4.0633	4.6403	1.1420	15.5045
9.33	3.0534	3.0182	30.9558	30.5995	0.9885	54.3878
9.40	3.0078	2.6665	30.4935	27.0334	0.8865	51.1820
9.47	2.9182	2.6770	29.5859	27.1401	0.9173	53.7010
9.53	3.0082	2.8145	30.4981	28.5339	0.9356	59.4365
9.60	2.1029	1.9799	21.3201	20.0725	0.9415	39.9166
9.67	2.7854	2.5729	28.2394	26.0848	0.9237	55.4464
9.73	2.0572	1.8992	20.8565	19.2548	0.9232	42.7699
9.80	2.5659	2.6378	26.0136	26.7428	1.0280	52.0798
9.87	3.1676	2.9392	32.1142	29.7987	0.9279	55.8288
9.93	2.6273	2.3974	26.6363	24.3057	0.9125	49.3283
10.00	1.8912	1.7175	19.1734	17.4122	0.9081	38.2894
10.07	2.8736	2.8048	29.1333	28.4354	0.9760	57.1224
10.13	2.4085	2.2029	24.4180	22.3335	0.9146	42.9008
10.20	3.1939	2.8911	32.3809	29.3107	0.9052	59.7315
10.27	2.4492	2.2848	24.8308	23.1640	0.9329	49.3441
10.33	2.5722	2.4834	26.0772	25.1769	0.9655	54.0989
10.40	3.1529	3.0321	31.9650	30.7401	0.9617	64.2355

10.47	3.0966	2.8821	31.3938	29.2199	0.9308	62.0436
10.53	1.8499	1.7824	18.7552	18.0709	0.9635	40.0500
10.60	1.8677	1.7643	18.9353	17.8871	0.9446	38.6029
10.67	2.9798	2.9304	30.2097	29.7093	0.9834	56.7927
10.73	2.0798	1.8543	21.0855	18.7998	0.8916	37.1984
10.80	2.3462	2.1566	23.7861	21.8642	0.9192	46.4249
10.87	3.2136	2.9796	32.5806	30.2082	0.9272	57.1381
10.93	2.6560	2.4084	26.9276	24.4170	0.9068	50.6474
11.00	2.1510	1.9662	21.8073	19.9342	0.9141	40.2085

**Stepping and cycling transitions**

Last Name	First Name	D.O.B	Weight	Height	Temp	Date
Eyestone	Barry	04-24-71	217.0 Lbs	72.8 in	20.6 deg C	04-01-1998

TIME(min)	VO2(L)	VCO2(L)	VO2(Kg)	VCO2(Kg)	RER	VE(stpd)
0.13	0.1752	0.1379	1.7766	1.3981	0.7869	16.5314
0.20	0.6007	0.6224	6.0900	6.3102	1.0362	21.8227
0.27	0.6927	0.5622	7.0225	5.6995	0.8116	16.5268
0.33	0.8997	0.7103	9.1211	7.2014	0.7895	17.7535
0.40	0.7104	0.5232	7.2018	5.3039	0.7365	12.8667
0.47	0.7196	0.5283	7.2955	5.3558	0.7341	12.6660
0.53	0.7496	0.5526	7.5993	5.6020	0.7372	14.2924
0.60	1.0581	0.7772	10.7271	7.8797	0.7346	18.3708
0.67	0.5497	0.3948	5.5730	4.0022	0.7182	9.4876
0.73	0.7651	0.5703	7.7570	5.7818	0.7454	15.3048
0.80	0.5804	0.4133	5.8843	4.1905	0.7121	11.0332
0.87	0.4660	0.3456	4.7242	3.5034	0.7416	9.3869
0.93	0.5795	0.4620	5.8746	4.6837	0.7973	14.4965
1.00	0.8859	0.6663	8.9814	6.7554	0.7522	18.2738
1.07	0.6627	0.4979	6.7185	5.0480	0.7514	13.2733
1.13	0.5112	0.3552	5.1828	3.6011	0.6948	10.4116
1.20	0.9415	0.8139	9.5454	8.2511	0.8644	23.0784
1.27	0.7039	0.4912	7.1368	4.9795	0.6977	15.9368
1.33	0.6942	0.7187	7.0382	7.2864	1.0353	21.6367
1.40	0.9673	0.7378	9.8069	7.4801	0.7627	16.7471
1.47	1.9995	1.3949	20.2713	14.1416	0.6976	31.5541
1.53	1.5693	1.0675	15.9104	10.8231	0.6803	25.4130
1.60	1.9842	1.3183	20.1165	13.3653	0.6644	30.1972
1.67	1.6588	1.1263	16.8176	11.4182	0.6789	28.9070
1.73	2.2424	1.5168	22.7342	15.3780	0.6764	35.5169
1.80	1.1388	0.6731	11.5457	6.8238	0.5910	20.2023
1.87	2.0118	1.6719	20.3959	16.9501	0.8311	41.2208
1.93	1.3702	1.0132	13.8914	10.2717	0.7394	22.3388
2.00	2.5446	1.8368	25.7978	18.6217	0.7218	43.3635
2.07	2.1699	1.5589	21.9985	15.8047	0.7184	32.9563
2.13	1.8183	1.2643	18.4347	12.8179	0.6953	27.0422
2.20	2.3997	1.6830	24.3285	17.0629	0.7014	37.9011
2.27	2.8749	1.9789	29.1468	20.0624	0.6883	44.7147
2.33	1.7179	1.2748	17.4169	12.9241	0.7420	28.3884
2.40	2.5587	1.8678	25.9410	18.9367	0.7300	42.4452

2.47	2.7514	2.0457	27.8943	20.7401	0.7435	44.5167
2.53	1.8798	1.4435	19.0583	14.6342	0.7679	31.1067
2.60	2.3887	1.8200	24.2168	18.4512	0.7619	39.3897
2.67	2.8997	2.2385	29.3975	22.6948	0.7720	49.3018
2.73	0.8865	0.6176	8.9874	6.2609	0.6966	23.6845
2.80	1.7150	1.7228	17.3873	17.4659	1.0045	38.0684
2.87	2.8601	2.3317	28.9965	23.6398	0.8153	47.0106
2.93	3.5067	2.6048	35.5517	26.4079	0.7428	56.1330
3.00	2.6681	2.1399	27.0501	21.6948	0.8020	48.6826
3.07	1.9481	1.6377	19.7501	16.6039	0.8407	37.3436
3.13	2.1269	1.8188	21.5628	18.4392	0.8551	40.0131
3.20	2.5911	2.1768	26.2696	22.0687	0.8401	47.7840
3.27	2.6386	2.2660	26.7509	22.9735	0.8588	51.0300
3.33	2.7252	2.2875	27.6288	23.1911	0.8394	49.7777
3.40	3.0127	2.4467	30.5440	24.8048	0.8121	55.2221
3.47	2.2585	2.0016	22.8968	20.2926	0.8863	44.8230
3.53	2.4893	2.1193	25.2368	21.4858	0.8514	47.2472
3.60	1.9394	1.7196	19.6619	17.4335	0.8867	40.2172
3.67	2.2908	2.0492	23.2242	20.7750	0.8945	50.0906
3.73	2.6629	2.3664	26.9975	23.9908	0.8886	51.8321
3.80	2.8915	2.4620	29.3143	24.9603	0.8515	55.6939
3.87	2.5704	2.2035	26.0598	22.3401	0.8573	51.4761
3.93	1.1388	0.9323	11.5452	9.4520	0.8187	27.1292
4.00	1.6694	1.7590	16.9248	17.8334	1.0537	40.2005
4.07	3.0161	2.6571	30.5783	26.9386	0.8810	52.0506
4.13	3.3634	2.6944	34.0990	27.3161	0.8011	56.3059
4.20	2.6118	2.2253	26.4795	22.5604	0.8520	48.6354
4.27	1.1483	1.0026	11.6413	10.1643	0.8731	26.3060
4.33	2.8413	2.6459	28.8055	26.8246	0.9312	57.5140
4.40	3.0404	2.6502	30.8242	26.8679	0.8716	63.0119
4.47	2.7786	2.4189	28.1702	24.5237	0.8706	53.2163
4.53	2.6092	2.2627	26.4524	22.9393	0.8672	51.1845
4.60	1.6545	1.5088	16.7737	15.2964	0.9119	38.3321
4.67	2.6581	2.4279	26.9488	24.6152	0.9134	56.7845
4.73	1.7955	1.6932	18.2031	17.1666	0.9431	41.3905
4.80	3.2225	2.8631	32.6705	29.0267	0.8885	60.3359
4.87	3.0154	2.5021	30.5708	25.3666	0.8298	56.2825
4.93	2.1435	1.8925	21.7315	19.1870	0.8829	42.1921
5.00	1.5167	1.3128	15.3769	13.3095	0.8655	29.9682
5.07	3.0877	2.8068	31.3044	28.4560	0.9090	57.9299



5.13	3.2509	2.6626	32.9585	26.9936	0.8190	58.7052
5.20	2.5757	2.2226	26.1132	22.5332	0.8629	51.3813
5.27	2.4388	2.0231	24.7248	20.5110	0.8296	50.7555
5.33	1.8032	1.8323	18.2812	18.5761	1.0161	42.2119
5.40	3.2064	2.7869	32.5072	28.2540	0.8692	59.9282
5.47	2.3478	2.0814	23.8025	21.1013	0.8865	45.3413
5.53	2.4230	2.0762	24.5650	21.0492	0.8569	47.0734
5.60	2.8139	2.4448	28.5285	24.7860	0.8688	54.8095
5.67	2.8184	2.3766	28.5740	24.0946	0.8432	54.1907
5.73	2.8548	2.5090	28.9428	25.4371	0.8789	57.1452
5.80	2.5092	2.2131	25.4394	22.4368	0.8820	50.0067
5.87	2.6074	2.2874	26.4340	23.1900	0.8773	52.5755
5.93	2.4822	1.9815	25.1656	20.0887	0.7983	51.5852
6.00	1.4804	1.5263	15.0089	15.4745	1.0310	34.7639
6.07	2.4960	2.1953	25.3047	22.2560	0.8795	46.7542
6.13	0.3648	0.3403	3.6989	3.4502	0.9328	10.7974
6.20	2.9859	2.7912	30.2714	28.2978	0.9348	56.7306
6.27	3.9468	3.2562	40.0137	33.0126	0.8250	66.9990
6.33	3.0132	2.5860	30.5481	26.2180	0.8583	60.2006
6.40	2.2258	2.0347	22.5662	20.6287	0.9141	48.2076
6.47	2.7034	2.4297	27.4076	24.6333	0.8988	55.9118
6.53	2.1993	1.9573	22.2974	19.8436	0.8900	46.3730
6.60	1.6885	1.5458	17.1185	15.6717	0.9155	36.5801
6.67	2.5877	2.1421	26.2346	21.7170	0.8278	53.4054
6.73	1.8927	1.9079	19.1884	19.3424	1.0080	42.3923
6.80	2.3499	2.1525	23.8240	21.8223	0.9160	50.6375
6.87	2.6406	2.2950	26.7709	23.2671	0.8691	50.4342
6.93	3.1176	2.7265	31.6068	27.6418	0.8746	58.7558
7.00	1.8156	1.5622	18.4070	15.8383	0.8605	34.8672
7.07	2.9038	2.5961	29.4395	26.3199	0.8940	54.8247
7.13	2.7844	2.2517	28.2285	22.8278	0.8087	55.1750
7.20	1.9395	1.9445	19.6633	19.7139	1.0026	41.9946
7.27	2.9570	2.6585	29.9791	26.9522	0.8990	52.8526
7.33	3.1083	2.6922	31.5131	27.2946	0.8661	57.6456
7.40	3.2762	3.0178	33.2147	30.5953	0.9211	66.6848
7.47	2.8948	2.6725	29.3482	27.0949	0.9232	59.7145
7.53	2.5495	2.4492	25.8470	24.8307	0.9607	52.3299
7.60	2.7487	2.5458	27.8673	25.8103	0.9262	55.1598
7.67	2.6602	2.5577	26.9703	25.9302	0.9614	59.3329
7.73	1.7885	1.7718	18.1326	17.9634	0.9907	40.8196

7.80	3.3879	3.1727	34.3473	32.1659	0.9365	65.0134
7.87	3.2216	2.9185	32.6609	29.5886	0.9059	67.0821
7.93	2.4604	2.3881	24.9442	24.2109	0.9706	55.9172
8.00	2.8234	2.7993	28.6245	28.3801	0.9915	61.6526
8.07	2.3073	2.2158	23.3917	22.4643	0.9604	45.8268
8.13	2.8330	2.6642	28.7218	27.0104	0.9404	57.1677
8.20	3.2912	3.0287	33.3667	30.7055	0.9202	67.6719
8.27	2.7889	2.6973	28.2748	27.3458	0.9671	61.0856
8.33	2.6818	2.5767	27.1885	26.1228	0.9608	58.0255
8.40	3.5147	3.0587	35.6331	31.0095	0.8702	71.8713
8.47	1.3274	1.4417	13.4576	14.6160	1.0861	34.5240
8.53	3.7174	3.6150	37.6875	36.6501	0.9725	74.7654
8.60	3.5396	3.2281	35.8858	32.7276	0.9120	73.6072
8.67	2.3152	2.2141	23.4723	22.4469	0.9563	53.9901
8.73	2.6365	2.5899	26.7292	26.2574	0.9823	59.3934
8.80	2.0227	1.8696	20.5065	18.9549	0.9243	51.3444
8.87	3.0086	3.2028	30.5022	32.4704	1.0645	67.9950
8.93	3.6037	3.3260	36.5349	33.7201	0.9230	69.2894
9.00	2.8719	2.6220	29.1162	26.5826	0.9130	59.1133
9.07	2.9628	2.8394	30.0375	28.7868	0.9584	66.4080
9.13	2.8073	2.6701	28.4614	27.0706	0.9511	62.3033
9.20	2.9028	2.7607	29.4295	27.9884	0.9510	65.3294
9.27	2.7629	2.6607	28.0106	26.9750	0.9630	64.3327
9.33	2.5079	2.4462	25.4259	24.7997	0.9754	58.7193
9.40	3.0469	2.9716	30.8904	30.1265	0.9753	68.5377
9.47	2.7186	2.5497	27.5614	25.8497	0.9379	60.8407
9.53	2.9734	2.8853	30.1447	29.2520	0.9704	67.9575
9.60	3.1674	2.9914	32.1115	30.3271	0.9444	67.7453
9.67	2.7880	2.6157	28.2656	26.5182	0.9382	61.5340
9.73	1.8812	1.8231	19.0716	18.4835	0.9692	40.5548
9.80	3.4522	3.1783	34.9993	32.2223	0.9207	71.1738
9.87	3.3346	3.0933	33.8075	31.3610	0.9276	73.0290
9.93	1.8375	1.7177	18.6290	17.4140	0.9348	41.6816
10.00	2.6828	2.6068	27.1985	26.4281	0.9717	58.1802
10.07	3.7923	3.4283	38.4470	34.7570	0.9040	76.5156
10.13	2.8783	2.5970	29.1812	26.3293	0.9023	62.8687
10.20	2.9436	2.8008	29.8434	28.3954	0.9515	67.3945
10.27	2.7466	2.5971	27.8457	26.3304	0.9456	62.2689
10.33	3.0153	2.9248	30.5697	29.6526	0.9700	68.3255
10.40	2.3746	2.2349	24.0740	22.6584	0.9412	53.3296

10.47	1.9027	1.8572	19.2897	18.8291	0.9761	40.8590
10.53	3.2583	3.1062	33.0336	31.4916	0.9533	65.5975
10.60	3.8541	3.3144	39.0742	33.6026	0.8600	76.4459
10.67	2.7492	2.4546	27.8725	24.8853	0.8928	59.9281
10.73	3.3958	3.1328	34.4279	31.7614	0.9225	77.0505
10.80	2.3757	2.3243	24.0855	23.5648	0.9784	54.2346
10.87	3.4581	3.1666	35.0586	32.1038	0.9157	73.1203
10.93	2.9212	2.7529	29.6163	27.9097	0.9424	66.5619
11.00	2.3783	2.2843	24.1120	23.1584	0.9605	56.6676
11.07	2.9880	2.8201	30.2933	28.5908	0.9438	68.1039
11.13	3.3015	3.0596	33.4719	31.0191	0.9267	71.8935
11.20	1.5321	1.2521	15.5328	12.6938	0.8172	37.5244
11.27	2.2992	2.5442	23.3100	25.7942	1.1066	55.9734
11.33	4.2893	3.6527	43.4865	37.0322	0.8516	77.4656
11.40	2.6355	2.3143	26.7190	23.4629	0.8781	56.6406
11.47	2.5801	2.4244	26.1572	24.5788	0.9397	59.2622
11.53	3.2594	3.0037	33.0442	30.4519	0.9215	66.5191
11.60	2.9419	2.6205	29.8254	26.5676	0.8908	63.7461
11.67	3.0955	2.8559	31.3834	28.9542	0.9226	69.0528
11.73	2.4018	2.2411	24.3496	22.7205	0.9331	52.6597
11.80	3.5698	3.2437	36.1919	32.8854	0.9086	75.7744
11.87	2.4175	2.2032	24.5096	22.3366	0.9113	52.7608
11.93	1.6077	1.4777	16.2990	14.9813	0.9192	40.2498
12.00	3.5912	3.4671	36.4081	35.1508	0.9655	70.1842

**One cycling transition**

Last Name	First Name	D.O.B	Weight	Height	Temp	Date
Harris	Toby	12-24-76	190.0 Lbs	74.0 in	21.7 deg C	03-19-1998

TIME(min)	VO2(L)	VCO2(L)	VO2(Kg)	VCO2(Kg)	RER	VE(stpd)
0.13	0.4191	0.3417	4.8523	3.9564	0.8154	12.8583
0.20	0.1749	0.1195	2.0247	1.3831	0.6831	4.9004
0.27	0.5286	0.3763	6.1206	4.3571	0.7119	12.1507
0.33	0.5474	0.4660	6.3388	5.3962	0.8513	13.6804
0.40	0.2053	0.1635	2.3768	1.8937	0.7968	5.3066
0.47	0.3507	0.2648	4.0607	3.0663	0.7551	7.7622
0.53	0.6651	0.5570	7.7009	6.4494	0.8375	13.6823
0.60	0.2920	0.2714	3.3806	3.1429	0.9297	8.5710
0.67	0.2604	0.2097	3.0151	2.4282	0.8053	6.1289
0.73	0.6705	0.5042	7.7639	5.8376	0.7519	14.0965
0.80	0.5618	0.6147	6.5046	7.1179	1.0943	16.3438
0.87	0.3102	0.2570	3.5916	2.9756	0.8285	6.7428
0.93	0.5785	0.4361	6.6980	5.0499	0.7539	10.4192
1.00	0.7587	0.6547	8.7852	7.5813	0.8630	14.0946
1.07	0.8025	0.6352	9.2920	7.3548	0.7915	13.7031
1.13	0.8906	0.7173	10.3121	8.3055	0.8054	15.4245
1.20	0.8526	0.6927	9.8719	8.0204	0.8124	15.0242
1.27	0.7447	0.6070	8.6223	7.0285	0.8152	13.2812
1.33	0.8501	0.6738	9.8438	7.8015	0.7925	15.7396
1.40	1.1406	0.9008	13.2068	10.4308	0.7898	21.6765
1.47	0.9537	0.7283	11.0430	8.4330	0.7636	17.4200
1.53	0.8651	0.6393	10.0169	7.4024	0.7390	16.0991
1.60	1.0773	0.7639	12.4745	8.8451	0.7091	18.8573
1.67	1.0545	0.7155	12.2104	8.2842	0.6785	17.8373
1.73	1.5779	1.2150	18.2703	14.0679	0.7700	27.0561
1.80	0.8163	0.5621	9.4516	6.5082	0.6886	12.9639
1.87	2.2923	1.6145	26.5423	18.6943	0.7043	32.1937
1.93	1.4382	0.9978	16.6527	11.5530	0.6938	20.8073
2.00	2.6484	1.8440	30.6659	21.3520	0.6963	33.7456
2.07	2.8124	1.9477	32.5649	22.5529	0.6926	36.5454
2.13	2.4407	1.7094	28.2610	19.7928	0.7004	31.7162
2.20	1.9528	1.4048	22.6116	16.2659	0.7194	25.6603
2.27	2.0198	1.4908	23.3867	17.2620	0.7381	27.5079
2.33	2.4912	1.9061	28.8455	22.0703	0.7651	33.8294
2.40	2.3352	1.7641	27.0397	20.4266	0.7554	31.4213

2.47	2.6089	2.0368	30.2087	23.5840	0.7807	37.7563
2.53	2.4951	1.9910	28.8910	23.0532	0.7979	34.0675
2.60	3.1580	2.5011	36.5663	28.9596	0.7920	45.6438
2.67	2.1239	1.7534	24.5929	20.3031	0.8256	32.4437
2.73	2.0571	1.7387	23.8187	20.1325	0.8452	33.9602
2.80	2.6327	2.2502	30.4837	26.0552	0.8547	43.7374
2.87	1.9716	1.7333	22.8291	20.0697	0.8791	32.3096
2.93	1.7322	1.4977	20.0576	17.3414	0.8646	27.8914
3.00	2.3611	2.0486	27.3386	23.7208	0.8677	36.6846
3.07	3.0455	2.6461	35.2638	30.6396	0.8689	46.5927
3.13	2.3906	2.0488	27.6803	23.7232	0.8570	36.6227
3.20	1.9995	1.7130	23.1516	19.8352	0.8568	31.4923
3.27	1.9741	1.7090	22.8579	19.7888	0.8657	32.8043
3.33	2.5209	2.2176	29.1896	25.6778	0.8797	40.8060
3.40	2.5092	2.1993	29.0543	25.4660	0.8765	39.1385
3.47	1.8566	1.6196	21.4970	18.7529	0.8723	29.1058
3.53	2.1974	1.9488	25.4436	22.5653	0.8869	34.8353
3.60	2.4366	2.1657	28.2135	25.0761	0.8888	38.3347
3.67	1.9297	1.7396	22.3440	20.1423	0.9015	29.6141
3.73	3.4611	2.9864	40.0764	34.5799	0.8628	52.6773
3.80	1.7674	1.5397	20.4647	17.8282	0.8712	27.1585
3.87	1.9697	1.7093	22.8066	19.7915	0.8678	30.3634
3.93	2.5024	2.2108	28.9756	25.5992	0.8835	38.8595
4.00	2.7292	2.3651	31.6017	27.3851	0.8666	42.7337
4.07	2.0524	1.8315	23.7644	21.2064	0.8924	31.9947
4.13	2.5694	2.2024	29.7511	25.5015	0.8572	40.2300
4.20	2.9765	2.6377	34.4648	30.5418	0.8862	48.0498
4.27	3.0898	2.7522	35.7768	31.8676	0.8907	50.5497
4.33	1.5017	1.3365	17.3876	15.4748	0.8900	24.6145
4.40	2.7519	2.4665	31.8640	28.5592	0.8963	47.0275
4.47	1.7666	1.5981	20.4556	18.5046	0.9046	28.9281
4.53	2.9358	2.6074	33.9938	30.1911	0.8881	47.0275
4.60	2.7074	2.3659	31.3491	27.3941	0.8738	42.2896
4.67	2.1641	1.9113	25.0577	22.1310	0.8832	34.6285
4.73	3.0227	2.6559	35.0002	30.7528	0.8786	49.3243
4.80	1.5309	1.3821	17.7264	16.0027	0.9028	25.6429
4.87	3.1432	2.8133	36.3951	32.5756	0.8951	51.5780
4.93	1.9669	1.7628	22.7747	20.4118	0.8962	32.0836
5.00	2.4729	2.2213	28.6333	25.7204	0.8983	40.3544
5.07	3.3282	2.9204	38.5375	33.8153	0.8775	53.7377

5.13	1.7225	1.5200	19.9445	17.5995	0.8824	28.0715
5.20	3.2881	2.8918	38.0726	33.4843	0.8795	55.5076
5.27	2.6615	2.4160	30.8177	27.9749	0.9078	44.2531
5.33	2.0626	1.8312	23.8827	21.2035	0.8878	34.8819
5.40	2.9625	2.6948	34.3023	31.2032	0.9097	52.1260
5.47	1.5237	1.4271	17.6424	16.5241	0.9366	26.7261
5.53	2.7670	2.5447	32.0392	29.4645	0.9196	47.5225
5.60	2.7677	2.5103	32.0466	29.0672	0.9070	46.1076
5.67	1.5668	1.3639	18.1424	15.7929	0.8705	26.2305
5.73	2.7863	2.5202	32.2628	29.1816	0.9045	45.9099
5.80	1.9658	1.7381	22.7619	20.1259	0.8842	30.7129
5.87	3.0861	2.6701	35.7335	30.9168	0.8652	48.1145
5.93	3.1416	2.6632	36.3766	30.8365	0.8477	50.9230
6.00	2.0269	1.7932	23.4697	20.7634	0.8847	34.2557
6.07	2.3896	2.0783	27.6696	24.0640	0.8697	40.0836
6.13	2.9064	2.5808	33.6526	29.8824	0.8880	47.6191
6.20	1.7460	1.5393	20.2171	17.8237	0.8816	28.9908
6.27	2.5841	2.2683	29.9217	26.2648	0.8778	44.5651
6.33	1.9644	1.7791	22.7453	20.6003	0.9057	32.6470
6.40	2.2572	1.9980	26.1362	23.1353	0.8852	36.7318
6.47	2.7816	2.4106	32.2085	27.9125	0.8666	45.2727
6.53	2.1270	1.9186	24.6284	22.2152	0.9020	34.1726
6.60	1.7610	1.5077	20.3907	17.4574	0.8561	26.7113
6.67	2.8529	2.4117	33.0331	27.9253	0.8454	45.4641
6.73	2.5403	2.1198	29.4145	24.5451	0.8345	38.1299
6.80	1.8679	1.5555	21.6286	18.0112	0.8327	29.2682
6.87	3.5024	2.9857	40.5542	34.5718	0.8525	51.4855
6.93	2.1035	1.7082	24.3562	19.7789	0.8121	30.4793
7.00	2.1268	1.7725	24.6257	20.5236	0.8334	32.7355
7.07	2.3769	2.0104	27.5220	23.2781	0.8458	36.3248
7.13	1.7337	1.4535	20.0749	16.8295	0.8383	26.4529
7.20	2.2509	1.9135	26.0629	22.1564	0.8501	37.1206
7.27	2.0067	1.7451	23.2358	20.2061	0.8696	28.3805
7.33	2.4203	2.0655	28.0242	23.9169	0.8534	33.5652
7.40	3.0898	2.6422	35.7769	30.5942	0.8551	49.3446
7.47	2.1179	1.8568	24.5230	21.4993	0.8767	31.2373
7.53	1.6784	1.4308	19.4339	16.5671	0.8525	24.6723
7.60	2.3525	2.0250	27.2398	23.4473	0.8608	34.0675
7.67	1.5054	1.2683	17.4312	14.6858	0.8425	23.4026
7.73	3.0402	2.5520	35.2021	29.5490	0.8394	41.3018

7.80	2.6069	2.1450	30.1849	24.8363	0.8228	36.8285
7.87	2.1184	1.7997	24.5283	20.8390	0.8496	29.1983
7.93	1.7205	1.4311	19.9218	16.5703	0.8318	22.4355
8.00	2.1786	1.7860	25.2259	20.6796	0.8198	29.5741

**Two cycling transitions**

Last Name	First Name	D.O.B	Weight	Height	Temp	Date
Harris	Toby	12-24-76	190.0 Lbs	74.0 in	21.4 deg C	03-31- 1998
TIME(min)	VO2(L)	VCO2(L)	VO2(Kg)	VCO2(Kg)	RER	VE(stpd)
0.13	0.0909	0.0715	1.0521	0.8283	0.7873	2.0314
0.20	0.5084	0.4103	5.8869	4.7505	0.8070	10.5574
0.27	0.9226	0.7559	10.6823	8.7529	0.8194	18.2774
0.33	0.5863	0.4778	6.7882	5.5329	0.8151	11.1757
0.40	0.6429	0.5129	7.4445	5.9385	0.7977	12.1799
0.47	1.2672	1.0376	14.6729	12.0142	0.8188	23.7672
0.53	1.1152	0.8802	12.9126	10.1919	0.7893	18.9076
0.60	0.6586	0.5044	7.6256	5.8403	0.7659	10.7768
0.67	0.8831	0.6712	10.2258	7.7715	0.7600	14.4328
0.73	0.5223	0.3975	6.0478	4.6022	0.7610	8.5377
0.80	0.6277	0.4813	7.2675	5.5733	0.7669	10.5661
0.87	0.6356	0.4894	7.3598	5.6671	0.7700	10.9725
0.93	0.6463	0.5062	7.4833	5.8612	0.7832	11.6885
1.00	0.2711	0.2174	3.1392	2.5172	0.8019	5.0785
1.07	0.6876	0.5615	7.9616	6.5016	0.8166	13.2095
1.13	0.6051	0.4972	7.0059	5.7574	0.8218	11.9935
1.20	0.5658	0.4689	6.5510	5.4289	0.8287	11.6171
1.27	0.8983	0.7783	10.4009	9.0119	0.8664	19.0482
1.33	0.7701	0.6558	8.9173	7.5938	0.8516	15.4831
1.40	0.6948	0.5679	8.0448	6.5758	0.8174	13.2513
1.47	1.7062	1.3556	19.7562	15.6969	0.7945	30.1554
1.53	1.1508	0.8566	13.3254	9.9188	0.7444	18.7427
1.60	1.2442	0.9769	14.4066	11.3110	0.7851	20.9836
1.67	0.8217	0.6654	9.5139	7.7044	0.8098	13.3477
1.73	1.1824	0.9251	13.6914	10.7114	0.7823	19.0535
1.80	1.3248	1.0248	15.3397	11.8659	0.7735	21.0855
1.87	1.1276	0.8519	13.0565	9.8642	0.7555	17.7289
1.93	1.6549	1.2477	19.1623	14.4469	0.7539	25.3848
2.00	1.9456	1.4385	22.5276	16.6560	0.7394	28.6550
2.07	1.1679	0.8812	13.5235	10.2029	0.7545	17.1271
2.13	1.4577	1.1088	16.8784	12.8389	0.7607	21.2020
2.20	0.7309	0.5529	8.4635	6.4020	0.7564	10.5020
2.27	1.6147	1.2239	18.6965	14.1719	0.7580	23.6517



2.33	2.0181	1.6135	23.3670	18.6828	0.7995	28.9449
2.40	1.9310	1.5061	22.3587	17.4387	0.7800	26.4952
2.47	1.6324	1.2927	18.9019	14.9682	0.7919	21.3532
2.53	1.9602	1.5272	22.6973	17.6829	0.7791	25.1844
2.60	3.0697	2.3862	35.5444	27.6299	0.7773	41.5771
2.67	1.7076	1.3793	19.7717	15.9703	0.8077	25.2863
2.73	1.7037	1.4669	19.7274	16.9849	0.8610	25.9197
2.80	1.5657	1.3211	18.1290	15.2972	0.8438	23.0592
2.87	1.7067	1.4297	19.7618	16.5548	0.8377	24.8682
2.93	1.9055	1.5863	22.0632	18.3678	0.8325	28.1542
3.00	1.9710	1.6631	22.8219	19.2566	0.8438	30.0494
3.07	2.5599	2.1717	29.6414	25.1455	0.8483	39.4525
3.13	1.9846	1.7382	22.9791	20.1262	0.8758	31.5773
3.20	1.7257	1.5181	19.9815	17.5776	0.8797	27.9335
3.27	1.7071	1.5260	19.7665	17.6698	0.8939	28.4196
3.33	1.2870	1.1755	14.9023	13.6115	0.9134	21.2020
3.40	1.5489	1.3923	17.9347	16.1218	0.8989	24.6677
3.47	1.7320	1.5447	20.0553	17.8859	0.8918	27.7104
3.53	2.3197	2.0303	26.8593	23.5084	0.8752	35.4677
3.60	1.7446	1.5288	20.2011	17.7016	0.8763	28.8736
3.67	1.4810	1.3561	17.1481	15.7027	0.9157	25.4691
3.73	2.6310	2.3758	30.4640	27.5093	0.9030	42.2787
3.80	1.7927	1.6061	20.7578	18.5965	0.8959	28.9409
3.87	1.9013	1.6995	22.0148	19.6779	0.8938	31.3866
3.93	1.2287	1.0880	14.2272	12.5975	0.8855	20.3753
4.00	1.7227	1.5863	19.9465	18.3678	0.9208	28.6624
4.07	2.2210	1.9913	25.7167	23.0577	0.8966	35.7870
4.13	1.7129	1.5141	19.8338	17.5316	0.8839	28.0409
4.20	1.3682	1.2511	15.8419	14.4867	0.9145	23.1706
4.27	2.1452	1.9517	24.8396	22.5989	0.9098	34.9495
4.33	2.1605	1.9288	25.0159	22.3331	0.8928	35.3608
4.40	1.3005	1.1446	15.0586	13.2531	0.8801	21.4959
4.47	1.7352	1.5582	20.0915	18.0419	0.8980	28.2558
4.53	2.1516	1.9014	24.9137	22.0157	0.8837	35.1478
4.60	1.9771	1.7758	22.8925	20.5624	0.8982	32.7370
4.67	1.3723	1.2467	15.8903	14.4360	0.9085	22.7736
4.73	2.3353	2.1102	27.0406	24.4342	0.9036	38.2323
4.80	1.3574	1.1887	15.7176	13.7643	0.8757	22.5577
4.87	1.3665	1.2873	15.8222	14.9052	0.9420	23.4283
4.93	2.2255	1.9901	25.7684	23.0429	0.8942	36.2853

5.00	2.1054	1.8575	24.3785	21.5079	0.8822	33.1437
5.07	1.6809	1.4277	19.4625	16.5312	0.8494	26.5389
5.13	1.7768	1.5491	20.5735	17.9373	0.8719	29.5648
5.20	1.7433	1.5373	20.1857	17.8006	0.8818	29.2560
5.27	1.6210	1.4337	18.7697	16.6005	0.8844	26.2121
5.33	1.5340	1.3387	17.7618	15.5011	0.8727	24.7932
5.40	1.4833	1.3141	17.1750	15.2159	0.8859	24.0919
5.47	2.5556	2.3116	29.5910	26.7664	0.9045	40.6671
5.53	1.6529	1.4418	19.1391	16.6951	0.8723	25.0137
5.60	1.4609	1.2531	16.9158	14.5099	0.8578	22.5609
5.67	2.8748	2.4938	33.2872	28.8757	0.8675	45.8458
5.73	1.4475	1.2502	16.7601	14.4755	0.8637	22.6500
5.80	1.7353	1.4954	20.0926	17.3154	0.8618	27.4161
5.87	2.0156	1.7686	23.3380	20.4783	0.8775	33.7210
5.93	1.7739	1.5772	20.5400	18.2628	0.8891	30.0728
6.00	1.9968	1.8148	23.1205	21.0139	0.9089	34.4390
6.07	1.3985	1.2460	16.1937	14.4269	0.8909	23.4658
6.13	1.7876	1.5741	20.6985	18.2270	0.8806	29.6747
6.20	2.0599	1.7758	23.8519	20.5620	0.8621	34.3494
6.27	1.5690	1.3451	18.1676	15.5749	0.8573	26.8217
6.33	1.8294	1.5993	21.1828	18.5186	0.8742	30.2635
6.40	2.7630	2.4241	31.9929	28.0688	0.8773	43.8006
6.47	2.0063	1.7014	23.2312	19.7000	0.8480	30.7968
6.53	1.7840	1.5810	20.6573	18.3065	0.8862	29.2803
6.60	1.6070	1.3986	18.6075	16.1943	0.8703	25.3853
6.67	1.5785	1.3672	18.2779	15.8306	0.8661	24.3733
6.73	1.9141	1.6337	22.1630	18.9167	0.8535	29.0729
6.80	1.7994	1.5640	20.8348	18.1090	0.8692	26.2013
6.87	2.5656	2.1454	29.7069	24.8412	0.8362	36.1537
6.93	2.8156	2.3581	32.6014	27.3044	0.8375	40.4190
7.00	2.2078	1.8346	25.5637	21.2429	0.8310	32.3035
7.07	2.2592	1.9410	26.1596	22.4747	0.8591	33.7024
7.13	2.3714	2.0116	27.4583	23.2923	0.8483	36.1187
7.20	2.2223	1.9214	25.7316	22.2473	0.8646	32.8766
7.27	2.1117	1.7952	24.4510	20.7861	0.8501	32.8812
7.33	3.0399	2.5869	35.1993	29.9541	0.8510	46.7847
7.40	1.4614	1.2932	16.9215	14.9742	0.8849	23.1578
7.47	2.7938	2.4642	32.3492	28.5323	0.8820	43.8901
7.53	2.9391	2.6593	34.0316	30.7915	0.9048	46.2140
7.60	2.2420	1.9765	25.9601	22.8860	0.8816	34.5288

7.67	1.7789	1.5916	20.5977	18.4290	0.8947	28.2480
7.73	2.1998	1.9530	25.4713	22.6141	0.8878	34.6017
7.80	2.9649	2.7025	34.3301	31.2922	0.9115	44.8998
7.87	2.0690	1.7657	23.9567	20.4452	0.8534	31.0630
7.93	3.5378	3.2248	40.9642	37.3404	0.9115	56.0430
8.00	2.2313	1.9977	25.8355	23.1314	0.8953	36.6919
8.07	1.9973	1.8983	23.1264	21.9807	0.9505	34.0849
8.13	2.9870	2.7826	34.5860	32.2193	0.9316	49.9169
8.20	2.8143	2.6901	32.5863	31.1485	0.9559	46.5881
8.27	1.8118	1.6585	20.9792	19.2035	0.9154	30.0479
8.33	2.7129	2.5286	31.4129	29.2787	0.9321	46.3156
8.40	2.3387	2.1898	27.0799	25.3554	0.9363	39.9631
8.47	1.6232	1.4913	18.7945	17.2681	0.9188	26.9951
8.53	3.0225	2.7411	34.9975	31.7385	0.9069	48.9091
8.60	2.6523	2.4542	30.7106	28.4176	0.9253	44.5458
8.67	1.9175	1.7777	22.2031	20.5834	0.9270	31.7473
8.73	3.3358	3.0855	38.6247	35.7274	0.9250	55.9029
8.80	1.5250	1.3820	17.6579	16.0022	0.9062	25.0842
8.87	3.4692	3.1048	40.1700	35.9509	0.8950	56.4569
8.93	1.6932	1.5452	19.6056	17.8919	0.9126	28.9113
9.00	2.8705	2.5464	33.2368	29.4848	0.8871	49.9307
9.07	2.4288	2.3515	28.1233	27.2275	0.9681	42.1454
9.13	3.0155	2.5934	34.9162	30.0287	0.8600	50.8020
9.20	1.8086	1.5722	20.9416	18.2039	0.8693	31.7605
9.27	2.5124	2.5304	29.0906	29.2991	1.0072	43.1133
9.33	1.8181	1.7309	21.0513	20.0418	0.9520	31.6459
9.40	3.0468	2.6369	35.2785	30.5322	0.8655	49.9907
9.47	1.9459	1.6907	22.5315	19.5762	0.8688	31.7517
9.53	3.1254	2.5454	36.1884	29.4733	0.8144	50.5047
9.60	2.0369	1.9017	23.5853	22.0194	0.9336	35.3168
9.67	3.0613	2.8761	35.4463	33.3018	0.9395	53.6116
9.73	1.8648	1.5600	21.5923	18.0627	0.8365	31.3243
9.80	2.6185	2.3643	30.3197	27.3757	0.9029	43.5844
9.87	2.2625	2.0378	26.1979	23.5953	0.9007	39.0394
9.93	2.3276	2.1034	26.9510	24.3554	0.9037	39.8396
10.00	2.6047	2.3202	30.1595	26.8658	0.8908	42.9703
10.07	2.1910	1.9766	25.3692	22.8871	0.9022	35.4904
10.13	1.8772	1.6381	21.7365	18.9671	0.8726	30.0313
10.20	2.8282	2.4685	32.7475	28.5826	0.8728	45.3388
10.27	2.2057	1.9365	25.5393	22.4226	0.8780	34.2783

10.33	3.5883	3.0783	41.5483	35.6436	0.8579	57.2218
10.40	1.8916	1.6792	21.9032	19.4436	0.8877	30.9273
10.47	3.0259	2.6770	35.0371	30.9969	0.8847	50.2755
10.53	1.8329	1.6544	21.2226	19.1557	0.9026	30.4413
10.60	2.3648	2.1022	27.3823	24.3412	0.8889	38.4347
10.67	2.1134	1.8760	24.4709	21.7217	0.8877	33.9881
10.73	1.7769	1.6136	20.5748	18.6838	0.9081	28.4119
10.80	2.7429	2.3716	31.7599	27.4607	0.8646	40.9660
10.87	3.0399	2.5240	35.1983	29.2251	0.8303	45.2374
10.93	3.2188	2.6928	37.2705	31.1794	0.8366	50.4769
11.00	2.3091	2.0082	26.7371	23.2531	0.8697	38.7328
11.07	1.9830	1.7436	22.9611	20.1889	0.8793	34.9765
11.13	1.8549	1.6870	21.4772	19.5339	0.9095	31.4471
11.20	2.3146	2.0296	26.8006	23.5007	0.8769	37.8331
11.27	3.0055	2.5681	34.8010	29.7362	0.8545	47.1255
11.33	1.7034	1.4798	19.7231	17.1344	0.8687	27.5074
11.40	2.7766	2.3939	32.1503	27.7187	0.8622	43.6085
11.47	2.4490	2.0694	28.3563	23.9619	0.8450	37.9397
11.53	3.0872	2.6177	35.7462	30.3100	0.8479	50.7809
11.60	3.0051	2.5889	34.7959	29.9762	0.8615	51.4175
11.67	2.0443	1.8215	23.6703	21.0907	0.8910	36.3930
11.73	2.3263	2.0668	26.9357	23.9314	0.8885	40.5660
11.80	2.3989	2.1223	27.7772	24.5745	0.8847	42.3623
11.87	2.2280	1.9303	25.7982	22.3505	0.8664	38.4135
11.93	2.9516	2.6286	34.1768	30.4366	0.8906	51.0425
12.00	1.9175	1.6860	22.2028	19.5225	0.8793	32.0251

**Stepping and cycling transitions**

Last Name	First Name	D.O.B	Weight	Height	Temp	Date
Harris	Toby	12-24-76	190.0 Lbs	74.0 in	21.0 deg C	04-02-1998

TIME(min)	VO2(L)	VCO2(L)	VO2(Kg)	VCO2(Kg)	RER	VE(stpd)
0.13	0.2105	0.1598	2.4378	1.8501	0.7589	19.0398
0.20	0.3870	0.3276	4.4814	3.7929	0.8464	18.0162
0.27	0.5571	0.4431	6.4504	5.1308	0.7954	17.2925
0.33	0.5406	0.4370	6.2599	5.0596	0.8083	16.6947
0.40	0.6203	0.4954	7.1826	5.7361	0.7986	17.0114
0.47	0.6060	0.4707	7.0173	5.4507	0.7768	15.9733
0.53	0.5532	0.6583	6.4050	7.6225	1.1901	25.3935
0.60	0.8861	0.7025	10.2602	8.1340	0.7928	20.9906
0.67	0.4769	0.3777	5.5220	4.3739	0.7921	13.1063
0.73	0.5044	0.4698	5.8409	5.4396	0.9313	14.3370
0.80	0.4841	0.4345	5.6049	5.0307	0.8976	12.4972
0.87	0.4722	0.4158	5.4676	4.8149	0.8806	12.9069
0.93	0.5875	0.5300	6.8030	6.1370	0.9021	14.3390
1.00	0.6856	0.6203	7.9381	7.1820	0.9048	18.4512
1.07	0.3421	0.3001	3.9607	3.4753	0.8775	8.5963
1.13	1.0052	0.8833	11.6396	10.2278	0.8787	23.3295
1.20	1.1749	0.9517	13.6044	11.0192	0.8100	27.0243
1.27	0.9604	0.7917	11.1205	9.1670	0.8243	20.8002
1.33	1.4298	1.0998	16.5555	12.7346	0.7692	26.7209
1.40	1.7181	1.3223	19.8937	15.3103	0.7696	36.4621
1.47	1.7007	1.2072	19.6929	13.9780	0.7098	27.3702
1.53	1.6405	1.1870	18.9958	13.7444	0.7235	28.8749
1.60	2.1601	1.6287	25.0114	18.8582	0.7540	42.5108
1.67	0.9093	0.7479	10.5288	8.6599	0.8225	19.9639
1.73	1.8775	1.5337	21.7399	17.7581	0.8168	37.0817
1.80	1.8645	1.4495	21.5894	16.7840	0.7774	32.6062
1.87	2.6315	1.9090	30.4695	22.1043	0.7255	46.5510
1.93	1.6202	1.2660	18.7605	14.6590	0.7814	29.9237
2.00	1.4613	1.0612	16.9200	12.2878	0.7262	32.0446
2.07	2.1797	1.8589	25.2381	21.5240	0.8528	40.9856
2.13	1.9433	1.2376	22.5011	14.3303	0.6369	35.3452
2.20	1.8976	1.7663	21.9723	20.4517	0.9308	38.3110
2.27	2.4806	1.8645	28.7222	21.5885	0.7516	41.9870
2.33	1.9387	1.4967	22.4480	17.3304	0.7720	33.1097

2.40	3.1643	2.2445	36.6387	25.9886	0.7093	48.8415
2.47	1.6180	1.2620	18.7347	14.6127	0.7800	27.1379
2.53	3.2641	2.3241	37.7945	26.9107	0.7120	54.1660
2.60	1.1136	0.9286	12.8948	10.7517	0.8338	19.9888
2.67	3.0493	2.3100	35.3082	26.7476	0.7575	47.0943
2.73	3.0489	2.1285	35.3034	24.6463	0.6981	44.6682
2.80	1.7822	1.5607	20.6357	18.0718	0.8758	35.8326
2.87	2.3302	1.9169	26.9812	22.1954	0.8226	38.6076
2.93	2.4695	1.8938	28.5940	21.9279	0.7669	40.8549
3.00	3.2125	2.5422	37.1978	29.4363	0.7913	50.3914
3.07	2.2749	1.7760	26.3410	20.5639	0.7807	37.3476
3.13	2.0818	1.7071	24.1048	19.7667	0.8200	40.8322
3.20	2.0402	1.7636	23.6234	20.4209	0.8644	41.3439
3.27	1.7840	1.5206	20.6568	17.6066	0.8523	34.7113
3.33	2.6453	2.0092	30.6294	23.2646	0.7595	46.2881
3.40	2.8695	2.5116	33.2259	29.0813	0.8753	51.7300
3.47	1.6985	1.4203	19.6671	16.4460	0.8362	29.6817
3.53	2.8112	2.3319	32.5505	27.0012	0.8295	51.3587
3.60	2.6338	2.0674	30.4963	23.9381	0.7849	41.7648
3.67	2.5401	2.1553	29.4121	24.9562	0.8485	42.5955
3.73	1.7666	1.4199	20.4553	16.4406	0.8037	30.9313
3.80	2.8749	2.2818	33.2879	26.4211	0.7937	51.2705
3.87	2.6776	2.2026	31.0041	25.5038	0.8226	45.1341
3.93	3.0838	2.5528	35.7074	29.5588	0.8278	51.2609
4.00		2.2049	32.5547	25.5299	0.7842	45.1341
4.07		2.3021	32.4470	26.6562	0.8215	49.9334
4.13		2.1068	28.9857	24.3948	0.8416	45.7468
4.20		2.1965	31.1125	25.4329	0.8174	47.0808
4.27		2.2255	30.1949	25.7688	0.8534	45.2327
4.33		2.0021	28.9193	23.1821	0.8016	43.7098
4.40		2.2194	31.1833	25.6986	0.8241	47.4710
4.47		1.9357	26.6127	22.4136	0.8422	41.1392
4.53		2.3406	31.2101	27.1020	0.8684	48.4084
4.60		2.0023	28.9758	23.1848	0.8001	41.9754
4.67		1.8989	25.4265	21.9878	0.8648	40.6163
4.73		1.8682	25.0762	21.6323	0.8627	39.2057
4.80		2.2242	31.1864	25.7538	0.8258	45.5300
4.87		1.9743	26.7574	22.8602	0.8543	42.5460
4.93		2.4235	32.8310	28.0620	0.8547	48.7630
5.00		2.2990	32.3900	26.6200	0.8219	46.5379

5.07		2.2002	30.8683	25.4755	0.8253	45.4562
5.13		2.2850	31.7070	26.4583	0.8345	50.4370
5.20		2.5325	33.8926	29.3234	0.8652	51.4723
5.27		2.2483	31.1459	26.0326	0.8358	48.1909
5.33		1.7899	23.4405	20.7250	0.8842	36.2321
5.40		2.1072	27.8075	24.3986	0.8774	42.0591
5.47		2.2364	30.9608	25.8949	0.8364	44.8171
5.53		2.5650	35.8183	29.6995	0.8292	52.5593
5.60		1.6971	23.0436	19.6510	0.8528	35.5404
5.67		2.3573	31.7571	27.2948	0.8595	54.1201
5.73		1.2978	16.7225	15.0277	0.8987	27.7595
5.80		2.7386	36.3534	31.7100	0.8723	55.0467
5.87		2.3062	31.1769	26.7037	0.8565	47.7957
5.93		2.0377	28.1078	23.5941	0.8394	42.4498
6.00	2.6082	2.0890	30.2005	24.1882	0.8009	47.5783
6.07	1.3448	1.2569	15.5714	14.5539	0.9347	26.2395
6.13	1.6575	1.4530	19.1925	16.8245	0.8766	33.5907
6.20	3.0714	2.5603	35.5632	29.6459	0.8336	52.4645
6.27	2.6464	2.2337	30.6429	25.8644	0.8441	44.7195
6.33	2.3037	1.9565	26.6744	22.6546	0.8493	41.0155
6.40	2.5420	2.2108	29.4331	25.5987	0.8697	50.5252
6.47	2.0907	1.8569	24.2086	21.5006	0.8881	38.6832
6.53	2.2167	1.9458	25.6673	22.5302	0.8778	43.4762
6.60	1.8487	1.7147	21.4065	19.8550	0.9275	38.5722
6.67	2.3187	1.9527	26.8479	22.6100	0.8422	46.7615
6.73	1.2751	1.2919	14.7643	14.9590	1.0132	30.0047
6.80	1.9186	1.8442	22.2149	21.3538	0.9612	40.0008
6.87	2.2343	2.1287	25.8707	24.6485	0.9528	45.4342
6.93	2.0487	1.7696	23.7215	20.4896	0.8638	42.2749
7.00	1.3595	1.3937	15.7421	16.1371	1.0251	28.0695
7.07	3.0367	2.6003	35.1623	30.1083	0.8563	54.3963
7.13	1.6874	1.6699	19.5385	19.3361	0.9896	33.9757
7.20	2.3516	2.1086	27.2287	24.4148	0.8967	43.3846
7.27	2.3203	2.2077	26.8662	25.5629	0.9515	47.1699
7.33	2.3411	2.0623	27.1071	23.8792	0.8809	44.3948
7.40	1.9387	1.9272	22.4480	22.3144	0.9940	37.5673
7.47	2.0009	1.8658	23.1684	21.6044	0.9325	40.5140
7.53	2.7621	2.6681	31.9822	30.8933	0.9660	49.1846
7.60	2.5950	2.3519	30.0473	27.2327	0.9063	46.6654
7.67	1.5222	1.4340	17.6253	16.6045	0.9421	34.0964

7.73	2.2218	2.3501	25.7256	27.2120	1.0578	47.1438
7.80	2.4263	2.2966	28.0938	26.5924	0.9466	48.6542
7.87	2.1647	2.1239	25.0651	24.5931	0.9812	41.0439
7.93	2.5226	2.2705	29.2087	26.2903	0.9001	51.2467
8.00	1.6693	1.8001	19.3289	20.8434	1.0784	35.2970
8.07	2.8566	2.7085	33.0764	31.3614	0.9482	54.1697
8.13	1.3917	1.4269	16.1141	16.5225	1.0253	29.1802
8.20	2.7113	2.7916	31.3939	32.3242	1.0296	55.8885
8.27	2.1575	2.1264	24.9818	24.6219	0.9856	45.0967
8.33	2.4339	2.4057	28.1820	27.8552	0.9884	47.4499
8.40	2.4351	2.3615	28.1955	27.3442	0.9698	48.3415
8.47	2.8495	2.7091	32.9944	31.3680	0.9507	56.2023
8.53	1.6837	1.7230	19.4951	19.9503	1.0234	37.0108
8.60	2.6526	2.5880	30.7141	29.9663	0.9757	55.4729
8.67	1.3769	1.4613	15.9428	16.9207	1.0613	30.5066
8.73	3.0071	2.8673	34.8189	33.2000	0.9535	58.3362
8.80	1.6311	1.6885	18.8860	19.5508	1.0352	33.2384
8.87	2.9584	2.6388	34.2554	30.5548	0.8920	60.3073
8.93	1.4250	1.5655	16.5006	18.1264	1.0985	32.3431
9.00	2.6798	2.5201	31.0288	29.1800	0.9404	54.0752
9.07	2.5305	2.4833	29.3008	28.7535	0.9813	49.8644
9.13	1.8507	1.7826	21.4291	20.6403	0.9632	37.5258
9.20	2.7473	2.5988	31.8110	30.0911	0.9459	56.7986
9.27	1.2489	1.1205	14.4611	12.9745	0.8972	28.7602
9.33	1.0543	1.1659	12.2074	13.5002	1.1059	25.2891
9.40	3.6948	3.3245	42.7815	38.4945	0.8998	66.9588
9.47	1.8598	1.8761	21.5343	21.7227	1.0088	38.7602
9.53	3.4155	3.1769	39.5480	36.7852	0.9301	65.7721
9.60	1.7236	1.6758	19.9571	19.4034	0.9723	37.4844
9.67	2.6080	2.6291	30.1974	30.4420	1.0081	53.9284
9.73	1.9095	1.8892	22.1103	21.8747	0.9893	40.3643
9.80	1.1535	1.1065	13.3558	12.8116	0.9593	27.3135
9.87	2.7146	2.7281	31.4327	31.5888	1.0050	54.2912
9.93	3.0823	2.7512	35.6901	31.8554	0.8926	56.0306
10.00	3.0654	2.6857	35.4943	31.0980	0.8761	56.8377
10.07	1.6203	1.5948	18.7617	18.4658	0.9842	34.8553
10.13	2.4356	2.2956	28.2016	26.5810	0.9425	50.4484
10.20	2.6989	2.4953	31.2507	28.8924	0.9245	53.2001
10.27	1.9331	1.8554	22.3829	21.4839	0.9598	37.8265
10.33	2.7338	2.4933	31.6541	28.8696	0.9120	53.2148



10.40	3.0534	2.7370	35.3547	31.6917	0.8964	59.2377
10.47	2.1017	2.0673	24.3353	23.9366	0.9836	42.7988
10.53	2.0762	1.9194	24.0403	22.2248	0.9245	44.2193
10.60	1.9579	1.9593	22.6702	22.6865	1.0007	45.0344
10.67	3.0182	2.8786	34.9471	33.3309	0.9538	61.7014
10.73	1.5507	1.5340	17.9554	17.7621	0.9892	34.1230
10.80	2.8651	2.6832	33.1752	31.0682	0.9365	54.9815
10.87	1.5080	1.4646	17.4611	16.9580	0.9712	30.8635
10.93	3.0832	2.6602	35.7006	30.8028	0.8628	59.2414
11.00	2.1454	2.0765	24.8420	24.0438	0.9679	43.9912
11.07	2.2883	2.0801	26.4964	24.0854	0.9090	41.9372
11.13	1.9953	1.8043	23.1034	20.8914	0.9043	38.3045
11.20	2.4119	2.1310	27.9274	24.6745	0.8835	47.2450
11.27	3.3000	2.9233	38.2111	33.8485	0.8858	59.9018
11.33	2.7568	2.2192	31.9209	25.6955	0.8050	51.3019
11.40	1.1106	1.1321	12.8600	13.1080	1.0193	26.4762
11.47	3.7135	3.2481	42.9990	37.6095	0.8747	67.2460
11.53	1.8166	1.7593	21.0343	20.3714	0.9685	36.6897
11.60	2.7115	2.4981	31.3961	28.9258	0.9213	52.7560
11.67	3.1882	2.8716	36.9156	33.2496	0.9007	61.1580
11.73	2.1626	1.9994	25.0409	23.1506	0.9245	43.9379
11.80	1.7342	1.6390	20.0803	18.9777	0.9451	37.4999
11.87	3.1028	2.8178	35.9267	32.6273	0.9082	61.2515
11.93	1.5666	1.5229	18.1398	17.6340	0.9721	31.2709
12.00	2.3289	2.0992	26.9664	24.3070	0.9014	43.4162
12.07	3.1587	2.6465	36.5742	30.6436	0.8378	56.4848
12.13	2.2184	2.0824	25.6869	24.1120	0.9387	41.9836
12.20	2.5325	2.2853	29.3238	26.4614	0.9024	48.3633
12.27	2.5013	2.1596	28.9627	25.0061	0.8634	46.1424
12.33	1.8816	1.7805	21.7870	20.6157	0.9462	37.1685
12.40	2.6929	2.3567	31.1805	27.2884	0.8752	48.9945
12.47	3.0656	2.7232	35.4966	31.5323	0.8883	59.5189
12.53	2.6912	2.3255	31.1614	26.9264	0.8641	50.0062
12.60	2.0404	1.9554	23.6256	22.6419	0.9584	40.1106
12.67	2.7477	2.5076	31.8159	29.0349	0.9126	54.5667
12.73	2.6130	2.3195	30.2560	26.8575	0.8877	49.9855
12.80	1.8520	1.7768	21.4445	20.5737	0.9594	38.0042
12.87	2.9156	2.4977	33.7599	28.9204	0.8566	56.5009
12.93	1.5777	1.5487	18.2681	17.9325	0.9816	32.1965
13.00	3.6618	3.1987	42.3994	37.0378	0.8735	66.2924

**One cycling transition**

Last Name	First Name	D.O.B	Weight	Height	Temp	Date
Le	Stanford	08-19-73	165.0 Lbs	67.5 in	20.7 deg C	04-01-1998

TIME(min)	VO2(L)	VCO2(L)	VO2(Kg)	VCO2(Kg)	RER	VE(stpd)
0.13	0.3942	0.3281	5.2558	4.3742	0.8323	11.2080
0.20	0.4089	0.3618	5.4525	4.8246	0.8848	11.1107
0.27	0.5911	0.5439	7.8817	7.2516	0.9201	15.1859
0.33	0.8712	0.7598	11.6159	10.1305	0.8721	21.7297
0.40	0.4911	0.4194	6.5483	5.5921	0.8540	12.4393
0.47	0.6516	0.5396	8.6881	7.1943	0.8281	16.0987
0.53	0.3836	0.3157	5.1142	4.2090	0.8230	9.3765
0.60	0.7107	0.5874	9.4761	7.8321	0.8265	17.1176
0.67	0.3653	0.3013	4.8703	4.0173	0.8249	8.7674
0.73	0.2607	0.2160	3.4760	2.8794	0.8284	6.3207
0.80	0.2894	0.2413	3.8581	3.2172	0.8339	7.1353
0.87	0.4246	0.3660	5.6612	4.8803	0.8621	10.8079
0.93	0.3633	0.3086	4.8442	4.1148	0.8494	9.3752
1.00	0.7301	0.6137	9.7351	8.1828	0.8405	18.5595
1.07	0.7071	0.5632	9.4273	7.5094	0.7966	18.1566
1.13	0.5714	0.4436	7.6189	5.9149	0.7763	14.4644
1.20	0.5856	0.4535	7.8086	6.0469	0.7744	14.0765
1.27	0.8849	0.6907	11.7985	9.2099	0.7806	19.8686
1.33	1.0561	0.8020	14.0817	10.6936	0.7594	22.4252
1.40	0.9007	0.6686	12.0090	8.9141	0.7423	17.6344
1.47	2.4177	1.7616	32.2356	23.4880	0.7286	44.0289
1.53	0.6892	0.5097	9.1892	6.7963	0.7396	13.6609
1.60	1.1105	0.8895	14.8068	11.8602	0.8010	22.4283
1.67	1.6793	1.3673	22.3906	18.2312	0.8142	33.8370
1.73	1.9591	1.5689	26.1209	20.9186	0.8008	35.6518
1.80	1.3563	1.0277	18.0844	13.7033	0.7577	22.9381
1.87	1.9747	1.5332	26.3289	20.4433	0.7765	34.8417
1.93	2.1614	1.7726	28.8188	23.6348	0.8201	39.0403
2.00	1.3823	1.1530	18.4308	15.3729	0.8341	24.1447
2.07	2.4961	2.1029	33.2819	28.0391	0.8425	43.0037
2.13	1.4907	1.2713	19.8755	16.9510	0.8529	26.3205
2.20	2.0434	1.7942	27.2450	23.9229	0.8781	36.6907
2.27	2.2486	1.9708	29.9809	26.2778	0.8765	41.4019
2.33	2.0089	1.8965	26.7860	25.2864	0.9440	41.0903
2.40	1.8995	1.8368	25.3268	24.4912	0.9670	38.5466

2.47	1.1919	1.1355	15.8923	15.1405	0.9527	23.4608
2.53	2.7698	2.5355	36.9303	33.8069	0.9154	53.0418
2.60	2.0965	1.9793	27.9528	26.3909	0.9441	40.3934
2.67	2.4550	2.2026	32.7327	29.3682	0.8972	46.2711
2.73	2.2151	2.0144	29.5352	26.8582	0.9094	41.6607
2.80	2.2211	2.0678	29.6142	27.5712	0.9310	43.3035
2.87	2.0749	1.9822	27.6649	26.4295	0.9553	41.6848
2.93	1.6715	1.6096	22.2867	21.4612	0.9630	34.0634
3.00	2.4156	2.3720	32.2081	31.6261	0.9819	49.9333
3.07	2.6617	2.6199	35.4894	34.9315	0.9843	55.6199
3.13	1.1967	1.2159	15.9561	16.2126	1.0161	25.1739
3.20	3.1116	3.0810	41.4877	41.0795	0.9902	65.2707
3.27	1.2636	1.3090	16.8477	17.4533	1.0359	27.8492
3.33	2.4013	2.4175	32.0175	32.2331	1.0067	50.9452
3.40	1.7353	1.7211	23.1372	22.9485	0.9918	34.3542
3.47	1.7015	1.6372	22.6863	21.8287	0.9622	32.5157
3.53	3.0303	2.8642	40.4040	38.1897	0.9452	56.8867
3.60	2.3792	2.2210	31.7225	29.6129	0.9335	46.7548
3.67	1.5605	1.5205	20.8072	20.2733	0.9743	32.6263
3.73	2.4478	2.4561	32.6378	32.7476	1.0034	52.0323
3.80	2.3140	2.3146	30.8528	30.8608	1.0003	47.7706
3.87	1.9836	1.9421	26.4481	25.8943	0.9791	40.4581
3.93	1.8581	1.7859	24.7746	23.8116	0.9611	37.2816
4.00	2.5896	2.5146	34.5278	33.5282	0.9711	51.4225
4.07	2.6164	2.5127	34.8853	33.5031	0.9604	52.6202
4.13	1.9215	1.8607	25.6201	24.8087	0.9683	40.2270
4.20	1.9143	1.8945	25.5239	25.2599	0.9897	41.2257
4.27	2.2204	2.2382	29.6047	29.8432	1.0081	48.1306
4.33	2.2635	2.2713	30.1796	30.2847	1.0035	47.1217
4.40	2.3699	2.2521	31.5982	30.0284	0.9503	47.5607
4.47	2.3367	2.2353	31.1560	29.8039	0.9566	46.9575
4.53	2.4398	2.2921	32.5303	30.5617	0.9395	50.3714
4.60	1.8894	1.8186	25.1919	24.2483	0.9625	39.4034
4.67	2.2634	2.1973	30.1785	29.2972	0.9708	46.7976
4.73	2.2392	2.1489	29.8566	28.6522	0.9597	46.3092
4.80	2.2862	2.1887	30.4829	29.1827	0.9573	46.4172
4.87	2.2118	2.1028	29.4904	28.0367	0.9507	45.0719
4.93	2.2634	2.1640	30.1784	28.8528	0.9561	45.9411
5.00	1.8216	1.7099	24.2875	22.7988	0.9387	36.6513
5.07	2.2871	2.1925	30.4953	29.2335	0.9586	47.0461

5.13	2.1450	1.9990	28.5993	26.6532	0.9320	42.6650
5.20	2.3179	2.1478	30.9051	28.6378	0.9266	47.7244
5.27	1.5180	1.3977	20.2394	18.6357	0.9208	30.5808
5.33	2.2733	2.1648	30.3112	28.8643	0.9523	46.1061
5.40	2.9592	2.6963	39.4562	35.9505	0.9111	59.6459
5.47	2.0952	2.0164	27.9357	26.8849	0.9624	42.0497
5.53	2.0798	1.9306	27.7306	25.7412	0.9283	41.6492
5.60	2.2398	2.0509	29.8636	27.3448	0.9157	43.6326
5.67	2.6634	2.3839	35.5118	31.7858	0.8951	52.5620
5.73	2.7854	2.5501	37.1381	34.0013	0.9155	57.3629
5.80	1.9025	1.8315	25.3673	24.4199	0.9627	40.7406
5.87	1.6998	1.6880	22.6637	22.5072	0.9931	36.5347
5.93	2.5344	2.4500	33.7922	32.6665	0.9667	52.6275
6.00	2.1744	2.0175	28.9916	26.8995	0.9278	43.4296
6.07	2.0733	1.8999	27.6440	25.3318	0.9164	40.8985
6.13	2.3510	2.1431	31.3466	28.5744	0.9116	45.9855
6.20	2.1769	1.9907	29.0258	26.5421	0.9144	44.1338
6.27	2.2368	2.0604	29.8242	27.4721	0.9211	45.5291
6.33	2.5190	2.2863	33.5867	30.4846	0.9076	51.2571
6.40	1.8436	1.7488	24.5809	23.3168	0.9486	38.9434
6.47	1.7753	1.6718	23.6710	22.2905	0.9417	35.8342
6.53	2.2740	2.0654	30.3197	27.5391	0.9083	44.5581
6.60	2.2926	2.1196	30.5678	28.2612	0.9245	44.8564
6.67	2.5019	2.2440	33.3587	29.9204	0.8969	48.3069
6.73	2.3835	2.1130	31.7797	28.1737	0.8865	46.4866
6.80	2.1646	1.9760	28.8607	26.3463	0.9129	43.4236
6.87	2.1033	1.8988	28.0442	25.3176	0.9028	42.4267
6.93	2.2517	2.0647	30.0231	27.5295	0.9169	45.6746
7.00	2.0203	1.8585	26.9372	24.7798	0.9199	40.7970
7.07	2.2637	2.0440	30.1833	27.2532	0.9029	44.5274
7.13	2.5886	2.3248	34.5153	30.9968	0.8981	50.8651
7.20	2.7301	2.4262	36.4016	32.3491	0.8887	53.6708
7.27	2.4337	2.1361	32.4492	28.4810	0.8777	48.2121
7.33	2.1684	1.9266	28.9119	25.6876	0.8885	43.8295
7.40	2.2724	2.0643	30.2992	27.5236	0.9084	46.4866
7.47	2.3561	2.1094	31.4144	28.1251	0.8953	47.4492
7.53	3.1023	2.7438	41.3642	36.5837	0.8844	61.2378
7.60	1.8076	1.6641	24.1014	22.1882	0.9206	37.5599
7.67	2.3190	2.0780	30.9196	27.7069	0.8961	47.4365
7.73	2.4918	2.2146	33.2235	29.5276	0.8888	49.9838

7.80	2.3380	2.0391	31.1735	27.1877	0.8721	45.4591
7.87	2.2598	2.0055	30.1309	26.7399	0.8875	44.4137
7.93	2.4284	2.1576	32.3787	28.7677	0.8885	49.0849
8.00	2.3885	2.1499	31.8468	28.6648	0.9001	48.5233

**Two cycling transitions**

Last Name	First Name	D.O.B	Weight	Height	Temp	Date
Le	Stanford	08-19-73	165.0 Lbs	67.3 in	25.9 deg C	03-09-1998

TIME(min)	VO2(L)	VCO2(L)	VO2(Kg)	VCO2(Kg)	RER	VE(stpd)
0.13	0.2274	0.2342	3.0316	3.1231	1.0302	17.6287
0.20	0.0841	0.0795	1.1207	1.0595	0.9454	7.2309
0.27	0.0746	0.0360	0.9941	0.4802	0.4830	13.8630
0.33	0.0509	0.0989	0.6780	1.3185	1.9446	11.2481
0.40	0.2882	0.2603	3.8433	3.4706	0.9030	17.4284
0.47	0.2349	0.1830	3.1326	2.4400	0.7789	10.6499
0.53	0.4091	0.3056	5.4541	4.0750	0.7471	15.5687
0.60	0.2811	0.1984	3.7485	2.6455	0.7057	9.6412
0.67	0.1635	0.1138	2.1806	1.5172	0.6958	5.4239
0.73	0.2008	0.1394	2.6775	1.8585	0.6941	6.6283
0.80	0.4018	0.2719	5.3574	3.6250	0.6766	13.2107
0.87	0.1262	0.0839	1.6825	1.1189	0.6650	4.3076
0.93	0.1883	0.1251	2.5110	1.6680	0.6643	6.6081
1.00	0.0555	0.0369	0.7398	0.4925	0.6656	2.0038
1.07	0.1271	0.0843	1.6949	1.1235	0.6629	4.8200
1.13	0.4107	0.2744	5.4756	3.6584	0.6681	15.8301
1.20	0.2560	0.1682	3.4135	2.2421	0.6568	9.8434
1.27	0.4921	0.3135	6.5614	4.1798	0.6370	17.8290
1.33	0.6286	0.3520	8.3817	4.6932	0.5599	20.4848
1.40	0.6966	0.3666	9.2885	4.8881	0.5262	18.6278
1.47	0.6228	0.3001	8.3045	4.0015	0.4818	13.6240
1.53	0.9327	0.4574	12.4360	6.0988	0.4904	18.4250
1.60	0.6902	0.3283	9.2029	4.3776	0.4757	13.2251
1.67	0.8052	0.3923	10.7361	5.2300	0.4871	16.0261
1.73	0.9389	0.4833	12.5192	6.4434	0.5147	19.2339
1.80	0.4471	0.2286	5.9613	3.0484	0.5114	9.4179
1.87	0.8077	0.4051	10.7697	5.4020	0.5016	18.0244
1.93	1.1174	0.5870	14.8986	7.8267	0.5253	23.4096
2.00	1.1528	0.5680	15.3702	7.5729	0.4927	22.2953
2.07	0.9297	0.4593	12.3965	6.1239	0.4940	17.0277
2.13	1.2150	0.5965	16.2005	7.9528	0.4909	21.6323
2.20	1.3095	0.6597	17.4598	8.7961	0.5038	23.5005
2.27	1.2494	0.6509	16.6585	8.6792	0.5210	22.6245
2.33	1.1951	0.6454	15.9348	8.6050	0.5400	22.1240
2.40	1.0278	0.5677	13.7040	7.5687	0.5523	19.4263

2.47	1.4709	0.8417	19.6123	11.2225	0.5722	27.7147
2.53	0.6523	0.3714	8.6970	4.9525	0.5695	12.2507
2.60	1.1074	0.6381	14.7655	8.5083	0.5762	21.4349
2.67	1.4541	0.8797	19.3876	11.7296	0.6050	29.2556
2.73	1.0424	0.6358	13.8989	8.4772	0.6099	20.3331
2.80	1.7528	1.0079	23.3711	13.4383	0.5750	30.7584
2.87	1.8008	1.0415	24.0102	13.8870	0.5784	33.0448
2.93	1.3762	0.8344	18.3488	11.1258	0.6064	27.2517
3.00	1.0762	0.6904	14.3487	9.2058	0.6416	22.6971
3.07	1.1967	0.7955	15.9566	10.6061	0.6647	25.8104
3.13	1.3742	0.9184	18.3232	12.2458	0.6683	29.3254
3.20	1.4341	0.9628	19.1208	12.8369	0.6714	30.4496
3.27	1.4325	0.9780	19.1004	13.0404	0.6827	30.9323
3.33	1.3600	0.9325	18.1338	12.4334	0.6856	29.7271
3.40	1.4151	0.9832	18.8682	13.1090	0.6948	31.5434
3.47	1.3119	0.9176	17.4915	12.2347	0.6995	29.5343
3.53	1.1144	0.7763	14.8588	10.3506	0.6966	25.1478
3.60	1.7584	1.2458	23.4460	16.6104	0.7085	40.8859
3.67	1.2589	0.9192	16.7860	12.2564	0.7302	31.0336
3.73	0.9396	0.7152	12.5278	9.5356	0.7612	23.7046
3.80	1.4647	1.0938	19.5297	14.5839	0.7468	35.5482
3.87	1.1228	0.8580	14.9701	11.4395	0.7642	28.7228
3.93	1.4029	1.0380	18.7048	13.8401	0.7399	33.4635
4.00	1.1291	0.8501	15.0552	11.3346	0.7529	26.8437
4.07	1.1073	0.8164	14.7639	10.8848	0.7373	26.2335
4.13	1.1038	0.7954	14.7168	10.6053	0.7206	26.7179
4.20	1.5205	1.1150	20.2733	14.8667	0.7333	37.2657
4.27	1.0272	0.7519	13.6960	10.0259	0.7320	24.0092
4.33	1.0971	0.7931	14.6280	10.5753	0.7229	25.2044
4.40	1.7701	1.2668	23.6011	16.8905	0.7157	39.8757
4.47	1.1205	0.7867	14.9395	10.4890	0.7021	24.2296
4.53	1.5366	1.0848	20.4886	14.4642	0.7060	34.7486
4.60	0.9415	0.6990	12.5534	9.3197	0.7424	22.8278
4.67	1.3727	1.0261	18.3032	13.6816	0.7475	34.6423
4.73	0.9663	0.7227	12.8835	9.6359	0.7479	23.8356
4.80	1.4227	1.0146	18.9689	13.5276	0.7131	31.9366
4.87	1.2251	0.8621	16.3349	11.4941	0.7037	27.5252
4.93	0.9506	0.6739	12.6742	8.9857	0.7090	21.9026
5.00	1.6319	1.1704	21.7593	15.6056	0.7172	37.6715
5.07	1.4950	1.0386	19.9339	13.8480	0.6947	32.7444

5.13	1.0038	0.7067	13.3840	9.4233	0.7041	22.8948
5.20	1.3699	0.9864	18.2660	13.1526	0.7201	32.5347
5.27	1.1388	0.8293	15.1846	11.0574	0.7282	27.3519
5.33	1.4974	1.0871	19.9651	14.4949	0.7260	36.6397
5.40	1.6577	1.1752	22.1021	15.6696	0.7090	39.1478
5.47	1.0451	0.7405	13.9343	9.8740	0.7086	24.8337
5.53	1.2113	0.8729	16.1509	11.6388	0.7206	29.3214
5.60	1.2550	0.8949	16.7336	11.9316	0.7130	31.4301
5.67	1.6745	1.2067	22.3267	16.0893	0.7206	41.8681
5.73	1.1789	0.8422	15.7189	11.2288	0.7143	29.6307
5.80	0.9590	0.7221	12.7865	9.6286	0.7530	25.2308
5.87	1.1007	0.8410	14.6758	11.2138	0.7641	28.8312
5.93	1.2300	0.9177	16.4000	12.2353	0.7461	30.9281
6.00	1.4113	0.9992	18.8175	13.3229	0.7080	35.6580
6.07	1.0977	0.7741	14.6361	10.3218	0.7052	26.3125
6.13	1.6703	1.1358	22.2703	15.1437	0.6800	39.0689
6.20	1.2354	0.8360	16.4714	11.1461	0.6767	29.0552
6.27	1.2753	0.8804	17.0044	11.7392	0.6904	29.6241
6.33	1.3087	0.8841	17.4490	11.7885	0.6756	29.7484
6.40	1.5136	1.0056	20.1810	13.4082	0.6644	32.7355
6.47	1.4248	0.9242	18.9978	12.3221	0.6486	30.5305
6.53	1.5403	1.0142	20.5374	13.5221	0.6584	33.5592
6.60	1.2727	0.8360	16.9691	11.1463	0.6569	28.1279
6.67	1.9535	1.3147	26.0471	17.5298	0.6730	43.0784
6.73	0.9627	0.6670	12.8359	8.8929	0.6928	21.6411
6.80	1.3068	0.9129	17.4241	12.1722	0.6986	28.6466
6.87	2.1160	1.3927	28.2138	18.5692	0.6582	43.5650
6.93	2.0691	1.3355	27.5881	17.8060	0.6454	41.4506
7.00	1.3846	0.9134	18.4620	12.1785	0.6597	28.4386
7.07	2.1390	1.4648	28.5203	19.5313	0.6848	46.4756
7.13	1.5332	1.0954	20.4427	14.6059	0.7145	34.4280
7.20	1.1432	0.8171	15.2425	10.8950	0.7148	25.5207
7.27	2.3455	1.6495	31.2738	21.9930	0.7032	51.9220
7.33	1.1550	0.8165	15.4005	10.8865	0.7069	25.1478
7.40	1.8339	1.2749	24.4515	16.9993	0.6952	39.1478
7.47	1.9176	1.3514	25.5686	18.0190	0.7047	42.3401
7.53	1.4003	0.9798	18.6713	13.0636	0.6997	31.4341
7.60	1.9119	1.3459	25.4919	17.9453	0.7040	41.8397
7.67	1.7009	1.2242	22.6786	16.3221	0.7197	37.2454
7.73	1.3552	0.9704	18.0689	12.9388	0.7161	28.7390



7.80	1.7379	1.2230	23.1723	16.3060	0.7037	36.6517
7.87	2.0150	1.4071	26.8668	18.7616	0.6983	42.6825
7.93	2.1972	1.5226	29.2960	20.3016	0.6930	48.3853
8.00	1.2816	0.9417	17.0885	12.5560	0.7348	28.7390
8.07	1.5822	1.1562	21.0965	15.4164	0.7308	35.4481
8.13	2.0993	1.5341	27.9905	20.4542	0.7308	47.0318
8.20	1.1974	0.8791	15.9651	11.7212	0.7342	26.2284
8.27	2.0354	1.4673	27.1382	19.5633	0.7209	43.4530
8.33	2.0920	1.5089	27.8928	20.1183	0.7213	45.5618
8.40	1.2385	0.9018	16.5127	12.0244	0.7282	27.6487
8.47	1.4160	1.0454	18.8794	13.9385	0.7383	32.3471
8.53	1.5427	1.1433	20.5698	15.2442	0.7411	35.1599
8.60	0.7323	0.5324	9.7638	7.0988	0.7271	15.2268
8.67	1.7213	1.1824	22.9512	15.7648	0.6869	34.2557
8.73	1.7430	1.1735	23.2398	15.6467	0.6733	34.8567
8.80	1.4712	0.9657	19.6160	12.8755	0.6564	27.3445
8.87	1.7728	1.1712	23.6372	15.6165	0.6607	32.6576
8.93	2.6414	1.7252	35.2183	23.0025	0.6531	47.1832
9.00	2.1533	1.4310	28.7107	19.0798	0.6646	42.1918
9.07	2.1880	1.5203	29.1740	20.2709	0.6948	46.9701
9.13	1.5749	1.1467	20.9989	15.2889	0.7281	36.5545
9.20	1.9768	1.4969	26.3572	19.9592	0.7573	46.4630
9.27	1.6134	1.2005	21.5117	16.0061	0.7441	38.7631
9.33	1.4637	1.1358	19.5162	15.1443	0.7760	35.7533
9.40	2.2288	1.6296	29.7175	21.7282	0.7312	47.5580
9.47	1.9544	1.4065	26.0591	18.7529	0.7196	46.8508
9.53	1.5737	1.2145	20.9826	16.1935	0.7718	39.6645
9.60	1.4845	1.1596	19.7931	15.4618	0.7812	38.2467
9.67	1.7755	1.3543	23.6733	18.0569	0.7628	43.6592
9.73	2.0592	1.5103	27.4561	20.1369	0.7334	48.1456
9.80	1.6264	1.1982	21.6848	15.9754	0.7367	39.2586
9.87	1.8076	1.3601	24.1016	18.1351	0.7524	44.3481
9.93	2.0576	1.5941	27.4342	21.2542	0.7747	51.5559
10.00	1.9774	1.5514	26.3659	20.6847	0.7845	51.6771
10.07	1.4529	1.1623	19.3716	15.4978	0.8000	39.5746
10.13	0.8818	0.7195	11.7571	9.5936	0.8160	24.6233
10.20	1.3455	1.1110	17.9405	14.8137	0.8257	36.3443
10.27	2.2213	1.5970	29.6175	21.2935	0.7189	48.0782
10.33	1.8396	1.2261	24.5280	16.3482	0.6665	39.4642
10.40	1.7174	1.2280	22.8988	16.3734	0.7150	41.3882

10.47	2.0305	1.4981	27.0727	19.9741	0.7378	49.6538
10.53	1.7502	1.3001	23.3357	17.3349	0.7428	41.6451
10.60	2.1282	1.5648	28.3759	20.8639	0.7353	51.3557
10.67	1.8380	1.3540	24.5061	18.0539	0.7367	44.3662
10.73	1.7881	1.3120	23.8409	17.4927	0.7337	43.2704
10.80	1.7442	1.2920	23.2559	17.2260	0.7407	42.6810
10.87	1.6094	1.2130	21.4587	16.1729	0.7537	40.2710
10.93	1.9918	1.4777	26.5577	19.7023	0.7419	49.3871
11.00	1.6732	1.2533	22.3100	16.7104	0.7490	42.2400
11.07	1.5875	1.1822	21.1660	15.7622	0.7447	39.6430
11.13	1.6524	1.2380	22.0314	16.5067	0.7492	41.1705
11.20	2.1314	1.5814	28.4193	21.0856	0.7419	52.6786
11.27	1.6083	1.2175	21.4438	16.2331	0.7570	38.8738
11.33	1.7022	1.2588	22.6956	16.7836	0.7395	41.2447
11.40	1.9132	1.3865	25.5098	18.4867	0.7247	45.0611
11.47	1.7732	1.2917	23.6430	17.2224	0.7284	42.3229
11.53	2.0951	1.5586	27.9350	20.7816	0.7439	50.6549
11.60	1.6426	1.1797	21.9019	15.7300	0.7182	39.3641
11.67	1.6082	1.1865	21.4427	15.8205	0.7378	41.4562
11.73	1.8820	1.4070	25.0932	18.7603	0.7476	47.1832
11.80	1.7946	1.3234	23.9286	17.6456	0.7374	44.4542
11.87	1.6073	1.1807	21.4305	15.7422	0.7346	39.6591
11.93	1.8234	1.3247	24.3113	17.6627	0.7265	44.0537
12.00	1.8084	1.2764	24.1122	17.0185	0.7058	45.0672
12.07	1.7169	1.2315	22.8925	16.4194	0.7172	40.7497
12.13	2.0559	1.4717	27.4126	19.6231	0.7158	51.6911
12.20	1.8179	1.2777	24.2391	17.0356	0.7028	44.2540
12.27	2.2385	1.6583	29.8472	22.1108	0.7408	57.9392
12.33	1.3897	1.0090	18.5289	13.4531	0.7261	35.2526

**Stepping and cycling transitions**

Last Name	First Name	D.O.B	Weight	Height	Temp	Date
Le	Stanford	08-19-73	165.0 Lbs	67.5 in	23.2 deg C	03-16-1998

TIME(min)	VO2(L)	VCO2(L)	VO2(Kg)	VCO2(Kg)	RER	VE(stpd)
0.13	0.2786	0.2433	3.7145	3.2445	0.8734	10.4315
0.20	0.7007	0.5789	9.3431	7.7192	0.8262	19.6113
0.27	0.6390	0.4984	8.5200	6.6455	0.7800	16.9121
0.33	0.5446	0.4024	7.2610	5.3651	0.7389	14.2830
0.40	0.5102	0.3982	6.8025	5.3087	0.7804	12.4742
0.47	0.4768	0.3617	6.3567	4.8232	0.7588	11.0734
0.53	0.7986	0.6092	10.6483	8.1226	0.7628	19.3281
0.60	0.5275	0.4085	7.0330	5.4472	0.7745	12.8801
0.67	0.4831	0.3899	6.4410	5.1984	0.8071	11.8804
0.73	0.3742	0.3027	4.9900	4.0362	0.8089	9.2665
0.80	0.0515	0.0416	0.6866	0.5550	0.8084	1.3083
0.87	0.1862	0.1531	2.4829	2.0414	0.8222	4.7301
0.93	0.4746	0.3905	6.3286	5.2067	0.8227	12.1774
1.00	0.3063	0.2560	4.0836	3.4140	0.8360	8.1496
1.07	0.4158	0.3509	5.5436	4.6781	0.8439	11.2748
1.13	0.5785	0.4945	7.7132	6.5931	0.8548	15.8901
1.20	0.6438	0.5403	8.5841	7.2035	0.8392	17.5017
1.27	0.8906	0.7056	11.8752	9.4079	0.7922	21.8328
1.33	1.1609	0.8469	15.4792	11.2926	0.7295	24.1535
1.40	1.4700	1.0211	19.5995	13.6153	0.6947	26.3785
1.47	1.2773	0.8674	17.0310	11.5658	0.6791	21.9546
1.53	1.1752	0.8057	15.6692	10.7420	0.6856	20.1363
1.60	1.1613	0.7986	15.4835	10.6482	0.6877	20.1363
1.67	1.4216	0.9845	18.9550	13.1264	0.6925	24.7915
1.73	1.7012	1.1669	22.6831	15.5586	0.6859	29.0202
1.80	1.7990	1.2027	23.9867	16.0361	0.6685	29.4354
1.87	1.7745	1.1547	23.6604	15.3957	0.6507	27.8849
1.93	1.2444	0.8228	16.5926	10.9712	0.6612	19.3575
2.00	2.3820	1.5597	31.7593	20.7961	0.6548	36.0986
2.07	2.2984	1.5050	30.6457	20.0666	0.6548	34.5527
2.13	1.8992	1.2620	25.3231	16.8267	0.6645	29.1410
2.20	1.8858	1.2831	25.1442	17.1078	0.6804	30.1494
2.27	1.3543	0.9372	18.0579	12.4960	0.6920	23.7804
2.33	2.8993	2.0303	38.6576	27.0707	0.7003	46.5596
2.40	1.7990	1.2364	23.9870	16.4847	0.6872	29.4314

2.47	2.1467	1.5381	28.6222	20.5081	0.7165	35.2724
2.53	1.9484	1.3608	25.9781	18.1433	0.6984	30.8170
2.60	2.1578	1.4860	28.7710	19.8136	0.6887	33.0189
2.67	2.5632	1.7647	34.1765	23.5290	0.6885	40.2836
2.73	2.3647	1.6631	31.5300	22.1749	0.7033	36.2303
2.80	2.2622	1.5869	30.1623	21.1585	0.7015	35.6559
2.87	2.1693	1.5758	28.9244	21.0102	0.7264	35.6461
2.93	2.3820	1.7439	31.7603	23.2522	0.7321	39.3610
3.00	2.5176	1.8616	33.5684	24.8217	0.7394	42.5941
3.07	2.1344	1.6346	28.4583	21.7949	0.7659	37.7451
3.13	2.3753	1.8266	31.6708	24.3546	0.7690	41.2736
3.20	2.1364	1.7121	28.4859	22.8274	0.8014	38.2536
3.27	2.1490	1.6959	28.6527	22.6125	0.7892	37.9360
3.33	1.9227	1.5893	25.6361	21.1911	0.8266	35.3537
3.40	1.5289	1.2485	20.3858	16.6467	0.8166	27.4671
3.47	2.0806	1.7082	27.7416	22.7765	0.8210	36.7335
3.53	2.4866	1.9709	33.1547	26.2788	0.7926	42.5647
3.60	2.3802	1.8521	31.7362	24.6945	0.7781	40.4349
3.67	2.2665	1.7645	30.2198	23.5269	0.7785	39.8259
3.73	2.1520	1.7479	28.6938	23.3058	0.8122	38.6244
3.80	2.1865	1.7946	29.1534	23.9275	0.8207	41.6305
3.87	2.4436	2.0301	32.5809	27.0677	0.8308	44.7600
3.93	2.1474	1.7844	28.6319	23.7914	0.8309	39.4291
4.00	2.2027	1.8359	29.3690	24.4790	0.8335	40.6585
4.07	2.1309	1.7942	28.4118	23.9220	0.8420	39.1273
4.13	2.3038	1.9302	30.7171	25.7358	0.8378	42.4641
4.20	1.6366	1.3935	21.8208	18.5796	0.8515	33.3301
4.27	1.9793	1.6922	26.3911	22.5630	0.8549	38.6297
4.33	1.9725	1.7207	26.2995	22.9432	0.8724	37.6082
4.40	2.9637	2.5242	39.5165	33.6555	0.8517	54.2790
4.47	2.1514	1.8298	28.6847	24.3973	0.8505	40.4333
4.53	1.9269	1.6603	25.6926	22.1376	0.8616	37.0150
4.60	2.1346	1.8243	28.4614	24.3242	0.8546	40.4460
4.67	2.5061	2.1465	33.4143	28.6198	0.8565	47.2746
4.73	2.3825	2.0516	31.7665	27.3552	0.8611	44.4522
4.80	2.1886	1.8922	29.1816	25.2296	0.8646	40.8654
4.87	2.2605	1.9750	30.1393	26.3332	0.8737	43.6416
4.93	2.0840	1.8719	27.7871	24.9583	0.8982	41.3629
5.00	2.5984	2.3241	34.6456	30.9876	0.8944	51.0173
5.07	2.0819	1.8533	27.7591	24.7112	0.8902	41.0441

5.13	2.0876	1.8565	27.8345	24.7533	0.8893	41.2509
5.20	2.3999	2.1174	31.9982	28.2318	0.8823	47.4693
5.27	2.4445	2.1551	32.5928	28.7352	0.8816	49.0852
5.33	2.1631	1.9319	28.8410	25.7590	0.8931	43.6536
5.40	1.6721	1.4912	22.2949	19.8830	0.8918	33.3940
5.47	2.3907	2.1268	31.8762	28.3577	0.8896	47.3626
5.53	1.8945	1.6084	25.2603	21.4454	0.8490	36.9268
5.60	2.1299	1.8439	28.3984	24.5855	0.8657	41.6648
5.67	2.2855	1.9425	30.4739	25.9004	0.8499	42.6419
5.73	2.7368	2.3105	36.4912	30.8066	0.8442	50.2784
5.80	2.3032	1.9346	30.7095	25.7947	0.8400	43.7142
5.87	2.2880	1.9417	30.5071	25.8890	0.8486	45.0432
5.93	2.4616	2.1463	32.8216	28.6169	0.8719	48.8275
6.00	2.0435	1.7758	27.2462	23.6779	0.8690	40.8178
6.07	1.6369	1.4137	21.8258	18.8492	0.8636	32.4938
6.13	1.6770	1.4385	22.3595	19.1801	0.8578	32.9130
6.20	2.4841	2.0660	33.1211	27.5468	0.8317	46.9484
6.27	1.7413	1.4678	23.2174	19.5702	0.8429	31.9052
6.33	1.9857	1.6311	26.4763	21.7478	0.8214	35.3019
6.40	2.8585	2.3088	38.1129	30.7845	0.8077	48.5534
6.47	2.6133	2.0964	34.8445	27.9514	0.8022	43.8548
6.53	2.8679	2.3576	38.2382	31.4352	0.8221	53.6973
6.60	2.2244	1.9626	29.6591	26.1674	0.8823	44.4461
6.67	2.2312	1.9978	29.7488	26.6373	0.8954	44.1455
6.73	2.1851	1.9647	29.1351	26.1962	0.8991	42.5227
6.80	2.3699	2.1134	31.5985	28.1787	0.8918	45.1551
6.87	2.1997	1.9666	29.3295	26.2215	0.8940	41.5312
6.93	2.7392	2.4323	36.5225	32.4311	0.8880	52.5300
7.00	2.8843	2.6124	38.4577	34.8319	0.9057	56.9097
7.07	2.0886	1.9433	27.8477	25.9107	0.9304	42.7057
7.13	2.0690	1.9747	27.5868	26.3297	0.9544	43.3012
7.20	2.5735	2.4426	34.3132	32.5677	0.9491	52.6943
7.27	2.5489	2.3015	33.9857	30.6872	0.9029	51.0263
7.33	2.2924	2.1895	30.5650	29.1938	0.9551	49.1418
7.40	2.2330	2.1976	29.7728	29.3009	0.9842	46.9032
7.47	2.1670	2.0807	28.8931	27.7426	0.9602	44.9358
7.53	2.0670	2.0029	27.5605	26.7048	0.9690	42.6113
7.60	2.5619	2.3931	34.1586	31.9085	0.9341	51.6278
7.67	2.5118	2.3457	33.4904	31.2756	0.9339	49.1216
7.73	2.4566	2.2832	32.7543	30.4432	0.9294	48.4735

7.80	2.2807	2.1453	30.4090	28.6043	0.9407	46.7349
7.87	2.3387	2.2449	31.1823	29.9322	0.9599	48.1191
7.93	2.1504	2.0799	28.6717	27.7317	0.9672	43.4194
8.00	2.8061	2.6426	37.4148	35.2342	0.9417	58.2644
8.07	2.2347	2.1699	29.7964	28.9320	0.9710	45.9697
8.13	2.2267	2.1163	29.6898	28.2175	0.9504	45.6066
8.20	2.5933	2.4519	34.5774	32.6915	0.9455	52.3866
8.27	2.5994	2.4471	34.6581	32.6281	0.9414	51.6783
8.33	2.2607	2.1041	30.1429	28.0544	0.9307	44.9558
8.40	2.3820	2.2356	31.7594	29.8080	0.9386	48.9144
8.47	2.4182	2.3093	32.2423	30.7911	0.9550	50.0897
8.53	2.3913	2.2949	31.8846	30.5983	0.9597	49.4547
8.60	2.4734	2.3961	32.9785	31.9478	0.9687	51.2496
8.67	2.3998	2.3048	31.9969	30.7309	0.9604	49.5090
8.73	2.2117	2.1267	29.4890	28.3556	0.9616	47.0972
8.80	2.5252	2.4615	33.6692	32.8196	0.9748	54.2119
8.87	2.1524	2.0928	28.6993	27.9036	0.9723	45.0993
8.93	2.3809	2.2721	31.7455	30.2949	0.9543	48.1863
9.00	2.3387	2.1555	31.1824	28.7404	0.9217	45.9571
9.07	2.5179	2.1581	33.5716	28.7745	0.8571	49.0408
9.13	2.4333	2.3267	32.4442	31.0222	0.9562	53.1733
9.20	2.0491	1.9380	27.3213	25.8397	0.9458	42.0349
9.27	2.5335	2.3266	33.7805	31.0210	0.9183	50.6282
9.33	2.4199	2.1884	32.2656	29.1791	0.9043	48.0927
9.40	2.4975	2.2785	33.2999	30.3795	0.9123	50.7395
9.47	2.4747	2.2847	32.9966	30.4631	0.9232	51.0494
9.53	2.3226	2.1552	30.9682	28.7354	0.9279	47.4655
9.60	2.2544	2.0984	30.0580	27.9792	0.9308	45.8633
9.67	2.5439	2.3370	33.9185	31.1595	0.9187	51.3568
9.73	2.7540	2.5461	36.7197	33.9482	0.9245	55.1062
9.80	2.6037	2.3961	34.7165	31.9476	0.9202	53.5372
9.87	2.4793	2.3287	33.0575	31.0488	0.9392	51.8573
9.93	2.3212	2.1659	30.9491	28.8791	0.9331	48.2335
10.00	2.4493	2.2793	32.6570	30.3910	0.9306	51.6783
10.07	2.1864	2.0495	29.1522	27.3264	0.9374	45.2376
10.13	2.3043	2.1138	30.7238	28.1844	0.9173	46.8646
10.20	2.2142	2.0156	29.5222	26.8745	0.9103	45.9067
10.27	2.4131	2.2411	32.1745	29.8808	0.9287	48.8205
10.33	2.5993	2.3946	34.6578	31.9277	0.9212	51.7146
10.40	2.4257	2.1937	32.3426	29.2487	0.9043	48.2074

10.47	2.7400	2.4640	36.5327	32.8529	0.8993	53.8521
10.53	2.4299	2.1722	32.3985	28.9627	0.8940	48.4270
10.60	2.4387	2.2342	32.5162	29.7898	0.9162	49.2072
10.67	2.3740	2.1779	31.6529	29.0386	0.9174	47.9136
10.73	2.5053	2.2410	33.4035	29.8800	0.8945	49.6841
10.80	2.3595	2.1566	31.4597	28.7553	0.9140	47.7084
10.87	2.4413	2.2339	32.5509	29.7859	0.9151	48.5071
10.93	2.2938	2.0711	30.5843	27.6153	0.9029	45.1190

**One cycling transition**

Last Name	First Name	D.O.B	Weight	Height	Temp	Date
Melhorn	Philip	12-26-73	159.0 Lbs	68.0 in	25.9 deg C	03-05-1998

TIME(min)	VO2(L)	VCO2(L)	VO2(Kg)	VCO2(Kg)	RER	VE(stpd)
0.13	1.0936	0.8777	15.1321	12.1445	0.8026	20.8940
0.17	1.3111	1.0511	18.1408	14.5430	0.8017	25.2304
0.23	2.0323	1.6557	28.1197	22.9090	0.8147	40.3248
0.27	1.7335	1.4120	23.9852	19.5376	0.8146	34.3070
0.30	1.0032	0.8197	13.8810	11.3416	0.8171	18.1931
0.37	1.2670	0.9769	17.5314	13.5169	0.7710	21.6824
0.40	2.0641	1.5915	28.5598	22.0204	0.7710	35.4803
0.47	1.6444	1.3240	22.7523	18.3193	0.8052	30.7496
0.50	1.5135	1.2444	20.9415	17.2177	0.8222	28.9677
0.57	1.2242	1.0309	16.9389	14.2636	0.8421	23.5324
0.60	1.8509	1.5377	25.6096	21.2760	0.8308	33.9034
0.63	1.4967	1.2345	20.7094	17.0808	0.8248	26.6892
0.70	2.0348	1.6140	28.1540	22.3324	0.7932	34.3023
0.73	1.0753	0.8442	14.8779	11.6810	0.7851	18.1344
0.77	2.3868	1.8692	33.0255	25.8632	0.7831	40.3248
0.80	1.9022	1.4948	26.3204	20.6825	0.7858	31.5338
0.83	1.7859	1.3695	24.7108	18.9497	0.7669	28.9835
0.90	1.6902	1.3548	23.3863	18.7454	0.8016	27.8754
0.93	2.8699	2.2481	39.7094	31.1052	0.7833	46.2550
0.97	1.8031	1.4017	24.9487	19.3951	0.7774	28.7824
1.00	1.6825	1.3015	23.2801	18.0088	0.7736	26.8905
1.03	1.2892	1.0035	17.8374	13.8849	0.7784	20.6687
1.07	2.0588	1.6244	28.4859	22.4758	0.7890	33.0155
1.10	2.4846	1.9747	34.3775	27.3223	0.7948	39.8114
1.13	1.2077	0.9508	16.7107	13.1563	0.7873	19.5641
1.17	1.0319	0.8199	14.2780	11.3441	0.7945	16.9563
1.20	3.0351	2.4477	41.9956	33.8682	0.8065	50.0039
1.23	2.5252	2.0368	34.9401	28.1827	0.8066	40.7368
1.27	1.7565	1.4017	24.3037	19.3948	0.7980	28.4607
1.30	1.7115	1.4154	23.6813	19.5848	0.8270	28.0845
1.33	1.4384	1.1732	19.9024	16.2330	0.8156	23.3474
1.37	2.9190	2.3649	40.3880	32.7217	0.8102	47.8233
1.40	1.7094	1.4178	23.6516	19.6178	0.8295	29.1727
1.47	3.0577	2.6236	42.3074	36.3012	0.8580	54.5423
1.50	1.8907	1.6112	26.1612	22.2932	0.8521	31.9366



1.57	2.3862	2.0103	33.0168	27.8158	0.8425	41.1099
1.60	2.3185	1.9748	32.0793	27.3243	0.8518	39.9349
1.63	2.7219	2.3369	37.6613	32.3339	0.8585	46.6440
1.67	1.9635	1.6998	27.1686	23.5196	0.8657	33.6269
1.73	2.2653	1.9448	31.3442	26.9085	0.8585	40.1381
1.77	2.1012	1.7902	29.0730	24.7695	0.8520	37.1773
1.80	1.2042	1.0359	16.6624	14.3334	0.8602	21.4911
1.83	2.3491	2.0483	32.5039	28.3413	0.8719	42.3188
1.87	2.0937	1.7790	28.9701	24.6156	0.8497	37.4514
1.90	1.0190	0.9195	14.0998	12.7228	0.9023	17.9421
1.93	2.0275	1.7429	28.0541	24.1156	0.8596	34.0086
1.97	2.8180	2.3781	38.9917	32.9049	0.8439	46.9065
2.00	1.7030	1.4176	23.5637	19.6152	0.8324	28.5814
2.07	2.8978	2.4715	40.0954	34.1965	0.8529	48.2251
2.13	3.2188	2.7432	44.5366	37.9556	0.8522	53.7884
2.17	2.2717	1.9337	31.4317	26.7550	0.8512	37.9528
2.23	2.8748	2.4926	39.7770	34.4887	0.8671	45.6557
2.27	2.5622	2.1424	35.4518	29.6428	0.8361	39.9349
2.30	2.6759	2.2147	37.0248	30.6435	0.8276	42.3073
2.33	1.3891	1.1872	19.2200	16.4265	0.8547	22.5498
2.37	1.8807	1.5612	26.0219	21.6022	0.8302	30.9467
2.40	2.7784	2.3930	38.4429	33.1107	0.8613	48.4897
2.47	2.2425	1.9701	31.0283	27.2597	0.8785	38.9358
2.53	2.7888	2.4635	38.5870	34.0864	0.8834	48.2580
2.57	2.1046	1.8003	29.1198	24.9101	0.8554	37.3496
2.63	2.0812	1.8748	28.7962	25.9400	0.9008	35.6774
2.67	3.1816	2.7074	44.0224	37.4612	0.8510	51.1828
2.70	2.1929	1.8258	30.3426	25.2632	0.8326	35.2832
2.77	2.1161	1.8036	29.2789	24.9550	0.8523	34.9877
2.80	2.7341	2.3128	37.8306	32.0012	0.8459	44.9539
2.83	2.2075	1.8720	30.5445	25.9022	0.8480	37.2543
2.90	2.9063	2.5184	40.2130	34.8452	0.8665	49.6724
2.97	2.2101	1.8980	30.5804	26.2615	0.8588	37.5472
3.00	2.8591	2.4446	39.5592	33.8253	0.8551	48.2185
3.03	1.9416	1.6160	26.8652	22.3597	0.8323	32.5148
3.10	1.8376	1.5723	25.4260	21.7545	0.8556	30.1500
3.13	3.0054	2.5358	41.5844	35.0864	0.8437	48.6736
3.17	1.4190	1.1939	19.6341	16.5195	0.8414	23.4564
3.20	1.3542	1.1379	18.7370	15.7449	0.8403	22.6680
3.23	2.8864	2.4662	39.9377	34.1232	0.8544	48.8840

3.27	2.1506	1.8348	29.7567	25.3868	0.8531	35.4900
3.33	2.6250	2.2499	36.3202	31.1309	0.8571	44.2903
3.40	1.2363	1.0850	17.1058	15.0120	0.8776	21.0882
3.43	2.5262	2.1669	34.9540	29.9829	0.8578	41.9964
3.47	1.5384	1.3240	21.2858	18.3195	0.8606	26.0890
3.50	1.6352	1.3867	22.6256	19.1868	0.8480	27.5958
3.53	2.2436	1.8758	31.0434	25.9545	0.8361	37.4412
3.57	2.4526	2.0619	33.9359	28.5293	0.8407	40.7091
3.60	1.4527	1.2129	20.1004	16.7826	0.8349	22.8651
3.73	2.5453	2.0765	35.2185	28.7312	0.8158	42.2900
3.77	1.5262	1.2924	21.1171	17.8821	0.8468	25.6937
3.80	2.0123	1.6307	27.8431	22.5633	0.8104	33.1104
3.83	2.1946	1.8775	30.3660	25.9785	0.8555	35.1950
3.87	3.7398	2.9296	51.7462	40.5357	0.7834	51.6295
3.90	3.1883	2.4131	44.1144	33.3886	0.7569	43.7590
3.93	2.1929	1.6890	30.3421	23.3692	0.7702	31.1353
3.97	1.5409	1.2049	21.3207	16.6720	0.7820	22.8651
4.00	2.8307	2.2646	39.1664	31.3342	0.8000	44.6675
4.03	2.4721	2.0274	34.2049	28.0518	0.8201	42.1039
4.10	1.9575	1.7356	27.0845	24.0148	0.8867	35.4562
4.13	1.4343	1.2601	19.8455	17.4351	0.8785	24.9031
4.17	1.4931	1.3036	20.6591	18.0367	0.8731	25.6107
4.20	2.4846	2.1502	34.3776	29.7507	0.8654	41.9964
4.23	3.0181	2.5651	41.7593	35.4926	0.8499	49.6657
4.27	1.4427	1.2008	19.9619	16.6145	0.8323	23.4532
4.30	1.5747	1.3147	21.7880	18.1903	0.8349	25.8288
4.33	3.2889	2.7884	45.5065	38.5819	0.8478	55.3812
4.40	1.7955	1.5723	24.8439	21.7548	0.8757	30.9509
4.43	2.9519	2.6210	40.8434	36.2652	0.8879	51.2423
4.47	1.5722	1.3917	21.7541	19.2566	0.8852	26.0153
4.50	1.0637	0.9095	14.7180	12.5843	0.8550	17.3412
4.53	2.5118	2.1252	34.7551	29.4056	0.8461	41.3881
4.60	1.9949	1.6998	27.6028	23.5186	0.8520	32.5015
4.63	3.4924	2.9616	48.3227	40.9778	0.8480	56.1466
4.67	1.0998	0.9213	15.2172	12.7481	0.8377	17.5335
4.70	1.8117	1.4763	25.0682	20.4271	0.8149	28.3920
4.73	3.1460	2.5819	43.5302	35.7243	0.8207	51.2284
4.77	2.2512	1.9127	31.1493	26.4652	0.8496	36.0569
4.80	1.3205	1.0753	18.2711	14.8788	0.8143	21.2940
4.83	1.5374	1.2915	21.2718	17.8692	0.8400	25.2984

4.87	2.7528	2.2866	38.0892	31.6383	0.8306	44.2722
4.93	2.7964	2.3229	38.6921	32.1403	0.8307	47.1164
4.97	2.4925	2.1340	34.4880	29.5270	0.8562	43.5501
5.00	1.0250	0.8778	14.1827	12.1451	0.8563	17.1441
5.03	2.0056	1.7180	27.7504	23.7711	0.8566	32.9134
5.07	2.6647	2.2448	36.8699	31.0603	0.8424	42.9647
5.10	2.1440	1.7930	29.6657	24.8088	0.8363	34.8842
5.13	1.3241	1.1483	18.3207	15.8889	0.8673	21.6883
5.17	1.5832	1.3485	21.9055	18.6583	0.8518	25.4206
5.20	2.9656	2.4993	41.0336	34.5819	0.8428	47.4281
5.23	2.7056	2.2736	37.4356	31.4591	0.8404	42.9823
5.27	1.6227	1.3444	22.4529	18.6018	0.8285	26.4131
5.30	1.1265	0.9562	15.5869	13.2303	0.8488	18.7308
5.33	3.2161	2.6979	44.4989	37.3293	0.8389	52.7975
5.40	2.2525	1.9047	31.1671	26.3549	0.8456	37.8302
5.43	2.6552	2.2568	36.7384	31.2264	0.8500	45.3174
5.50	2.7713	2.4140	38.3451	33.4011	0.8711	45.3359
5.53	1.2822	1.0796	17.7412	14.9378	0.8420	20.2943
5.57	1.7193	1.4337	23.7895	19.8370	0.8339	27.3875
5.60	2.6315	2.2797	36.4111	31.5436	0.8663	43.5501
5.63	2.5853	2.2138	35.7716	30.6314	0.8563	41.3824
5.70	3.3235	2.7937	45.9850	38.6550	0.8406	51.6436
5.73	1.4948	1.2409	20.6833	17.1693	0.8301	23.8409
5.77	1.3234	1.1026	18.3118	15.2567	0.8332	21.4736
5.80	2.9490	2.5301	40.8032	35.0073	0.8580	49.6589
5.87	2.9986	2.5942	41.4896	35.8947	0.8651	48.0890
5.90	2.6992	2.3114	37.3469	31.9819	0.8563	42.7677
5.93	1.1883	1.0069	16.4413	13.9326	0.8474	18.5286
5.97	2.0239	1.7113	28.0043	23.6779	0.8455	31.5466
6.00	3.1538	2.6475	43.6381	36.6317	0.8394	49.4888
6.07	2.6363	2.2391	36.4770	30.9813	0.8493	42.5706
6.10	2.4670	2.0851	34.1340	28.8511	0.8452	40.2165
6.13	1.6558	1.4104	22.9104	19.5143	0.8518	27.2016
6.20	3.1327	2.7215	43.3458	37.6566	0.8687	50.5900
6.23	1.3090	1.1233	18.1121	15.5423	0.8581	20.4997
6.27	2.7179	2.2352	37.6064	30.9266	0.8224	42.5764
6.30	2.0354	1.7218	28.1627	23.8236	0.8459	33.8942
6.37	1.7701	1.5820	24.4914	21.8896	0.8938	30.6306
6.40	3.0447	2.6836	42.1274	37.1319	0.8814	49.6086
6.47	2.7400	2.3097	37.9117	31.9576	0.8429	43.3766

6.50	1.6205	1.3490	22.4225	18.6658	0.8325	26.0189
6.53	1.5912	1.3823	22.0172	19.1255	0.8687	25.4345
6.57	2.2115	1.8425	30.5991	25.4937	0.8332	33.9034
6.60	3.0825	2.5602	42.6508	35.4246	0.8306	48.0824
6.67	2.6993	2.2430	37.3491	31.0348	0.8309	42.9706
6.70	2.7558	2.2579	38.1305	31.2413	0.8193	43.7590
6.77	2.9359	2.4648	40.6226	34.1041	0.8395	46.7284
6.80	2.2559	1.8512	31.2131	25.6144	0.8206	36.0520
6.87	2.3111	1.9488	31.9769	26.9642	0.8432	37.6588
6.90	2.8727	2.4200	39.7479	33.4838	0.8424	46.9001
6.93	1.2221	1.0652	16.9090	14.7383	0.8716	19.9111
6.97	1.9913	1.6703	27.5533	23.1116	0.8388	32.2160
7.00	2.6527	2.2765	36.7035	31.4982	0.8582	44.2903
7.03	2.2977	1.9429	31.7927	26.8829	0.8456	37.6178
7.10	2.6527	2.2543	36.7046	31.1915	0.8498	42.5764
7.13	2.8216	2.3826	39.0412	32.9664	0.8444	45.5145
7.20	2.1376	1.8354	29.5774	25.3957	0.8586	35.0956
7.23	3.0904	2.6136	42.7602	36.1625	0.8457	49.4551
7.27	1.5937	1.3586	22.0510	18.7977	0.8525	25.2304
7.30	1.4585	1.2218	20.1805	16.9047	0.8377	22.9236
7.33	3.6972	3.1327	51.1562	43.3459	0.8473	58.9447
7.37	1.4350	1.1944	19.8550	16.5260	0.8323	22.6649
7.40	1.4987	1.2453	20.7361	17.2304	0.8309	23.8571
7.43	2.9982	2.5440	41.4850	35.2001	0.8485	50.2774
7.47	1.7034	1.4871	23.5691	20.5764	0.8730	28.6545
7.50	1.8426	1.6182	25.4948	22.3895	0.8782	31.0301
7.53	1.8549	1.6525	25.6651	22.8650	0.8909	31.1226
7.57	2.9677	2.5767	41.0621	35.6529	0.8683	48.6204
7.60	2.2370	1.9077	30.9523	26.3961	0.8528	37.6281
7.63	1.1352	0.9902	15.7075	13.7008	0.8722	19.5115
7.67	1.5858	1.3856	21.9412	19.1719	0.8738	27.3838
7.70	2.8745	2.4872	39.7733	34.4137	0.8652	49.0090
7.73	1.4502	1.2664	20.0656	17.5224	0.8733	24.4486
7.77	1.3762	1.1794	19.0424	16.3185	0.8570	22.9236
7.80	2.9366	2.5087	40.6320	34.7112	0.8543	49.0944
7.83	1.9476	1.6373	26.9480	22.6547	0.8407	32.3265
7.87	1.2620	1.0735	17.4616	14.8538	0.8507	20.9474
7.90	2.1915	1.8762	30.3224	25.9600	0.8561	36.5741
7.93	2.7836	2.3426	38.5155	32.4135	0.8416	45.5331
8.00	2.3107	1.9434	31.9720	26.8900	0.8410	38.0324

8.03	2.8572	2.4297	39.5342	33.6187	0.8504	47.8298
8.07	2.1357	1.8041	29.5511	24.9630	0.8447	35.4803
8.10	1.3510	1.1739	18.6932	16.2430	0.8689	22.2768
8.13	1.3765	1.1731	19.0461	16.2314	0.8522	22.4739
8.17	2.9451	2.4858	40.7493	34.3952	0.8441	47.8984
8.20	2.7142	2.2814	37.5556	31.5662	0.8405	44.9539
8.23	1.5283	1.2866	21.1464	17.8023	0.8419	25.4275
8.27	1.8120	1.5304	25.0723	21.1753	0.8446	30.0378
8.30	1.9830	1.6545	27.4381	22.8920	0.8343	32.7296
8.33	3.0153	2.5338	41.7216	35.0591	0.8403	50.4746
8.37	2.2616	1.9139	31.2924	26.4820	0.8463	37.8251
8.43	2.2798	1.9568	31.5447	27.0754	0.8583	39.4118
8.47	1.3039	1.1228	18.0418	15.5353	0.8611	22.4556
8.50	1.5355	1.3141	21.2457	18.1819	0.8558	26.4131
8.53	2.7245	2.3907	37.6978	33.0788	0.8775	47.2942
8.57	2.4298	2.0808	33.6205	28.7916	0.8564	40.2110
8.60	1.5309	1.3187	21.1818	18.2465	0.8614	24.8362
8.63	1.4937	1.2512	20.6678	17.3125	0.8377	24.1093
8.67	2.5029	2.1051	34.6320	29.1272	0.8410	41.1966
8.70	2.0456	1.7235	28.3036	23.8470	0.8425	33.8942
8.73	1.5814	1.3254	21.8811	18.3388	0.8381	26.4023
8.77	2.6740	2.2713	36.9987	31.4272	0.8494	45.3359
8.80	2.1157	1.7612	29.2742	24.3686	0.8324	36.0520
8.87	2.1443	1.8257	29.6696	25.2607	0.8514	35.0765
8.90	2.7224	2.2938	37.6686	31.7383	0.8426	44.5414
8.93	2.1614	1.8110	29.9060	25.0577	0.8379	35.4755
8.97	1.1974	1.0296	16.5683	14.2459	0.8598	19.5009
9.00	1.6389	1.3759	22.6769	19.0381	0.8395	26.0854
9.03	2.8682	2.3825	39.6860	32.9660	0.8307	45.4705
9.07	2.0616	1.7066	28.5252	23.6140	0.8278	33.2042
9.10	1.1164	0.9361	15.4474	12.9525	0.8385	17.9856
9.13	2.1269	1.7777	29.4290	24.5966	0.8358	33.8942
9.17	2.6510	2.2036	36.6804	30.4900	0.8312	41.7765
9.20	1.3923	1.1831	19.2643	16.3695	0.8497	22.0736
9.23	2.0082	1.6934	27.7864	23.4314	0.8433	31.9236
9.27	2.7218	2.3344	37.6601	32.2998	0.8577	43.7590
9.30	2.0482	1.7288	28.3400	23.9210	0.8441	33.3121
9.37	2.4508	2.0539	33.9100	28.4181	0.8380	38.2139
9.40	2.9958	2.4791	41.4517	34.3022	0.8275	47.2685
9.43	1.6919	1.4150	23.4096	19.5782	0.8363	26.8000

9.50	3.3790	2.8102	46.7537	38.8831	0.8317	52.8262
9.53	1.0854	0.9044	15.0176	12.5141	0.8333	17.1465
9.57	2.0151	1.6761	27.8815	23.1911	0.8318	32.0183
9.60	1.9548	1.6746	27.0475	23.1711	0.8567	31.4211
9.63	2.6674	2.2302	36.9071	30.8580	0.8361	40.9995
9.67	2.6855	2.2121	37.1576	30.6071	0.8237	41.0050
9.73	3.0652	2.5028	42.4121	34.6298	0.8165	49.6589
9.77	1.8285	1.4838	25.3007	20.5307	0.8115	30.1583
9.80	1.0265	0.8637	14.2026	11.9502	0.8414	16.7546
9.83	2.5550	2.1415	35.3517	29.6315	0.8382	40.9883
9.87	2.3069	1.9119	31.9189	26.4544	0.8288	36.0422
9.90	1.0545	0.8650	14.5905	11.9685	0.8203	16.7478
9.93	2.0602	1.7179	28.5057	23.7699	0.8339	33.2939
9.97	2.8353	2.3567	39.2307	32.6089	0.8312	45.3236
10.00	0.7212	0.6060	9.9792	8.3845	0.8402	11.4341

**Two cycling transitions**

Last Name	First Name	D.O.B	Weight	Height	Temp	Date
Melhorn	Philip	12-26-73	159.0 Lbs	68.0 in	26.1 deg C	03-10-1998

TIME(min)	VO2(L)	VCO2(L)	VO2(Kg)	VCO2(Kg)	RER	VE(stpd)
0.13	1.4726	1.1243	20.3754	15.5561	0.7635	28.6728
0.20	0.7061	0.5391	9.7694	7.4588	0.7635	13.6783
0.27	0.5951	0.4507	8.2342	6.2361	0.7573	11.9669
0.33	0.3989	0.3152	5.5191	4.3614	0.7902	9.0278
0.40	0.4661	0.3940	6.4489	5.4518	0.8454	11.0325
0.47	0.4082	0.3474	5.6475	4.8063	0.8510	9.8223
0.53	0.3536	0.3042	4.8931	4.2090	0.8602	8.8260
0.60	0.2232	0.1964	3.0880	2.7174	0.8800	5.8163
0.67	0.3436	0.3074	4.7538	4.2536	0.8948	9.2272
0.73	0.1858	0.1668	2.5707	2.3085	0.8980	5.1151
0.80	0.3061	0.2749	4.2352	3.8033	0.8980	8.4271
0.87	0.3185	0.2841	4.4067	3.9313	0.8921	8.8188
0.93	0.1642	0.1460	2.2725	2.0197	0.8887	4.6092
1.00	0.2174	0.1940	3.0074	2.6850	0.8928	6.2158
1.07	0.2586	0.2265	3.5777	3.1341	0.8760	7.4219
1.13	0.3341	0.2881	4.6229	3.9861	0.8622	9.4239
1.20	0.3584	0.3090	4.9592	4.2759	0.8622	9.9306
1.27	0.5580	0.4754	7.7203	6.5778	0.8520	14.8478
1.33	0.4240	0.3534	5.8665	4.8896	0.8335	11.1237
1.40	0.8465	0.6820	11.7133	9.4359	0.8056	20.0482
1.47	1.1090	0.8362	15.3441	11.5707	0.7541	21.6579
1.53	0.9264	0.6418	12.8184	8.8803	0.6928	15.6503
1.60	1.0396	0.6866	14.3849	9.4998	0.6604	16.4417
1.67	0.7536	0.5006	10.4277	6.9262	0.6642	12.0305
1.73	1.4012	0.9652	19.3881	13.3553	0.6888	23.0318
1.80	1.0539	0.7414	14.5828	10.2587	0.7035	17.6496
1.87	0.8958	0.6068	12.3947	8.3955	0.6773	14.0433
1.93	1.5255	1.0227	21.1081	14.1507	0.6704	22.8767
2.00	2.1855	1.5027	30.2394	20.7914	0.6876	32.3822
2.07	1.4386	0.9562	19.9050	13.2308	0.6647	20.3655
2.13	1.4358	0.9481	19.8663	13.1186	0.6603	21.0203
2.20	1.3002	0.8909	17.9899	12.3269	0.6852	19.8396
2.27	2.2191	1.5533	30.7046	21.4929	0.7000	35.7860
2.33	1.6333	1.1374	22.5994	15.7381	0.6964	27.3695
2.40	1.1287	0.8382	15.6175	11.5975	0.7426	19.8585

2.47	1.5077	1.1395	20.8612	15.7661	0.7558	25.3747
2.53	1.1993	0.8997	16.5941	12.4487	0.7502	20.8473
2.60	1.0844	0.8196	15.0049	11.3400	0.7558	18.2513
2.67	1.6434	1.2316	22.7390	17.0415	0.7494	26.4564
2.73	2.0033	1.4704	27.7190	20.3455	0.7340	31.2837
2.80	1.5061	1.1130	20.8392	15.3999	0.7390	23.2590
2.87	1.4507	1.0665	20.0724	14.7568	0.7352	22.4753
2.93	1.2912	0.9378	17.8663	12.9764	0.7263	20.2542
3.00	1.3408	0.9814	18.5513	13.5785	0.7319	21.6373
3.07	1.7253	1.3005	23.8726	17.9944	0.7538	26.7862
3.13	1.8832	1.3999	26.0570	19.3701	0.7434	28.2526
3.20	1.4296	1.0666	19.7808	14.7578	0.7461	21.4603
3.27	1.3830	1.0402	19.1361	14.3930	0.7521	21.1209
3.33	1.7522	1.3141	24.2445	18.1830	0.7500	27.2915
3.40	1.5242	1.1674	21.0892	16.1520	0.7659	24.1679
3.47	1.7698	1.3538	24.4876	18.7322	0.7650	27.4884
3.53	1.3970	1.0609	19.3295	14.6796	0.7594	21.4545
3.60	1.6046	1.2094	22.2018	16.7333	0.7537	25.0636
3.67	1.7891	1.3685	24.7552	18.9355	0.7649	28.9617
3.73	1.2170	0.9548	16.8385	13.2109	0.7846	19.9113
3.80	1.6441	1.2738	22.7488	17.6254	0.7748	27.0724
3.87	1.5700	1.2134	21.7227	16.7892	0.7729	26.1771
3.93	1.3832	1.1059	19.1391	15.3015	0.7995	23.4532
4.00	2.2036	1.7458	30.4900	24.1557	0.7923	35.8103
4.07	1.2179	0.9363	16.8512	12.9547	0.7688	19.4441
4.13	1.8264	1.3826	25.2706	19.1306	0.7570	29.8921
4.20	1.6144	1.2447	22.3370	17.2229	0.7711	27.8745
4.27	1.0252	0.8101	14.1850	11.2091	0.7902	18.0605
4.33	1.4609	1.1682	20.2136	16.1637	0.7996	25.6721
4.40	1.6986	1.3584	23.5032	18.7958	0.7997	28.9933
4.47	1.2092	0.9459	16.7313	13.0875	0.7822	20.5606
4.53	1.7781	1.3883	24.6021	19.2094	0.7808	29.4428
4.60	1.1655	0.8962	16.1268	12.4005	0.7689	19.8477
4.67	1.3682	1.0842	18.9317	15.0021	0.7924	23.2654
4.73	2.0291	1.5905	28.0756	22.0067	0.7838	33.6947
4.80	1.3828	1.0807	19.1331	14.9526	0.7815	22.4662
4.87	1.2301	0.9640	17.0203	13.3386	0.7837	20.2514
4.93	1.5330	1.2146	21.2114	16.8062	0.7923	25.9518
5.00	1.6012	1.2699	22.1554	17.5715	0.7931	26.8755
5.07	1.4824	1.1684	20.5119	16.1661	0.7881	24.9634



5.13	1.7522	1.4176	24.2439	19.6141	0.8090	29.9679
5.20	1.0105	0.7949	13.9816	10.9989	0.7867	16.6468
5.27	1.1012	0.8681	15.2362	12.0111	0.7883	18.7071
5.33	1.7661	1.4123	24.4372	19.5408	0.7996	29.1780
5.40	1.8541	1.4532	25.6535	20.1075	0.7838	29.0936
5.47	1.4723	1.0966	20.3712	15.1731	0.7448	22.4478
5.53	1.2435	0.9512	17.2062	13.1615	0.7649	19.8369
5.60	1.3493	1.0293	18.6692	14.2423	0.7629	22.4478
5.67	1.5078	1.1759	20.8627	16.2701	0.7799	25.0704
5.73	1.2863	1.0105	17.7982	13.9814	0.7855	21.0506
5.80	1.6863	1.3392	23.3321	18.5301	0.7942	26.4672
5.87	1.7656	1.3758	24.4304	19.0365	0.7792	27.9634
5.93	1.3602	1.0691	18.8208	14.7929	0.7860	21.6638
6.00	1.5767	1.2254	21.8160	16.9558	0.7772	24.7561
6.07	1.7754	1.3766	24.5651	19.0469	0.7754	27.9786
6.13	1.6878	1.2817	23.3529	17.7342	0.7594	26.0768
6.20	2.1883	1.6657	30.2781	23.0469	0.7612	34.3779
6.27	1.3009	0.9938	17.9992	13.7511	0.7640	20.6609
6.33	1.7052	1.3375	23.5934	18.5068	0.7844	27.6627
6.40	2.1356	1.6962	29.5486	23.4689	0.7942	33.5877
6.47	1.7117	1.3206	23.6843	18.2723	0.7715	26.5711
6.53	1.1923	0.9373	16.4975	12.9695	0.7862	19.1486
6.60	1.2855	1.0234	17.7868	14.1604	0.7961	20.8643
6.67	2.5439	2.0037	35.1980	27.7244	0.7877	38.3870
6.73	2.2970	1.7204	31.7821	23.8036	0.7490	34.1004
6.80	1.7385	1.3201	24.0541	18.2660	0.7594	26.9685
6.87	1.9221	1.4758	26.5946	20.4193	0.7678	30.4898
6.93	1.4798	1.1655	20.4751	16.1262	0.7876	23.2401
7.00	2.6344	2.0394	36.4513	28.2184	0.7741	40.1073
7.07	2.1926	1.6655	30.3383	23.0450	0.7596	32.8835
7.13	1.9720	1.5141	27.2855	20.9493	0.7678	30.9618
7.20	1.8607	1.4705	25.7457	20.3468	0.7903	29.0619
7.27	2.4798	1.9486	34.3114	26.9614	0.7858	39.0886
7.33	1.7511	1.3527	24.2292	18.7169	0.7725	27.4660
7.40	2.5244	1.9429	34.9288	26.8831	0.7697	39.4895
7.47	1.7426	1.3547	24.1119	18.7440	0.7774	27.7592
7.53	2.0480	1.6158	28.3369	22.3569	0.7890	32.7743
7.60	2.1943	1.7313	30.3615	23.9557	0.7890	35.1893
7.67	1.9193	1.4845	26.5568	20.5404	0.7735	30.1725
7.73	2.1290	1.6530	29.4577	22.8721	0.7764	33.9770

7.80	2.3542	1.8396	32.5733	25.4541	0.7814	38.0863
7.87	1.9973	1.5670	27.6355	21.6818	0.7846	32.6785
7.93	2.1673	1.7363	29.9884	24.0239	0.8011	35.2896
8.00	1.9660	1.5753	27.2030	21.7971	0.8013	31.2879
8.07	1.7657	1.4031	24.4313	19.4145	0.7947	28.1753
8.13	2.4408	1.9636	33.7727	27.1696	0.8045	39.1942
8.20	1.7109	1.3764	23.6733	19.0448	0.8045	27.4735
8.27	2.4125	1.9388	33.3804	26.8268	0.8037	38.8935
8.33	1.5668	1.2392	21.6787	17.1457	0.7909	25.0841
8.40	2.4683	2.0122	34.1525	27.8416	0.8152	39.7278
8.47	1.5990	1.2634	22.1249	17.4810	0.7901	24.7730
8.53	2.3285	1.8396	32.2178	25.4538	0.7901	36.0012
8.60	1.8643	1.4953	25.7951	20.6899	0.8021	28.7848
8.67	1.8979	1.5250	26.2601	21.1001	0.8035	28.9657
8.73	2.3725	1.8965	32.8271	26.2403	0.7993	36.6832
8.80	2.0699	1.6543	28.6408	22.8902	0.7992	31.8766
8.87	1.9711	1.5944	27.2736	22.0614	0.8089	30.0006
8.93	2.1803	1.7335	30.1676	23.9858	0.7951	33.0840
9.00	1.8372	1.4558	25.4198	20.1436	0.7924	27.9710
9.07	2.0774	1.6275	28.7439	22.5187	0.7834	31.8809
9.13	1.9469	1.5826	26.9384	21.8973	0.8129	31.0620
9.20	1.5537	1.2763	21.4980	17.6600	0.8215	23.9478
9.27	2.5635	2.0198	35.4701	27.9468	0.7879	37.5105
9.33	2.3129	1.7715	32.0030	24.5117	0.7659	33.6809
9.40	2.0624	1.5910	28.5363	22.0135	0.7714	31.5673
9.47	1.6362	1.3139	22.6386	18.1792	0.8030	25.2676
9.53	2.6018	2.0607	35.9999	28.5129	0.7920	38.9937
9.60	1.3759	1.0739	19.0382	14.8589	0.7805	20.8529
9.67	2.4457	1.9022	33.8393	26.3197	0.7778	37.1894
9.73	1.7720	1.3684	24.5186	18.9341	0.7722	26.6496
9.80	1.9718	1.5329	27.2828	21.2105	0.7774	29.0619
9.87	2.1949	1.6811	30.3702	23.2610	0.7659	32.2688
9.93	1.6564	1.2788	22.9184	17.6937	0.7720	24.0611
10.00	3.0291	2.2792	41.9123	31.5361	0.7524	42.5252
10.07	1.7560	1.3166	24.2974	18.2172	0.7498	24.8665
10.13	2.2193	1.6782	30.7079	23.2207	0.7562	32.6830
10.20	2.4939	1.9418	34.5065	26.8677	0.7786	37.7059
10.27	2.4215	1.8867	33.5056	26.1053	0.7791	35.4997
10.33	2.4511	1.9039	33.9144	26.3434	0.7768	36.8987
10.40	1.7723	1.4173	24.5220	19.6101	0.7997	28.4878

10.47	2.2347	1.8148	30.9204	25.1106	0.8121	35.0700
10.53	1.8319	1.4982	25.3472	20.7297	0.8178	28.7848
10.60	2.3586	1.8942	32.6343	26.2084	0.8031	36.4976
10.67	2.3206	1.8483	32.1084	25.5738	0.7965	35.7860
10.73	1.6960	1.3492	23.4663	18.6686	0.7955	26.1486
10.80	2.5859	2.0677	35.7799	28.6102	0.7996	40.3078
10.87	1.8938	1.5537	26.2031	21.4971	0.8204	30.1397
10.93	1.9967	1.6622	27.6269	22.9985	0.8325	31.6016
11.00	2.0389	1.6830	28.2109	23.2875	0.8255	32.0902
11.07	1.8935	1.5394	26.2000	21.2995	0.8130	29.0738
11.13	1.8696	1.5233	25.8691	21.0777	0.8148	28.1600
11.20	2.2235	1.7748	30.7652	24.5564	0.7982	33.1752
11.27	2.2323	1.7686	30.8871	24.4713	0.7923	33.7858
11.33	2.4103	1.9664	33.3507	27.2080	0.8158	37.7805
11.40	1.8361	1.4797	25.4049	20.4735	0.8059	27.7629
11.47	2.2538	1.8052	31.1847	24.9771	0.8009	34.5831
11.53	2.1821	1.7551	30.1927	24.2847	0.8043	34.8933
11.60	1.8936	1.5827	26.2012	21.8988	0.8358	30.1766
11.67	1.7957	1.4413	24.8459	19.9426	0.8027	27.4548
11.73	2.0733	1.6498	28.6868	22.8268	0.7957	32.1598
11.80	2.4769	1.9583	34.2710	27.0962	0.7906	37.7703
11.87	1.8850	1.4828	26.0812	20.5165	0.7866	28.2718
11.93	2.3996	1.8614	33.2024	25.7548	0.7757	35.4901
12.00	2.7904	2.1985	38.6088	30.4193	0.7879	42.5252
12.07	2.6815	2.1119	37.1023	29.2218	0.7876	42.1126
12.13	1.4750	1.1732	20.4082	16.2324	0.7954	24.1384
12.20	2.2804	1.8364	31.5522	25.4094	0.8053	38.3766
12.27	1.7753	1.4848	24.5635	20.5443	0.8364	29.7554
12.33	1.8956	1.5722	26.2284	21.7537	0.8294	30.3524
12.40	2.3018	1.8427	31.8484	25.4966	0.8006	35.8862
12.47	1.3781	1.0958	19.0678	15.1616	0.7951	21.6344
12.53	2.8428	2.2838	39.3349	31.6000	0.8034	43.2156
12.60	1.9495	1.5337	26.9743	21.2212	0.7867	29.3546
12.67	2.5659	1.9937	35.5024	27.5852	0.7770	39.4788
12.73	1.8602	1.4766	25.7392	20.4304	0.7937	29.7392
12.80	2.1193	1.7223	29.3243	23.8310	0.8127	34.3779
12.87	2.0251	1.6598	28.0196	22.9657	0.8196	31.7677
12.93	2.2339	1.7816	30.9092	24.6510	0.7975	33.5853
13.00	2.2792	1.7948	31.5358	24.8335	0.7875	35.5758
13.07	1.6360	1.3055	22.6368	18.0630	0.7979	26.4528

13.13	1.5588	1.2641	21.5686	17.4906	0.8109	24.8597
13.20	2.7185	2.2133	37.6143	30.6248	0.8142	42.0009
13.27	1.5398	1.1993	21.3056	16.5947	0.7789	22.1502
13.33	3.1861	2.4600	44.0838	34.0379	0.7721	46.9938
13.40	1.7430	1.4318	24.1164	19.8110	0.8215	26.8646
13.47	2.0035	1.6278	27.7209	22.5229	0.8125	31.0662
13.53	1.9390	1.5772	26.8283	21.8233	0.8134	30.6862
13.60	1.9445	1.5950	26.9047	22.0697	0.8203	30.8826
13.67	2.1681	1.7666	29.9986	24.4435	0.8148	33.3026
13.73	2.1970	1.7620	30.3990	24.3803	0.8020	32.1861
13.80	2.7389	2.1873	37.8972	30.2642	0.7986	40.2476
13.87	1.6330	1.3038	22.5946	18.0404	0.7984	24.5557
13.93	2.5904	2.1206	35.8414	29.3420	0.8187	39.9013

**Stepping and cycling transitions**

Last Name	First Name	D.O.B	Weight	Height	Temp	Date
Melhorn	Philip	12-26-73	159.0 Lbs	68.0 in	28.9 deg C	03-23-1998

TIME(min)	VO2(L)	VCO2(L)	VO2(Kg)	VCO2(Kg)	RER	VE(stpd)
0.13	0.8521	0.7358	11.7907	10.1804	0.8634	20.3733
0.20	0.8924	0.7240	12.3472	10.0176	0.8113	21.1598
0.27	0.5882	0.4833	8.1391	6.6867	0.8215	15.1882
0.33	0.8796	0.7563	12.1702	10.4652	0.8599	20.8856
0.40	0.6035	0.5343	8.3505	7.3932	0.8854	18.2234
0.47	0.8386	0.7224	11.6037	9.9959	0.8614	21.5545
0.53	0.4909	0.4590	6.7922	6.3504	0.9349	14.1141
0.60	0.4770	0.4639	6.5994	6.4187	0.9726	13.9237
0.67	0.6893	0.6599	9.5375	9.1303	0.9573	19.2855
0.73	0.6002	0.5729	8.3052	7.9272	0.9545	16.8426
0.80	0.6930	0.6250	9.5884	8.6478	0.9019	18.7031
0.87	0.4757	0.4642	6.5815	6.4223	0.9758	14.1008
0.93	0.5410	0.5159	7.4849	7.1378	0.9536	15.6718
1.00	0.5814	0.5663	8.0439	7.8355	0.9741	15.8784
1.07	0.2762	0.2609	3.8217	3.6104	0.9447	7.3471
1.13	0.5300	0.4699	7.3333	6.5023	0.8867	15.4738
1.20	0.7284	0.7307	10.0781	10.1106	1.0032	20.8687
1.27	0.9664	0.9189	13.3714	12.7141	0.9508	26.3553
1.33	0.5731	0.4812	7.9294	6.6580	0.8397	14.1046
1.40	0.7430	0.6024	10.2807	8.3346	0.8107	16.8426
1.47	1.8592	1.5295	25.7244	21.1629	0.8227	34.4826
1.53	1.1996	0.8449	16.5986	11.6910	0.7043	19.2005
1.60	1.6426	1.1614	22.7280	16.0693	0.7070	28.2168
1.67	1.0264	0.7774	14.2020	10.7568	0.7574	18.0347
1.73	1.9789	1.4407	27.3813	19.9341	0.7280	31.1813
1.80	1.9031	1.3079	26.3319	18.0967	0.6873	28.3071
1.87	2.2517	1.5290	31.1555	21.1564	0.6791	33.8994
1.93	1.9931	1.4071	27.5777	19.4690	0.7060	31.0581
2.00	1.7401	1.1898	24.0772	16.4622	0.6837	28.3224
2.07	1.5327	1.1474	21.2073	15.8764	0.7486	25.8689
2.13	2.5006	1.8640	34.5993	25.7908	0.7454	40.5617
2.20	1.5498	1.1519	21.4437	15.9387	0.7433	24.3011
2.27	2.2064	1.6467	30.5282	22.7844	0.7463	34.1979
2.33	2.2975	1.6780	31.7896	23.2173	0.7303	35.7754
2.40	2.0353	1.5084	28.1610	20.8715	0.7412	32.2294

2.47	1.7038	1.2534	23.5748	17.3432	0.7357	27.6364
2.53	2.6262	1.9702	36.3376	27.2606	0.7502	42.8266
2.60	1.6408	1.2375	22.7034	17.1233	0.7542	26.5548
2.67	2.3053	1.7512	31.8969	24.2301	0.7596	39.7940
2.73	2.3249	1.8124	32.1678	25.0775	0.7796	40.8611
2.80	1.4553	1.0861	20.1369	15.0283	0.7463	27.8062
2.87	2.6368	2.1698	36.4839	30.0230	0.8229	46.3609
2.93	1.8980	1.5240	26.2619	21.0870	0.8030	31.6502
3.00	1.5254	1.1728	21.1064	16.2275	0.7688	25.0850
3.07	2.2986	1.7445	31.8040	24.1381	0.7590	37.7980
3.13	2.3013	1.7165	31.8412	23.7507	0.7459	38.2257
3.20	2.0122	1.5219	27.8419	21.0574	0.7563	32.0378
3.27	2.1045	1.5687	29.1189	21.7056	0.7454	32.6125
3.33	2.3429	1.7763	32.4174	24.5772	0.7581	37.7102
3.40	2.5663	1.9707	35.5090	27.2675	0.7679	43.4029
3.47	2.0681	1.6542	28.6154	22.8884	0.7999	35.4574
3.53	2.6312	2.0308	36.4070	28.0998	0.7718	43.3912
3.60	1.6368	1.2690	22.6480	17.5579	0.7752	28.4166
3.67	2.2086	1.6842	30.5589	23.3034	0.7626	40.0448
3.73	1.3813	1.2103	19.1121	16.7464	0.8762	25.3721
3.80	2.2997	1.8480	31.8199	25.5693	0.8036	40.0826
3.87	1.2896	1.0810	17.8438	14.9579	0.8383	25.0782
3.93	2.6301	2.1106	36.3914	29.2033	0.8025	43.2933
4.00	2.0371	1.6423	28.1860	22.7232	0.8062	35.0514
4.07	2.2010	1.7433	30.4542	24.1207	0.7920	36.8535
4.13	2.6435	2.0220	36.5772	27.9771	0.7649	43.9047
4.20	2.2467	1.7495	31.0864	24.2070	0.7787	36.8684
4.27	2.6644	2.0671	36.8655	28.6009	0.7758	44.0709
4.33	2.2399	1.7201	30.9917	23.8002	0.7680	38.9993
4.40	1.4621	1.1698	20.2302	16.1853	0.8001	26.8560
4.47	2.1213	1.7468	29.3514	24.1690	0.8234	37.6427
4.53	2.2415	1.7582	31.0147	24.3275	0.7844	38.3855
4.60	1.5821	1.2834	21.8906	17.7578	0.8112	27.1318
4.67	2.3855	1.8574	33.0065	25.6995	0.7786	38.8961
4.73	1.9032	1.4632	26.3342	20.2455	0.7688	30.6414
4.80	2.4453	1.8971	33.8343	26.2486	0.7758	40.3603
4.87	2.1952	1.7459	30.3741	24.1571	0.7953	35.8492
4.93	1.8124	1.4364	25.0772	19.8744	0.7925	29.7684
5.00	2.1460	1.6789	29.6934	23.2305	0.7823	34.5805
5.07	2.0652	1.6049	28.5756	22.2067	0.7771	35.1541

5.13	1.7485	1.3745	24.1926	19.0188	0.7861	29.4945
5.20	2.2546	1.7510	31.1951	24.2279	0.7767	36.7456
5.27	2.5830	1.9731	35.7393	27.3013	0.7639	42.5212
5.33	1.9737	1.5453	27.3097	21.3810	0.7829	32.9107
5.40	1.9201	1.5858	26.5676	21.9423	0.8259	39.1953
5.47	1.8190	1.4856	25.1692	20.5549	0.8167	30.7559
5.53	2.0435	1.6145	28.2745	22.3393	0.7901	32.9152
5.60	2.2851	1.7927	31.6182	24.8052	0.7845	37.3084
5.67	2.4890	1.8748	34.4394	25.9407	0.7532	43.5930
5.73	1.4661	1.2316	20.2855	17.0403	0.8400	27.4256
5.80	2.4470	1.9583	33.8577	27.0960	0.8003	41.2253
5.87	2.3917	1.9316	33.0927	26.7272	0.8076	39.5819
5.93	1.9294	1.5455	26.6962	21.3838	0.8010	32.2294
6.00	1.7971	1.4286	24.8662	19.7673	0.7949	29.9804
6.07	2.1896	1.7387	30.2968	24.0568	0.7940	35.3738
6.13	2.3401	1.7991	32.3790	24.8933	0.7688	37.9938
6.20	2.1795	1.7344	30.1563	23.9978	0.7958	37.4164
6.27	2.2892	1.8824	31.6749	26.0453	0.8223	39.7940
6.33	2.3221	1.8674	32.1299	25.8378	0.8042	41.1273
6.40	2.4596	2.0290	34.0322	28.0739	0.8249	43.9611
6.47	1.8770	1.5671	25.9714	21.6834	0.8349	33.6989
6.53	1.8830	1.5578	26.0540	21.5543	0.8273	34.3846
6.60	2.1354	1.7209	29.5460	23.8114	0.8059	39.5552
6.67	2.0306	1.7361	28.0963	24.0213	0.8550	36.2801
6.73	1.7372	1.4073	24.0368	19.4720	0.8101	28.4013
6.80	1.6816	1.3286	23.2680	18.3825	0.7900	27.0302
6.87	2.8217	2.0775	39.0424	28.7452	0.7363	46.3672
6.93	1.9704	1.6292	27.2634	22.5422	0.8268	33.3160
7.00	2.5251	2.0217	34.9388	27.9731	0.8006	41.7261
7.07	2.5069	2.0212	34.6871	27.9663	0.8062	42.1065
7.13	2.5210	2.0550	34.8819	28.4342	0.8152	43.0800
7.20	1.8751	1.5221	25.9447	21.0609	0.8118	31.1267
7.27	2.0275	1.6139	28.0531	22.3308	0.7960	33.9039
7.33	3.0324	2.4149	41.9579	33.4141	0.7964	49.6375
7.40	2.4701	2.0492	34.1779	28.3542	0.8296	40.3003
7.47	2.6102	2.1020	36.1155	29.0839	0.8053	42.8093
7.53	2.4124	1.9659	33.3786	27.2015	0.8149	41.0405
7.60	2.3706	1.9343	32.8003	26.7641	0.8160	40.3385
7.67	2.0658	1.7288	28.5835	23.9204	0.8369	36.4320
7.73	2.1535	1.8273	29.7969	25.2838	0.8485	37.9887

7.80	1.7066	1.4260	23.6135	19.7311	0.8356	31.4415
7.87	2.7268	2.2926	37.7291	31.7217	0.8408	48.5694
7.93	2.6845	2.2825	37.1439	31.5821	0.8503	45.4237
8.00	2.4980	2.0485	34.5631	28.3442	0.8201	41.7205
8.07	2.5255	2.0760	34.9439	28.7244	0.8220	43.7028
8.13	2.3520	1.9640	32.5433	27.1754	0.8351	42.3252
8.20	2.3614	1.9922	32.6740	27.5655	0.8437	43.6851
8.27	2.4021	2.0560	33.2372	28.4480	0.8559	44.4507
8.33	2.1686	1.8626	30.0055	25.7721	0.8589	38.6022
8.40	1.9063	1.6127	26.3767	22.3145	0.8460	33.0131
8.47	2.2614	1.8913	31.2900	26.1685	0.8363	38.9941
8.53	2.4466	2.0597	33.8518	28.4988	0.8419	46.9111
8.60	2.0827	1.7676	28.8167	24.4575	0.8487	36.8237
8.67	2.3725	1.9640	32.8269	27.1747	0.8278	42.9246
8.73	2.2123	1.8568	30.6108	25.6910	0.8393	39.7564
8.80	1.7367	1.4616	24.0297	20.2231	0.8416	29.9804
8.87	2.5525	2.0429	35.3175	28.2669	0.8004	43.0974
8.93	2.4761	2.0280	34.2600	28.0609	0.8191	41.3455
9.00	2.6274	2.1444	36.3544	29.6709	0.8162	43.1032
9.07	1.9023	1.5359	26.3218	21.2510	0.8074	32.0292
9.13	2.1000	1.7213	29.0573	23.8164	0.8196	35.4526
9.20	2.5490	2.0615	35.2693	28.5235	0.8087	41.3120
9.27	2.6538	2.1127	36.7194	29.2318	0.7961	44.4747
9.33	2.5809	2.0431	35.7099	28.2691	0.7916	44.2668
9.40	1.7751	1.5063	24.5609	20.8423	0.8486	31.7439
9.47	2.0317	1.7077	28.1120	23.6291	0.8405	35.0656
9.53	2.7026	2.2351	37.3948	30.9258	0.8270	46.6110
9.60	1.7988	1.4848	24.8888	20.5438	0.8254	30.7393
9.67	2.2196	1.8056	30.7120	24.9838	0.8135	37.4214
9.73	2.7136	2.2278	37.5472	30.8250	0.8210	45.2340
9.80	2.0802	1.7035	28.7821	23.5703	0.8189	34.0019
9.87	2.5203	2.0211	34.8724	27.9656	0.8019	40.8721
9.93	2.4104	1.9341	33.3521	26.7617	0.8024	39.5926
10.00	2.1844	1.7679	30.2246	24.4614	0.8093	37.6123
10.07	2.4375	2.0186	33.7270	27.9301	0.8281	42.8093
10.13	2.6260	2.1763	36.3347	30.1129	0.8288	45.8152
10.20	2.1894	1.8198	30.2939	25.1799	0.8312	38.3907
10.27	1.6002	1.3354	22.1411	18.4773	0.8345	27.7045
10.33	2.5232	2.0862	34.9126	28.8656	0.8268	41.9333
10.40	2.8100	2.2220	38.8802	30.7447	0.7908	46.5319



10.47	2.2389	1.8425	30.9779	25.4938	0.8230	37.9887
10.53	2.0280	1.6834	28.0607	23.2922	0.8301	34.3892
10.60	2.1297	1.7285	29.4681	23.9160	0.8116	37.6950
10.67	1.9756	1.6947	27.3354	23.4489	0.8578	35.1588
10.73	2.5197	2.1272	34.8639	29.4332	0.8442	42.1236
10.80	2.2618	1.8612	31.2958	25.7525	0.8229	37.6376
10.87	1.4320	1.1704	19.8142	16.1939	0.8173	26.6564
10.93	3.0128	2.4841	41.6865	34.3712	0.8245	52.5149
11.00	1.9951	1.6649	27.6053	23.0361	0.8345	33.4984
11.07	2.3506	1.8665	32.5237	25.8257	0.7941	39.3753
11.13	2.3066	1.8323	31.9156	25.3526	0.7944	39.0657
11.20	2.1891	1.7097	30.2901	23.6564	0.7810	36.7258
11.27	2.0185	1.6533	27.9288	22.8758	0.8191	34.3707
11.33	2.5285	2.0003	34.9860	27.6777	0.7911	40.8226
11.40	2.8156	2.2673	38.9573	31.3721	0.8053	45.0321
11.47	2.8184	2.2669	38.9971	31.3664	0.8043	45.0685
11.53	2.6561	2.1523	36.7517	29.7807	0.8103	44.6525
11.60	2.4269	1.9810	33.5802	27.4106	0.8163	42.4175
11.67	1.6594	1.4176	22.9607	19.6148	0.8543	29.7804
11.73	2.3966	2.0393	33.1607	28.2162	0.8509	42.3946
11.80	2.6003	2.2022	35.9795	30.4711	0.8469	45.5461
11.87	1.9043	1.6240	26.3486	22.4709	0.8528	32.8084
11.93	1.8923	1.5279	26.1830	21.1406	0.8074	32.7148
12.00	2.4382	2.0932	33.7356	28.9629	0.8585	42.2443
12.07	2.1890	1.8396	30.2887	25.4532	0.8404	34.7764
12.13	1.9703	1.5712	27.2616	21.7393	0.7974	32.3274
12.20	2.9095	2.3831	40.2566	32.9732	0.8191	49.5420
12.27	2.4835	2.0493	34.3629	28.3546	0.8252	41.5246
12.33	2.4866	2.0645	34.4056	28.5657	0.8303	43.6910
12.40	2.7378	2.2620	37.8814	31.2987	0.8262	47.4199
12.47	2.5520	2.1075	35.3108	29.1605	0.8258	43.9047
12.53	2.3783	1.9704	32.9080	27.2636	0.8285	41.3065
12.60	2.6011	2.1648	35.9898	29.9527	0.8323	45.6194
12.67	1.9265	1.6377	26.6557	22.6596	0.8501	37.0046
12.73	1.6948	1.4407	23.4505	19.9348	0.8501	30.4579
12.80	2.3910	2.0523	33.0835	28.3961	0.8583	41.3343
12.87	2.3802	2.0015	32.9333	27.6932	0.8409	39.0920
12.93	2.2913	1.8425	31.7034	25.4942	0.8041	37.4113
13.00	2.0541	1.6490	28.4214	22.8165	0.8028	34.1045

**One cycling transition**

Last Name	First Name	D.O.B	Weight	Height	Temp	Date
Meyers	Andrew	05-24-73	148.0 Lbs	70.0 in	22.0 deg C	04-13-1998

TIME(min)	VO2(L)	VCO2(L)	VO2(Kg)	VCO2(Kg)	RER	VE(stpd)
0.13	0.0248	0.0182	0.3684	0.2700	0.7330	0.7075
0.20	0.5043	0.4060	7.4967	6.0347	0.8050	12.2035
0.27	0.2609	0.2184	3.8781	3.2466	0.8372	7.7664
0.33	0.3920	0.3019	5.8277	4.4873	0.7700	9.2691
0.40	0.3107	0.2437	4.6184	3.6227	0.7844	8.0645
0.47	0.4167	0.3481	6.1935	5.1749	0.8355	10.0862
0.53	0.7195	0.5711	10.6954	8.4888	0.7937	15.9230
0.60	0.3915	0.2992	5.8194	4.4478	0.7643	9.2729
0.67	0.3860	0.3119	5.7382	4.6363	0.8080	8.4724
0.73	0.4300	0.3333	6.3912	4.9546	0.7752	9.6707
0.80	0.6134	0.4595	9.1174	6.8298	0.7491	13.1030
0.87	0.3536	0.2640	5.2558	3.9237	0.7466	8.0678
0.93	0.3601	0.2986	5.3522	4.4381	0.8292	8.2672
1.00	0.6038	0.4648	8.9758	6.9086	0.7697	13.1048
1.07	0.5859	0.4399	8.7098	6.5388	0.7507	13.3028
1.13	0.6133	0.4428	9.1170	6.5826	0.7220	15.9164
1.20	1.4213	1.2482	21.1278	18.5548	0.8782	33.6786
1.27	1.0504	0.8345	15.6138	12.4044	0.7945	22.7916
1.33	0.8131	0.6965	12.0862	10.3531	0.8566	18.3467
1.40	1.0782	0.9031	16.0273	13.4248	0.8376	24.8017
1.47	0.4711	0.4594	7.0028	6.8286	0.9751	13.1382
1.53	0.8250	0.7645	12.2641	11.3643	0.9266	24.2943
1.60	1.2647	1.0710	18.7991	15.9201	0.8469	27.5239
1.67	1.1860	0.9668	17.6292	14.3713	0.8152	25.0068
1.73	0.6429	0.4923	9.5567	7.3178	0.7657	15.4233
1.80	1.1442	1.0976	17.0084	16.3152	0.9592	26.6989
1.87	1.4431	1.1287	21.4521	16.7777	0.7821	27.9310
1.93	1.9621	1.4698	29.1671	21.8483	0.7491	34.2552
2.00	1.3219	1.1165	19.6502	16.5973	0.8446	28.4391
2.07	1.8241	1.3914	27.1149	20.6822	0.7628	31.3680
2.13	1.1933	0.9318	17.7378	13.8505	0.7808	21.2701
2.20	2.1598	1.7520	32.1048	26.0434	0.8112	42.9316
2.27	1.4955	1.2225	22.2307	18.1720	0.8174	27.3147
2.33	1.7616	1.3984	26.1864	20.7868	0.7938	34.1827
2.40	1.0611	0.9599	15.7727	14.2685	0.9046	23.5789

2.47	2.1497	1.8543	31.9551	27.5634	0.8626	41.2013
2.53	1.2836	1.2142	19.0811	18.0495	0.9459	28.9394
2.60	2.4224	2.0560	36.0084	30.5628	0.8488	47.0960
2.67	1.0939	1.0320	16.2607	15.3408	0.9434	25.0740
2.73	2.1619	2.0268	32.1365	30.1274	0.9375	46.7999
2.80	1.4410	1.2739	21.4197	18.9364	0.8841	33.7794
2.87	1.1724	1.3746	17.4277	20.4337	1.1725	35.2822
2.93	1.9492	1.8566	28.9752	27.5986	0.9525	38.0837
3.00	1.7788	1.6425	26.4420	24.4153	0.9234	34.2883
3.07	1.9350	1.7828	28.7641	26.5015	0.9213	41.7453
3.13	1.9731	1.8446	29.3300	27.4196	0.9349	41.1233
3.20	1.8519	1.6832	27.5282	25.0204	0.9089	38.6882
3.27	2.1254	1.9312	31.5937	28.7071	0.9086	46.3581
3.33	1.8128	1.7675	26.9464	26.2737	0.9750	40.2106
3.40	1.2571	1.2812	18.6873	19.0443	1.0191	29.4476
3.47	2.1829	2.1187	32.4484	31.4946	0.9706	49.6103
3.53	1.1460	1.3784	17.0352	20.4894	1.2028	26.7136
3.60	1.9454	1.8474	28.9174	27.4607	0.9496	43.7680
3.67	2.1210	1.9675	31.5281	29.2460	0.9276	46.0684
3.73	1.1038	1.1504	16.4079	17.1007	1.0422	25.3927
3.80	1.9381	1.8816	28.8090	27.9704	0.9709	42.1370
3.87	2.0291	2.0121	30.1616	29.9101	0.9917	42.1370
3.93	1.7460	1.4929	25.9544	22.1919	0.8550	38.7149
4.00	1.4156	1.6297	21.0423	24.2257	1.1513	37.0762
4.07	1.5715	1.5797	23.3606	23.4824	1.0052	34.9846
4.13	1.7877	1.7223	26.5732	25.6019	0.9634	38.1845
4.20	1.1027	1.0233	16.3920	15.2109	0.9280	27.3147
4.27	0.9565	1.0530	14.2177	15.6534	1.1010	26.8218
4.33	1.6763	1.6154	24.9179	24.0127	0.9637	32.2758
4.40	1.9115	1.6504	28.4149	24.5331	0.8634	35.2627
4.47	2.5381	2.1951	37.7289	32.6293	0.8648	45.4448
4.53	1.3004	1.2628	19.3306	18.7706	0.9710	29.2257
4.60	2.1367	2.0161	31.7614	29.9697	0.9436	42.7124
4.67	2.1569	2.0222	32.0623	30.0598	0.9375	43.7198
4.73	1.9314	1.8592	28.7099	27.6372	0.9626	43.9454
4.80	1.8493	1.8629	27.4902	27.6922	1.0073	40.6273
4.87	2.0247	1.9876	30.0963	29.5454	0.9817	44.3608
4.93	1.8846	1.8496	28.0146	27.4934	0.9814	41.7453
5.00	2.1453	2.1103	31.8889	31.3689	0.9837	47.1513
5.07	1.8371	1.7887	27.3088	26.5894	0.9737	41.5436

5.13	1.5065	1.5051	22.3935	22.3738	0.9991	37.9987
5.20	1.8110	1.7250	26.9201	25.6416	0.9525	42.3211
5.27	1.6175	1.6968	24.0444	25.2228	1.0490	38.1258
5.33	1.5579	1.6025	23.1580	23.8205	1.0286	36.2503
5.40	2.1953	2.1410	32.6329	31.8259	0.9753	49.3814
5.47	1.6279	1.5900	24.1984	23.6347	0.9767	35.0564
5.53	2.0219	1.9033	30.0559	28.2927	0.9413	41.0168
5.60	2.0147	1.9080	29.9476	28.3627	0.9471	42.2087
5.67	2.2974	2.1654	34.1513	32.1888	0.9425	47.5871
5.73	1.4774	1.4385	21.9615	21.3835	0.9737	34.0819
5.80	2.0865	2.0437	31.0154	30.3801	0.9795	46.9757
5.87	1.4654	1.4569	21.7822	21.6565	0.9942	33.5638
5.93	1.8453	1.7639	27.4306	26.2199	0.9559	45.9803
6.00	1.3799	1.4610	20.5124	21.7174	1.0587	31.1491
6.07	1.3728	1.3464	20.4069	20.0145	0.9808	28.2257
6.13	1.4095	1.3715	20.9520	20.3872	0.9730	31.1663
6.20	1.6999	1.3710	25.2692	20.3802	0.8065	37.1924
6.27	1.5393	1.7035	22.8811	25.3221	1.1067	36.0886
6.33	2.2447	2.0083	33.3669	29.8529	0.8947	41.4921
6.40	2.3770	2.1231	35.3339	31.5595	0.8932	44.9782
6.47	2.0305	1.8026	30.1829	26.7955	0.8878	40.0090
6.53	1.9508	1.7686	28.9981	26.2899	0.9066	40.0988
6.60	1.9582	1.7924	29.1089	26.6431	0.9153	39.6059
6.67	1.9219	1.7400	28.5687	25.8642	0.9053	39.4943
6.73	2.1668	1.9959	32.2095	29.6694	0.9211	44.1045
6.80	2.0584	1.8826	30.5976	27.9843	0.9146	41.1006
6.87	1.9100	1.7690	28.3913	26.2965	0.9262	39.5269
6.93	1.9539	1.8548	29.0447	27.5712	0.9493	41.7223
7.00	2.0765	1.9805	30.8666	29.4406	0.9538	44.5011
7.07	1.8653	1.7881	27.7268	26.5799	0.9586	41.0055
7.13	2.1159	2.0421	31.4528	30.3553	0.9651	45.5770
7.20	1.8367	1.7328	27.3029	25.7573	0.9434	39.9193
7.27	2.0596	1.9338	30.6156	28.7463	0.9389	44.9658
7.33	1.4143	1.4087	21.0240	20.9397	0.9960	33.4538
7.40	2.5412	2.4175	37.7746	35.9353	0.9513	53.0094
7.47	1.5412	1.4542	22.9093	21.6170	0.9436	33.0462
7.53	1.7765	1.6849	26.4078	25.0456	0.9484	40.3003
7.60	1.5605	1.4205	23.1964	21.1151	0.9103	34.4283
7.67	2.1597	2.0873	32.1040	31.0273	0.9665	46.5340
7.73	2.0394	1.8424	30.3147	27.3875	0.9034	39.9193

7.80	1.9803	1.7490	29.4376	25.9989	0.8832	39.8808
7.87	2.0957	1.7880	31.1518	26.5779	0.8532	42.9198
7.93	1.6902	1.7509	25.1243	26.0270	1.0359	41.5322
8.00	2.1966	2.0491	32.6517	30.4599	0.9329	44.2539
8.07	1.8493	1.6726	27.4897	24.8625	0.9044	38.0942
8.13	2.1847	2.0247	32.4758	30.0976	0.9268	49.1934
8.20	1.8846	1.7913	28.0142	26.6274	0.9505	40.7984
8.27	2.2197	2.0981	32.9953	31.1885	0.9452	49.4754
8.33	1.7563	1.6623	26.1072	24.7096	0.9465	39.7122
8.40	1.8319	1.7526	27.2309	26.0516	0.9567	40.7033
8.47	1.6796	1.5882	24.9670	23.6088	0.9456	35.6461
8.53	2.2041	2.0434	32.7639	30.3754	0.9271	46.2254
8.60	1.8579	1.6872	27.6175	25.0802	0.9081	38.6035
8.67	1.5285	1.3786	22.7214	20.4921	0.9019	32.6612
8.73	1.8395	1.6789	27.3440	24.9566	0.9127	38.7676
8.80	2.0337	1.7804	30.2306	26.4655	0.8755	39.4725

**Two cycling transitions**

Last Name	First Name	D.O.B	Weight	Height	Temp	Date
Meyers	Andrew	05-24-73	148.0 Lbs	70.0 in	22.5 deg C	04-03-1998

TIME(min)	VO2(L)	VCO2(L)	VO2(Kg)	VCO2(Kg)	RER	VE(stpd)
0.13	0.0503	0.0164	0.7476	0.2442	0.3267	7.3073
0.20	0.0516	0.0173	0.7666	0.2565	0.3346	7.5082
0.27	0.0515	0.0172	0.7660	0.2563	0.3346	7.5020
0.33	0.0292	0.0096	0.4342	0.1420	0.3271	4.1571
0.40	0.0342	0.0112	0.5088	0.1664	0.3271	4.8715
0.47	0.0732	0.0280	1.0881	0.4155	0.3819	10.5579
0.53	0.0275	0.0096	0.4086	0.1432	0.3503	3.8556
0.60	0.0648	0.0231	0.9625	0.3435	0.3569	8.1159
0.67	0.0853	0.0365	1.2682	0.5425	0.4278	10.1476
0.73	0.0414	0.0158	0.6150	0.2349	0.3820	4.8675
0.80	0.1495	0.0735	2.2224	1.0924	0.4916	12.5744
0.87	0.2099	0.1222	3.1207	1.8164	0.5821	13.5903
0.93	0.1543	0.1158	2.2942	1.7209	0.7501	9.5374
1.00	0.1221	0.0826	1.8143	1.2284	0.6771	6.3877
1.07	0.4918	0.3601	7.3108	5.3535	0.7323	16.0222
1.13	1.0552	0.7976	15.6849	11.8561	0.7559	21.7249
1.20	1.0068	0.7115	14.9663	10.5758	0.7066	16.5429
1.27	1.3944	0.8843	20.7274	13.1448	0.6342	22.6385
1.33	0.7714	0.5611	11.4661	8.3401	0.7274	14.1110
1.40	0.8379	0.6014	12.4552	8.9393	0.7177	16.3579
1.47	0.7703	0.5213	11.4511	7.7497	0.6768	14.8257
1.53	0.5126	0.4067	7.6190	6.0459	0.7935	10.7565
1.60	0.2722	0.1254	4.0459	1.8635	0.4606	9.0277
1.67	0.8342	0.8656	12.3999	12.8674	1.0377	28.4094
1.73	0.6680	0.4712	9.9296	7.0036	0.7053	15.6166
1.80	0.5824	0.5100	8.6570	7.5808	0.8757	15.0143
1.87	0.7966	0.6554	11.8420	9.7421	0.8227	16.0399
1.93	1.5664	1.1473	23.2850	17.0551	0.7324	26.4020
2.00	1.2804	0.9721	19.0331	14.4505	0.7592	20.2729
2.07	1.2225	0.8482	18.1729	12.6078	0.6938	18.5778
2.13	1.6190	1.0682	24.0664	15.8789	0.6598	25.9851
2.20	0.8454	0.6240	12.5674	9.2756	0.7381	15.0330
2.27	1.4482	0.9935	21.5273	14.7680	0.6860	25.9994
2.33	1.0046	0.7164	14.9339	10.6496	0.7131	18.3647
2.40	1.6396	1.1827	24.3727	17.5805	0.7213	27.6282

2.47	1.1968	0.8594	17.7910	12.7755	0.7181	22.1157
2.53	1.8978	1.3672	28.2103	20.3234	0.7204	30.5485
2.60	1.3672	0.8799	20.3235	13.0790	0.6435	24.8446
2.67	0.9824	0.8575	14.6027	12.7464	0.8729	19.8921
2.73	1.7259	1.2677	25.6549	18.8442	0.7345	29.0382
2.80	0.9464	0.7580	14.0681	11.2671	0.8009	16.2295
2.87	0.4722	0.3401	7.0186	5.0554	0.7203	13.6993
2.93	0.9469	0.7969	14.0763	11.8461	0.8416	22.1279
3.00	0.7759	0.5910	11.5339	8.7854	0.7617	17.4515
3.07	0.2779	0.3627	4.1309	5.3914	1.3051	13.4963
3.13	1.2329	1.0185	18.3275	15.1402	0.8261	21.3071
3.20	1.5620	1.2147	23.2189	18.0559	0.7776	25.4635
3.27	1.1555	0.9349	17.1766	13.8973	0.8091	18.4585
3.33	1.9774	1.4556	29.3935	21.6366	0.7361	30.6416
3.40	1.1701	0.9458	17.3938	14.0585	0.8083	22.3278
3.47	1.9379	1.4934	28.8062	22.1993	0.7706	30.6332
3.53	1.1374	0.8893	16.9079	13.2192	0.7818	18.8798
3.60	1.9306	1.4542	28.6981	21.6167	0.7532	31.2375
3.67	1.7469	1.3432	25.9679	19.9665	0.7689	29.2292
3.73	1.0987	0.8935	16.3323	13.2815	0.8132	19.6782
3.80	1.5166	1.2122	22.5433	18.0198	0.7993	28.1871
3.87	1.5278	1.2425	22.7111	18.4690	0.8132	28.0113
3.93	0.8967	0.7603	13.3289	11.3021	0.8479	17.2581
4.00	1.3316	1.0831	19.7946	16.0995	0.8133	24.4726
4.07	0.8002	0.6740	11.8953	10.0189	0.8423	18.8720
4.13	1.0744	1.0168	15.9701	15.1148	0.9464	23.2380
4.20	1.5898	1.2688	23.6317	18.8612	0.7981	31.6737
4.27	1.0330	0.9615	15.3560	14.2927	0.9308	20.6983
4.33	0.7467	0.6471	11.1000	9.6190	0.8666	17.6496
4.40	1.5704	1.2941	23.3438	19.2366	0.8241	31.0646
4.47	0.8918	0.8289	13.2568	12.3208	0.9294	19.2725
4.53	1.6509	1.4557	24.5406	21.6388	0.8818	31.8504
4.60	1.1599	0.9911	17.2420	14.7321	0.8544	23.7618
4.67	1.8255	1.5508	27.1352	23.0517	0.8495	33.8931
4.73	0.9810	0.8694	14.5827	12.9241	0.8863	19.4700
4.80	1.6397	1.3093	24.3746	19.4631	0.7985	31.8504
4.87	0.6907	0.6679	10.2665	9.9281	0.9670	15.4223
4.93	1.4107	1.1703	20.9693	17.3969	0.8296	28.8192
5.00	0.9357	0.8675	13.9084	12.8947	0.9271	19.7797
5.07	1.6144	1.3591	23.9975	20.2027	0.8419	30.9545

5.13	1.3716	1.1982	20.3893	17.8111	0.8736	26.1592
5.20	1.1863	0.9375	17.6337	13.9354	0.7903	24.1547
5.27	0.8785	0.8257	13.0592	12.2733	0.9398	18.5727
5.33	1.9310	1.5794	28.7046	23.4780	0.8179	35.6083
5.40	1.3926	1.2033	20.7009	17.8876	0.8641	25.8764
5.47	1.1201	0.9571	16.6505	14.2266	0.8544	22.0234
5.53	1.6901	1.2609	25.1225	18.7428	0.7461	32.6979
5.60	0.9015	0.8849	13.4011	13.1535	0.9815	24.1680
5.67	0.8684	0.8915	12.9092	13.2521	1.0266	21.2983
5.73	1.2863	1.1621	19.1203	17.2750	0.9035	26.0830
5.80	1.8122	1.5140	26.9384	22.5048	0.8354	33.3071
5.87	1.6470	1.3995	24.4827	20.8034	0.8497	30.6543
5.93	0.9045	0.8019	13.4452	11.9205	0.8866	18.1818
6.00	0.7738	0.7138	11.5025	10.6100	0.9224	22.4324
6.07	1.7578	1.5606	26.1287	23.1981	0.8878	35.3429
6.13	1.7180	1.4177	25.5377	21.0745	0.8252	32.6618
6.20	0.8968	0.8582	13.3301	12.7571	0.9570	19.2831
6.27	1.6739	1.2496	24.8821	18.5749	0.7465	33.5794
6.33	1.2364	1.4284	18.3796	21.2332	1.1553	34.7049
6.40	1.5423	1.3122	22.9267	19.5053	0.8508	32.0753
6.47	1.4522	1.3068	21.5869	19.4261	0.8999	27.0001
6.53	1.2955	1.1211	19.2571	16.6654	0.8654	24.9666
6.60	1.7511	1.4880	26.0302	22.1183	0.8497	32.5918
6.67	1.8048	1.5121	26.8282	22.4765	0.8378	36.6481
6.73	1.7328	1.4923	25.7584	22.1831	0.8612	34.8207
6.80	1.3575	1.1977	20.1783	17.8037	0.8823	26.5831
6.87	1.7730	1.5824	26.3552	23.5215	0.8925	33.0676
6.93	1.6629	1.4558	24.7195	21.6405	0.8754	31.2719
7.00	1.1539	1.0771	17.1522	16.0104	0.9334	28.0036
7.07	1.5790	1.3715	23.4713	20.3872	0.8686	33.7730
7.13	2.0520	1.7921	30.5024	26.6390	0.8733	37.8454
7.20	2.0655	1.8631	30.7031	27.6953	0.9020	37.4499
7.27	1.6211	1.4035	24.0973	20.8631	0.8658	30.6416
7.33	2.2032	1.8662	32.7503	27.7411	0.8470	40.7878
7.40	1.8131	1.6233	26.9510	24.1294	0.8953	33.6762
7.47	1.4417	1.3570	21.4312	20.1720	0.9412	29.8546
7.53	2.0336	1.8209	30.2293	27.0674	0.8954	43.8679
7.60	2.2378	2.1090	33.2652	31.3495	0.9424	43.8438
7.67	2.1099	1.9072	31.3639	28.3502	0.9039	40.4042
7.73	2.1631	1.9319	32.1544	28.7176	0.8931	42.0401



7.80	1.0908	1.0817	16.2151	16.0789	0.9916	26.8008
7.87	2.2222	2.1181	33.0334	31.4848	0.9531	46.4953
7.93	2.0003	1.8874	29.7342	28.0555	0.9435	40.8047
8.00	1.8032	1.6717	26.8046	24.8502	0.9271	37.5204
8.07	2.1254	1.9970	31.5934	29.6850	0.9396	44.2253
8.13	1.3388	1.3473	19.9005	20.0270	1.0064	33.0949
8.20	2.2517	2.1321	33.4713	31.6935	0.9469	45.8483
8.27	1.8602	1.7564	27.6512	26.1091	0.9442	36.8206
8.33	1.6591	1.5409	24.6617	22.9050	0.9288	34.0866
8.40	1.9210	1.7974	28.5555	26.7185	0.9357	38.2407
8.47	2.0310	1.8630	30.1910	27.6927	0.9173	39.6772
8.53	2.0453	1.8754	30.4026	27.8775	0.9169	41.4866
8.60	1.6733	1.5484	24.8736	23.0172	0.9254	36.7293
8.67	2.1078	1.8437	31.3316	27.4057	0.8747	42.9185
8.73	0.8517	0.8006	12.6610	11.9013	0.9400	24.9666
8.80	1.6059	1.7618	23.8712	26.1891	1.0971	37.3638
8.87	1.9101	1.7578	28.3936	26.1301	0.9203	38.9722
8.93	2.2360	2.0563	33.2374	30.5663	0.9196	44.0285
9.00	2.1061	1.9316	31.3064	28.7131	0.9172	39.5812
9.07	1.2608	1.1315	18.7424	16.8191	0.8974	24.6485
9.13	2.3241	1.8760	34.5473	27.8864	0.8072	44.4466
9.20	0.8832	1.0731	13.1292	15.9515	1.2150	29.2292
9.27	1.3153	1.2609	19.5515	18.7429	0.9586	29.7325
9.33	2.6310	2.3348	39.1094	34.7062	0.8874	46.2795
9.40	1.1381	1.0729	16.9170	15.9485	0.9428	25.7856
9.47	1.9421	1.9275	28.8692	28.6527	0.9925	45.2397
9.53	1.3485	1.1106	20.0457	16.5087	0.8236	33.2842
9.60	1.7397	1.9582	25.8608	29.1087	1.1256	39.1644
9.67	2.5963	2.3465	38.5943	34.8807	0.9038	46.5583
9.73	1.9087	1.7231	28.3723	25.6133	0.9028	37.8246
9.80	2.2876	2.0946	34.0051	31.1355	0.9156	46.7483
9.87	1.9793	1.8005	29.4222	26.7649	0.9097	41.5766
9.93	2.2930	2.1456	34.0852	31.8937	0.9357	47.6741
10.00	2.0165	1.8721	29.9757	27.8288	0.9284	41.9707
10.07	1.9110	1.7522	28.4063	26.0457	0.9169	41.0752
10.13	2.0584	2.0328	30.5975	30.2170	0.9876	44.4282
10.20	2.0127	1.8811	29.9180	27.9627	0.9346	40.9795
10.27	1.9709	1.8161	29.2976	26.9966	0.9215	41.1766
10.33	2.0098	1.7757	29.8760	26.3950	0.8835	41.0020
10.40	0.9870	1.0203	14.6721	15.1667	1.0337	25.1557

10.47	2.1480	2.0339	31.9294	30.2335	0.9469	43.7362
10.53	1.8721	1.6930	27.8289	25.1668	0.9043	37.2059
10.60	1.1739	1.1367	17.4493	16.8975	0.9684	29.3266
10.67	1.8258	1.4497	27.1405	21.5491	0.7940	38.9561
10.73	1.4871	1.6429	22.1062	24.4209	1.1047	33.1553
10.80	2.5093	2.1784	37.3000	32.3815	0.8681	44.9601
10.87	2.1584	1.9180	32.0839	28.5107	0.8886	42.0111
10.93	2.1492	1.8962	31.9470	28.1860	0.8823	42.9422
11.00	2.1431	1.9048	31.8563	28.3139	0.8888	43.4318
11.07	1.5812	1.5845	23.5041	23.5534	1.0021	46.7870
11.13	1.7797	1.6733	26.4556	24.8732	0.9402	37.4292
11.20	2.0980	1.9701	31.1866	29.2848	0.9390	43.1991
11.27	1.9365	1.8115	28.7865	26.9271	0.9354	40.7934
11.33	2.1987	1.9735	32.6834	29.3358	0.8976	44.6434
11.40	1.8888	1.7155	28.0770	25.5013	0.9083	38.9400
11.47	1.7257	1.5530	25.6525	23.0853	0.8999	34.7001
11.53	1.3450	1.3620	19.9936	20.2460	1.0126	33.2934
11.60	2.3463	2.1221	34.8771	31.5446	0.9045	45.4864
11.67	2.5210	2.1674	37.4746	32.2188	0.8597	48.0534
11.73	2.2895	2.0035	34.0329	29.7816	0.8751	47.8638
11.80	2.0183	1.8865	30.0021	28.0431	0.9347	43.3124
11.87	2.1310	1.9701	31.6774	29.2853	0.9245	45.0244
11.93	2.2214	1.9935	33.0201	29.6327	0.8974	46.7870
12.00	1.8475	1.7274	27.4626	25.6781	0.9350	39.1213
12.07	1.6451	1.5585	24.4541	23.1665	0.9473	37.0994
12.13	1.6560	1.6446	24.6168	24.4470	0.9931	38.9186
12.20	1.9493	1.7878	28.9765	26.5753	0.9171	38.6518
12.27	1.2467	1.1094	18.5318	16.4918	0.8899	29.6147
12.33	1.6459	1.6322	24.4654	24.2628	0.9917	38.4436
12.40	1.8764	1.7867	27.8927	26.5591	0.9522	38.5450
12.47	2.1768	1.9413	32.3573	28.8576	0.8918	41.8808
12.53	2.1509	1.8447	31.9724	27.4207	0.8576	45.0368
12.60	2.1631	1.9702	32.1540	29.2865	0.9108	44.6188
12.67	1.4108	1.0521	20.9714	15.6397	0.7458	33.4871
12.73	1.1178	1.3389	16.6157	19.9023	1.1978	30.2191
12.80	1.2894	1.2984	19.1673	19.3000	1.0069	35.7049
12.87	2.0631	1.8738	30.6674	27.8545	0.9083	41.4524
12.93	2.5430	2.2520	37.8015	33.4750	0.8855	46.0512
13.00	2.2739	1.9220	33.8011	28.5700	0.8452	46.2477

**Stepping and cycling transitions**

Last Name	First Name	D.O.B	Weight	Height	Temp	Date
Meyers	Andrew	05-24-73	148.0 Lbs	70.0 in	22.6 deg C	04-04-1998

TIME(min)	VO2(L)	VCO2(L)	VO2(Kg)	VCO2(Kg)	RER	VE(stpd)
0.13	0.1635	0.1025	2.4311	1.5240	0.6269	13.8679
0.20	0.1689	0.1160	2.5102	1.7246	0.6870	8.4460
0.27	0.3778	0.2609	5.6159	3.8780	0.6905	14.2699
0.33	0.1256	0.0877	1.8668	1.3033	0.6981	4.0258
0.40	0.2908	0.2013	4.3228	2.9926	0.6923	8.4495
0.47	0.1630	0.1120	2.4232	1.6654	0.6873	4.5221
0.53	0.0695	0.0467	1.0337	0.6944	0.6718	2.0112
0.60	0.1628	0.1004	2.4197	1.4927	0.6169	4.5277
0.67	0.1605	0.1218	2.3864	1.8106	0.7587	4.6271
0.73	0.0899	0.0600	1.3356	0.8917	0.6676	2.6164
0.80	0.2551	0.1642	3.7925	2.4411	0.6437	6.6416
0.87	0.2641	0.1983	3.9257	2.9484	0.7510	7.1418
0.93	0.2340	0.1617	3.4787	2.4032	0.6908	5.8317
1.00	0.1972	0.1382	2.9310	2.0545	0.7010	4.8289
1.07	0.5477	0.3853	8.1415	5.7280	0.7036	12.8789
1.13	0.9187	0.6670	13.6568	9.9154	0.7260	20.9311
1.20	0.6822	0.4903	10.1412	7.2880	0.7187	14.0824
1.27	1.0086	0.7190	14.9925	10.6877	0.7129	19.3211
1.33	1.0926	0.7908	16.2419	11.7558	0.7238	20.1178
1.40	1.3472	0.9814	20.0257	14.5879	0.7285	24.6511
1.47	1.1316	0.8253	16.8212	12.2683	0.7293	20.2239
1.53	1.5846	1.1534	23.5547	17.1458	0.7279	28.5791
1.60	1.3853	0.9752	20.5929	14.4959	0.7039	23.4090
1.67	1.3285	0.9873	19.7481	14.6754	0.7431	22.8494
1.73	0.9714	0.7103	14.4403	10.5578	0.7311	16.5148
1.80	1.6288	1.2107	24.2118	17.9975	0.7433	29.0635
1.87	1.0967	0.8255	16.3023	12.2703	0.7527	20.0310
1.93	0.8681	0.6553	12.9047	9.7409	0.7548	15.9018
2.00	2.2184	1.6602	32.9763	24.6793	0.7484	37.9429
2.07	1.3103	0.9567	19.4768	14.2209	0.7301	21.6415
2.13	1.6942	1.2117	25.1842	18.0124	0.7152	26.4549
2.20	2.0316	1.4504	30.1990	21.5606	0.7140	32.5171
2.27	1.4896	1.0742	22.1426	15.9672	0.7211	24.6613
2.33	1.6000	1.1968	23.7843	17.7904	0.7480	27.9907
2.40	1.3570	1.0363	20.1710	15.4046	0.7637	24.2653

2.47	1.3197	0.9656	19.6168	14.3534	0.7317	22.7425
2.53	2.4505	1.9424	36.4262	28.8739	0.7927	42.0404
2.60	1.8542	1.3961	27.5619	20.7523	0.7529	30.7135
2.67	1.8436	1.3844	27.4053	20.5792	0.7509	30.5917
2.73	1.6800	1.2725	24.9732	18.9160	0.7574	29.3841
2.80	1.8829	1.4459	27.9886	21.4938	0.7679	32.7094
2.87	1.8319	1.4106	27.2303	20.9679	0.7700	31.6942
2.93	1.6825	1.2973	25.0103	19.2848	0.7711	29.1828
3.00	1.8294	1.4297	27.1938	21.2528	0.7815	31.8036
3.07	1.7449	1.3881	25.9372	20.6338	0.7955	30.7748
3.13	1.3158	1.0519	19.5595	15.6363	0.7994	23.7150
3.20	1.3772	1.1138	20.4721	16.5571	0.8088	25.2252
3.27	1.8916	1.5259	28.1182	22.6826	0.8067	33.8305
3.33	2.2184	1.7515	32.9764	26.0351	0.7895	37.9481
3.40	1.6724	1.2979	24.8606	19.2925	0.7760	28.2733
3.47	1.6995	1.3404	25.2624	19.9251	0.7887	29.3922
3.53	1.5214	1.2075	22.6152	17.9486	0.7937	27.0696
3.60	1.3537	1.0828	20.1228	16.0958	0.7999	23.9534
3.67	1.9280	1.5281	28.6590	22.7154	0.7926	33.0022
3.73	1.9860	1.5537	29.5215	23.0954	0.7823	33.9944
3.80	1.7302	1.3633	25.7185	20.2647	0.7879	28.8809
3.87	1.7008	1.3177	25.2823	19.5874	0.7747	27.8862
3.93	1.5078	1.1563	22.4137	17.1885	0.7669	25.0535
4.00	1.5531	1.2037	23.0867	17.8925	0.7750	26.2501
4.07	2.0528	1.5870	30.5142	23.5905	0.7731	35.3018
4.13	1.7456	1.3711	25.9485	20.3816	0.7855	29.9672
4.20	1.7398	1.3769	25.8625	20.4678	0.7914	29.5772
4.27	1.6045	1.2769	23.8511	18.9803	0.7958	27.5459
4.33	1.9513	1.5561	29.0056	23.1305	0.7974	34.1955
4.40	1.8707	1.4927	27.8074	22.1883	0.7979	32.2017
4.47	1.9668	1.5588	29.2363	23.1713	0.7926	33.5921
4.53	1.9057	1.4987	28.3285	22.2778	0.7864	32.5773
4.60	1.1483	0.9024	17.0690	13.4139	0.7859	20.1178
4.67	2.1081	1.6787	31.3368	24.9541	0.7963	36.8511
4.73	2.4062	1.9559	35.7677	29.0746	0.8129	40.9171
4.80	1.8260	1.4402	27.1432	21.4086	0.7887	31.5806
4.87	1.7355	1.3989	25.7973	20.7944	0.8061	31.3967
4.93	1.5009	1.2246	22.3109	18.2039	0.8159	27.7970
5.00	1.9203	1.5623	28.5454	23.2227	0.8135	34.6360
5.07	1.6525	1.3542	24.5644	20.1303	0.8195	29.5010

5.13	1.5139	1.2375	22.5041	18.3955	0.8174	27.6507
5.20	1.6563	1.3512	24.6201	20.0850	0.8158	30.6001
5.27	1.7388	1.4086	25.8475	20.9387	0.8101	32.0093
5.33	1.8287	1.4760	27.1837	21.9402	0.8071	32.1884
5.40	1.9683	1.5580	29.2590	23.1591	0.7915	33.6106
5.47	1.7344	1.3461	25.7814	20.0093	0.7761	29.5813
5.53	1.8711	1.4820	27.8143	22.0299	0.7920	32.6043
5.60	1.5816	1.2470	23.5096	18.5370	0.7885	28.3700
5.67	1.4070	1.1568	20.9146	17.1956	0.8222	25.3659
5.73	1.8654	1.4990	27.7287	22.2818	0.8036	32.5126
5.80	1.6083	1.2647	23.9077	18.7991	0.7863	27.3715
5.87	1.8402	1.4648	27.3538	21.7742	0.7960	30.7717
5.93	1.6679	1.3225	24.7934	19.6589	0.7929	28.8730
6.00	1.8991	1.5093	28.2297	22.4349	0.7947	33.7979
6.07	1.4443	1.1339	21.4698	16.8551	0.7851	25.6502
6.13	1.0257	0.8090	15.2468	12.0259	0.7887	18.6166
6.20	1.4806	1.1960	22.0093	17.7781	0.8078	27.1777
6.27	1.6222	1.3057	24.1136	19.4087	0.8049	28.4745
6.33	1.7214	1.3595	25.5884	20.2090	0.7898	29.7784
6.40	1.7748	1.4074	26.3823	20.9204	0.7930	30.7929
6.47	1.6740	1.3159	24.8839	19.5612	0.7861	28.1765
6.53	1.5809	1.2186	23.4991	18.1151	0.7709	26.3470
6.60	2.2056	1.7095	32.7860	25.4121	0.7751	37.6099
6.67	1.9827	1.5225	29.4722	22.6319	0.7679	33.6059
6.73	2.3306	1.7731	34.6444	26.3570	0.7608	39.4417
6.80	1.6238	1.2616	24.1374	18.7542	0.7770	30.1051
6.87	1.3818	1.1976	20.5402	17.8018	0.8667	26.9690
6.93	0.9165	0.7755	13.6229	11.5275	0.8462	17.7635
7.00	1.7937	1.4956	26.6626	22.2316	0.8338	32.7229
7.07	1.5131	1.2124	22.4916	18.0215	0.8013	24.7415
7.13	2.4256	1.8999	36.0565	28.2414	0.7833	36.8561
7.20	1.7884	1.3730	26.5847	20.4088	0.7677	26.4549
7.27	2.0427	1.5776	30.3647	23.4509	0.7723	31.0862
7.33	2.3314	1.8479	34.6558	27.4688	0.7926	37.0320
7.40	2.2335	1.8129	33.2007	26.9486	0.8117	36.2220
7.47	2.4297	1.9680	36.1165	29.2543	0.8100	39.6375
7.53	1.9569	1.6118	29.0893	23.9585	0.8236	32.9932
7.60	2.2215	1.8856	33.0220	28.0290	0.8488	38.3244
7.67	2.3805	2.0473	35.3864	30.4327	0.8600	41.4426
7.73	1.8500	1.5906	27.5005	23.6448	0.8598	32.4947

7.80	1.3950	1.2353	20.7363	18.3630	0.8855	25.2617
7.87	1.8349	1.6436	27.2761	24.4318	0.8957	33.6106
7.93	2.0300	1.8049	30.1764	26.8300	0.8891	36.2070
8.00	2.1818	1.9147	32.4317	28.4623	0.8776	38.6421
8.07	2.1015	1.8311	31.2390	27.2192	0.8713	38.0278
8.13	2.0953	1.8925	31.1467	28.1318	0.9032	39.2621
8.20	1.6174	1.4941	24.0427	22.2099	0.9238	30.8057
8.27	1.8757	1.7015	27.8815	25.2929	0.9072	35.0098
8.33	1.9074	1.7444	28.3530	25.9305	0.9146	34.2049
8.40	1.2111	1.0545	18.0026	15.6751	0.8707	21.1324
8.47	2.0364	1.8473	30.2714	27.4595	0.9071	36.5440
8.53	2.2912	2.0584	34.0582	30.5978	0.8984	39.1722
8.60	2.5714	2.2476	38.2229	33.4101	0.8741	45.4054
8.67	2.1612	1.9222	32.1259	28.5734	0.8894	41.1579
8.73	1.8484	1.6990	27.4764	25.2551	0.9192	36.8511
8.80	1.6478	1.5372	24.4950	22.8508	0.9329	33.1989
8.87	1.1778	1.1079	17.5076	16.4685	0.9407	24.1347
8.93	2.7078	2.5195	40.2507	37.4524	0.9305	51.5228
9.00	1.8415	1.7247	27.3732	25.6374	0.9366	34.4251
9.07	1.5917	1.4840	23.6610	22.0598	0.9323	31.5060
9.13	2.2548	2.1884	33.5167	32.5299	0.9706	43.8991
9.20	1.9984	1.8840	29.7065	28.0051	0.9427	37.2333
9.27	2.0577	1.8541	30.5870	27.5610	0.9011	37.6462
9.33	1.3072	1.1731	19.4309	17.4375	0.8974	24.4633
9.40	1.8051	1.5939	26.8329	23.6934	0.8830	33.5192
9.47	2.0425	1.8940	30.3614	28.1544	0.9273	38.6528
9.53	0.9762	0.8500	14.5110	12.6346	0.8707	18.5160
9.60	1.5038	1.4077	22.3534	20.9256	0.9361	26.9690
9.67	2.2363	1.8898	33.2425	28.0909	0.8450	34.6455
9.73	3.1916	2.5783	47.4424	38.3260	0.8078	51.8247
9.80	1.5647	1.3413	23.2584	19.9376	0.8572	27.3441
9.87	2.0440	1.7974	30.3835	26.7179	0.8794	35.4170
9.93	2.2558	1.9983	33.5329	29.7040	0.8858	40.5734
10.00	2.5396	2.2439	37.7501	33.3553	0.8836	46.5041
10.07	2.2043	1.9610	32.7660	29.1495	0.8896	41.2812
10.13	1.9353	1.7537	28.7680	26.0680	0.9061	37.3493
10.20	1.9634	1.7960	29.1854	26.6974	0.9147	38.6208
10.27	1.9904	1.8161	29.5871	26.9954	0.9124	38.8434
10.33	2.0480	1.8639	30.4428	27.7059	0.9101	39.6539
10.40	1.9701	1.7890	29.2859	26.5932	0.9081	38.2238

10.47	1.8622	1.7042	27.6817	25.3323	0.9151	36.7251
10.53	2.2260	2.0335	33.0885	30.2273	0.9135	43.7743
10.60	2.0581	1.8460	30.5935	27.4402	0.8969	39.7381
10.67	2.0047	1.7783	29.7994	26.4349	0.8871	38.5308
10.73	1.8833	1.6759	27.9943	24.9117	0.8899	37.0320
10.80	1.6224	1.4475	24.1163	21.5172	0.8922	32.8191
10.87	1.7349	1.5906	25.7887	23.6435	0.9168	35.7386
10.93	1.4763	1.3416	21.9451	19.9432	0.9088	28.7882
11.00	1.9531	1.7079	29.0327	25.3884	0.8745	36.0307
11.07	2.2230	1.9068	33.0443	28.3442	0.8578	40.4813
11.13	2.2727	1.9957	33.7828	29.6665	0.8782	42.0577
11.20	1.8849	1.6676	28.0193	24.7892	0.8847	35.5171
11.27	2.1306	1.8532	31.6707	27.5473	0.8698	39.6375
11.33	1.6875	1.4954	25.0851	22.2290	0.8861	31.2831
11.40	1.4320	1.2470	21.2868	18.5371	0.8708	26.3351
11.47	2.1416	1.8603	31.8349	27.6537	0.8687	39.8332
11.53	2.2305	1.9346	33.1555	28.7573	0.8673	39.2405
11.60	2.5768	2.1430	38.3035	31.8561	0.8317	44.0944
11.67	1.8296	1.5698	27.1960	23.3344	0.8580	33.0113
11.73	1.2638	0.9989	18.7866	14.8481	0.7904	23.4437
11.80	1.5762	1.5546	23.4300	23.1096	0.9863	33.8305
11.87	1.9336	1.7781	28.7432	26.4317	0.9196	35.8491
11.93	2.5050	2.1529	37.2370	32.0021	0.8594	41.4826
12.00	2.4946	2.0714	37.0824	30.7913	0.8303	42.4895
12.07	1.7873	1.5023	26.5680	22.3318	0.8406	32.2017
12.13	1.7379	1.5176	25.8338	22.5588	0.8732	34.1372
12.20	2.4631	2.1813	36.6137	32.4247	0.8856	46.3092
12.27	2.0215	1.7757	30.0499	26.3949	0.8784	37.8579
12.33	2.0578	1.8248	30.5887	27.1259	0.8868	39.4526
12.40	1.9473	1.7404	28.9462	25.8710	0.8938	38.0383
12.47	2.3374	2.0448	34.7447	30.3949	0.8748	45.5856
12.53	2.0881	1.8506	31.0398	27.5095	0.8863	41.4426
12.60	1.9259	1.6964	28.6287	25.2166	0.8808	37.6099
12.67	2.0136	1.7529	29.9318	26.0569	0.8705	39.4308
12.73	2.1052	1.8659	31.2931	27.7357	0.8863	43.0847
12.80	1.7885	1.6280	26.5853	24.1999	0.9103	39.4580
12.87	1.5855	1.4685	23.5683	21.8290	0.9262	32.3068
12.93	1.5857	1.4517	23.5718	21.5787	0.9154	31.5893
13.00	2.1940	1.9623	32.6135	29.1691	0.8944	44.2896

**One cycling transition**

Last Name	First Name	D.O.B	Weight	Height	Temperature	Date
Navalta	James	07-15-71	161.0 Lbs	69.0 inches	25.5 degree C	03-09-1998

TIME(min)	VO2(L)	VCO2(L)	VO2(Kg)	VCO2(Kg)	RER	VE(stpd)
0.13	1.0043	0.8805	13.7227	12.0320	0.8768	26.1544
0.20	0.7301	0.6527	9.9769	8.9186	0.8939	17.3068
0.27	1.0281	0.8991	14.0492	12.2856	0.8745	22.1397
0.33	1.0141	0.8688	13.8574	11.8717	0.8567	20.7308
0.40	0.8502	0.7197	11.6182	9.8347	0.8465	17.2974
0.47	0.8538	0.7222	11.6662	9.8681	0.8459	17.5033
0.53	0.6921	0.5927	9.4571	8.0986	0.8564	14.4875
0.60	0.5158	0.4495	7.0483	6.1428	0.8715	11.0698
0.67	0.7678	0.6626	10.4919	9.0545	0.8630	17.5009
0.73	0.6617	0.5830	9.0415	7.9668	0.8811	15.6883
0.80	0.6538	0.5770	8.9339	7.8845	0.8825	16.0884
0.87	0.5677	0.5141	7.7579	7.0252	0.9056	14.6827
0.93	0.5984	0.5598	8.1771	7.6491	0.9354	16.1016
1.00	0.2952	0.2816	4.0338	3.8475	0.9538	8.2532
1.07	0.8037	0.7793	10.9828	10.6494	0.9696	24.1524
1.13	0.5475	0.5463	7.4809	7.4656	0.9980	16.8014
1.20	1.0600	1.0826	14.4846	14.7933	1.0213	30.2705
1.27	0.7224	0.6890	9.8713	9.4156	0.9538	17.3956
1.33	0.9194	0.8202	12.5636	11.2081	0.8921	19.9284
1.40	1.2166	1.0285	16.6242	14.0544	0.8454	24.0550
1.47	0.7354	0.6060	10.0483	8.2806	0.8241	13.9768
1.53	1.0611	0.8454	14.4995	11.5523	0.7967	18.8059
1.60	1.0296	0.7885	14.0690	10.7750	0.7659	17.5991
1.67	1.0160	0.7655	13.8833	10.4602	0.7534	16.2000
1.73	1.9176	1.4272	26.2028	19.5020	0.7443	28.7737
1.80	1.8045	1.2910	24.6571	17.6408	0.7154	26.1330
1.87	1.8363	1.3255	25.0930	18.1118	0.7218	25.9390
1.93	1.2045	0.8539	16.4591	11.6683	0.7089	16.0972
2.00	2.0731	1.4426	28.3281	19.7125	0.6959	26.8659
2.07	1.8114	1.2676	24.7527	17.3218	0.6998	23.7401
2.13	2.2461	1.6053	30.6922	21.9360	0.7147	31.3852
2.20	2.1724	1.6035	29.6848	21.9116	0.7381	31.3810
2.27	2.2440	1.6730	30.6630	22.8602	0.7455	33.0953
2.33	2.5706	1.9875	35.1255	27.1579	0.7732	38.8186
2.40	1.5645	1.2248	21.3783	16.7363	0.7829	24.5449



2.47	1.9097	1.5329	26.0958	20.9469	0.8027	30.7817
2.53	1.7062	1.4005	23.3144	19.1376	0.8208	28.3790
2.60	1.9297	1.6116	26.3682	22.0220	0.8352	31.7876
2.67	1.5179	1.2637	20.7410	17.2686	0.8326	25.5299
2.73	1.8984	1.6122	25.9407	22.0294	0.8492	30.9744
2.80	1.8261	1.5275	24.9535	20.8730	0.8365	28.9868
2.87	2.3771	1.9441	32.4819	26.5648	0.8178	36.0371
2.93	1.8020	1.4588	24.6232	19.9344	0.8096	27.8683
3.00	2.5280	2.1301	34.5440	29.1064	0.8426	40.8466
3.07	1.6792	1.4139	22.9462	19.3202	0.8420	26.5785
3.13	1.3596	1.1461	18.5787	15.6608	0.8429	21.5241
3.20	2.4353	2.0594	33.2767	28.1412	0.8457	38.0348
3.27	2.4452	2.0062	33.4123	27.4145	0.8205	37.0185
3.33	1.7952	1.4316	24.5301	19.5622	0.7975	27.7450
3.40	2.1082	1.7945	28.8076	24.5216	0.8512	34.4124
3.47	2.1836	1.7923	29.8383	24.4914	0.8208	34.4031
3.53	1.9137	1.5941	26.1497	21.7832	0.8330	31.4430
3.60	1.7209	1.5020	23.5159	20.5236	0.8728	28.3404
3.67	0.6975	0.5888	9.5311	8.0451	0.8441	10.5523
3.73	2.3966	1.9995	32.7486	27.3230	0.8343	35.9022
3.80	1.9139	1.5980	26.1523	21.8364	0.8350	28.5647
3.87	1.9222	1.5706	26.2655	21.4615	0.8171	29.7757
3.93	2.5438	2.1250	34.7598	29.0374	0.8354	38.1892
4.00	2.3090	1.9265	31.5518	26.3244	0.8343	34.5901
4.07	2.3325	1.9133	31.8731	26.1448	0.8203	35.1742
4.13	1.9720	1.6409	26.9467	22.4220	0.8321	30.1658
4.20	2.0879	1.6604	28.5301	22.6887	0.7953	31.8708
4.27	2.3955	1.9892	32.7340	27.1819	0.8304	36.2039
4.33	2.3348	1.8979	31.9040	25.9337	0.8129	35.7772
4.40	2.1492	1.7568	29.3686	24.0054	0.8174	34.7533
4.47	1.7059	1.4578	23.3107	19.9202	0.8546	30.3379
4.53	2.3104	1.9954	31.5702	27.2659	0.8637	37.9727
4.60	2.9616	2.4853	40.4687	33.9611	0.8392	48.8286
4.67	1.6678	1.4149	22.7893	19.3340	0.8484	30.9575
4.73	1.7346	1.5290	23.7031	20.8934	0.8815	30.3379
4.80	2.1592	1.8401	29.5050	25.1443	0.8522	40.3051
4.87	2.5115	2.2249	34.3182	30.4019	0.8859	47.3345
4.93	1.3812	1.2220	18.8735	16.6978	0.8847	26.0254
5.00	2.1154	1.8987	28.9055	25.9447	0.8976	36.7972
5.07	1.1304	1.0237	15.4469	13.9891	0.9056	23.9152

5.13	2.0222	1.7608	27.6328	24.0607	0.8707	33.2874
5.20	2.2347	1.8361	30.5362	25.0895	0.8216	33.9729
5.27	1.9721	1.6284	26.9479	22.2515	0.8257	31.1671
5.33	1.9158	1.5237	26.1786	20.8205	0.7953	32.3823
5.40	1.5941	1.3635	21.7833	18.6317	0.8553	28.9473
5.47	2.0601	1.8290	28.1506	24.9919	0.8878	34.5430
5.53	1.8609	1.5610	25.4281	21.3308	0.8389	29.7352
5.60	2.1439	1.7767	29.2950	24.2779	0.8287	33.9729
5.67	2.1817	1.8390	29.8117	25.1292	0.8429	34.9637
5.73	2.0463	1.7064	27.9617	23.3166	0.8339	33.5571
5.80	2.2040	1.6924	30.1174	23.1257	0.7679	36.1595
5.87	2.0107	1.7793	27.4748	24.3141	0.8850	34.3515
5.93	2.3439	1.9929	32.0288	27.2321	0.8502	35.3704
6.00	2.3637	1.8854	32.2984	25.7639	0.7977	33.7627
6.07	2.1122	1.6998	28.8627	23.2270	0.8047	31.7443
6.13	1.9567	1.5592	26.7374	21.3057	0.7969	30.5430
6.20	2.2327	1.9162	30.5085	26.1844	0.8583	35.7529
6.27	1.7737	1.4660	24.2366	20.0323	0.8265	29.3494
6.33	2.0794	1.7418	28.4135	23.8008	0.8377	33.5617
6.40	2.0662	1.7209	28.2333	23.5149	0.8329	33.3835
6.47	2.2466	1.8644	30.6984	25.4760	0.8299	35.1790
6.53	1.8784	1.5008	25.6678	20.5082	0.7990	31.3639
6.60	2.7791	2.3349	37.9752	31.9048	0.8401	44.6028
6.67	2.5462	2.0887	34.7928	28.5417	0.8203	41.1985
6.80	2.1175	1.8029	28.9349	24.6353	0.8514	33.8585
6.87	3.6507	2.9685	49.8853	40.5640	0.8131	56.2788
6.93	1.8232	1.5004	24.9134	20.5019	0.8229	29.3334
7.00	1.8276	1.5445	24.9731	21.1055	0.8451	32.5835
7.07	1.7461	1.4583	23.8603	19.9267	0.8351	28.3442
7.13	2.6660	2.1803	36.4296	29.7931	0.8178	41.8905
7.20	2.4099	1.9863	32.9298	27.1426	0.8243	41.0812
7.27	1.6992	1.4511	23.2182	19.8281	0.8540	31.9583
7.33	1.7627	1.5403	24.0860	21.0473	0.8738	31.0538
7.40	2.0076	1.7298	27.4332	23.6364	0.8616	31.9757
7.47	2.6598	2.1652	36.3455	29.5866	0.8140	42.6227
7.53	1.9690	1.6512	26.9051	22.5627	0.8386	35.0546
7.60	1.6461	1.4357	22.4933	19.6178	0.8722	29.1206
7.67	2.0669	1.8116	28.2434	24.7546	0.8765	35.5569
7.73	2.4253	2.0143	33.1405	27.5245	0.8305	38.3693
7.80	1.9069	1.5982	26.0566	21.8383	0.8381	31.8361

7.87	2.1476	1.8671	29.3461	25.5137	0.8694	37.3801
7.93	2.1646	1.8687	29.5779	25.5357	0.8633	36.5712
8.00	2.0274	1.6903	27.7030	23.0972	0.8337	33.6714
8.07	1.5663	1.3524	21.4034	18.4798	0.8634	27.0477
8.13	2.3438	2.0171	32.0266	27.5634	0.8606	39.3214
8.20	2.3990	2.0329	32.7820	27.7787	0.8474	41.1929
8.27	1.6482	1.3857	22.5215	18.9350	0.8408	28.1356
8.33	2.6216	2.2611	35.8227	30.8966	0.8625	43.9056
8.40	2.4041	2.0111	32.8506	27.4807	0.8365	42.2033
8.47	1.7330	1.4953	23.6813	20.4331	0.8628	30.7356
8.53	2.0560	1.8002	28.0939	24.5986	0.8756	35.7533
8.60	2.6548	2.2265	36.2773	30.4246	0.8387	45.2998
8.67	1.4324	1.2341	19.5731	16.8633	0.8616	25.9249
8.73	1.7483	1.5504	23.8896	21.1862	0.8868	30.3421
8.80	3.2214	2.7190	44.0185	37.1545	0.8441	53.0556
8.87	1.9717	1.6564	26.9418	22.6337	0.8401	33.3607
8.93	2.4462	2.0858	33.4263	28.5022	0.8527	44.1889
9.00	2.1883	1.8990	29.9027	25.9486	0.8678	40.7910
9.07	1.7119	1.4908	23.3929	20.3710	0.8708	32.1611
9.13	1.8085	1.6237	24.7130	22.1873	0.8978	33.3744
9.20	1.8707	1.6077	25.5627	21.9680	0.8594	32.3471
9.27	1.5993	1.3630	21.8536	18.6254	0.8523	28.7546
9.33	2.9736	2.6172	40.6337	35.7628	0.8801	51.8774
9.40	2.0269	1.6884	27.6968	23.0719	0.8330	32.3471
9.47	2.0343	1.6911	27.7974	23.1085	0.8313	33.0628
9.53	2.4607	2.0382	33.6245	27.8506	0.8283	40.5605
9.60	2.0377	1.6780	27.8438	22.9292	0.8235	34.2791
9.67	1.7042	1.4623	23.2874	19.9820	0.8581	30.0571
9.73	2.8930	2.4723	39.5311	33.7835	0.8546	49.1033
9.80	1.8761	1.5578	25.6358	21.2866	0.8303	31.9540
9.87	2.1555	1.8279	29.4541	24.9778	0.8480	38.2792
9.93	2.4277	1.9968	33.1733	27.2858	0.8225	42.3928
10.00	1.9454	1.6582	26.5826	22.6588	0.8524	35.4674
10.07	1.6536	1.4428	22.5955	19.7156	0.8725	29.6563
10.13	1.9812	1.7128	27.0727	23.4043	0.8645	32.8445
10.20	1.8295	1.4677	24.9989	20.0550	0.8022	29.1206
10.27	3.1732	2.5477	43.3611	34.8134	0.8029	52.8003
10.33	1.8012	1.5244	24.6125	20.8309	0.8464	31.3340
10.40	1.9468	1.6422	26.6028	22.4395	0.8435	34.4614
10.47	2.6296	2.2874	35.9328	31.2563	0.8699	46.9197

10.53	1.7954	1.5355	24.5331	20.9820	0.8553	30.3462
10.60	2.0424	1.7062	27.9084	23.3144	0.8354	34.7486
10.67	1.9652	1.6773	26.8532	22.9202	0.8535	34.5477
10.73	2.8575	2.4134	39.0466	32.9781	0.8446	49.9134
10.80	1.9278	1.6196	26.3426	22.1316	0.8401	33.5663
10.87	1.5231	1.2897	20.8128	17.6226	0.8467	26.6174
10.93	2.9426	2.4878	40.2095	33.9953	0.8455	50.6164
11.00	1.7480	1.4634	23.8863	19.9965	0.8372	29.6227

**Two cycling transitions**

Last Name	First Name	D.O.B	Weight	Height	Temp	Date
Navalta	James	07-15-71	161.0 Lbs	69.0 in	21.3 deg C	04-08-1998

TIME(min)	VO2(L)	VCO2(L)	VO2(Kg)	VCO2(Kg)	RER	VE(stpd)
0.13	0.2753	0.4271	3.7621	5.8362	1.5513	24.3602
0.20	0.0498	0.0517	0.6804	0.7069	1.0390	1.8429
0.27	1.2267	1.2597	16.7625	17.2126	1.0269	29.2894
0.33	0.9912	0.9207	13.5449	12.5808	0.9288	20.6869
0.40	0.2838	0.2570	3.8787	3.5112	0.9053	5.7286
0.47	0.8071	0.7428	11.0281	10.1506	0.9204	15.9738
0.53	0.8233	0.7393	11.2494	10.1027	0.8981	16.1764
0.60	0.1466	0.1312	2.0037	1.7933	0.8950	2.8651
0.67	0.5167	0.4536	7.0602	6.1977	0.8778	10.0335
0.73	0.8740	0.7748	11.9425	10.5879	0.8866	17.3905
0.80	0.7181	0.6407	9.8123	8.7548	0.8922	14.5262
0.87	0.1277	0.1161	1.7456	1.5859	0.9085	2.6616
0.93	0.7604	0.6907	10.3899	9.4380	0.9084	15.9672
1.00	0.7577	0.6896	10.3543	9.4232	0.9101	15.9606
1.07	0.6844	0.6228	9.3526	8.5105	0.9100	14.5322
1.13	1.1838	1.0830	16.1758	14.7992	0.9149	25.9979
1.20	0.3332	0.3152	4.5529	4.3076	0.9461	7.5763
1.27	0.6036	0.5661	8.2482	7.7357	0.9379	12.9971
1.33	1.1857	1.1149	16.2016	15.2344	0.9403	24.4201
1.40	1.0541	0.9728	14.4039	13.2932	0.9229	20.8744
1.47	1.2162	1.0802	16.6192	14.7607	0.8882	22.7163
1.53	0.6752	0.5770	9.2257	7.8852	0.8547	12.1734
1.60	0.6311	0.5261	8.6240	7.1891	0.8336	10.9488
1.67	1.3282	1.0902	18.1495	14.8978	0.8208	22.9273
1.73	1.1884	0.9686	16.2395	13.2359	0.8150	20.2633
1.80	1.4982	1.1876	20.4718	16.2279	0.7927	24.7662
1.87	0.1666	0.1273	2.2766	1.7393	0.7640	2.6627
1.93	1.4641	1.1092	20.0063	15.1564	0.7576	22.5210
2.00	1.7470	1.3258	23.8716	18.1162	0.7589	25.4967
2.07	0.9941	0.7439	13.5845	10.1648	0.7483	13.9182
2.13	1.4953	1.1095	20.4326	15.1602	0.7420	21.2955
2.20	1.7170	1.3136	23.4628	17.9494	0.7650	25.5814
2.27	1.7372	1.3494	23.7375	18.4389	0.7768	26.2026
2.33	1.0634	0.8311	14.5316	11.3570	0.7815	16.2810
2.40	2.3368	1.8646	31.9310	25.4785	0.7979	36.6325

2.47	1.2702	1.0215	17.3566	13.9590	0.8042	20.2689
2.53	0.4498	0.3574	6.1466	4.8841	0.7946	7.1628
2.60	1.6002	1.3103	21.8663	17.9047	0.8188	26.6046
2.67	1.5465	1.2853	21.1329	17.5630	0.8311	24.6707
2.73	1.5904	1.2909	21.7328	17.6403	0.8117	25.7932
2.80	1.5380	1.2884	21.0160	17.6057	0.8377	25.1895
2.87	1.5402	1.2925	21.0465	17.6621	0.8392	25.3943
2.93	1.6469	1.4208	22.5049	19.4149	0.8627	27.6432
3.00	2.2753	1.9407	31.0906	26.5190	0.8530	37.4667
3.07	0.5182	0.4377	7.0812	5.9806	0.8446	8.7013
3.13	2.0549	1.7454	28.0798	23.8498	0.8494	35.6919
3.20	1.3949	1.1997	19.0611	16.3929	0.8600	23.7560
3.27	1.6410	1.3684	22.4234	18.6986	0.8339	27.3134
3.33	1.0263	0.8602	14.0236	11.7544	0.8382	17.3953
3.40	1.4658	1.2517	20.0297	17.1044	0.8540	24.9847
3.47	1.3707	1.1605	18.7302	15.8581	0.8467	23.3270
3.53	1.1404	0.9798	15.5836	13.3891	0.8592	19.4607
3.60	1.9714	1.7024	26.9384	23.2627	0.8636	33.3812
3.67	1.9807	1.6528	27.0649	22.5852	0.8345	33.2558
3.73	1.5611	1.3500	21.3320	18.4476	0.8648	27.6355
3.80	1.3632	1.1993	18.6276	16.3884	0.8798	24.1555
3.87	1.1447	0.9935	15.6417	13.5754	0.8679	20.4623
3.93	1.4766	1.3149	20.1772	17.9677	0.8905	26.4036
4.00	1.2865	1.1117	17.5795	15.1915	0.8642	21.6930
4.07	1.0194	0.8654	13.9302	11.8257	0.8489	17.3953
4.13	1.2385	1.0555	16.9242	14.4226	0.8522	22.5272
4.20	2.0163	1.7887	27.5514	24.4418	0.8871	35.3851
4.27	2.0483	1.7081	27.9896	23.3399	0.8339	33.5906
4.33	1.2446	1.0191	17.0071	13.9262	0.8188	21.0995
4.40	1.3418	1.1397	18.3346	15.5741	0.8494	24.5615
4.47	0.8807	0.7738	12.0340	10.5742	0.8787	16.3766
4.53	1.6818	1.4916	22.9809	20.3819	0.8869	29.9814
4.60	1.0879	0.9172	14.8662	12.5331	0.8431	17.9144
4.67	1.8076	1.5110	24.7005	20.6476	0.8359	30.1004
4.73	1.9820	1.7119	27.0834	23.3918	0.8637	32.9215
4.80	1.2784	1.0824	17.4687	14.7905	0.8467	20.4623
4.87	1.5630	1.3154	21.3582	17.9744	0.8416	25.5672
4.93	1.2357	1.0569	16.8860	14.4427	0.8553	20.6640
5.00	2.0264	1.7389	27.6903	23.7620	0.8581	34.5717
5.07	1.8302	1.5873	25.0089	21.6894	0.8673	31.8409

5.13	1.4640	1.2428	20.0050	16.9827	0.8489	24.9813
5.20	1.3678	1.1792	18.6898	16.1134	0.8621	23.8221
5.27	1.7101	1.4814	23.3685	20.2433	0.8663	30.0796
5.33	0.9794	0.8421	13.3832	11.5067	0.8598	17.3977
5.40	1.8480	1.6707	25.2527	22.8291	0.9040	34.5526
5.47	1.5063	1.3059	20.5829	17.8447	0.8670	25.8598
5.53	1.6607	1.4405	22.6932	19.6845	0.8674	28.6393
5.60	1.6111	1.3911	22.0154	19.0081	0.8634	27.8210
5.67	0.9164	0.7934	12.5228	10.8410	0.8657	16.3744
5.73	1.0907	0.9779	14.9037	13.3622	0.8966	20.4566
5.80	2.0810	1.8704	28.4360	25.5585	0.8988	38.0546
5.87	1.4164	1.2486	19.3552	17.0614	0.8815	24.5547
5.93	1.2223	1.0522	16.7025	14.3784	0.8609	20.7750
6.00	1.4565	1.2742	19.9030	17.4120	0.8748	25.1582
6.07	1.2701	1.0977	17.3560	14.9998	0.8642	21.8886
6.13	2.0039	1.6829	27.3826	22.9967	0.8398	33.3259
6.20	1.9191	1.6368	26.2235	22.3663	0.8529	32.7035
6.27	1.3970	1.1855	19.0899	16.1989	0.8486	23.7330
6.33	1.4248	1.2253	19.4689	16.7436	0.8600	24.5310
6.40	2.2913	1.9521	31.3099	26.6750	0.8520	39.5562
6.47	1.4609	1.2579	19.9621	17.1888	0.8611	25.1582
6.53	1.4099	1.1974	19.2661	16.3613	0.8492	23.8517
6.60	1.8780	1.5747	25.6617	21.5173	0.8385	31.0898
6.67	2.4613	2.1045	33.6321	28.7573	0.8551	41.5097
6.73	1.4979	1.2848	20.4682	17.5567	0.8578	25.1686
6.80	1.7251	1.5023	23.5732	20.5284	0.8708	29.2570
6.87	2.3881	1.9944	32.6328	27.2529	0.8351	38.7653
6.93	1.5132	1.2827	20.6772	17.5280	0.8477	25.7575
7.00	2.0675	1.8209	28.2514	24.8815	0.8807	35.5994
7.07	2.1140	1.8765	28.8866	25.6416	0.8877	36.9395
7.13	1.4889	1.3197	20.3457	18.0330	0.8863	26.1845
7.20	2.4668	2.2100	33.7078	30.1990	0.8959	42.7071
7.27	1.6724	1.4546	22.8522	19.8762	0.8698	28.9181
7.33	2.4828	2.2054	33.9268	30.1355	0.8883	43.9757
7.40	1.5158	1.3678	20.7125	18.6898	0.9023	26.6885
7.47	2.5646	2.2867	35.0446	31.2468	0.8916	44.3602
7.53	1.6118	1.4357	22.0244	19.6177	0.8907	28.6274
7.60	1.8594	1.6860	25.4082	23.0385	0.9067	34.0603
7.67	2.3869	2.1508	32.6164	29.3904	0.9011	42.2984
7.73	1.3488	1.2110	18.4302	16.5479	0.8979	23.5154

7.80	1.7052	1.6085	23.3012	21.9801	0.9433	30.1527
7.87	2.6621	2.3845	36.3764	32.5828	0.8957	46.3917
7.93	1.8486	1.7524	25.2610	23.9454	0.9479	31.4641
8.00	1.7368	1.5149	23.7320	20.7001	0.8722	29.8502
8.07	1.9749	1.8570	26.9862	25.3749	0.9403	33.9205
8.13	1.6618	1.5020	22.7073	20.5249	0.9039	29.1386
8.20	2.6280	2.3972	35.9106	32.7571	0.9122	45.0633
8.27	2.0934	1.8829	28.6057	25.7296	0.8995	35.7991
8.33	1.5964	1.4234	21.8140	19.4500	0.8916	27.6126
8.40	1.6409	1.4907	22.4221	20.3697	0.9085	27.8133
8.47	3.1802	2.7727	43.4564	37.8880	0.8719	52.9168
8.53	1.5106	1.3167	20.6412	17.9918	0.8716	25.5672
8.60	2.5453	2.2573	34.7800	30.8458	0.8869	44.9673
8.67	1.9138	1.7798	26.1514	24.3200	0.9300	35.5601
8.73	2.0278	1.8875	27.7087	25.7916	0.9308	35.6820
8.80	2.3756	2.0965	32.4614	28.6480	0.8825	41.9303
8.87	1.9827	1.8363	27.0929	25.0916	0.9261	37.5120
8.93	1.9359	1.8093	26.4533	24.7229	0.9346	37.4964
9.00	2.1598	2.0843	29.5128	28.4810	0.9650	42.6226
9.07	1.2458	1.1942	17.0234	16.3187	0.9586	23.5089
9.13	3.1249	2.8510	42.7009	38.9575	0.9123	56.0124
9.20	1.2748	1.1584	17.4201	15.8290	0.9087	23.3077
9.27	1.8334	1.7171	25.0522	23.4639	0.9366	33.1824
9.33	2.7682	2.5087	37.8263	34.2800	0.9062	47.2026
9.40	2.0160	1.7939	27.5479	24.5126	0.8898	35.2438
9.47	2.1016	1.9150	28.7179	26.1672	0.9112	38.8032
9.53	1.9674	1.8183	26.8844	24.8469	0.9242	35.7596
9.60	2.6242	2.3885	35.8591	32.6380	0.9102	49.2460
9.67	1.3113	1.2099	17.9186	16.5331	0.9227	24.1022
9.73	2.4861	2.2769	33.9715	31.1132	0.9159	43.7047
9.80	2.3488	2.0868	32.0954	28.5155	0.8885	40.9589
9.87	1.3321	1.2352	18.2021	16.8779	0.9273	24.5073
9.93	2.8445	2.6206	38.8688	35.8088	0.9213	50.7384
10.00	1.5963	1.4439	21.8133	19.7307	0.9045	28.1201
10.07	2.8815	2.5742	39.3740	35.1758	0.8934	52.2678
10.13	1.6290	1.4453	22.2590	19.7490	0.8872	29.6457
10.20	2.6281	2.4595	35.9125	33.6081	0.9358	49.2392
10.27	1.1548	1.0592	15.7794	14.4741	0.9173	21.3986
10.33	2.6455	2.4341	36.1496	33.2611	0.9201	47.8222
10.40	1.8769	1.7079	25.6471	23.3378	0.9100	32.3790



10.47	2.2296	1.9845	30.4669	27.1171	0.8901	38.7225
10.53	2.0165	1.8183	27.5540	24.8459	0.9017	36.4747
10.60	2.2407	2.0114	30.6177	27.4851	0.8977	39.3247
10.67	1.9571	1.7277	26.7428	23.6080	0.8828	34.9374
10.73	1.7971	1.6148	24.5569	22.0654	0.8985	32.2635
10.80	2.3967	2.1177	32.7499	28.9378	0.8836	43.0861
10.87	2.0667	1.7857	28.2409	24.4003	0.8640	37.5120
10.93	2.5657	2.2940	35.0597	31.3465	0.8941	50.2469
11.00	1.4587	1.3588	19.9321	18.5672	0.9315	28.9391
11.07	2.4777	2.3354	33.8572	31.9118	0.9425	48.9058
11.13	1.3495	1.2705	18.4409	17.3612	0.9415	24.9616
11.20	2.8230	2.5404	38.5757	34.7138	0.8999	48.8093
11.27	1.6737	1.4942	22.8698	20.4175	0.8928	29.2126
11.33	2.3482	2.0479	32.0871	27.9836	0.8721	39.9210
11.40	2.5195	2.2078	34.4284	30.1683	0.8763	44.5111
11.47	2.3989	2.1478	32.7807	29.3488	0.8953	44.5585
11.53	1.6908	1.5487	23.1041	21.1618	0.9159	31.9961
11.60	1.9728	1.8482	26.9579	25.2552	0.9368	36.4546
11.67	2.6639	2.3553	36.4013	32.1843	0.8842	48.1155
11.73	1.4977	1.3591	20.4661	18.5711	0.9074	27.5669
11.80	2.8281	2.5755	38.6452	35.1938	0.9107	51.2548
11.87	1.4878	1.3195	20.3296	18.0308	0.8869	26.7649
11.93	1.8251	1.6710	24.9392	22.8329	0.9155	33.1870
12.00	2.8089	2.4298	38.3823	33.2017	0.8650	47.7837
12.07	1.6567	1.4351	22.6377	19.6102	0.8663	29.1389
12.13	2.7621	2.4853	37.7430	33.9609	0.8998	50.0565
12.20	1.5023	1.3631	20.5282	18.6257	0.9073	27.2068
12.27	2.9130	2.6347	39.8044	36.0018	0.9045	53.3328
12.33	1.8896	1.7406	25.8213	23.7841	0.9211	35.1271
12.40	2.0494	1.8316	28.0047	25.0284	0.8937	38.5990
12.47	1.4167	1.3071	19.3591	17.8605	0.9226	26.9766
12.53	2.5311	2.2922	34.5869	31.3219	0.9056	46.3533
12.60	2.5693	2.2653	35.1082	30.9542	0.8817	45.8554
12.67	1.5637	1.3910	21.3670	19.0076	0.8896	29.0083
12.73	2.0613	1.8656	28.1674	25.4927	0.9050	38.8247
12.80	1.6897	1.5526	23.0895	21.2156	0.9188	31.1766
12.87	2.9081	2.5328	39.7381	34.6100	0.8710	50.8597
12.93	1.7807	1.5813	24.3331	21.6079	0.8880	31.7530
13.00	2.2179	1.9808	30.3066	27.0662	0.8931	40.1362

**Stepping and cycling transitions**

Last Name	First Name	D.O.B	Weight	Height	Temp	Date
Navalta	James	07-15-71	161.0 Lbs	69.0 in	28.6 deg C	03-23-1998

TIME(min)	VO2(L)	VCO2(L)	VO2(Kg)	VCO2(Kg)	RER	VE(stpd)
0.13	0.2991	0.2476	4.0869	3.3831	0.8278	11.9433
0.20	0.5696	0.5123	7.7831	6.9999	0.8994	16.2529
0.27	0.7789	0.6387	10.6440	8.7279	0.8200	17.1410
0.33	0.7868	0.6394	10.7519	8.7374	0.8126	17.0454
0.40	0.6809	0.5713	9.3043	7.8065	0.8390	15.6676
0.47	0.6319	0.5426	8.6346	7.4141	0.8587	15.7655
0.53	0.4850	0.4440	6.6280	6.0666	0.9153	13.1287
0.60	0.6586	0.6280	8.9997	8.5813	0.9535	18.2209
0.67	0.4601	0.4479	6.2869	6.1210	0.9736	12.7385
0.73	0.4803	0.4595	6.5631	6.2787	0.9567	12.9379
0.80	0.5058	0.4935	6.9118	6.7430	0.9756	13.9143
0.87	0.5571	0.5325	7.6125	7.2770	0.9559	15.4738
0.93	0.4132	0.3933	5.6457	5.3744	0.9519	11.7522
1.00	0.1365	0.1290	1.8653	1.7628	0.9450	3.9190
1.07	0.9173	0.8921	12.5339	12.1908	0.9726	24.8756
1.13	0.8542	0.8277	11.6724	11.3100	0.9690	23.3055
1.20	1.1468	1.1461	15.6706	15.6603	0.9993	30.7559
1.27	0.9257	0.9210	12.6497	12.5854	0.9949	23.7004
1.33	0.9792	0.9617	13.3802	13.1410	0.9821	23.5077
1.40	0.7320	0.6937	10.0029	9.4789	0.9476	17.4466
1.47	1.0932	1.0403	14.9387	14.2154	0.9516	24.6764
1.53	1.2352	1.1021	16.8785	15.0594	0.8922	24.9870
1.60	1.2161	0.9952	16.6179	13.5985	0.8183	23.6056
1.67	1.9040	1.4942	26.0176	20.4177	0.7848	35.2758
1.73	1.3473	1.0491	18.4101	14.3348	0.7786	23.8930
1.80	1.2965	0.9877	17.7158	13.4966	0.7618	21.7534
1.87	2.0116	1.5013	27.4877	20.5152	0.7463	32.7060
1.93	1.7502	1.3076	23.9164	17.8673	0.7471	27.4108
2.00	1.8814	1.3496	25.7090	18.4423	0.7173	28.6835
2.07	2.2871	1.6239	31.2526	22.1897	0.7100	35.4526
2.13	1.2917	0.9141	17.6505	12.4913	0.7077	20.1774
2.20	1.8121	1.3001	24.7619	17.7655	0.7175	29.2123
2.27	1.2281	0.9094	16.7816	12.4271	0.7405	19.2057
2.33	3.0348	2.1690	41.4692	29.6379	0.7147	43.1206
2.40	2.3794	1.6223	32.5142	22.1683	0.6818	33.3115

2.47	1.6299	1.1409	22.2726	15.5897	0.7000	24.5070
2.53	1.6764	1.2398	22.9073	16.9407	0.7395	26.2644
2.60	1.6621	1.2354	22.7113	16.8809	0.7433	26.0614
2.67	2.0122	1.4718	27.4958	20.1120	0.7315	29.5845
2.73	1.9029	1.3605	26.0021	18.5905	0.7150	27.8212
2.80	2.3242	1.7192	31.7589	23.4915	0.7397	34.9771
2.87	1.8240	1.3442	24.9239	18.3686	0.7370	27.4330
2.93	2.8807	2.1980	39.3640	30.0350	0.7630	46.0296
3.00	1.3923	1.0769	19.0252	14.7148	0.7734	21.8425
3.07	1.8958	1.4395	25.9049	19.6704	0.7593	29.5885
3.13	2.2942	1.7940	31.3498	24.5140	0.7820	36.0597
3.20	1.8833	1.4356	25.7348	19.6165	0.7623	28.5971
3.27	2.0665	1.5789	28.2385	21.5756	0.7640	31.8333
3.33	1.9315	1.4720	26.3926	20.1149	0.7621	30.1641
3.40	1.2542	0.9618	17.1378	13.1420	0.7668	19.9734
3.47	2.6123	2.0250	35.6957	27.6706	0.7752	40.3385
3.53	2.4936	1.8673	34.0741	25.5156	0.7488	37.3084
3.60	1.5157	1.1595	20.7119	15.8440	0.7650	23.4003
3.67	1.2539	0.9803	17.1334	13.3958	0.7819	19.5871
3.73	2.7611	2.0970	37.7296	28.6540	0.7595	42.3195
3.80	1.4586	1.1323	19.9310	15.4719	0.7763	25.2707
3.87	2.2078	1.6678	30.1681	22.7896	0.7554	32.1358
3.93	2.0888	1.5259	28.5429	20.8510	0.7305	30.7642
4.00	2.6830	2.0549	36.6615	28.0788	0.7659	42.1931
4.07	1.6775	1.3105	22.9218	17.9069	0.7812	26.7436
4.13	2.1551	1.6707	29.4480	22.8291	0.7752	33.4804
4.20	2.0959	1.6093	28.6391	21.9906	0.7679	34.3846
4.27	2.2041	1.7230	30.1182	23.5444	0.7817	36.3487
4.33	1.4825	1.1840	20.2582	16.1788	0.7986	24.4872
4.40	2.2143	1.7577	30.2571	24.0179	0.7938	34.2635
4.47	2.1366	1.6306	29.1958	22.2821	0.7632	32.1315
4.53	1.8225	1.3709	24.9042	18.7326	0.7522	29.6704
4.60	2.3795	1.9029	32.5154	26.0027	0.7997	39.3966
4.67	1.7983	1.4199	24.5727	19.4027	0.7896	29.5805
4.73	1.7273	1.3831	23.6034	18.8994	0.8007	28.6049
4.80	1.5484	1.2149	21.1583	16.6010	0.7846	24.1051
4.87	2.1984	1.7295	30.0401	23.6331	0.7867	33.1022
4.93	2.1067	1.5889	28.7866	21.7111	0.7542	31.5565
5.00	2.4137	1.8376	32.9821	25.1104	0.7613	36.7159
5.07	1.6132	1.2385	22.0435	16.9242	0.7678	25.0715

5.13	1.7318	1.3654	23.6644	18.6573	0.7884	27.0375
5.20	2.5097	1.9447	34.2937	26.5742	0.7749	37.5447
5.27	2.0066	1.5406	27.4200	21.0522	0.7678	31.2498
5.33	1.8507	1.4598	25.2897	19.9480	0.7888	29.3727
5.40	2.0235	1.5611	27.6508	21.3322	0.7715	31.3478
5.47	2.6255	2.0531	35.8763	28.0547	0.7820	41.3510
5.53	1.7150	1.3548	23.4350	18.5121	0.7899	27.4515
5.60	2.0684	1.6590	28.2634	22.6699	0.8021	33.6852
5.67	2.0579	1.6606	28.1209	22.6920	0.8069	33.4804
5.73	1.7146	1.3445	23.4300	18.3724	0.7841	27.4108
5.80	1.4625	1.2102	19.9849	16.5367	0.8275	24.5718
5.87	1.6580	1.3055	22.6561	17.8389	0.7874	24.6797
5.93	2.9838	2.3191	40.7729	31.6902	0.7772	43.2303
6.00	1.3047	0.9947	17.8281	13.5920	0.7624	19.1293
6.07	2.3891	1.8668	32.6456	25.5085	0.7814	38.4886
6.13	1.4593	1.1388	19.9405	15.5616	0.7804	23.5045
6.20	2.9004	2.2810	39.6321	31.1683	0.7864	43.0800
6.27	2.4676	1.8698	33.7185	25.5503	0.7578	37.2104
6.33	1.9490	1.5365	26.6327	20.9953	0.7883	33.1111
6.40	1.5367	1.2500	20.9990	17.0802	0.8134	25.8515
6.47	2.7442	2.2424	37.4978	30.6421	0.8172	44.1867
6.53	2.1219	1.7047	28.9947	23.2942	0.8034	33.1022
6.60	1.6448	1.2973	22.4760	17.7276	0.7887	26.0508
6.67	1.5148	1.2691	20.6985	17.3414	0.8378	24.5004
6.73	3.1059	2.4744	42.4409	33.8123	0.7967	45.4482
6.80	1.9031	1.4919	26.0045	20.3855	0.7839	28.5261
6.87	2.1882	1.7499	29.9005	23.9112	0.7997	35.1730
6.93	2.0699	1.7411	28.2841	23.7917	0.8412	34.5805
7.00	2.7798	2.3215	37.9855	31.7221	0.8351	44.4747
7.07	1.9668	1.6183	26.8749	22.1138	0.8228	33.2980
7.13	2.2351	1.9052	30.5415	26.0342	0.8524	37.4315
7.20	2.5009	2.1472	34.1737	29.3410	0.8586	41.9390
7.27	2.6027	2.1936	35.5654	29.9744	0.8428	45.6502
7.33	2.2664	1.9902	30.9697	27.1952	0.8781	40.3276
7.40	1.9791	1.7177	27.0437	23.4718	0.8679	36.5447
7.47	1.2755	1.1506	17.4295	15.7221	0.9020	23.5045
7.53	2.7043	2.3985	36.9534	32.7741	0.8869	48.2102
7.60	1.8730	1.6494	25.5937	22.5382	0.8806	33.1200
7.67	1.9698	1.7237	26.9162	23.5541	0.8751	34.0999
7.73	2.0756	1.7591	28.3618	24.0371	0.8475	35.2520

7.80	2.3071	1.9555	31.5259	26.7205	0.8476	37.7878
7.87	2.4897	2.0643	34.0205	28.2081	0.8291	40.9591
7.93	2.1942	1.9144	29.9835	26.1601	0.8725	37.7980
8.00	2.5221	2.2246	34.4635	30.3980	0.8820	43.5349
8.07	1.5101	1.3522	20.6355	18.4774	0.8954	26.2573
8.13	3.0238	2.6855	41.3191	36.6963	0.8881	51.6960
8.20	1.3760	1.1983	18.8031	16.3743	0.8708	24.2814
8.27	2.4048	2.1413	32.8604	29.2602	0.8904	42.6134
8.33	1.9123	1.7426	26.1307	23.8120	0.9113	33.2891
8.40	2.5627	2.2337	35.0182	30.5227	0.8716	41.7543
8.47	2.2377	1.9268	30.5775	26.3291	0.8611	38.1174
8.53	2.1781	1.9080	29.7628	26.0724	0.8760	38.3907
8.60	2.1284	1.8682	29.0837	25.5285	0.8778	40.0448
8.67	1.6459	1.5243	22.4902	20.8289	0.9261	31.1393
8.73	2.6793	2.2501	36.6114	30.7467	0.8398	46.4402
8.80	1.4311	1.3298	19.5554	18.1716	0.9292	26.8379
8.87	2.0150	1.8138	27.5344	24.7855	0.9002	35.4622
8.93	2.5763	2.2865	35.2035	31.2440	0.8875	43.1032
9.00	2.1539	1.8483	29.4325	25.2560	0.8581	34.0723
9.07	2.6731	2.2680	36.5271	30.9914	0.8484	44.2549
9.13	1.5484	1.3515	21.1578	18.4678	0.8729	27.0302
9.20	2.8203	2.4789	38.5383	33.8735	0.8790	50.0787
9.27	1.4460	1.2986	19.7587	17.7443	0.8981	26.0754
9.33	2.4405	2.1850	33.3482	29.8572	0.8953	43.0974
9.40	2.8481	2.4313	38.9186	33.2233	0.8537	46.2255
9.47	2.3029	1.9218	31.4682	26.2610	0.8345	39.8705
9.53	2.4395	2.1534	33.3351	29.4249	0.8827	45.6194
9.60	2.2743	1.9791	31.0772	27.0436	0.8702	41.1440
9.67	2.0722	1.8486	28.3162	25.2605	0.8921	39.5819
9.73	2.5888	2.3471	35.3755	32.0726	0.9066	49.7244
9.80	1.3371	1.2199	18.2716	16.6695	0.9123	25.4666
9.87	2.7901	2.4797	38.1255	33.8837	0.8887	48.7653
9.93	2.2273	1.9365	30.4357	26.4619	0.8694	38.0092
10.00	2.5773	2.2227	35.2180	30.3725	0.8624	46.0172
10.07	1.4394	1.2599	19.6693	17.2158	0.8753	25.9494
10.13	2.6330	2.2913	35.9786	31.3094	0.8702	46.6648
10.20	1.8699	1.6369	25.5508	22.3679	0.8754	33.1022
10.27	2.3469	2.0173	32.0692	27.5661	0.8596	41.1273
10.33	1.6686	1.4544	22.8003	19.8741	0.8717	28.8008
10.40	1.9058	1.6496	26.0425	22.5417	0.8656	31.9399

10.47	2.8009	2.3864	38.2726	32.6097	0.8520	45.6317
10.53	1.9485	1.6423	26.6251	22.4417	0.8429	32.4254
10.60	2.5639	2.2082	35.0350	30.1743	0.8613	43.2991
10.67	2.3684	2.0169	32.3636	27.5602	0.8516	40.7041
10.73	1.8413	1.6098	25.1600	21.9967	0.8743	31.9399
10.80	2.2905	1.9493	31.2988	26.6361	0.8510	38.1845
10.87	2.2745	1.8309	31.0796	25.0182	0.8050	38.9524
10.93	1.3541	1.2298	18.5027	16.8040	0.9082	25.4598
11.00	2.6601	2.3242	36.3492	31.7594	0.8737	45.0442
11.07	1.1431	0.9447	15.6196	12.9096	0.8265	18.5977
11.13	3.0290	2.5718	41.3904	35.1424	0.8490	51.1292
11.20	1.8862	1.5984	25.7739	21.8422	0.8475	29.7684
11.27	3.0537	2.4957	41.7279	34.1032	0.8173	49.2748
11.33	2.8265	2.3431	38.6230	32.0179	0.8290	50.3320
11.40	1.2704	1.1107	17.3590	15.1767	0.8743	23.8834
11.47	2.2572	2.0139	30.8444	27.5186	0.8922	41.9973
11.53	2.4244	2.0988	33.1283	28.6788	0.8657	41.5190
11.60	2.3834	2.0528	32.5686	28.0508	0.8613	41.1384
11.67	2.0370	1.7540	27.8344	23.9679	0.8611	35.8685
11.73	2.6199	2.2526	35.8002	30.7808	0.8598	46.0172
11.80	1.8445	1.6027	25.2049	21.9005	0.8689	32.6081
11.87	2.1032	1.8004	28.7389	24.6022	0.8561	37.5856
11.93	2.4986	2.1931	34.1429	29.9681	0.8777	43.4716
12.00	1.7181	1.4468	23.4767	19.7705	0.8421	29.4666
12.07	2.6030	2.2462	35.5685	30.6935	0.8629	44.2608
12.13	2.7165	2.2744	37.1198	31.0784	0.8372	45.4420
12.20	2.2958	1.9124	31.3706	26.1323	0.8330	40.7301
12.27	1.8793	1.6543	25.6803	22.6048	0.8802	34.0723
12.33	1.4908	1.2798	20.3714	17.4877	0.8584	27.0265
12.40	2.6210	2.2821	35.8145	31.1843	0.8707	44.8363
12.47	1.8442	1.5602	25.2006	21.3202	0.8460	29.2748
12.53	2.9041	2.3695	39.6836	32.3786	0.8159	45.6133
12.60	2.7672	2.2510	37.8122	30.7597	0.8135	46.6522
12.67	2.2966	1.9816	31.3820	27.0775	0.8628	40.7301
12.73	2.2793	1.9386	31.1458	26.4904	0.8505	39.1636
12.80	2.5645	2.1769	35.0430	29.7463	0.8489	46.6110
12.87	1.4560	1.2709	19.8961	17.3659	0.8728	26.7256
12.93	1.7446	1.5292	23.8392	20.8965	0.8766	31.8247
13.00	2.5800	2.2085	35.2548	30.1780	0.8560	44.4807

**One cycling transition**

Last Name	First Name	D.O.B	Weight	Height	Temp	Date
Oneil	Andrew	09-05-73	160.6 Lbs	70.5 in	22.3 deg C	04-14-1998

TIME(min)	VO2(L)	VCO2(L)	VO2(Kg)	VCO2(Kg)	RER	VE(stpd)
0.13	0.1155	0.1522	1.5823	2.0856	1.3181	13.4863
0.20	0.1216	0.1440	1.6659	1.9722	1.1839	8.6554
0.27	0.0829	0.0867	1.1356	1.1880	1.0462	4.1241
0.33	0.5874	0.5649	8.0460	7.7389	0.9618	18.0960
0.40	0.4272	0.3668	5.8518	5.0247	0.8587	10.6580
0.47	0.3457	0.2822	4.7358	3.8654	0.8162	7.8459
0.53	0.4973	0.3923	6.8123	5.3733	0.7888	10.5691
0.60	0.6805	0.5384	9.3218	7.3751	0.7912	13.6782
0.67	0.6768	0.5239	9.2710	7.1764	0.7741	13.2759
0.73	0.7301	0.5701	10.0011	7.8096	0.7809	15.2790
0.80	0.5191	0.4155	7.1116	5.6913	0.8003	10.2686
0.87	0.0518	0.0407	0.7102	0.5580	0.7857	1.0067
0.93	0.4314	0.3340	5.9089	4.5755	0.7743	8.7524
1.00	0.6293	0.5133	8.6210	7.0309	0.8156	14.4928
1.07	0.5899	0.5148	8.0804	7.0526	0.8728	13.4733
1.13	0.4941	0.4200	6.7679	5.7530	0.8500	11.3618
1.20	0.1334	0.1153	1.8268	1.5792	0.8645	3.3208
1.27	0.7953	0.6730	10.8940	9.2196	0.8463	20.9225
1.33	0.3242	0.2893	4.4410	3.9634	0.8925	8.4437
1.40	0.5954	0.5272	8.1557	7.2223	0.8855	14.4788
1.47	0.7033	0.6042	9.6343	8.2771	0.8591	15.3901
1.53	1.1885	0.9508	16.2802	13.0241	0.8000	22.5257
1.60	0.5228	0.3992	7.1613	5.4691	0.7637	9.3483
1.67	1.2804	0.9329	17.5396	12.7791	0.7286	20.9138
1.73	1.3187	0.9430	18.0638	12.9175	0.7151	21.4284
1.80	1.4294	1.0518	19.5810	14.4088	0.7359	22.3307
1.87	1.5725	1.1561	21.5413	15.8370	0.7352	23.6416
1.93	1.8767	1.3815	25.7079	18.9249	0.7361	28.1649
2.00	2.0399	1.5364	27.9433	21.0464	0.7532	30.8510
2.07	1.5705	1.1971	21.5136	16.3982	0.7622	24.0374
2.13	2.0502	1.6177	28.0855	22.1599	0.7890	32.8790
2.20	1.5422	1.3031	21.1267	17.8500	0.8449	25.3519
2.27	1.4854	1.2525	20.3484	17.1577	0.8432	25.1507
2.33	2.2517	1.9694	30.8457	26.9777	0.8746	38.8059
2.40	2.0806	1.8379	28.5014	25.1774	0.8834	35.6894

2.47	1.4324	1.2843	19.6219	17.5930	0.8966	25.1334
2.53	2.0820	1.9049	28.5209	26.0940	0.9149	37.4242
2.60	2.1273	2.0056	29.1408	27.4735	0.9428	38.9065
2.67	1.5546	1.4691	21.2953	20.1252	0.9451	28.9776
2.73	1.3831	1.3427	18.9472	18.3935	0.9708	26.3543
2.80	2.1264	2.0937	29.1282	28.6806	0.9846	40.5373
2.87	2.0638	2.0558	28.2714	28.1612	0.9961	39.3465
2.93	1.6500	1.6412	22.6021	22.4822	0.9947	31.8999
3.00	2.1664	2.1634	29.6767	29.6350	0.9986	43.4843
3.07	1.4601	1.5033	20.0010	20.5937	1.0296	30.0968
3.13	2.1817	2.2468	29.8858	30.7778	1.0298	45.4349
3.20	1.1566	1.1834	15.8435	16.2105	1.0232	23.9303
3.27	1.5230	1.5831	20.8629	21.6864	1.0395	30.1559
3.33	2.7026	2.6900	37.0222	36.8496	0.9953	52.1338
3.40	1.3437	1.3725	18.4064	18.8015	1.0215	26.9653
3.47	2.5028	2.5656	34.2855	35.1458	1.0251	51.6742
3.53	1.2535	1.3112	17.1719	17.9614	1.0460	26.3289
3.60	2.1071	2.1985	28.8648	30.1159	1.0433	43.4484
3.67	1.6457	1.6664	22.5434	22.8275	1.0126	33.2949
3.73	1.9915	2.0193	27.2809	27.6610	1.0139	40.7105
3.80	1.5406	1.5602	21.1041	21.3720	1.0127	31.9696
3.87	1.1532	1.2242	15.7976	16.7700	1.0616	23.7488
3.93	2.9061	2.9672	39.8092	40.6470	1.0210	56.3605
4.00	1.3634	1.3678	18.6763	18.7365	1.0032	26.5335
4.07	2.5543	2.5734	34.9902	35.2522	1.0075	51.3655
4.13	1.6757	1.7110	22.9541	23.4384	1.0211	34.3919
4.20	2.2754	2.3347	31.1699	31.9820	1.0261	47.8408
4.27	1.2785	1.3480	17.5132	18.4663	1.0544	27.5386
4.33	2.5799	2.7144	35.3409	37.1832	1.0521	54.3961
4.40	1.5343	1.6510	21.0181	22.6163	1.0760	33.2857
4.47	1.9618	2.0794	26.8746	28.4854	1.0599	42.3071
4.53	1.8979	2.0111	25.9984	27.5496	1.0597	40.7105
4.60	1.9509	2.0341	26.7247	27.8648	1.0427	41.8104
4.67	1.7330	1.8155	23.7404	24.8693	1.0476	37.2774
4.73	2.4034	2.4965	32.9237	34.1987	1.0387	51.7391
4.80	1.5972	1.6608	21.8789	22.7501	1.0398	34.8515
4.87	2.0217	2.1175	27.6942	29.0071	1.0474	44.9076
4.93	2.1518	2.2686	29.4772	31.0765	1.0543	47.6070
5.00	1.3258	1.3940	18.1621	19.0962	1.0514	29.3154
5.07	1.4434	1.5615	19.7720	21.3900	1.0818	30.8595



5.13	2.7199	2.7455	37.2585	37.6089	1.0094	55.6879
5.20	1.3922	1.4193	19.0706	19.4423	1.0195	29.5365
5.27	2.6388	2.7130	36.1482	37.1642	1.0281	55.6496
5.33	1.5435	1.5917	21.1433	21.8041	1.0313	33.2628
5.40	2.5099	2.5718	34.3826	35.2306	1.0247	54.8913
5.47	1.6986	1.7650	23.2690	24.1775	1.0390	36.9607
5.53	2.3180	2.4265	31.7537	33.2398	1.0468	51.6245
5.60	1.7218	1.7634	23.5862	24.1563	1.0242	38.1659
5.67	1.7601	1.8189	24.1109	24.9164	1.0334	39.1973
5.73	2.1560	2.1946	29.5337	30.0630	1.0179	48.1224
5.80	1.4224	1.4925	19.4849	20.4448	1.0493	31.9565
5.87	1.4067	1.4420	19.2695	19.7538	1.0251	30.3569
5.93	2.3325	2.3348	31.9523	31.9834	1.0010	47.7940
6.00	1.5560	1.5467	21.3146	21.1878	0.9941	31.4367
6.07	2.5256	2.4647	34.5979	33.7635	0.9759	50.4539
6.13	1.8800	1.8167	25.7529	24.8870	0.9664	37.5737
6.20	2.4010	2.3995	32.8907	32.8705	0.9994	50.7275
6.27	1.4152	1.4314	19.3858	19.6082	1.0115	30.4533
6.33	2.5243	2.5857	34.5791	35.4204	1.0243	54.0349
6.40	2.3687	2.3591	32.4483	32.3169	0.9959	50.4054
6.47	1.3139	1.3356	17.9993	18.2963	1.0165	29.3195
6.53	2.4439	2.5360	33.4783	34.7392	1.0377	54.4742
6.60	1.5672	1.6750	21.4685	22.9447	1.0688	34.9664
6.67	2.4604	2.8458	33.7046	38.9834	1.1566	56.3527
6.73	1.2746	1.4440	17.4605	19.7810	1.1329	28.7368
6.80	2.3750	2.5393	32.5342	34.7854	1.0692	52.1410
6.87	2.5763	2.7199	35.2918	37.2588	1.0557	56.2523
6.93	2.3637	2.3072	32.3801	31.6052	0.9761	53.0306
7.00	2.0298	2.0938	27.8053	28.6824	1.0315	48.7988
7.07	1.8380	1.9594	25.1787	26.8412	1.0660	44.3747
7.13	2.3245	2.3937	31.8420	32.7899	1.0298	55.2085
7.20	1.7920	1.8802	24.5473	25.7561	1.0492	42.4847
7.27	1.5169	1.5244	20.7790	20.8823	1.0050	35.9465
7.33	2.1137	2.2114	28.9545	30.2930	1.0462	51.1223
7.40	1.6986	1.7690	23.2679	24.2334	1.0415	39.9731
7.47	1.6663	1.7071	22.8257	23.3853	1.0245	37.7642
7.53	2.2258	2.2373	30.4900	30.6483	1.0052	49.8235
7.60	2.3140	2.3408	31.6986	32.0661	1.0116	52.3028
7.67	1.6573	1.6601	22.7024	22.7413	1.0017	36.7649
7.73	1.9899	2.0287	27.2588	27.7907	1.0195	45.1779

7.80	2.3321	2.3117	31.9463	31.6674	0.9913	51.4800
7.87	1.4718	1.4672	20.1619	20.0983	0.9968	32.5281
7.93	2.6030	2.6062	35.6579	35.7009	1.0012	56.3450
8.00	2.1353	2.1032	29.2510	28.8115	0.9850	45.8180

**Two cycling transitions**

Last Name	First Name	D.O.B	Weight	Height	Temp	Date
Oneil	Andrew	09-05-73	160.6 Lbs	70.5 in	22.5 deg C	04-03-1998

TIME(min)	VO2(L)	VCO2(L)	VO2(Kg)	VCO2(Kg)	RER	VE(stpd)
0.13	0.5408	0.4084	7.4085	5.5951	0.7552	11.8678
0.20	0.3944	0.3519	5.4029	4.8208	0.8923	9.5467
0.27	0.4064	0.3562	5.5677	4.8799	0.8765	9.1316
0.33	0.4683	0.4123	6.4153	5.6482	0.8804	10.1532
0.40	0.5528	0.4866	7.5728	6.6658	0.8802	11.5699
0.47	1.1337	0.9638	15.5306	13.2030	0.8501	22.7275
0.53	0.2328	0.1965	3.1887	2.6919	0.8442	4.6724
0.60	0.4103	0.3477	5.6204	4.7625	0.8474	9.1341
0.67	0.4396	0.3621	6.0224	4.9609	0.8237	8.8309
0.73	0.4090	0.3322	5.6029	4.5511	0.8123	8.3245
0.80	0.4446	0.3646	6.0909	4.9947	0.8200	9.3345
0.87	0.4026	0.3400	5.5144	4.6576	0.8446	8.5193
0.93	0.2445	0.2062	3.3499	2.8251	0.8433	5.1739
1.00	0.1172	0.0990	1.6058	1.3556	0.8442	2.6380
1.07	0.6956	0.5964	9.5290	8.1697	0.8574	14.7222
1.13	0.9934	0.8304	13.6080	11.3760	0.8360	21.0983
1.20	0.5396	0.4466	7.3923	6.1179	0.8276	11.5667
1.27	1.0182	0.8473	13.9481	11.6063	0.8321	21.2027
1.33	0.8141	0.6735	11.1516	9.2264	0.8274	16.0332
1.40	0.9060	0.7336	12.4104	10.0487	0.8097	16.9582
1.47	1.0404	0.8352	14.2517	11.4414	0.8028	19.3980
1.53	0.9755	0.8075	13.3635	11.0622	0.8278	18.2884
1.60	0.7496	0.6280	10.2681	8.6031	0.8378	13.4041
1.67	1.2421	1.0224	17.0152	14.0060	0.8231	22.3463
1.73	1.0680	0.8872	14.6302	12.1534	0.8307	18.8954
1.80	1.3603	1.1128	18.6346	15.2439	0.8180	23.6249
1.87	0.7494	0.6043	10.2658	8.2781	0.8064	12.3199
1.93	1.5577	1.2313	21.3384	16.8667	0.7904	25.4649
2.00	1.2285	0.9874	16.8292	13.5259	0.8037	20.3579
2.07	1.0856	0.8789	14.8717	12.0392	0.8095	17.5247
2.13	1.2720	1.0161	17.4248	13.9188	0.7988	20.4851
2.20	1.1391	0.9134	15.6043	12.5125	0.8019	18.4341
2.27	1.7121	1.3848	23.4540	18.9703	0.8088	27.8077
2.33	1.7462	1.4369	23.9212	19.6841	0.8229	29.0581
2.40	1.1676	0.9720	15.9951	13.3153	0.8325	18.7474

2.47	1.3425	1.0930	18.3901	14.9725	0.8142	22.0138
2.53	1.6307	1.3466	22.3385	18.4468	0.8258	27.0947
2.60	1.3126	1.0991	17.9803	15.0567	0.8374	22.0047
2.67	1.2399	1.0526	16.9854	14.4193	0.8489	20.4001
2.73	2.0719	1.7675	28.3818	24.2128	0.8531	33.4146
2.80	1.9752	1.6539	27.0578	22.6564	0.8373	32.6221
2.87	1.1028	0.9610	15.1065	13.1643	0.8714	19.3747
2.93	1.6497	1.4582	22.5992	19.9750	0.8839	29.4578
3.00	1.6068	1.4332	22.0106	19.6326	0.8920	29.0701
3.07	0.9793	0.8789	13.4145	12.0403	0.8976	17.7383
3.13	1.3387	1.2048	18.3388	16.5038	0.8999	24.4869
3.20	1.8241	1.6371	24.9878	22.4266	0.8975	32.2277
3.27	1.2590	1.0968	17.2459	15.0244	0.8712	21.6331
3.33	1.1723	1.0314	16.0587	14.1289	0.8798	20.5870
3.40	1.5059	1.3226	20.6292	18.1173	0.8782	26.3198
3.47	1.6564	1.4353	22.6897	19.6610	0.8665	28.3092
3.53	1.4889	1.3004	20.3953	17.8132	0.8734	25.3736
3.60	1.3831	1.2030	18.9459	16.4791	0.8698	23.4504
3.67	1.2306	1.0589	16.8579	14.5051	0.8604	20.6012
3.73	2.0064	1.7084	27.4845	23.4028	0.8515	33.2384
3.80	1.6389	1.4209	22.4509	19.4641	0.8670	28.1366
3.87	1.5963	1.3888	21.8671	19.0253	0.8700	26.6074
3.93	1.6707	1.4596	22.8867	19.9946	0.8736	28.5365
4.00	1.7610	1.5221	24.1231	20.8504	0.8643	29.4415
4.07	1.3682	1.1749	18.7419	16.0950	0.8588	23.2433
4.13	2.0012	1.7354	27.4137	23.7730	0.8672	34.4333
4.20	1.2836	1.1191	17.5832	15.3307	0.8719	22.2054
4.27	2.0761	1.8241	28.4393	24.9880	0.8786	37.1128
4.33	1.4576	1.3012	19.9671	17.8246	0.8927	26.0761
4.40	1.1450	1.0096	15.6854	13.8303	0.8817	20.0719
4.47	1.2963	1.1573	17.7569	15.8529	0.8928	22.6253
4.53	2.4046	2.1165	32.9401	28.9928	0.8802	41.5817
4.60	1.1528	1.0052	15.7915	13.7703	0.8720	19.7690
4.67	1.6936	1.4789	23.2003	20.2585	0.8732	29.3721
4.73	1.8641	1.6446	25.5352	22.5281	0.8822	33.1227
4.80	1.2020	1.0628	16.4660	14.5584	0.8841	21.9119
4.87	1.9681	1.7868	26.9602	24.4770	0.9079	35.2435
4.93	1.2199	1.0897	16.7113	14.9277	0.8933	21.2014
5.00	2.3455	2.0499	32.1304	28.0809	0.8740	39.8052
5.07	1.4781	1.2806	20.2473	17.5428	0.8664	25.7669

5.13	2.0206	1.7965	27.6794	24.6099	0.8891	36.0384
5.20	1.4660	1.2709	20.0818	17.4099	0.8670	26.8113
5.27	1.2408	1.1375	16.9967	15.5815	0.9167	23.4277
5.33	1.7799	1.6163	24.3827	22.1417	0.9081	32.9188
5.40	1.5435	1.3869	21.1433	18.9982	0.8985	27.7097
5.47	1.0295	0.9099	14.1025	12.4649	0.8839	18.3824
5.53	2.4586	2.1697	33.6788	29.7218	0.8825	43.7876
5.60	1.2650	1.1222	17.3284	15.3730	0.8872	22.3999
5.67	2.3047	2.0270	31.5709	27.7674	0.8795	40.7439
5.73	1.3245	1.1618	18.1434	15.9145	0.8772	24.0522
5.80	1.8863	1.6966	25.8402	23.2407	0.8994	35.2337
5.87	1.3486	1.2209	18.4738	16.7248	0.9053	25.0437
5.93	1.4934	1.3237	20.4569	18.1333	0.8864	27.4907
6.00	1.5140	1.3488	20.7402	18.4762	0.8908	28.6344
6.07	2.1692	2.0456	29.7149	28.0221	0.9430	40.2290
6.13	1.5987	1.4573	21.9004	19.9636	0.9116	28.7165
6.20	2.1669	1.9389	29.6835	26.5609	0.8948	39.4088
6.27	1.0111	0.9007	13.8508	12.3380	0.8908	18.9407
6.33	1.4602	1.2438	20.0025	17.0382	0.8518	29.4334
6.40	1.4158	1.3493	19.3950	18.4829	0.9530	29.0140
6.47	1.9829	1.8422	27.1624	25.2351	0.9290	35.4276
6.53	1.6591	1.4088	22.7269	19.2989	0.8492	27.7058
6.60	1.8055	1.5531	24.7327	21.2758	0.8602	30.1588
6.67	2.6249	2.2303	35.9572	30.5524	0.8497	42.5654
6.73	1.6971	1.4413	23.2481	19.7442	0.8493	28.0422
6.80	2.3206	1.9773	31.7890	27.0861	0.8521	39.6248
6.87	2.1506	1.8716	29.4607	25.6379	0.8702	37.3567
6.93	1.8326	1.6078	25.1036	22.0247	0.8773	32.3824
7.00	2.5550	2.2806	34.9994	31.2415	0.8926	45.2958
7.07	1.3798	1.2340	18.9011	16.9035	0.8943	24.5809
7.13	2.1957	1.9854	30.0780	27.1978	0.9042	39.1997
7.20	2.2292	2.0119	30.5373	27.5597	0.9025	38.9907
7.27	2.0276	1.8041	27.7758	24.7141	0.8898	35.1350
7.33	2.6244	2.3391	35.9506	32.0430	0.8913	46.8296
7.40	1.7557	1.5846	24.0508	21.7063	0.9025	31.6911
7.47	1.5077	1.3934	20.6532	19.0878	0.9242	27.5925
7.53	2.7558	2.5219	37.7505	34.5460	0.9151	48.5457
7.60	2.5140	2.2139	34.4383	30.3280	0.8806	44.0589
7.67	1.8860	1.6920	25.8354	23.1787	0.8972	34.6368
7.73	2.8127	2.5554	38.5296	35.0061	0.9086	51.7814

7.80	2.1411	1.9475	29.3307	26.6787	0.9096	39.7045
7.87	1.8749	1.7124	25.6842	23.4576	0.9133	35.1253
7.93	1.5665	1.4632	21.4592	20.0436	0.9340	29.8299
8.00	2.7007	2.5114	36.9959	34.4026	0.9299	49.4863
8.07	1.6148	1.4799	22.1204	20.2733	0.9165	28.7099
8.13	2.8336	2.5452	38.8160	34.8659	0.8982	50.7521
8.20	1.7631	1.5991	24.1519	21.9055	0.9070	31.8547
8.27	2.7979	2.5408	38.3276	34.8050	0.9081	51.7457
8.33	2.3656	2.1674	32.4059	29.6900	0.9162	43.5213
8.40	1.8636	1.7020	25.5287	23.3155	0.9133	34.9126
8.47	2.5390	2.3334	34.7807	31.9647	0.9190	48.3093
8.53	2.7833	2.5421	38.1274	34.8228	0.9133	53.7972
8.60	1.5844	1.4783	21.7038	20.2512	0.9331	31.0560
8.67	2.5329	2.3920	34.6970	32.7669	0.9444	50.5143
8.73	2.7702	2.5735	37.9483	35.2528	0.9290	53.7232
8.80	2.1548	1.9966	29.5183	27.3501	0.9265	41.4638
8.87	1.8028	1.6499	24.6953	22.6013	0.9152	35.2894
8.93	2.3382	2.1827	32.0304	29.9004	0.9335	45.9497
9.00	1.4427	1.3170	19.7627	18.0408	0.9129	28.0190
9.07	2.6885	2.5431	36.8283	34.8370	0.9459	52.3257
9.13	2.8275	2.6058	38.7330	35.6957	0.9216	51.2455
9.20	1.8496	1.6711	25.3371	22.8924	0.9035	34.1739
9.27	2.6937	2.4445	36.9005	33.4861	0.9075	51.6229
9.33	2.2800	2.0690	31.2329	28.3429	0.9075	43.6941
9.40	1.8481	1.7005	25.3159	23.2943	0.9201	35.6852
9.47	2.8090	2.5663	38.4794	35.1541	0.9136	53.1296
9.53	2.6568	2.4041	36.3948	32.9335	0.9049	50.3990
9.60	2.3611	2.1516	32.3434	29.4745	0.9113	45.7280
9.67	2.2949	2.1046	31.4376	28.8305	0.9171	45.8483
9.73	2.0208	1.8479	27.6820	25.3132	0.9144	40.9682
9.80	2.2751	2.0965	31.1652	28.7194	0.9215	46.7918
9.87	1.6522	1.5610	22.6324	21.3840	0.9448	33.0357
9.93	2.6602	2.4627	36.4417	33.7359	0.9258	51.3046
10.00	1.9838	1.7868	27.1755	24.4773	0.9007	37.4189
10.07	2.5239	2.3224	34.5746	31.8136	0.9201	48.7362
10.13	2.7278	2.4611	37.3673	33.7130	0.9022	50.7417
10.20	2.4642	2.1752	33.7562	29.7966	0.8827	46.0809
10.27	2.0053	1.7514	27.4693	23.9915	0.8734	37.7830
10.33	2.0793	1.8587	28.4841	25.4620	0.8939	39.9266
10.40	2.6993	2.4167	36.9764	33.1053	0.8953	50.1369

10.47	2.5846	2.2687	35.4057	31.0777	0.8778	48.6282
10.53	2.1778	1.9512	29.8325	26.7284	0.8959	41.7335
10.60	2.2624	2.0010	30.9923	27.4105	0.8844	43.3542
10.67	2.3180	2.0371	31.7540	27.9058	0.8788	44.4745
10.73	2.5381	2.2648	34.7684	31.0243	0.8923	49.9347
10.80	2.6614	2.4212	36.4574	33.1674	0.9098	52.6878
10.87	2.8679	2.5647	39.2866	35.1334	0.8943	57.3059
10.93	1.5552	1.4299	21.3039	19.5872	0.9194	31.8066
11.00	2.5780	2.3856	35.3152	32.6791	0.9254	51.8558
11.07	2.8152	2.5543	38.5650	34.9902	0.9073	55.7045
11.13	2.6324	2.3630	36.0607	32.3698	0.8976	52.5052
11.20	2.4891	2.2248	34.0977	30.4768	0.8938	50.4996
11.27	1.9064	1.7509	26.1149	23.9853	0.9185	39.6981
11.33	1.9035	1.7614	26.0757	24.1294	0.9254	39.1823
11.40	2.7550	2.4960	37.7396	34.1922	0.9060	53.5590
11.47	2.7284	2.3885	37.3751	32.7198	0.8754	51.3076
11.53	2.6225	2.2686	35.9253	31.0767	0.8650	51.5521
11.60	2.4459	2.1746	33.5060	29.7895	0.8891	49.1934
11.67	2.0584	1.8353	28.1966	25.1411	0.8916	41.8481
11.73	2.2433	2.0236	30.7301	27.7205	0.9021	45.8285
11.80	2.1117	1.8989	28.9280	26.0129	0.8992	42.2409
11.87	2.3843	2.1612	32.6617	29.6058	0.9064	47.2871
11.93	2.6336	2.2809	36.0763	31.2456	0.8661	50.5135
12.00	2.3970	2.0811	32.8361	28.5083	0.8682	45.8851
12.07	2.5389	2.1772	34.7795	29.8248	0.8575	50.3322
12.13	2.6640	2.2980	36.4928	31.4796	0.8626	52.3391
12.20	1.4500	1.2828	19.8625	17.5730	0.8847	28.9868
12.27	2.5419	2.2459	34.8211	30.7656	0.8835	49.3011
12.33	2.7121	2.3432	37.1514	32.0984	0.8640	52.1227
12.40	2.7531	2.3952	37.7135	32.8113	0.8700	53.6379
12.47	2.4430	2.1325	33.4661	29.2119	0.8729	49.4692
12.53	2.1005	1.8955	28.7739	25.9663	0.9024	43.0257
12.60	2.5055	2.2353	34.3225	30.6206	0.8921	50.1690
12.67	2.6662	2.3091	36.5231	31.6312	0.8661	52.9527
12.73	2.5782	2.2818	35.3172	31.2578	0.8851	52.7506
12.80	2.4794	2.2484	33.9647	30.7993	0.9068	49.3011
12.87	2.4008	2.1365	32.8870	29.2675	0.8899	47.6847
12.93	2.0115	1.7821	27.5549	24.4120	0.8859	39.4222
13.00	2.5074	2.2260	34.3486	30.4925	0.8877	48.9172

**Stepping and cycling transitions**

Last Name	First Name	D.O.B	Weight	Height	Temp	Date
Oneil	Andrew	09-15-73	160.6 Lbs	70.5 in	21.5 deg C	04-02-1998

TIME(min)	VO2(L)	VCO2(L)	VO2(Kg)	VCO2(Kg)	RER	VE(stpd)
0.13	0.0436	0.0186	0.5974	0.2548	0.4265	5.1000
0.20	0.0807	0.0385	1.1050	0.5273	0.4772	7.5553
0.27	0.0877	0.0396	1.2011	0.5430	0.4521	7.8562
0.33	0.0538	0.0245	0.7370	0.3363	0.4563	5.0145
0.40	0.2637	0.1950	3.6122	2.6709	0.7394	14.0916
0.47	0.3447	0.2783	4.7215	3.8122	0.8074	12.6621
0.53	0.1234	0.0903	1.6905	1.2374	0.7320	4.9008
0.60	0.2411	0.1973	3.3033	2.7030	0.8183	7.5533
0.67	0.3200	0.2423	4.3837	3.3194	0.7572	8.9835
0.73	0.2324	0.2003	3.1834	2.7438	0.8619	6.5307
0.80	0.4771	0.3863	6.5363	5.2924	0.8097	12.0477
0.87	0.4163	0.3338	5.7023	4.5729	0.8019	11.4241
0.93	0.4628	0.3648	6.3393	4.9968	0.7882	9.5960
1.00	0.5463	0.4231	7.4840	5.7964	0.7745	11.3252
1.07	0.5355	0.4081	7.3357	5.5901	0.7620	11.1304
1.13	0.5941	0.4417	8.1381	6.0503	0.7435	11.6345
1.20	0.9084	0.6756	12.4432	9.2552	0.7438	19.5463
1.27	0.5699	0.4124	7.8071	5.6493	0.7236	11.4351
1.33	0.5209	0.3558	7.1361	4.8734	0.6829	10.4127
1.40	0.8059	0.6246	11.0402	8.5568	0.7751	17.8139
1.47	0.7924	0.6609	10.8543	9.0528	0.8340	18.3753
1.53	1.0351	0.7714	14.1798	10.5665	0.7452	17.8115
1.60	1.1739	0.7898	16.0803	10.8198	0.6729	18.7353
1.67	1.0924	0.8529	14.9644	11.6833	0.7807	18.0112
1.73	1.1769	0.8223	16.1220	11.2650	0.6987	17.3116
1.80	1.8998	1.3519	26.0243	18.5196	0.7116	28.1347
1.87	1.5303	0.9976	20.9632	13.6662	0.6519	23.2239
1.93	0.9303	0.7524	12.7438	10.3070	0.8088	18.4825
2.00	1.4904	1.0374	20.4170	14.2113	0.6961	22.2132
2.07	1.0883	0.7754	14.9085	10.6214	0.7124	17.5994
2.13	1.4991	1.1231	20.5361	15.3854	0.7492	24.4937
2.20	1.4871	1.0725	20.3712	14.6919	0.7212	21.2801
2.27	1.2434	0.8983	17.0326	12.3062	0.7225	17.9670
2.33	2.9989	2.1672	41.0814	29.6883	0.7227	41.5199
2.40	2.1550	1.5460	29.5200	21.1780	0.7174	30.5235



2.47	1.6809	1.2192	23.0262	16.7010	0.7253	23.6739
2.53	2.1814	1.6186	29.8826	22.1729	0.7420	33.3726
2.60	1.4240	1.1040	19.5064	15.1231	0.7753	22.2576
2.67	1.4837	1.2009	20.3246	16.4504	0.8094	27.5706
2.73	2.2322	1.7675	30.5777	24.2117	0.7918	37.0518
2.80	1.5580	1.2053	21.3418	16.5114	0.7737	25.2150
2.87	1.7961	1.4673	24.6040	20.1004	0.8170	28.8000
2.93	1.3682	1.1308	18.7423	15.4906	0.8265	25.5806
3.00	1.6011	1.3335	21.9333	18.2677	0.8329	26.6442
3.07	2.2800	1.8301	31.2323	25.0699	0.8027	36.7489
3.13	1.5933	1.2763	21.8260	17.4839	0.8011	27.4457
3.20	1.8707	1.5717	25.6266	21.5301	0.8401	31.2467
3.27	1.8184	1.4746	24.9102	20.2005	0.8109	29.0002
3.33	2.0301	1.6681	27.8090	22.8504	0.8217	34.2864
3.40	0.9854	0.9011	13.4991	12.3437	0.9144	20.8311
3.47	1.7700	1.3642	24.2463	18.6875	0.7707	28.5680
3.53	1.8370	1.6536	25.1648	22.6524	0.9002	32.3297
3.60	2.3121	1.9432	31.6721	26.6195	0.8405	38.7870
3.67	2.3319	1.9128	31.9436	26.2031	0.8203	37.0355
3.73	1.4359	1.1902	19.6699	16.3043	0.8289	24.2895
3.80	2.4154	2.0867	33.0876	28.5845	0.8639	40.2071
3.87	1.9944	1.5274	27.3202	20.9238	0.7659	33.4932
3.93	1.9343	1.8438	26.4970	25.2574	0.9532	36.1182
4.00	1.2757	1.0767	17.4750	14.7498	0.8441	21.8402
4.07	2.5397	2.1754	34.7908	29.8006	0.8566	42.1204
4.13	1.6108	1.3565	22.0653	18.5817	0.8421	30.0735
4.20	1.4632	1.3439	20.0437	18.4096	0.9185	26.9318
4.27	2.1039	1.8228	28.8206	24.9697	0.8664	35.1902
4.33	2.2354	1.8448	30.6215	25.2711	0.8253	36.8222
4.40	1.3648	1.2460	18.6953	17.0690	0.9130	23.8714
4.47	2.2002	1.9847	30.1402	27.1877	0.9020	40.5446
4.53	2.2307	1.8109	30.5573	24.8070	0.8118	38.7748
4.60	1.6037	1.4932	21.9680	20.4550	0.9311	29.8047
4.67	1.9414	1.7402	26.5939	23.8390	0.8964	34.2911
4.73	2.3634	2.0289	32.3759	27.7929	0.8584	42.8461
4.80	1.9518	1.8010	26.7377	24.6707	0.9227	35.6277
4.87	2.2994	1.8434	31.4991	25.2525	0.8017	41.5602
4.93	1.7143	1.7235	23.4836	23.6097	1.0054	36.5515
5.00	1.7570	1.6251	24.0684	22.2623	0.9250	32.7648
5.07	2.2668	1.9732	31.0516	27.0296	0.8705	39.4633

5.13	1.4124	1.2830	19.3473	17.5752	0.9084	28.1638
5.20	2.0187	1.8535	27.6531	25.3900	0.9182	36.8120
5.27	2.1660	1.8755	29.6710	25.6913	0.8659	38.3522
5.33	1.8326	1.5929	25.1040	21.8206	0.8692	31.2035
5.40	2.7042	2.3402	37.0437	32.0580	0.8654	45.7088
5.47	1.6781	1.4439	22.9872	19.7791	0.8604	29.6780
5.53	2.8653	2.3375	39.2512	32.0210	0.8158	52.9382
5.60	1.3614	1.2981	18.6495	17.7824	0.9535	26.4108
5.67	2.3166	2.0013	31.7349	27.4144	0.8639	42.9422
5.73	1.8394	1.6873	25.1975	23.1139	0.9173	35.6706
5.80	2.3496	2.0282	32.1863	27.7840	0.8632	44.2804
5.87	1.6311	1.4993	22.3437	20.5386	0.9192	30.1671
5.93	2.5221	2.2969	34.5494	31.4638	0.9107	45.7088
6.00	1.4309	1.2874	19.6015	17.6352	0.8997	25.2926
6.07	1.4795	1.3173	20.2672	18.0453	0.8904	27.1321
6.13	2.4348	2.1947	33.3531	30.0644	0.9014	43.9379
6.20	2.8650	2.4415	39.2471	33.4448	0.8522	49.5722
6.27	1.3786	1.2181	18.8843	16.6862	0.8836	24.7827
6.33	2.3102	2.0734	31.6471	28.4028	0.8975	42.5302
6.40	1.4849	1.3500	20.3414	18.4927	0.9091	27.0264
6.47	2.8136	2.4992	38.5418	34.2362	0.8883	50.2862
6.53	1.4051	1.2254	19.2480	16.7865	0.8721	26.7241
6.60	2.4796	2.1818	33.9676	29.8876	0.8799	45.6899
6.67	1.4540	1.3230	19.9177	18.1232	0.9099	26.4072
6.73	2.5600	2.2327	35.0687	30.5855	0.8722	45.2882
6.80	1.4738	1.3088	20.1890	17.9286	0.8880	26.5201
6.87	2.4995	2.1761	34.2404	29.8097	0.8706	43.1343
6.93	1.4013	1.2561	19.1959	17.2074	0.8964	24.7519
7.00	2.1573	1.9328	29.5516	26.4760	0.8959	39.2431
7.07	2.2994	2.0393	31.4989	27.9351	0.8869	40.2624
7.13	2.3930	2.1611	32.7812	29.6040	0.9031	40.7776
7.20	2.0371	1.8221	27.9057	24.9605	0.8945	34.8745
7.27	2.4913	2.2157	34.1274	30.3526	0.8894	44.5373
7.33	2.8457	2.6170	38.9825	35.8491	0.9196	52.3920
7.40	2.6376	2.4813	36.1319	33.9899	0.9407	48.8926
7.47	1.5032	1.4088	20.5921	19.2984	0.9372	29.5638
7.53	2.3968	2.3454	32.8335	32.1290	0.9785	47.6703
7.60	2.6989	2.6459	36.9707	36.2447	0.9804	52.6542
7.67	1.7166	1.6539	23.5156	22.6563	0.9635	33.2108
7.73	2.3221	2.2085	31.8096	30.2539	0.9511	46.4929

7.80	1.9781	1.9183	27.0972	26.2775	0.9698	39.9621
7.87	1.9143	1.7275	26.2239	23.6649	0.9024	38.5136
7.93	1.0264	1.0519	14.0606	14.4090	1.0248	23.6608
8.00	2.0296	2.0400	27.8034	27.9452	1.0051	39.2322
8.07	2.4200	2.2454	33.1507	30.7593	0.9279	42.0913
8.13	2.9373	2.5666	40.2366	35.1588	0.8738	53.3020
8.20	1.5937	1.4895	21.8313	20.4036	0.9346	29.6412
8.27	2.7332	2.3963	37.4415	32.8259	0.8767	52.5451
8.33	1.2327	1.2216	16.8862	16.7336	0.9910	25.6616
8.40	2.6072	2.5138	35.7149	34.4352	0.9642	50.3256
8.47	1.8120	1.7186	24.8218	23.5423	0.9485	32.5816
8.53	3.0893	2.7736	42.3188	37.9940	0.8978	54.7062
8.60	3.2029	2.8309	43.8749	38.7797	0.8839	58.2477
8.67	2.4231	2.2560	33.1938	30.9038	0.9310	47.2433
8.73	1.8250	1.7314	24.9997	23.7174	0.9487	36.0688
8.80	2.4069	2.4003	32.9706	32.8806	0.9973	48.5391
8.87	2.8763	2.7110	39.4009	37.1369	0.9425	56.7721
8.93	1.5709	1.4922	21.5192	20.4415	0.9499	32.0886
9.00	1.4526	1.4970	19.8982	20.5064	1.0306	30.3332
9.07	2.8193	2.7307	38.6204	37.4068	0.9686	53.4395
9.13	2.7303	2.5265	37.4012	34.6092	0.9253	52.5233
9.20	2.5279	2.3960	34.6286	32.8213	0.9478	50.7051
9.27	2.4716	2.3476	33.8578	32.1595	0.9498	49.4734
9.33	1.4836	1.4204	20.3239	19.4573	0.9574	29.7448
9.40	2.5330	2.4390	34.6980	33.4107	0.9629	50.9691
9.47	2.6176	2.4589	35.8571	33.6832	0.9394	53.6237
9.53	1.8939	1.8745	25.9436	25.6777	0.9897	39.2130
9.60	1.9710	1.9079	27.0006	26.1354	0.9680	39.7045
9.67	1.6039	1.5445	21.9719	21.1580	0.9630	30.9525
9.73	3.1478	2.8546	43.1206	39.1045	0.9069	57.2641
9.80	2.3123	2.2192	31.6749	30.4000	0.9598	42.6376
9.87	2.7029	2.3733	37.0255	32.5108	0.8781	48.5324
9.93	1.7055	1.5664	23.3624	21.4575	0.9185	33.3255
10.00	2.8095	2.4944	38.4866	34.1699	0.8878	56.4908
10.07	1.5400	1.5797	21.0962	21.6397	1.0258	34.5257
10.13	2.8265	2.7048	38.7194	37.0519	0.9569	53.8269
10.20	1.7136	1.5902	23.4734	21.7840	0.9280	31.6780
10.27	2.8557	2.6048	39.1191	35.6823	0.9121	53.4853
10.33	2.2004	1.9932	30.1421	27.3047	0.9059	41.3521
10.40	2.3592	2.1429	32.3183	29.3553	0.9083	44.0467

10.47	3.0937	2.7994	42.3788	38.3485	0.9049	58.6856
10.53	2.5314	2.3075	34.6762	31.6096	0.9116	49.5136
10.60	2.1121	1.9655	28.9334	26.9252	0.9306	41.0752
10.67	2.9706	2.7513	40.6933	37.6885	0.9262	57.8574
10.73	1.4959	1.3836	20.4917	18.9535	0.9249	30.2399
10.80	2.7330	2.6246	37.4383	35.9531	0.9603	53.6164
10.87	3.1412	2.7593	43.0301	37.7987	0.8784	58.2714
10.93	2.5288	2.2674	34.6415	31.0607	0.8966	50.0484
11.00	2.4168	2.2334	33.1068	30.5938	0.9241	48.9722
11.07	1.7598	1.6161	24.1068	22.1383	0.9183	37.2315
11.13	2.5104	2.3649	34.3894	32.3960	0.9420	54.5453
11.20	1.6463	1.5848	22.5526	21.7095	0.9626	32.8783
11.27	2.7886	2.6530	38.2003	36.3421	0.9514	53.8120
11.33	2.7328	2.4796	37.4352	33.9665	0.9073	52.7531
11.40	2.3793	2.1366	32.5925	29.2678	0.8980	47.5792
11.47	1.8974	1.7756	25.9915	24.3237	0.9358	38.3474
11.53	2.9948	2.7626	41.0240	37.8441	0.9225	59.1525
11.60	2.7046	2.4868	37.0499	34.0661	0.9195	54.8911
11.67	2.7623	2.5820	37.8395	35.3692	0.9347	56.6784
11.73	1.6126	1.5053	22.0906	20.6201	0.9334	34.8790
11.80	2.2543	2.2022	30.8813	30.1672	0.9769	48.2894
11.87	2.7235	2.5625	37.3077	35.1026	0.9409	56.6861
11.93	1.9016	1.7918	26.0488	24.5450	0.9423	38.7799
12.00	2.2370	2.0710	30.6439	28.3694	0.9258	45.4613
12.07	2.5836	2.3746	35.3914	32.5285	0.9191	51.8986
12.13	2.8552	2.5623	39.1118	35.1005	0.8974	57.3802
12.20	2.7972	2.5594	38.3184	35.0605	0.9150	55.9994
12.27	2.7622	2.5099	37.8386	34.3819	0.9086	57.0996
12.33	2.3815	2.1312	32.6235	29.1950	0.8949	52.2243
12.40	2.5615	2.5056	35.0886	34.3239	0.9782	58.8076
12.47	2.4755	2.4374	33.9113	33.3886	0.9846	53.9779
12.53	2.4039	2.2373	32.9301	30.6480	0.9307	51.5428
12.60	2.3826	2.2301	32.6385	30.5498	0.9360	53.1516
12.67	2.4664	2.3374	33.7862	32.0188	0.9477	55.3121
12.73	2.1482	2.0728	29.4273	28.3945	0.9649	48.7630
12.80	2.1633	2.1024	29.6341	28.8002	0.9719	47.5596
12.87	2.6666	2.4888	36.5291	34.0928	0.9333	56.7485
12.93	2.4148	2.2111	33.0794	30.2888	0.9156	51.4719
13.00	2.5984	2.4458	35.5949	33.5045	0.9413	55.3907

**One cycling transition**

Last Name	First Name	D.O.B	Weight	Height	Temp	Date
Reddin	Nakia	05-05-75	199.5 Lbs	74.0 in	22.1 deg C	03-18-1998

TIME(min)	VO2(L)	VCO2(L)	VO2(Kg)	VCO2(Kg)	RER	VE(stpd)
0.13	0.1231	0.0841	1.3578	0.9274	0.6830	15.0309
0.20	0.0902	0.0537	0.9944	0.5922	0.5956	10.9700
0.27	0.0815	0.0459	0.8989	0.5064	0.5634	11.7858
0.33	0.0800	0.0476	0.8820	0.5253	0.5956	12.3835
0.40	0.2426	0.2343	2.6754	2.5835	0.9656	20.3036
0.47	0.3540	0.2803	3.9040	3.0910	0.7917	12.8999
0.53	0.4491	0.3411	4.9528	3.7612	0.7594	11.7122
0.60	0.7015	0.5326	7.7363	5.8736	0.7592	15.2768
0.67	0.2115	0.1533	2.3328	1.6901	0.7245	4.2793
0.73	0.8483	0.6216	9.3550	6.8542	0.7327	16.7027
0.80	0.5933	0.4456	6.5428	4.9141	0.7511	11.2077
0.87	0.8133	0.6138	8.9686	6.7686	0.7547	15.0773
0.93	0.4740	0.3572	5.2275	3.9396	0.7536	8.7648
1.00	0.5598	0.4147	6.1728	4.5727	0.7408	10.6022
1.07	0.7853	0.5832	8.6601	6.4316	0.7427	15.9077
1.13	0.9008	0.6830	9.9333	7.5322	0.7583	18.7577
1.20	0.6414	0.4944	7.0736	5.4526	0.7708	13.4678
1.27	1.1501	0.9087	12.6831	10.0206	0.7901	23.2336
1.33	1.0450	0.8099	11.5234	8.9309	0.7750	19.9921
1.40	1.2530	0.9638	13.8170	10.6282	0.7692	23.4731
1.47	0.8600	0.6370	9.4836	7.0247	0.7407	16.3291
1.53	1.5962	1.2435	17.6020	13.7124	0.7790	29.1842
1.60	1.5867	1.1622	17.4976	12.8168	0.7325	27.5363
1.67	1.4191	1.0577	15.6489	11.6642	0.7454	24.2009
1.73	1.3980	1.0176	15.4170	11.2213	0.7278	23.2819
1.80	2.1733	1.5639	23.9667	17.2456	0.7196	34.9035
1.87	1.7046	1.2204	18.7976	13.4582	0.7160	26.7315
1.93	1.6872	1.2234	18.6056	13.4911	0.7251	26.0281
2.00	2.5733	1.8805	28.3771	20.7372	0.7308	39.5871
2.07	1.9016	1.4419	20.9703	15.9004	0.7582	30.2900
2.13	1.8731	1.4382	20.6554	15.8596	0.7678	30.0860
2.20	2.6918	2.1051	29.6836	23.2140	0.7820	42.5695
2.27	2.0909	1.6592	23.0577	18.2968	0.7935	34.3504
2.33	1.7478	1.4068	19.2736	15.5131	0.8049	29.0943
2.40	1.9721	1.6379	21.7472	18.0617	0.8305	33.1547

2.47	2.0817	1.7326	22.9565	19.1062	0.8323	35.3942
2.53	2.2409	1.8845	24.7122	20.7820	0.8410	37.8422
2.60	2.5188	2.1160	27.7762	23.3346	0.8401	42.6185
2.67	2.8996	2.5422	31.9756	28.0338	0.8767	49.9941
2.73	2.6568	2.3710	29.2985	26.1463	0.8924	45.8622
2.80	2.6148	2.3582	28.8348	26.0055	0.9019	46.9768
2.87	2.3059	2.1550	25.4289	23.7642	0.9345	42.5891
2.93	2.6666	2.4665	29.4062	27.1995	0.9250	50.0804
3.00	2.2527	2.1827	24.8422	24.0693	0.9689	43.0085
3.07	2.3037	2.2372	25.4045	24.6705	0.9711	44.2132
3.13	1.9067	1.8745	21.0267	20.6707	0.9831	36.8630
3.20	2.2246	2.2318	24.5317	24.6114	1.0033	43.0866
3.27	2.3339	2.2269	25.7374	24.5569	0.9541	43.7936
3.33	2.3242	2.3385	25.6300	25.7882	1.0062	47.4339
3.40	2.9042	2.9064	32.0257	32.0502	1.0008	56.4908
3.47	2.2679	2.2329	25.0090	24.6231	0.9846	45.6142
3.53	2.5010	2.5197	27.5801	27.7858	1.0075	51.3160
3.60	2.6088	2.6267	28.7686	28.9664	1.0069	51.8100
3.67	2.7682	2.7715	30.5263	30.5632	1.0012	55.0456
3.73	2.8325	2.8519	31.2358	31.4493	1.0068	57.3815
3.80	2.3835	2.4646	26.2846	27.1782	1.0340	51.3965
3.87	2.5530	2.7264	28.1539	30.0660	1.0679	54.8576
3.93	2.1220	2.2452	23.4000	24.7588	1.0581	44.6803
4.00	2.6685	2.6990	29.4271	29.7638	1.0114	56.8188
4.07	2.5272	2.6464	27.8691	29.1837	1.0472	54.7896
4.13	2.3998	2.4961	26.4635	27.5257	1.0401	49.5750
4.20	2.0524	2.0804	22.6332	22.9415	1.0136	45.2709
4.27	2.9661	3.0278	32.7092	33.3888	1.0208	62.6194
4.33	2.4091	2.4286	26.5664	26.7821	1.0081	48.8168
4.40	2.7350	2.7110	30.1604	29.8960	0.9912	56.0689
4.47	2.5769	2.5849	28.4173	28.5049	1.0031	51.3894
4.53	2.5638	2.6223	28.2722	28.9175	1.0228	54.2898
4.60	2.5515	2.6258	28.1365	28.9562	1.0291	52.9925
4.67	2.7819	2.8360	30.6779	31.2742	1.0194	58.7143
4.73	2.4177	2.5317	26.6610	27.9180	1.0471	51.4555
4.80	2.7867	2.8608	30.7310	31.5479	1.0266	58.1459
4.87	2.4554	2.5306	27.0772	27.9065	1.0306	53.0501
4.93	2.6655	2.7247	29.3942	30.0464	1.0222	56.5848
5.00	3.0058	2.9524	33.1469	32.5581	0.9822	62.9474
5.07	2.5114	2.5499	27.6944	28.1197	1.0154	52.4127

5.13	2.8388	2.7846	31.3046	30.7073	0.9809	59.4323
5.20	2.3406	2.4632	25.8117	27.1637	1.0524	52.9123
5.27	2.6711	2.7189	29.4555	29.9831	1.0179	55.2057
5.33	2.5319	2.5491	27.9210	28.1100	1.0068	52.8832
5.40	2.6127	2.7638	28.8122	30.4780	1.0578	54.7293
5.47	3.2305	3.2504	35.6242	35.8436	1.0062	66.2650
5.53	2.3753	2.3752	26.1943	26.1926	0.9999	50.8570
5.60	3.1392	3.1497	34.6181	34.7335	1.0033	67.0819
5.67	2.2833	2.2708	25.1792	25.0415	0.9945	48.8308
5.73	3.0247	2.9739	33.3553	32.7954	0.9832	65.9339
5.80	2.5699	2.5804	28.3402	28.4557	1.0041	54.2076
5.87	2.9992	2.9666	33.0739	32.7146	0.9891	64.0687
5.93	2.7512	2.7325	30.3396	30.1327	0.9932	58.8219
6.00	2.6969	2.6768	29.7405	29.5189	0.9926	57.5001
6.07	3.2767	3.2217	36.1338	35.5272	0.9832	71.4260
6.13	2.4804	2.5182	27.3524	27.7699	1.0153	56.9016
6.20	3.1823	3.2791	35.0935	36.1602	1.0304	72.6184
6.27	2.3835	2.4111	26.2841	26.5884	1.0116	53.5737
6.33	2.9783	2.9916	32.8430	32.9899	1.0045	66.8431
6.40	3.0351	3.0853	33.4698	34.0236	1.0165	68.1015
6.47	2.8448	2.8675	31.3709	31.6220	1.0080	65.1624
6.53	2.9761	3.0354	32.8187	33.4731	1.0199	70.3341
6.60	2.3702	2.4830	26.1377	27.3812	1.0476	58.2075
6.67	2.9773	3.1465	32.8328	34.6984	1.0568	70.6994
6.73	2.4115	2.4379	26.5935	26.8837	1.0109	55.5877
6.80	2.8742	2.9680	31.6954	32.7303	1.0327	67.9088
6.87	2.8341	2.8894	31.2537	31.8634	1.0195	64.3453
6.93	3.0672	3.1287	33.8234	34.5023	1.0201	73.3456
7.00	2.4719	2.5157	27.2592	27.7422	1.0177	58.5634
7.07	2.6148	2.7261	28.8354	30.0621	1.0425	62.0889
7.13	2.1228	2.1020	23.4089	23.1799	0.9902	47.7661
7.20	2.8870	2.8941	31.8370	31.9144	1.0024	63.8798
7.27	3.2179	2.9777	35.4855	32.8368	0.9254	66.2373
7.33	3.4550	3.2769	38.1008	36.1364	0.9484	73.9613
7.40	2.7879	2.7065	30.7442	29.8458	0.9708	64.2747
7.47	2.7376	2.7635	30.1891	30.4748	1.0095	64.1826
7.53	3.0117	3.0218	33.2123	33.3231	1.0033	73.0632
7.60	3.2070	3.2837	35.3653	36.2109	1.0239	76.9778
7.67	2.6282	2.6572	28.9830	29.3027	1.0110	64.2482
7.73	2.5543	2.6119	28.1681	28.8032	1.0225	62.0293

7.80	2.8828	2.9300	31.7901	32.3112	1.0164	69.9156
7.87	2.4170	2.4380	26.6533	26.8857	1.0087	57.4906
7.93	3.1309	3.1892	34.5262	35.1687	1.0186	75.2913
8.00	2.7065	2.6995	29.8460	29.7689	0.9974	64.4146



**Two cycling transitions**

Last Name	First Name	D.O.B	Weight	Height	Temp	Date
Reddin	Nakia	06-05-75	199.5 Lbs	74.0 in	23.5 deg C	03-30-1998

TIME(min)	VO2(L)	VCO2(L)	VO2(Kg)	VCO2(Kg)	RER	VE(stpd)
0.13	0.5441	0.5459	6.0005	6.0199	1.0032	22.6738
0.20	0.5579	0.4317	6.1518	4.7610	0.7739	12.6551
0.27	0.9503	0.7268	10.4793	8.0143	0.7648	16.9575
0.33	1.0270	0.6927	11.3252	7.6387	0.6745	17.1629
0.40	0.7960	0.6212	8.7778	6.8502	0.7804	14.8402
0.47	0.9246	0.6614	10.1957	7.2932	0.7153	15.2538
0.53	0.5941	0.4197	6.5511	4.6277	0.7064	10.1344
0.60	0.7793	0.5829	8.5940	6.4284	0.7480	16.4604
0.67	1.0075	0.7581	11.1102	8.3602	0.7525	18.6684
0.73	0.8412	0.6050	9.2768	6.6718	0.7192	15.5485
0.80	0.5428	0.4049	5.9861	4.4646	0.7458	10.0437
0.87	0.9362	0.7002	10.3245	7.7218	0.7479	16.4536
0.93	0.8340	0.6123	9.1968	6.7523	0.7342	14.6457
1.00	0.6745	0.4998	7.4382	5.5114	0.7410	12.1429
1.07	1.1627	0.8566	12.8218	9.4459	0.7367	21.6795
1.13	0.8469	0.6256	9.3393	6.8986	0.7387	15.9541
1.20	1.1309	0.8661	12.4714	9.5509	0.7658	21.8652
1.27	1.2293	0.9273	13.5560	10.2260	0.7544	23.4700
1.33	0.8850	0.6860	9.7599	7.5648	0.7751	17.0602
1.40	1.2203	0.8418	13.4567	9.2835	0.6899	22.6832
1.47	1.4814	1.2739	16.3366	14.0484	0.8599	32.6975
1.53	0.5552	0.4153	6.1229	4.5796	0.7480	10.3280
1.60	1.3803	1.0749	15.2219	11.8532	0.7787	26.8986
1.67	1.6641	1.3218	18.3505	14.5758	0.7943	30.3111
1.73	1.0595	0.8058	11.6833	8.8858	0.7606	18.6710
1.80	2.0179	1.4623	22.2524	16.1261	0.7247	33.7283
1.87	1.5675	1.1197	17.2862	12.3473	0.7143	26.9097
1.93	1.7871	1.2903	19.7071	14.2291	0.7220	30.3195
2.00	2.3020	1.7578	25.3854	19.3845	0.7636	42.6564
2.07	1.7433	1.3408	19.2243	14.7859	0.7691	31.7294
2.13	2.2098	1.7903	24.3685	19.7421	0.8101	39.7348
2.20	1.6081	1.3600	17.7330	14.9975	0.8457	30.1187
2.27	1.2188	1.0547	13.4409	11.6311	0.8654	23.2041
2.33	1.9174	1.5726	21.1440	17.3425	0.8202	36.1474
2.40	1.4239	1.2457	15.7018	13.7376	0.8749	27.4971

2.47	1.6054	1.3435	17.7032	14.8151	0.8369	28.3115
2.53	1.9282	1.5991	21.2630	17.6337	0.8293	32.8339
2.60	2.3112	1.8171	25.4870	20.0387	0.7862	39.1596
2.67	1.3238	1.0971	14.5985	12.0988	0.8288	23.9007
2.73	2.0359	1.6688	22.4506	18.4029	0.8197	35.7703
2.80	2.4750	1.9694	27.2929	21.7179	0.7957	43.9551
2.87	1.6670	1.4603	18.3829	16.1031	0.8760	31.5026
2.93	2.2640	1.8974	24.9666	20.9242	0.8381	42.5385
3.00	1.2883	1.1317	14.2068	12.4803	0.8785	24.8981
3.07	2.0205	1.8107	22.2811	19.9671	0.8961	37.4475
3.13	1.9992	1.6836	22.0468	18.5662	0.8421	37.3266
3.20	2.5053	2.1115	27.6272	23.2849	0.8428	48.6451
3.27	0.9455	0.8304	10.4262	9.1576	0.8783	19.6748
3.33	2.2184	1.9902	24.4633	21.9467	0.8971	39.7239
3.40	2.3541	2.0611	25.9600	22.7284	0.8755	42.5385
3.47	2.0046	1.6677	22.1057	18.3902	0.8319	36.1325
3.53	2.4461	2.0816	26.9749	22.9548	0.8510	45.0034
3.60	0.6669	0.5806	7.3537	6.4025	0.8706	14.5474
3.67	2.5835	2.3366	28.4894	25.7666	0.9044	46.5452
3.73	3.0274	2.5331	33.3853	27.9338	0.8367	55.7893
3.80	1.4947	1.3008	16.4828	14.3447	0.8703	29.1951
3.87	2.0939	1.9095	23.0908	21.0573	0.9119	41.0618
3.93	2.0502	1.8256	22.6087	20.1322	0.8905	40.1197
4.00	1.9228	1.6920	21.2034	18.6588	0.8800	36.9000
4.07	1.8925	1.6536	20.8693	18.2347	0.8738	35.4056
4.13	1.9200	1.6836	21.1726	18.5657	0.8769	36.2030
4.20	2.0333	1.7787	22.4219	19.6152	0.8748	38.4146
4.27	1.9525	1.7246	21.5319	19.0180	0.8832	37.4064
4.33	2.7575	2.3693	30.4084	26.1279	0.8592	54.9639
4.40	1.4381	1.3853	15.8589	15.2764	0.9633	31.3019
4.47	1.9624	1.8459	21.6405	20.3559	0.9406	39.1059
4.53	1.2751	1.2297	14.0613	13.5606	0.9644	26.6723
4.60	2.0849	1.9588	22.9910	21.6006	0.9395	40.7214
4.67	2.0167	1.7706	22.2389	19.5252	0.8780	38.4040
4.73	2.0813	1.8481	22.9517	20.3806	0.8880	39.9136
4.80	1.8933	1.6366	20.8783	18.0477	0.8644	34.1298
4.87	1.4331	1.2292	15.8034	13.5551	0.8577	26.4040
4.93	2.3996	2.0926	26.4615	23.0762	0.8721	43.7304
5.00	2.4218	1.9165	26.7070	21.1341	0.7913	46.7330
5.07	1.8257	1.7826	20.1332	19.6580	0.9764	38.0875

5.13	1.7325	1.5348	19.1049	16.9252	0.8859	33.2902
5.20	2.2174	1.9869	24.4523	21.9108	0.8961	42.9104
5.27	1.9934	1.7619	21.9821	19.4290	0.8839	37.2857
5.33	2.5012	2.1652	27.5818	23.8767	0.8657	48.3243
5.40	2.1194	1.8522	23.3718	20.4251	0.8739	40.1307
5.47	2.0897	1.8143	23.0448	20.0075	0.8682	40.0029
5.53	2.3330	2.0862	25.7271	23.0057	0.8942	44.9094
5.60	1.8286	1.6055	20.1646	17.7045	0.8780	36.3183
5.67	1.9143	1.6778	21.1100	18.5019	0.8764	36.7095
5.73	2.0056	1.7960	22.1165	19.8057	0.8955	41.2343
5.80	1.6318	1.4284	17.9942	15.7515	0.8754	31.9867
5.87	2.5095	2.1777	27.6739	24.0145	0.8678	46.7779
5.93	2.0888	1.7928	23.0346	19.7700	0.8583	36.9253
6.00	2.0890	1.7165	23.0369	18.9285	0.8217	37.3113
6.07	1.4851	1.2396	16.3773	13.6694	0.8347	27.8832
6.13	1.0843	0.9415	11.9569	10.3829	0.8684	20.5557
6.20	2.9848	2.5015	32.9146	27.5857	0.8381	52.7718
6.27	2.2534	1.7808	24.8497	19.6384	0.7903	36.6042
6.33	2.8209	2.2654	31.1072	24.9821	0.8031	49.9490
6.40	2.1245	1.7620	23.4278	19.4303	0.8294	38.7208
6.47	2.5488	2.1547	28.1072	23.7610	0.8454	48.1976
6.53	2.4249	2.0967	26.7411	23.1210	0.8646	45.8241
6.60	2.7244	2.3031	30.0430	25.3979	0.8454	52.2774
6.67	1.4078	1.1413	15.5250	12.5861	0.8107	31.9126
6.73	2.0293	2.0785	22.3786	22.9212	1.0242	43.2111
6.80	2.2611	1.9873	24.9347	21.9152	0.8789	40.5153
6.87	3.3136	2.9364	36.5407	32.3809	0.8862	62.0104
6.93	2.4544	2.1324	27.0656	23.5149	0.8688	45.2225
7.00	2.7610	2.4254	30.4466	26.7465	0.8785	53.3591
7.07	2.2794	2.0437	25.1366	22.5375	0.8966	43.9009
7.13	2.7652	2.4984	30.4932	27.5518	0.9035	51.9407
7.20	2.7080	2.4044	29.8622	26.5149	0.8879	50.9380
7.27	2.6001	2.3769	28.6728	26.2114	0.9142	50.1427
7.33	2.1016	1.9013	23.1752	20.9666	0.9047	39.4854
7.40	3.1133	2.7092	34.3317	29.8757	0.8702	56.3218
7.47	2.8913	2.4739	31.8835	27.2806	0.8556	54.0094
7.53	2.0084	1.8643	22.1481	20.5592	0.9283	40.2200
7.60	2.7315	2.4974	30.1214	27.5405	0.9143	51.9193
7.67	2.4204	2.2021	26.6913	24.2843	0.9098	45.3103
7.73	2.9939	2.7607	33.0151	30.4442	0.9221	58.1177

7.80	2.9078	2.6942	32.0655	29.7102	0.9265	55.9516
7.87	2.3504	2.1787	25.9193	24.0262	0.9270	45.6737
7.93	2.8396	2.6205	31.3140	28.8977	0.9228	57.5244
8.00	2.5632	2.4135	28.2662	26.6151	0.9416	52.8069
8.07	3.1701	2.9334	34.9579	32.3486	0.9254	64.7488
8.13	2.7443	2.6272	30.2635	28.9714	0.9573	57.9252
8.20	2.5163	2.4116	27.7490	26.5936	0.9584	52.7067
8.27	2.4787	2.3646	27.3337	26.0756	0.9540	54.2877
8.33	2.6138	2.5865	28.8243	28.5229	0.9895	52.8926
8.40	2.9973	2.7837	33.0528	30.6974	0.9287	61.1070
8.47	2.6307	2.5150	29.0105	27.7345	0.9560	54.7885
8.53	2.7711	2.6270	30.5581	28.9699	0.9480	57.1666
8.60	2.3338	2.2553	25.7361	24.8705	0.9664	48.0842
8.67	3.3718	3.1884	37.1832	35.1608	0.9456	70.0687
8.73	2.3112	2.2251	25.4872	24.5369	0.9627	50.1638
8.80	2.6235	2.5328	28.9310	27.9310	0.9654	56.9745
8.87	3.2904	3.1709	36.2847	34.9671	0.9637	69.9129
8.93	2.3846	2.3287	26.2964	25.6793	0.9765	51.6274
9.00	2.4985	2.3557	27.5527	25.9773	0.9428	55.3525
9.07	3.5140	3.5175	38.7512	38.7896	1.0010	78.1583
9.13	2.0355	2.0561	22.4470	22.6741	1.0101	44.2620
9.20	2.1891	2.1304	24.1401	23.4936	0.9732	46.3602
9.27	3.4294	3.2451	37.8182	35.7856	0.9463	70.5395
9.33	2.2027	2.0730	24.2901	22.8605	0.9411	46.5792
9.40	3.0372	2.8710	33.4927	31.6604	0.9453	62.1382
9.47	2.8919	2.7121	31.8910	29.9084	0.9378	59.9969
9.53	3.0782	2.8390	33.9455	31.3068	0.9223	65.7061
9.60	2.7422	2.6461	30.2396	29.1801	0.9650	60.1988
9.67	3.0183	2.8900	33.2846	31.8697	0.9575	69.7923
9.73	2.2697	2.2186	25.0291	24.4654	0.9775	50.9353
9.80	3.1608	3.0731	34.8564	33.8890	0.9722	70.0726
9.87	2.5016	2.3440	27.5870	25.8491	0.9370	54.0019
9.93	3.1730	2.9767	34.9909	32.8263	0.9381	67.4144
10.00	2.3850	2.2329	26.3013	24.6238	0.9362	52.0411
10.07	2.8147	2.7022	31.0393	29.7982	0.9600	61.8960
10.13	2.6791	2.5038	29.5439	27.6104	0.9346	56.5747
10.20	3.4922	3.2332	38.5110	35.6541	0.9258	76.2405
10.27	2.2907	2.2187	25.2611	24.4673	0.9686	51.8915
10.33	3.1755	3.0469	35.0179	33.6000	0.9595	72.6178
10.40	2.6204	2.5031	28.8961	27.6033	0.9553	59.0251

10.47	2.7688	2.6225	30.5331	28.9197	0.9472	61.9129
10.53	2.4853	2.3472	27.4073	25.8834	0.9444	54.3236
10.60	3.1023	2.8499	34.2103	31.4276	0.9187	66.8876
10.67	2.6048	2.4490	28.7251	27.0069	0.9402	56.4207
10.73	3.5011	3.1742	38.6088	35.0042	0.9066	75.2941
10.80	2.7899	2.6152	30.7655	28.8395	0.9374	62.2551
10.87	2.6787	2.5372	29.5394	27.9793	0.9472	61.2726
10.93	3.1940	3.0383	35.2215	33.5046	0.9513	72.4980
11.00	2.8216	2.6242	31.1158	28.9381	0.9300	63.2198
11.07	2.7655	2.5693	30.4973	28.3329	0.9290	61.0890
11.13	3.3114	3.0405	36.5171	33.5291	0.9182	71.7810
11.20	2.5117	2.2638	27.6981	24.9641	0.9013	56.0904
11.27	3.4080	3.2826	37.5818	36.1996	0.9632	77.7734
11.33	2.4947	2.3006	27.5105	25.3700	0.9222	54.5709
11.40	3.1220	2.8446	34.4279	31.3693	0.9112	66.8419
11.47	3.0610	2.7652	33.7549	30.4936	0.9034	64.8998
11.53	2.6230	2.4092	28.9249	26.5674	0.9185	57.9708
11.60	3.0818	2.8744	33.9851	31.6972	0.9327	67.9393
11.67	2.2554	2.1274	24.8713	23.4596	0.9432	48.6183
11.73	3.5734	3.2092	39.4062	35.3895	0.8981	77.1281
11.80	2.3578	2.1282	26.0009	23.4691	0.9026	49.7165
11.87	3.4203	3.1189	37.7179	34.3936	0.9119	74.2447
11.93	2.2715	2.0845	25.0486	22.9867	0.9177	49.5032
12.00	3.5405	3.2221	39.0432	35.5323	0.9101	74.5747

**Stepping and cycling transitions**

Last Name	First Name	D.O.B	Weight	Height	Temp	Date
Reddin	Nakia	06-05-75	199.5 Lbs	74.0 in	21.6 deg C	03-20-1998

TIME(min)	VO2(L)	VCO2(L)	VO2(Kg)	VCO2(Kg)	RER	VE(stpd)
0.13	0.4287	0.3741	4.7270	4.1250	0.8726	13.6406
0.20	0.4901	0.3902	5.4047	4.3032	0.7962	10.7904
0.27	0.4660	0.3606	5.1390	3.9771	0.7739	8.9580
0.33	1.0243	0.7732	11.2954	8.5265	0.7549	18.7175
0.40	0.4743	0.3571	5.2299	3.9374	0.7529	8.5402
0.47	0.5229	0.3959	5.7661	4.3663	0.7572	9.3587
0.53	0.7255	0.5492	8.0000	6.0566	0.7571	13.2316
0.60	0.2392	0.1861	2.6377	2.0527	0.7782	4.4790
0.67	0.5354	0.4274	5.9044	4.7135	0.7983	9.9732
0.73	0.4723	0.3756	5.2088	4.1416	0.7951	8.8562
0.80	0.5049	0.4011	5.5683	4.4229	0.7943	9.9746
0.87	0.6311	0.5135	6.9590	5.6623	0.8137	13.2298
0.93	0.6123	0.5021	6.7524	5.5365	0.8199	13.1389
1.00	0.2833	0.2343	3.1245	2.5837	0.8269	6.0060
1.07	0.8633	0.6945	9.5196	7.6581	0.8045	17.9161
1.13	0.7259	0.5884	8.0045	6.4891	0.8107	14.6525
1.20	0.9513	0.7543	10.4907	8.3185	0.7929	19.5367
1.27	0.9771	0.7996	10.7754	8.8177	0.8183	19.8612
1.33	0.9875	0.7684	10.8900	8.4734	0.7781	18.3131
1.40	1.4951	1.1705	16.4872	12.9075	0.7829	26.4779
1.47	1.6848	1.3127	18.5788	14.4761	0.7792	28.6906
1.53	0.9175	0.6991	10.1183	7.7094	0.7619	15.0658
1.60	1.9142	1.5363	21.1087	16.9413	0.8026	32.4773
1.67	1.2600	0.9775	13.8948	10.7792	0.7758	20.7520
1.73	1.5538	1.1856	17.1350	13.0742	0.7630	24.8279
1.80	2.1075	1.5556	23.2407	17.1549	0.7381	33.5602
1.87	2.2074	1.6634	24.3423	18.3429	0.7535	34.9063
1.93	1.9745	1.5141	21.7735	16.6967	0.7668	30.7423
2.00	2.0284	1.5762	22.3688	17.3814	0.7770	31.3358
2.07	1.6337	1.2795	18.0153	14.1098	0.7832	26.1651
2.13	2.7527	2.2232	30.3553	24.5170	0.8077	44.5094
2.20	2.2128	1.7672	24.4022	19.4884	0.7986	36.5497
2.27	1.6895	1.4296	18.6309	15.7645	0.8461	28.9380
2.33	2.4146	2.0659	26.6270	22.7819	0.8556	41.4423
2.40	1.7931	1.5268	19.7733	16.8367	0.8515	31.1581

2.47	2.4206	2.0326	26.6931	22.4144	0.8397	41.3120
2.53	2.3764	2.0745	26.2055	22.8764	0.8730	41.1198
2.60	1.5606	1.3749	17.2091	15.1622	0.8811	28.4949
2.67	2.6226	2.4010	28.9209	26.4777	0.9155	45.9990
2.73	2.5423	2.2641	28.0352	24.9671	0.8906	43.9636
2.80	1.0090	0.8907	11.1271	9.8228	0.8828	18.0129
2.87	2.3572	2.1488	25.9937	23.6965	0.9116	43.3231
2.93	2.2818	1.9873	25.1623	21.9152	0.8710	38.3664
3.00	2.7837	2.4729	30.6974	27.2703	0.8884	50.6733
3.07	2.4593	2.2943	27.1197	25.3008	0.9329	44.9875
3.13	2.2949	2.1345	25.3075	23.5387	0.9301	43.8740
3.20	1.5178	1.4270	16.7371	15.7361	0.9402	28.5967
3.27	1.7780	1.6526	19.6068	18.2242	0.9295	32.2782
3.33	2.8494	2.5580	31.4218	28.2086	0.8977	51.2626
3.40	2.3799	2.1445	26.2441	23.6486	0.9011	41.5212
3.47	2.5463	2.2841	28.0796	25.1877	0.8970	45.1848
3.53	2.3745	2.1600	26.1849	23.8197	0.9097	42.7306
3.60	2.6096	2.3947	28.7776	26.4076	0.9176	48.4749
3.67	2.1660	2.0103	23.8856	22.1685	0.9281	41.1932
3.73	2.0957	2.0194	23.1105	22.2695	0.9636	39.8709
3.80	1.9641	1.8696	21.6589	20.6171	0.9519	37.5419
3.87	2.7204	2.5411	29.9996	28.0226	0.9341	52.1780
3.93	2.1420	2.0798	23.6214	22.9347	0.9709	41.3063
4.00	2.4416	2.2950	26.9247	25.3087	0.9400	45.3571
4.07	1.6722	1.5448	18.4401	17.0353	0.9238	30.7423
4.13	2.4291	2.2652	26.7867	24.9797	0.9325	46.8002
4.20	2.8609	2.7054	31.5492	29.8343	0.9456	51.8800
4.27	2.4189	2.2221	26.6742	24.5045	0.9187	43.3171
4.33	2.4405	2.2431	26.9124	24.7359	0.9191	45.7765
4.40	2.5498	2.3736	28.1185	26.1751	0.9309	48.6382
4.47	2.4202	2.2864	26.6885	25.2136	0.9447	46.1898
4.53	2.3001	2.1076	25.3648	23.2418	0.9163	43.6342
4.60	2.3879	2.2413	26.3324	24.7157	0.9386	47.6834
4.67	1.6837	1.6525	18.5674	18.2234	0.9815	33.7589
4.73	2.3137	2.2744	25.5140	25.0814	0.9830	46.9907
4.80	2.5092	2.3190	27.6709	25.5730	0.9242	46.8955
4.87	2.2910	2.0636	25.2647	22.7567	0.9007	42.5037
4.93	2.5325	2.2768	27.9277	25.1079	0.8990	47.9812
5.00	2.0913	1.9804	23.0615	21.8385	0.9470	39.6467
5.07	2.4139	2.2203	26.6200	24.4843	0.9198	43.2393

5.13	1.9361	1.6982	21.3509	18.7265	0.8771	35.4875
5.20	2.4157	2.1379	26.6390	23.5754	0.8850	44.3523
5.27	2.7236	2.4691	30.0349	27.2283	0.9066	51.4376
5.33	3.0726	2.7235	33.8829	30.0337	0.8864	56.0377
5.40	2.6722	2.4297	29.4681	26.7941	0.9093	51.8585
5.47	2.3345	2.1847	25.7434	24.0915	0.9358	47.1811
5.53	2.4185	2.3009	26.6701	25.3733	0.9514	48.1840
5.60	2.3471	2.2062	25.8830	24.3292	0.9400	45.9609
5.67	2.4560	2.2667	27.0836	24.9966	0.9229	47.5681
5.73	2.3983	2.2004	26.4479	24.2654	0.9175	45.5089
5.80	2.5488	2.3226	28.1070	25.6122	0.9112	48.1840
5.87	1.8881	1.7343	20.8217	19.1250	0.9185	36.6249
5.93	1.7730	1.6080	19.5521	17.7326	0.9069	34.9920
6.00	2.2637	2.0820	24.9632	22.9592	0.9197	43.9212
6.07	2.4993	2.2442	27.5612	24.7479	0.8979	46.5582
6.13	1.7695	1.5850	19.5129	17.4784	0.8957	34.1562
6.20	2.1771	1.9473	24.0080	21.4738	0.8944	41.6057
6.27	2.3654	2.1938	26.0849	24.1921	0.9274	47.4805
6.33	2.2605	2.0472	24.9275	22.5759	0.9057	42.0795
6.40	2.4143	2.1025	26.6243	23.1851	0.8708	44.4001
6.47	2.2124	1.9779	24.3971	21.8118	0.8940	41.7703
6.53	2.2630	2.0376	24.9554	22.4700	0.9004	41.8820
6.60	2.5568	2.2620	28.1951	24.9446	0.8847	47.2711
6.67	2.5687	2.2797	28.3261	25.1401	0.8875	46.8589
6.73	2.5098	2.2497	27.6765	24.8090	0.8964	48.6912
6.80	2.6039	2.4636	28.7152	27.1672	0.9461	53.1473
6.87	1.4244	1.3826	15.7073	15.2467	0.9707	28.5652
6.93	2.6179	2.5468	28.8688	28.0846	0.9728	52.1330
7.00	1.7127	1.6260	18.8873	17.9311	0.9494	31.5132
7.07	2.6647	2.4945	29.3857	27.5078	0.9361	49.3469
7.13	2.8123	2.6243	31.0124	28.9392	0.9331	52.9080
7.20	2.5591	2.4436	28.2208	26.9467	0.9549	51.2792
7.27	2.3360	2.2782	25.7599	25.1225	0.9753	48.4683
7.33	2.9202	2.9317	32.2025	32.3295	1.0039	63.2463
7.40	2.4223	2.5763	26.7122	28.4104	1.0636	53.1180
7.47	2.2018	2.3217	24.2809	25.6023	1.0544	49.6577
7.53	2.8414	3.0531	31.3334	33.6680	1.0745	64.8859
7.60	2.0328	2.0802	22.4172	22.9398	1.0233	46.8459
7.67	2.5600	2.7064	28.2305	29.8455	1.0572	59.4111
7.73	1.8042	1.9286	19.8957	21.2681	1.0690	39.9289



7.80	2.6321	2.5976	29.0256	28.6449	0.9869	53.5013
7.87	2.6256	2.6173	28.9536	28.8623	0.9968	54.8670
7.93	2.8293	2.7728	31.2006	30.5777	0.9800	59.6906
8.00	2.5313	2.5772	27.9136	28.4201	1.0181	53.6892
8.07	2.9874	2.9717	32.9438	32.7710	0.9948	62.8902
8.13	2.1285	2.2232	23.4724	24.5169	1.0445	50.1230
8.20	2.2378	2.3596	24.6777	26.0204	1.0544	52.9582
8.27	2.5704	2.7205	28.3454	30.0001	1.0584	60.1807
8.33	2.3384	2.3704	25.7868	26.1394	1.0137	52.1482
8.40	2.2131	2.2676	24.4053	25.0057	1.0246	50.4407
8.47	3.1348	3.0663	34.5692	33.8144	0.9782	68.8209
8.53	2.5625	2.5905	28.2587	28.5665	1.0109	58.4021
8.60	2.3189	2.3358	25.5722	25.7587	1.0073	52.6617
8.67	2.6099	2.6099	28.7807	28.7812	1.0000	59.8521
8.73	2.7350	2.8376	30.1605	31.2916	1.0375	63.7578
8.80	2.3018	2.3721	25.3828	26.1588	1.0306	51.2298
8.87	2.3469	2.3060	25.8805	25.4301	0.9826	51.0133
8.93	2.8612	2.8680	31.5519	31.6276	1.0024	63.6566
9.00	2.5859	2.6252	28.5166	28.9498	1.0152	58.6573
9.07	2.5463	2.5686	28.0799	28.3252	1.0087	56.8838
9.13	2.3624	2.3202	26.0511	25.5864	0.9822	52.1919
9.20	2.6642	2.6384	29.3794	29.0950	0.9903	59.6167
9.27	2.9197	2.8835	32.1972	31.7985	0.9876	64.9365
9.33	2.0707	2.0617	22.8343	22.7354	0.9957	45.0108
9.40	3.2109	3.3223	35.4083	36.6364	1.0347	67.4559
9.47	2.7035	2.7126	29.8133	29.9136	1.0034	57.4674
9.53	2.3979	2.3912	26.4435	26.3687	0.9972	51.5851
9.60	2.7083	2.6642	29.8661	29.3791	0.9837	59.5271
9.67	3.0542	2.9337	33.6799	32.3520	0.9606	67.3548
9.73	2.5633	2.5144	28.2665	27.7275	0.9809	57.7268
9.80	2.6116	2.5923	28.7995	28.5863	0.9926	60.4860
9.87	2.5885	2.5552	28.5454	28.1782	0.9871	58.8677
9.93	2.4448	2.4002	26.9607	26.4678	0.9817	54.9154
10.00	2.8856	2.7186	31.8215	29.9795	0.9421	61.3600
10.07	1.8933	1.7724	20.8787	19.5453	0.9361	40.9739
10.13	3.0793	2.9927	33.9570	33.0024	0.9719	65.1950
10.20	2.7097	2.4936	29.8815	27.4982	0.9202	55.7161
10.27	2.6120	2.4136	28.8037	26.6158	0.9240	55.4761
10.33	3.1101	2.9431	34.2974	32.4548	0.9463	68.1945
10.40	1.8085	1.7497	19.9437	19.2954	0.9675	39.9428

10.47	3.1725	2.9931	34.9851	33.0064	0.9434	67.4791
10.53	2.8355	2.6477	31.2691	29.1981	0.9338	60.5110
10.60	2.4455	2.3389	26.9678	25.7928	0.9564	53.8844
10.67	2.7721	2.6590	30.5693	29.3218	0.9592	61.1161
10.73	2.6072	2.5077	28.7514	27.6543	0.9618	60.3425
10.80	3.0006	2.8723	33.0893	31.6746	0.9572	66.8647
10.87	2.1324	2.0321	23.5151	22.4096	0.9530	48.1461
10.93	3.1332	2.9377	34.5518	32.3960	0.9376	71.1162
11.00	2.4127	2.3422	26.6060	25.8286	0.9708	55.6233
11.07	2.1684	2.1025	23.9121	23.1857	0.9696	48.7181
11.13	2.8727	2.7739	31.6785	30.5898	0.9656	64.1273
11.20	2.9558	2.9187	32.5957	32.1866	0.9874	64.1417
11.27	2.9310	2.8106	32.3222	30.9943	0.9589	64.9753
11.33	2.6293	2.5952	28.9948	28.6193	0.9870	62.0750
11.40	3.1242	3.0717	34.4522	33.8732	0.9832	72.0081
11.47	2.9936	2.8681	33.0123	31.6279	0.9581	70.4526
11.53	2.4692	2.4100	27.2292	26.5761	0.9760	57.9897
11.60	2.7536	2.6178	30.3651	28.8683	0.9507	64.7024
11.67	2.3928	2.3253	26.3864	25.6424	0.9718	55.8182
11.73	3.3629	3.2648	37.0845	36.0024	0.9708	76.0005
11.80	2.5322	2.3327	27.9239	25.7237	0.9212	56.4692
11.87	2.9747	2.7908	32.8038	30.7759	0.9382	65.6545
11.93	3.1670	2.9630	34.9242	32.6752	0.9356	71.0419
12.00	2.9019	2.7770	32.0014	30.6234	0.9569	65.9492

**One cycling transition**

Last Name	First Name	D.O.B	Weight	Height	Temp	Date
Robideau	John	06-19-67	296.0 Lbs	73.5 in	28.8 deg C	03-23-1998

TIME(min)	VO2(L)	VCO2(L)	VO2(Kg)	VCO2(Kg)	RER	VE(stpd)
0.13	0.2590	0.2161	1.9250	1.6065	0.8345	9.0149
0.20	0.4097	0.3596	3.0452	2.6731	0.8778	11.7649
0.27	0.2495	0.2133	1.8547	1.5851	0.8546	8.0405
0.33	0.3233	0.2861	2.4031	2.1265	0.8849	10.1922
0.40	0.4774	0.4273	3.5480	3.1761	0.8952	14.5003
0.47	0.4855	0.4144	3.6087	3.0800	0.8535	13.9200
0.53	0.3578	0.3179	2.6596	2.3625	0.8883	10.0056
0.60	0.2386	0.2094	1.7735	1.5562	0.8775	8.2355
0.67	0.4264	0.3585	3.1693	2.6647	0.8408	10.8752
0.73	0.7611	0.5772	5.6570	4.2903	0.7584	18.5198
0.80	0.5764	0.4574	4.2844	3.3998	0.7935	13.3300
0.87	0.7578	0.5468	5.6323	4.0642	0.7216	15.4842
0.93	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1.00	0.3888	0.2902	2.8899	2.1571	0.7464	7.8412
1.07	1.9961	1.4094	14.8360	10.4753	0.7061	39.6852
1.13	1.0512	0.7465	7.8130	5.5480	0.7101	22.1394
1.20	1.2152	0.9216	9.0316	6.8497	0.7584	24.8991
1.27	0.9754	0.7051	7.2492	5.2406	0.7229	18.8214
1.33	1.6077	1.1547	11.9493	8.5821	0.7182	31.0707
1.40	0.8099	0.5711	6.0194	4.2447	0.7052	14.6022
1.47	2.3597	1.6495	17.5385	12.2596	0.6990	43.7382
1.53	1.1512	0.8582	8.5561	6.3784	0.7455	24.3011
1.60	1.1173	0.8852	8.3044	6.5791	0.7922	22.3473
1.67	1.7303	1.3004	12.8604	9.6652	0.7515	31.6716
1.73	2.3089	1.5919	17.1607	11.8319	0.6895	38.1226
1.80	2.3102	1.5579	17.1707	11.5789	0.6743	37.4416
1.87	1.3751	0.9461	10.2205	7.0321	0.6880	22.5495
1.93	1.9147	1.3302	14.2311	9.8867	0.6947	31.9312
2.00	1.8451	1.3188	13.7137	9.8021	0.7148	30.7725
2.07	2.2252	1.5501	16.5388	11.5210	0.6966	34.6738
2.13	2.9921	2.1355	22.2386	15.8716	0.7137	49.0272
2.20	2.3294	1.7148	17.3132	12.7449	0.7361	39.7335
2.27	2.1752	1.6568	16.1667	12.3143	0.7617	37.5650
2.33	2.3994	1.8235	17.8335	13.5528	0.7600	39.3806
2.40	2.2329	1.6902	16.5956	12.5623	0.7570	36.7803

2.47	2.1043	1.6564	15.6402	12.3114	0.7872	35.5053
2.53	2.7035	2.0678	20.0934	15.3686	0.7649	45.4911
2.60	2.1517	1.7402	15.9925	12.9341	0.8088	38.4114
2.67	3.4344	2.7766	25.5262	20.6371	0.8085	59.3889
2.73	2.2538	1.8130	16.7510	13.4753	0.8044	39.1131
2.80	2.2657	1.8429	16.8393	13.6975	0.8134	40.7686
2.87	3.4179	2.8823	25.4033	21.4221	0.8433	62.9254
2.93	2.4273	2.0575	18.0408	15.2921	0.8476	45.2645
3.00	2.4726	2.0825	18.3772	15.4782	0.8422	47.6480
3.07	3.0190	2.6683	22.4388	19.8321	0.8838	58.7029
3.13	3.0142	2.6632	22.4031	19.7942	0.8836	57.3309
3.20	2.1083	1.8136	15.6700	13.4796	0.8602	39.4232
3.27	2.5989	2.2424	19.3159	16.6665	0.8628	50.5551
3.33	3.3045	2.9621	24.5606	22.0159	0.8964	64.1103
3.40	2.8091	2.4386	20.8786	18.1248	0.8681	53.1240
3.47	2.3841	2.0491	17.7196	15.2299	0.8595	46.4590
3.53	3.1305	2.7914	23.2673	20.7468	0.8917	61.2757
3.60	2.7835	2.4298	20.6880	18.0597	0.8730	54.5353
3.67	1.9601	1.7249	14.5686	12.8203	0.8800	37.6173
3.73	2.1895	1.9328	16.2735	14.3651	0.8827	40.1806
3.80	4.5235	3.8581	33.6207	28.6748	0.8529	81.9071
3.87	2.1056	1.7977	15.6494	13.3610	0.8538	39.5052
3.93	3.4517	3.0662	25.6546	22.7895	0.8883	67.0149
4.00	2.6358	2.2922	19.5901	17.0368	0.8697	49.5041
4.07	3.5776	3.1494	26.5899	23.4077	0.8803	73.3150
4.13	1.9836	1.8057	14.7433	13.4211	0.9103	41.1273
4.20	3.9342	3.4894	29.2404	25.9344	0.8869	80.1112
4.27	2.1557	1.9781	16.0218	14.7021	0.9176	44.6465
4.33	3.4211	3.1171	25.4272	23.1679	0.9111	68.9558
4.40	2.7157	2.3871	20.1844	17.7418	0.8790	53.2769
4.47	2.9139	2.6806	21.6577	19.9232	0.9199	58.8433
4.53	2.9932	2.6854	22.2464	19.9590	0.8972	58.9492
4.60	2.8437	2.5099	21.1355	18.6545	0.8826	55.8307
4.67	3.1897	2.7608	23.7071	20.5196	0.8655	63.0234
4.73	3.8957	3.4467	28.9543	25.6172	0.8847	80.3287
4.80	1.4471	1.3293	10.7556	9.8796	0.9186	31.7182
4.87	4.1393	3.7490	30.7653	27.8644	0.9057	85.2902
4.93	2.3900	2.1184	17.7637	15.7450	0.8864	49.9538
5.00	3.9283	3.6591	29.1965	27.1957	0.9315	82.6798
5.07	2.0110	1.8079	14.9468	13.4369	0.8990	41.2698

5.13	4.2120	3.8229	31.3056	28.4132	0.9076	87.9697
5.20	2.5694	2.3211	19.0968	17.2512	0.9034	53.4727
5.27	2.7789	2.5210	20.6537	18.7375	0.9072	57.8798
5.33	4.1612	3.7148	30.9277	27.6098	0.8927	82.9092
5.40	1.8139	1.6089	13.4820	11.9580	0.8870	37.3234
5.47	4.0447	3.7646	30.0621	27.9801	0.9307	87.4327
5.53	2.4356	2.1888	18.1024	16.2683	0.8987	48.9611
5.60	3.2803	2.8746	24.3808	21.3656	0.8763	66.3023
5.67	3.4879	3.2138	25.9239	23.8863	0.9214	74.0392
5.73	2.7467	2.4386	20.4148	18.1251	0.8878	55.2281
5.80	3.0779	2.7293	22.8761	20.2851	0.8867	65.9105
5.87	3.6206	3.3321	26.9097	24.7653	0.9203	80.2740
5.93	3.0309	2.7432	22.5270	20.3887	0.9051	64.4589
6.00	2.3124	2.0943	17.1869	15.5661	0.9057	49.8558
6.07	3.4758	3.1295	25.8336	23.2596	0.9004	74.8529
6.13	3.4315	3.1340	25.5041	23.2931	0.9133	73.9014
6.20	3.4960	3.1543	25.9839	23.4443	0.9023	74.9105
6.27	3.3635	2.9792	24.9988	22.1427	0.8858	72.2076
6.33	2.1991	2.0255	16.3444	15.0543	0.9211	50.7511
6.40	2.6386	2.2962	19.6109	17.0663	0.8702	53.9551
6.47	3.4236	3.0142	25.4460	22.4031	0.8804	74.2250
6.53	3.6746	3.3127	27.3114	24.6211	0.9015	81.3734
6.60	3.3004	3.0451	24.5299	22.6327	0.9227	71.8060
6.67	2.9454	2.6553	21.8914	19.7351	0.9015	63.9691
6.73	2.0488	1.8187	15.2274	13.5171	0.8877	43.2933
6.80	3.8700	3.4327	28.7635	25.5130	0.8870	80.4704
6.87	3.1853	2.8072	23.6744	20.8645	0.8813	64.4502
6.93	2.3766	2.1313	17.6640	15.8409	0.8968	48.8764
7.00	3.8382	3.4444	28.5274	25.6001	0.8974	84.9214
7.07	3.0997	2.7570	23.0385	20.4913	0.8894	67.1475
7.13	3.7146	3.2841	27.6083	24.4086	0.8841	77.8071
7.20	2.5700	2.2354	19.1011	16.6144	0.8698	52.9616
7.27	2.9338	2.5479	21.8055	18.9368	0.8684	59.6587
7.33	3.9364	3.4409	29.2570	25.5743	0.8741	79.7302
7.40	3.4199	2.9853	25.4178	22.1878	0.8729	70.8957
7.47	2.6703	2.3813	19.8468	17.6985	0.8918	57.7151
7.53	3.2914	2.9597	24.4629	21.9980	0.8992	70.2892
7.60	3.3598	2.9242	24.9713	21.7340	0.8704	71.3066
7.67	2.5976	2.3334	19.3066	17.3432	0.8983	58.4674
7.73	3.4221	3.0831	25.4347	22.9146	0.9009	74.7247

7.80	3.6742	3.2903	27.3083	24.4551	0.8955	77.7712
7.87	2.5553	2.2507	18.9922	16.7279	0.8808	54.9492
7.93	3.3950	2.9938	25.2330	22.2515	0.8818	71.2682
8.00	2.9631	2.5090	22.0232	18.6478	0.8467	61.4055

**Two cycling transitions**

Last Name	First Name	D.O.B	Weight	Height	Temp	Date
Robideau	John	06-19-67	296.0 Lbs	73.5 in	21.2 deg C	04-01-1998

TIME(min)	VO2(L)	VCO2(L)	VO2(Kg)	VCO2(Kg)	RER	VE(stpd)
0.13	0.1691	0.1571	1.2569	1.1677	0.9291	13.6159
0.20	0.5272	0.5234	3.9185	3.8902	0.9928	23.7607
0.27	0.4090	0.3902	3.0401	2.9000	0.9539	18.0818
0.33	0.7468	0.6612	5.5502	4.9141	0.8854	23.2626
0.40	0.6426	0.5059	4.7761	3.7600	0.7872	16.4679
0.47	0.6909	0.5466	5.1348	4.0626	0.7912	16.2601
0.53	0.8961	0.7116	6.6604	5.2890	0.7941	20.1219
0.60	1.0883	0.8414	8.0886	6.2534	0.7731	26.8217
0.67	0.4036	0.3835	2.9995	2.8504	0.9503	12.4035
0.73	0.5187	0.4121	3.8549	3.0626	0.7945	12.4052
0.80	0.7484	0.5952	5.5626	4.4238	0.7953	16.7124
0.87	0.6182	0.5068	4.5951	3.7671	0.8198	14.6422
0.93	1.0379	0.8357	7.7144	6.2115	0.8052	21.9572
1.00	0.6741	0.5531	5.0101	4.1107	0.8205	18.6408
1.07	0.7260	0.5514	5.3957	4.0979	0.7595	15.2459
1.13	1.6813	1.2734	12.4964	9.4644	0.7574	33.7211
1.20	1.7668	1.4746	13.1319	10.9599	0.8346	46.0555
1.27	0.8255	0.5891	6.1357	4.3783	0.7136	16.3115
1.33	0.9991	0.7494	7.4255	5.5700	0.7501	23.5902
1.40	0.6538	0.5656	4.8590	4.2039	0.8652	17.7486
1.47	1.5068	1.2241	11.1995	9.0979	0.8124	34.3704
1.53	1.7760	1.2595	13.2000	9.3611	0.7092	34.8755
1.60	0.7431	0.5068	5.5229	3.7669	0.6821	13.4570
1.67	0.8435	0.6164	6.2693	4.5811	0.7307	15.9015
1.73	3.2089	2.2770	23.8501	16.9236	0.7096	56.6982
1.80	2.5134	1.7173	18.6804	12.7639	0.6833	41.6232
1.87	1.8233	1.2225	13.5514	9.0861	0.6705	33.2531
1.93	1.2758	1.0219	9.4820	7.5953	0.8010	27.7219
2.00	2.1198	1.4653	15.7555	10.8906	0.6912	44.5817
2.07	2.3716	2.0810	17.6270	15.4666	0.8774	53.7558
2.13	1.2993	1.0701	9.6571	7.9538	0.8236	29.7974
2.20	2.0628	1.5927	15.3316	11.8377	0.7721	43.4414
2.27	2.3863	1.9660	17.7361	14.6124	0.8239	49.0773
2.33	1.7377	1.3268	12.9151	9.8614	0.7636	32.9152
2.40	1.7503	1.2930	13.0093	9.6104	0.7387	37.5165

2.47	1.2369	1.1383	9.1933	8.4602	0.9203	30.5883
2.53	3.2382	2.5536	24.0675	18.9798	0.7886	61.3732
2.60	1.7928	1.4365	13.3252	10.6766	0.8012	34.0739
2.67	2.1194	1.6636	15.7525	12.3643	0.7849	42.1041
2.73	3.0218	2.3765	22.4590	17.6633	0.7865	57.6700
2.80	1.6061	1.3582	11.9372	10.0950	0.8457	33.3644
2.87	2.6337	1.9599	19.5746	14.5667	0.7442	55.7341
2.93	1.3990	1.3598	10.3981	10.1068	0.9720	33.8183
3.00	2.1629	1.8364	16.0758	13.6491	0.8490	42.7999
3.07	2.8929	2.4143	21.5009	17.9442	0.8346	64.9657
3.13	1.7998	1.5906	13.3770	11.8222	0.8838	38.4127
3.20	1.9223	1.6240	14.2873	12.0704	0.8448	40.1393
3.27	2.8374	2.3498	21.0889	17.4645	0.8281	58.8764
3.33	2.4258	2.0941	18.0294	15.5642	0.8633	50.4498
3.40	1.7436	1.4931	12.9591	11.0976	0.8564	36.4987
3.47	1.4970	1.4275	11.1263	10.6101	0.9536	47.3165
3.53	2.2695	2.0600	16.8677	15.3106	0.9077	49.6275
3.60	2.6666	2.2392	19.8193	16.6431	0.8397	55.6199
3.67	2.1661	1.9639	16.0993	14.5962	0.9066	46.5833
3.73	2.2491	1.9341	16.7164	14.3754	0.8600	46.3730
3.80	2.1345	1.7246	15.8645	12.8183	0.8080	45.4306
3.87	1.1915	1.1532	8.8558	8.5710	0.9678	33.4108
3.93	3.1332	2.8732	23.2870	21.3549	0.9170	66.2690
4.00	2.2420	1.9145	16.6638	14.2291	0.8539	44.4120
4.07	1.9808	1.7099	14.7224	12.7090	0.8632	44.6321
4.13	2.7741	2.3381	20.6180	17.3777	0.8428	61.3479
4.20	1.6412	1.5777	12.1983	11.7261	0.9613	38.4251
4.27	2.2607	1.9951	16.8024	14.8284	0.8825	46.7154
4.33	2.7689	2.4650	20.5797	18.3207	0.8902	65.1895
4.40	1.9836	1.6292	14.7431	12.1087	0.8213	41.6549
4.47	1.7712	1.8283	13.1642	13.5886	1.0322	42.4618
4.53	2.8238	2.4984	20.9878	18.5695	0.8848	63.5560
4.60	2.2027	1.8936	16.3713	14.0744	0.8597	45.8966
4.67	1.6002	1.5392	11.8934	11.4399	0.9619	40.8139
4.73	3.2157	2.8566	23.9005	21.2312	0.8883	67.5984
4.80	1.1900	1.0088	8.8443	7.4975	0.8477	27.5139
4.87	0.8423	0.8368	6.2603	6.2198	0.9935	20.2095
4.93	4.2847	3.6450	31.8460	27.0913	0.8507	75.6198
5.00	1.8981	1.5707	14.1073	11.6740	0.8275	37.4791
5.07	2.1806	1.9422	16.2068	14.4355	0.8907	46.7348



5.13	2.9047	2.2960	21.5890	17.0652	0.7905	62.7959
5.20	1.6698	1.8689	12.4106	13.8905	1.1192	51.1839
5.27	1.9596	1.8818	14.5647	13.9866	0.9603	43.4536
5.33	2.9656	2.5829	22.0420	19.1973	0.8709	61.7798
5.40	2.7078	2.3922	20.1253	17.7800	0.8835	56.4102
5.47	1.8541	1.6718	13.7806	12.4259	0.9017	40.7180
5.53	2.0096	1.8136	14.9361	13.4798	0.9025	46.1949
5.60	3.0326	2.7020	22.5396	20.0825	0.8910	67.9575
5.67	2.4159	2.1301	17.9558	15.8320	0.8817	52.9753
5.73	2.0179	1.9138	14.9980	14.2243	0.9484	45.7761
5.80	2.0240	1.8477	15.0430	13.7331	0.9129	46.7653
5.87	2.4972	2.2201	18.5604	16.5010	0.8890	57.5739
5.93	1.2462	1.1791	9.2624	8.7635	0.9461	31.9855
6.00	2.8452	2.6929	21.1465	20.0144	0.9465	64.3327
6.07	2.4179	2.1705	17.9706	16.1322	0.8977	52.0403
6.13	2.6304	2.3317	19.5499	17.3300	0.8864	57.4168
6.20	1.7877	1.6251	13.2872	12.0788	0.9091	42.6414
6.27	2.5510	2.3423	18.9600	17.4091	0.9182	58.8370
6.33	3.1143	2.6584	23.1467	19.7583	0.8536	75.9214
6.40	1.8760	1.8938	13.9429	14.0754	1.0095	47.5703
6.47	2.2658	2.1529	16.8403	16.0010	0.9502	51.1273
6.53	3.0321	2.6185	22.5361	19.4617	0.8636	64.0855
6.60	2.3286	2.0921	17.3069	15.5496	0.8985	53.0181
6.67	2.2642	2.0963	16.8286	15.5808	0.9259	52.4606
6.73	2.1618	2.0497	16.0677	15.2343	0.9481	55.1546
6.80	2.5769	2.3297	19.1526	17.3151	0.9041	57.5799
6.87	3.0182	2.7984	22.4326	20.7990	0.9272	65.9107
6.93	2.9700	2.5957	22.0740	19.2922	0.8740	62.9121
7.00	3.0376	2.6668	22.5770	19.8208	0.8779	67.4959
7.07	2.5659	2.4160	19.0707	17.9565	0.9416	57.3074
7.13	2.7943	2.5833	20.7688	19.2003	0.9245	59.5142
7.20	2.9577	2.6043	21.9832	19.3563	0.8805	62.7413
7.27	2.3614	2.1596	17.5506	16.0510	0.9146	51.2871
7.33	2.5385	2.3628	18.8673	17.5615	0.9308	55.3258
7.40	2.6867	2.4652	19.9685	18.3222	0.9176	59.5328
7.47	2.9909	2.7298	22.2295	20.2888	0.9127	67.7198
7.53	3.9237	3.4480	29.1624	25.6268	0.8788	84.8013
7.60	1.8666	1.8712	13.8730	13.9079	1.0025	45.6856
7.67	2.5657	2.4406	19.0692	18.1392	0.9512	56.1607
7.73	2.5447	2.2618	18.9132	16.8108	0.8888	56.0415

7.80	2.5857	2.4656	19.2183	18.3254	0.9535	58.5543
7.87	3.5017	3.1291	26.0259	23.2570	0.8936	74.4887
7.93	3.0378	2.8434	22.5779	21.1330	0.9360	67.7665
8.00	2.9068	2.7291	21.6049	20.2840	0.9389	67.5363
8.07	2.8437	2.7565	21.1360	20.4878	0.9693	65.5413
8.13	3.1131	2.8553	23.1383	21.2222	0.9172	68.2147
8.20	2.1005	2.0481	15.6117	15.2226	0.9751	51.9030
8.27	2.4445	2.3442	18.1688	17.4231	0.9590	58.2268
8.33	2.8350	2.6643	21.0707	19.8022	0.9398	63.6505
8.40	3.4065	3.1101	25.3185	23.1154	0.9130	70.1166
8.47	3.6767	3.4178	27.3267	25.4022	0.9296	82.8369
8.53	2.7576	2.5672	20.4960	19.0803	0.9309	67.0948
8.60	3.3767	3.4061	25.0968	25.3157	1.0087	78.4699
8.67	2.7672	2.5581	20.5672	19.0130	0.9244	62.4553
8.73	3.1035	2.9023	23.0664	21.5715	0.9352	70.0059
8.80	2.3957	2.2821	17.8059	16.9618	0.9526	55.1790
8.87	2.9063	2.7482	21.6010	20.4260	0.9456	61.6808
8.93	3.1871	2.9895	23.6879	22.2194	0.9380	71.9352
9.00	2.8416	2.6586	21.1200	19.7599	0.9356	63.7428
9.07	3.5738	3.1571	26.5621	23.4652	0.8834	78.6141
9.13	3.1630	3.1685	23.5088	23.5500	1.0018	69.7847
9.20	3.7858	3.3507	28.1378	24.9036	0.8851	77.4600
9.27	3.0053	2.7867	22.3365	20.7118	0.9273	68.4529
9.33	3.1279	3.0379	23.2482	22.5789	0.9712	71.2995
9.40	2.5090	2.3514	18.6479	17.4769	0.9372	57.2697
9.47	2.7486	2.6412	20.4286	19.6306	0.9609	62.8740
9.53	3.2222	2.9889	23.9486	22.2151	0.9276	69.9866
9.60	2.9892	2.6924	22.2167	20.0114	0.9007	64.5541
9.67	2.6164	2.4579	19.4462	18.2680	0.9394	59.0715
9.73	3.7206	3.3603	27.6530	24.9750	0.9032	76.6204
9.80	3.5969	3.3713	26.7335	25.0569	0.9373	76.6098
9.87	3.4968	3.1310	25.9898	23.2713	0.8954	73.2284
9.93	2.8462	2.6523	21.1540	19.7132	0.9319	63.9753
10.00	3.5881	3.1489	26.6687	23.4040	0.8776	75.8615
10.07	3.2614	3.1922	24.2398	23.7258	0.9788	77.0900
10.13	3.1098	2.8805	23.1131	21.4089	0.9263	67.5257
10.20	2.8644	2.6627	21.2896	19.7903	0.9296	64.5364
10.27	3.0615	2.9200	22.7540	21.7024	0.9538	69.9254
10.33	2.3622	2.2158	17.5571	16.4686	0.9380	53.3171
10.40	3.7293	3.3942	27.7175	25.2270	0.9101	82.9688

10.47	3.3716	3.1418	25.0590	23.3509	0.9318	75.1469
10.53	3.1130	2.8689	23.1372	21.3232	0.9216	70.8212
10.60	2.4834	2.3496	18.4575	17.4631	0.9461	59.1680
10.67	3.5601	3.2788	26.4601	24.3696	0.9210	83.6201
10.73	3.3475	3.0654	24.8798	22.7837	0.9158	73.9397
10.80	2.6217	2.5522	19.4859	18.9688	0.9735	59.6199
10.87	2.7135	2.4686	20.1678	18.3478	0.9098	61.9316
10.93	3.5008	3.1827	26.0193	23.6556	0.9092	71.9984
11.00	3.2094	2.8008	23.8535	20.8164	0.8727	67.9649
11.07	3.6516	3.3095	27.1399	24.5973	0.9063	76.2430
11.13	3.5384	3.1649	26.2986	23.5230	0.8945	74.2809
11.20	3.3176	3.0500	24.6578	22.6686	0.9193	74.3728
11.27	3.1888	2.9775	23.7009	22.1298	0.9337	71.3023
11.33	3.1754	2.9457	23.6006	21.8937	0.9277	70.7109
11.40	2.9044	2.6747	21.5865	19.8798	0.9209	61.9770
11.47	3.5134	3.1810	26.1128	23.6425	0.9054	73.5373
11.53	3.2210	2.9401	23.9397	21.8522	0.9128	72.3108
11.60	3.2724	2.9796	24.3217	22.1453	0.9105	71.0126
11.67	3.3674	3.0992	25.0280	23.0346	0.9204	74.0403
11.73	3.9684	3.6266	29.4951	26.9544	0.9139	88.1120
11.80	2.7932	2.6673	20.7606	19.8245	0.9549	64.1817
11.87	3.2953	3.0405	24.4922	22.5980	0.9227	71.6959
11.93	3.3443	2.9691	24.8562	22.0679	0.8878	81.8757
12.00	2.7569	2.8230	20.4901	20.9819	1.0240	66.5686

**Stepping and cycling transitions**

Last Name	First Name	D.O.B	Weight	Height	Temp	Date
Robideau	John	06-19-67	296.0 Lbs	73.5 in	24.2 deg C	03-30-1998

TIME(min)	VO2(L)	VCO2(L)	VO2(Kg)	VCO2(Kg)	RER	VE(stpd)
0.13	0.6751	0.6466	5.0179	4.8056	0.9577	18.1293
0.20	0.8002	0.7083	5.9473	5.2645	0.8852	19.8884
0.27	0.4465	0.3970	3.3188	2.9507	0.8891	13.4940
0.33	0.8217	0.7254	6.1075	5.3917	0.8828	21.6438
0.40	0.9043	0.7492	6.7214	5.5685	0.8285	21.4581
0.47	0.7303	0.5790	5.4281	4.3035	0.7928	16.4423
0.53	0.8306	0.6661	6.1731	4.9504	0.8019	19.2416
0.60	0.5898	0.4467	4.3834	3.3204	0.7575	16.0281
0.67	1.1838	1.2282	8.7985	9.1283	1.0375	33.6820
0.73	0.6127	0.5086	4.5541	3.7798	0.8300	15.2413
0.80	0.5245	0.4426	3.8986	3.2899	0.8439	14.5274
0.87	0.3318	0.2850	2.4658	2.1182	0.8590	10.1163
0.93	0.7674	0.7093	5.7036	5.2718	0.9243	20.4610
1.00	0.4987	0.4483	3.7068	3.3322	0.8990	13.8299
1.07	0.4895	0.4375	3.6379	3.2516	0.8938	12.4235
1.13	0.6416	0.5452	4.7687	4.0523	0.8498	16.0281
1.20	0.6259	0.5563	4.6519	4.1347	0.8888	16.2351
1.27	1.3560	1.1309	10.0782	8.4051	0.8340	30.1865
1.33	1.1254	0.8684	8.3645	6.4544	0.7716	21.8412
1.40	1.9314	1.3390	14.3554	9.9520	0.6933	32.4144
1.47	1.0507	0.7486	7.8092	5.5640	0.7125	17.9486
1.53	1.8332	1.2557	13.6253	9.3328	0.6850	30.1063
1.60	1.2975	0.9097	9.6437	6.7609	0.7011	21.8622
1.67	2.1648	1.5146	16.0899	11.2571	0.6996	36.7095
1.73	1.2588	0.8873	9.3557	6.5952	0.7049	21.2751
1.80	2.4425	1.6694	18.1539	12.4078	0.6835	38.5043
1.87	1.3625	0.9463	10.1265	7.0335	0.6946	22.7710
1.93	2.3302	1.6140	17.3187	11.9962	0.6927	40.5431
2.00	2.6833	1.8384	19.9438	13.6641	0.6851	43.9733
2.07	1.2004	0.8941	8.9221	6.6456	0.7448	20.9856
2.13	3.4440	2.4006	25.5973	17.8425	0.6970	54.8009
2.20	1.7144	1.1665	12.7422	8.6700	0.6804	26.5081
2.27	2.3962	1.6634	17.8093	12.3628	0.6942	37.6277
2.33	2.0432	1.4429	15.1857	10.7246	0.7062	32.7155
2.40	2.0601	1.4608	15.3118	10.8574	0.7091	32.4590

2.47	3.4659	2.4460	25.7602	18.1795	0.7057	54.2285
2.53	2.0653	1.4897	15.3502	11.0719	0.7213	33.3222
2.60	3.1424	2.3079	23.3553	17.1535	0.7345	52.9870
2.67	2.0496	1.5280	15.2336	11.3568	0.7455	34.7226
2.73	2.3378	1.7634	17.3757	13.1066	0.7543	40.8610
2.80	2.0932	1.5987	15.5575	11.8825	0.7638	36.2478
2.87	2.4110	1.8068	17.9193	13.4290	0.7494	41.2456
2.93	1.8289	1.3684	13.5933	10.1707	0.7482	33.5321
3.00	3.5947	2.7457	26.7172	20.4069	0.7638	61.4168
3.07	1.8372	1.4337	13.6549	10.6561	0.7804	31.7163
3.13	2.3036	1.7736	17.1215	13.1819	0.7699	38.6364
3.20	2.1393	1.6786	15.9002	12.4757	0.7846	39.3497
3.27	3.5232	2.7673	26.1857	20.5680	0.7855	57.4114
3.33	1.9189	1.4466	14.2618	10.7517	0.7539	31.9302
3.40	3.1384	2.4608	23.3262	18.2895	0.7841	55.9823
3.47	2.1314	1.6757	15.8418	12.4545	0.7862	37.9495
3.53	2.9311	2.3310	21.7853	17.3251	0.7953	53.1512
3.60	1.9293	1.5902	14.3395	11.8192	0.8242	34.7178
3.67	1.4296	1.1257	10.6252	8.3668	0.7875	25.6977
3.73	3.8216	2.9467	28.4036	21.9015	0.7711	66.4345
3.80	2.8636	2.2050	21.2837	16.3887	0.7700	49.4339
3.87	2.1249	1.6708	15.7930	12.4184	0.7863	38.0980
3.93	2.3917	1.9211	17.7764	14.2784	0.8032	43.7544
4.00	2.9494	2.3531	21.9213	17.4890	0.7978	52.2845
4.07	2.3462	1.8578	17.4376	13.8082	0.7919	40.6044
4.13	3.4562	2.7408	25.6879	20.3707	0.7930	62.4949
4.20	1.6055	1.3233	11.9327	9.8352	0.8242	30.5912
4.27	3.3229	2.6444	24.6970	19.6545	0.7958	61.4168
4.33	2.6473	2.1405	19.6758	15.9092	0.8086	49.5410
4.40	1.9769	1.6059	14.6931	11.9354	0.8123	37.2959
4.47	3.5108	2.8469	26.0940	21.1591	0.8109	64.1826
4.53	1.8689	1.4999	13.8904	11.1477	0.8025	34.5937
4.60	2.8506	2.3172	21.1870	17.2225	0.8129	51.8909
4.67	3.4690	2.7559	25.7827	20.4827	0.7944	63.4894
4.73	1.8070	1.5049	13.4301	11.1852	0.8328	35.3619
4.80	2.6860	2.1755	19.9636	16.1696	0.8100	51.9122
4.87	3.0322	2.4919	22.5368	18.5212	0.8218	56.4989
4.93	2.6907	2.1562	19.9985	16.0259	0.8014	48.1778
5.00	2.3625	1.9412	17.5590	14.4279	0.8217	43.9129
5.07	2.6901	2.1877	19.9943	16.2598	0.8132	50.5161

5.13	2.6921	2.2650	20.0087	16.8343	0.8414	50.4953
5.20	2.6113	2.0862	19.4083	15.5055	0.7989	43.5060
5.27	3.0737	2.5037	22.8452	18.6088	0.8146	56.6379
5.33	3.3603	2.7795	24.9755	20.6584	0.8271	61.2161
5.40	2.5061	2.0236	18.6268	15.0403	0.8075	45.6737
5.47	3.2514	2.7019	24.1658	20.0816	0.8310	62.9706
5.53	2.0262	1.7541	15.0598	13.0370	0.8657	41.0719
5.60	1.9068	1.6068	14.1723	11.9427	0.8427	35.8628
5.67	3.2867	2.5927	24.4280	19.2702	0.7889	59.9378
5.73	1.6787	1.4086	12.4770	10.4690	0.8391	31.4723
5.80	3.7948	3.0725	28.2049	22.8358	0.8096	67.4458
5.87	2.6966	2.1444	20.0426	15.9378	0.7952	47.0209
5.93	2.8393	2.2975	21.1033	17.0759	0.8092	51.1631
6.00	2.4163	1.9146	17.9591	14.2299	0.7923	44.4142
6.07	2.9255	2.4129	21.7433	17.9340	0.8248	57.4399
6.13	2.1045	1.8524	15.6414	13.7681	0.8802	40.8884
6.20	3.4940	2.8569	25.9689	21.2341	0.8177	64.1211
6.27	2.9695	2.5536	22.0704	18.9795	0.8600	62.0426
6.33	1.8284	1.6279	13.5892	12.0992	0.8904	39.0772
6.40	2.6459	2.3802	19.6654	17.6903	0.8996	57.7584
6.47	2.6683	2.3558	19.8318	17.5092	0.8829	53.5939
6.53	3.3690	2.8641	25.0398	21.2871	0.8501	67.5368
6.60	2.0416	1.7932	15.1744	13.3282	0.8783	42.4860
6.67	2.4072	2.0592	17.8917	15.3046	0.8554	47.2215
6.73	3.8938	3.3130	28.9407	24.6238	0.8508	74.4406
6.80	3.1048	2.6416	23.0765	19.6339	0.8508	60.9985
6.87	2.1331	1.8718	15.8544	13.9123	0.8775	43.5746
6.93	3.7183	3.3587	27.6363	24.9632	0.9033	73.3270
7.00	3.0829	2.6632	22.9135	19.7944	0.8639	61.3558
7.07	1.5485	1.3424	11.5093	9.9776	0.8669	32.5765
7.13	3.7730	3.4710	28.0423	25.7977	0.9200	82.0408
7.20	1.9936	1.8348	14.8176	13.6369	0.9203	40.3652
7.27	4.0159	3.6258	29.8479	26.9488	0.9029	75.0665
7.33	3.6217	3.1548	26.9184	23.4480	0.8711	69.7126
7.40	2.0484	1.8383	15.2245	13.6631	0.8974	41.1665
7.47	3.5004	3.1941	26.0168	23.7402	0.9125	70.0399
7.53	3.3099	2.9981	24.6008	22.2829	0.9058	69.4690
7.60	3.6122	3.4001	26.8477	25.2710	0.9413	77.0023
7.67	2.9315	2.7240	21.7878	20.2460	0.9292	60.8645
7.73	2.4527	2.3081	18.2297	17.1545	0.9410	51.4558

7.80	3.6749	3.5190	27.3135	26.1547	0.9576	77.1634
7.87	2.8992	2.7472	21.5480	20.4183	0.9476	60.9067
7.93	2.6707	2.5169	19.8498	18.7065	0.9424	54.8886
8.00	3.9293	3.6116	29.2045	26.8430	0.9191	84.2706
8.07	2.0790	2.0700	15.4517	15.3849	0.9957	47.6330
8.13	3.2232	3.0452	23.9559	22.6334	0.9448	67.1424
8.20	3.1303	2.9325	23.2660	21.7958	0.9368	66.4883
8.27	3.0494	2.8617	22.6644	21.2695	0.9385	62.1382
8.33	3.8417	3.5665	28.5532	26.5075	0.9284	79.3341
8.40	3.6185	3.4082	26.8939	25.3313	0.9419	77.9797
8.47	3.7728	3.5873	28.0413	26.6620	0.9508	84.1931
8.53	2.8944	2.8926	21.5128	21.4993	0.9994	65.8074
8.60	3.3312	3.1684	24.7590	23.5487	0.9511	71.3508
8.67	2.3268	2.2022	17.2941	16.3679	0.9464	50.3292
8.73	3.7360	3.4700	27.7676	25.7903	0.9288	77.3594
8.80	2.5165	2.3881	18.7040	17.7493	0.9490	57.2567
8.87	3.7644	3.6386	27.9788	27.0436	0.9666	79.6117
8.93	3.7595	3.5066	27.9422	26.0623	0.9327	78.5250
9.00	3.4705	3.2280	25.7942	23.9917	0.9301	72.4485
9.07	3.0381	2.8676	22.5802	21.3133	0.9439	66.2161
9.13	3.2331	3.0594	24.0299	22.7389	0.9463	70.8906
9.20	3.1123	2.9398	23.1320	21.8495	0.9446	68.5941
9.27	3.0466	2.8359	22.6437	21.0775	0.9308	66.9508
9.33	3.5936	3.4161	26.7091	25.3897	0.9506	79.5228
9.40	3.5925	3.3753	26.7009	25.0870	0.9396	79.3124
9.47	3.8093	3.5640	28.3127	26.4893	0.9356	85.4510
9.53	3.4819	3.3320	25.8787	24.7648	0.9570	78.0192
9.60	2.8256	2.6897	21.0013	19.9910	0.9519	63.4248
9.67	2.7516	2.6295	20.4512	19.5439	0.9556	59.9582
9.73	3.6093	3.3021	26.8258	24.5429	0.9149	75.8996
9.80	3.3785	3.1539	25.1107	23.4410	0.9335	73.6762
9.87	3.2631	3.0225	24.2526	22.4644	0.9263	70.8547
9.93	4.1215	3.8356	30.6330	28.5081	0.9306	95.0361
10.00	3.2264	3.0801	23.9799	22.8925	0.9547	73.4959
10.07	3.1808	2.9562	23.6408	21.9717	0.9294	68.7374
10.13	2.9557	2.6462	21.9681	19.6675	0.8953	65.0017
10.20	3.3449	3.1485	24.8604	23.4012	0.9413	73.4654
10.27	3.6107	3.2914	26.8360	24.4628	0.9116	77.5210
10.33	3.7916	3.5295	28.1809	26.2331	0.9309	84.0206
10.40	3.5451	3.2741	26.3485	24.3346	0.9236	76.9337

10.47	3.6176	3.3240	26.8877	24.7052	0.9188	81.5512
10.53	3.3116	3.1737	24.6132	23.5883	0.9584	76.3670
10.60	3.5099	3.2877	26.0870	24.4356	0.9367	79.8782
10.67	3.5378	3.3484	26.2943	24.8870	0.9465	81.8503
10.73	3.8726	3.6290	28.7825	26.9722	0.9371	91.2715
10.80	3.4680	3.3861	25.7755	25.1670	0.9764	80.5102
10.87	3.2814	3.1063	24.3884	23.0877	0.9467	76.5873
10.93	3.0269	2.7544	22.4975	20.4717	0.9100	64.2687
11.00	3.4193	3.1707	25.4140	23.5658	0.9273	78.5603
11.07	4.0991	3.7989	30.4665	28.2350	0.9268	91.5208
11.13	3.5757	3.3627	26.5761	24.9930	0.9404	78.7382
11.20	3.9386	3.5189	29.2733	26.1542	0.8935	85.3927
11.27	3.6948	3.3429	27.4611	24.8455	0.9048	85.4709
11.33	3.2904	3.1612	24.4554	23.4951	0.9607	77.9389
11.40	3.5053	3.2612	26.0529	24.2386	0.9304	84.2438
11.47	2.4573	2.4269	18.2640	18.0377	0.9876	58.5376
11.53	3.8307	3.5362	28.4716	26.2827	0.9231	82.8982
11.60	3.9831	3.6709	29.6042	27.2841	0.9216	89.8438
11.67	3.1502	2.8557	23.4135	21.2246	0.9065	71.6422
11.73	4.0435	3.7688	30.0527	28.0112	0.9321	93.2643
11.80	3.9503	3.6359	29.3600	27.0239	0.9204	85.4359
11.87	4.1103	3.5628	30.5497	26.4806	0.8668	92.1548
11.93	3.1801	2.9847	23.6357	22.1839	0.9386	74.9741
12.00	4.0560	3.6323	30.1462	26.9966	0.8955	88.4645



**One cycling transition**

Last Name	First Name	D.O.B	Weight	Height	Temp	Date
Santo	Tony	09-05-74	163.7 Lbs	67.0 in	26.1 deg C	03-03-1998

TIME(min)	VO2(L)	VCO2(L)	VO2(Kg)	VCO2(Kg)	RER	VE(stpd)
0.07	0.4218	0.3668	5.6689	4.9300	0.8697	11.2293
0.13	1.0928	0.9660	14.6866	12.9822	0.8840	33.1149
0.17	0.5687	0.5342	7.6426	7.1795	0.9394	15.3664
0.23	0.8084	0.6963	10.8645	9.3581	0.8613	18.9151
0.27	1.0297	0.8863	13.8387	11.9117	0.8608	23.2561
0.30	1.1099	0.9430	14.9160	12.6736	0.8497	23.8377
0.37	1.9431	1.5691	26.1143	21.0874	0.8075	37.4412
0.40	1.6321	1.3057	21.9339	17.5471	0.8000	30.9341
0.50	2.2312	1.7088	29.9851	22.9643	0.7659	39.0071
0.57	1.9490	1.4553	26.1937	19.5576	0.7467	32.8089
0.60	2.0357	1.5197	27.3583	20.4236	0.7465	34.4947
0.67	1.4804	1.1138	19.8954	14.9680	0.7523	23.8474
0.70	2.2266	1.6553	29.9243	22.2464	0.7434	34.7013
0.77	2.5991	1.9056	34.9294	25.6100	0.7332	40.4136
0.80	1.8862	1.4043	25.3492	18.8732	0.7445	29.1648
0.87	2.2681	1.7114	30.4816	23.0002	0.7546	35.6532
0.90	3.0455	2.3189	40.9297	31.1639	0.7614	45.6929
0.97	2.0369	1.5214	27.3749	20.4470	0.7469	30.6431
1.00	2.6672	1.9945	35.8447	26.8043	0.7478	40.2110
1.07	1.9733	1.5023	26.5193	20.1903	0.7613	29.9571
1.10	2.5461	1.9524	34.2177	26.2388	0.7668	38.6236
1.17	2.1919	1.7375	29.4578	23.3503	0.7927	34.8890
1.20	1.9548	1.5331	26.2704	20.6042	0.7843	29.9448
1.27	2.7314	2.1244	36.7085	28.5497	0.7777	41.3712
1.30	2.0495	1.6208	27.5436	21.7826	0.7908	31.5038
1.33	1.3092	1.0302	17.5944	13.8454	0.7869	19.9084
1.37	2.6752	2.0931	35.9531	28.1297	0.7824	40.8023
1.43	2.8291	2.2248	38.0212	29.9000	0.7864	43.8829
1.50	2.2538	1.8025	30.2899	24.2242	0.7997	34.3023
1.53	1.4806	1.1868	19.8988	15.9494	0.8015	21.9385
1.57	1.2122	0.9718	16.2908	13.0598	0.8017	17.5903
1.60	3.2777	2.5327	44.0502	34.0374	0.7727	46.1369
1.67	3.2235	2.5247	43.3218	33.9294	0.7832	46.3278
1.70	1.1807	0.9218	15.8671	12.3884	0.7808	17.1511
1.73	2.1259	1.6617	28.5701	22.3323	0.7817	30.9467

1.77	2.2301	1.7538	29.9703	23.5699	0.7864	33.1240
1.83	2.9560	2.3219	39.7270	31.2044	0.7855	43.7293
1.87	1.9949	1.5641	26.8092	21.0202	0.7841	30.1378
1.90	1.3353	1.0683	17.9460	14.3570	0.8000	20.4858
1.93	2.9532	2.3810	39.6885	31.9981	0.8062	46.0993
2.00	3.1317	2.5769	42.0872	34.6310	0.8228	49.4618
2.07	3.2396	2.6614	43.5372	35.7674	0.8215	50.8413
2.13	3.4288	2.8153	46.0802	37.8358	0.8211	53.3740
2.20	2.3269	1.8801	31.2718	25.2670	0.8080	34.6588
2.23	2.2222	1.7744	29.8647	23.8470	0.7985	33.4818
2.27	1.4209	1.1331	19.0963	15.2275	0.7974	21.2795
2.30	2.9998	2.4255	40.3146	32.5966	0.8086	46.2900
2.37	3.3187	2.7623	44.6009	37.1228	0.8323	52.4177
2.40	1.1981	0.9705	16.1017	13.0427	0.8100	18.7181
2.43	1.9328	1.5897	25.9749	21.3641	0.8225	30.3389
2.50	2.7969	2.3240	37.5875	31.2330	0.8309	44.5233
2.53	2.3780	1.9760	31.9588	26.5559	0.8309	37.8560
2.60	3.6043	3.0666	48.4386	41.2122	0.8508	55.3586
2.67	2.2871	1.8719	30.7373	25.1568	0.8184	34.4760
2.70	2.2203	1.7814	29.8391	23.9400	0.8023	34.4900
2.77	2.7746	2.2801	37.2887	30.6425	0.8218	43.7233
2.80	2.2311	1.8524	29.9847	24.8943	0.8302	35.6580
2.87	3.1344	2.6123	42.1233	35.1070	0.8334	49.6184
2.90	1.4852	1.2157	19.9601	16.3387	0.8186	23.2467
2.97	3.3567	2.7818	45.1108	37.3851	0.8287	53.1915
3.03	3.0418	2.5139	40.8795	33.7843	0.8264	47.8854
3.10	2.3508	1.9736	31.5929	26.5234	0.8395	37.4158
3.13	3.2191	2.6987	43.2622	36.2684	0.8383	50.3992
3.17	2.4828	2.0416	33.3663	27.4371	0.8223	38.1983
3.20	2.9192	2.3789	39.2312	31.9703	0.8149	44.9295
3.27	2.8131	2.2643	37.8065	30.4301	0.8049	44.5293
3.30	2.1503	1.7390	28.8980	23.3714	0.8088	37.4361
3.37	2.0980	1.8806	28.1948	25.2741	0.8964	37.0572
3.40	2.4901	2.1834	33.4648	29.3438	0.8769	42.1936
3.43	2.0797	1.7929	27.9498	24.0952	0.8621	35.0527
3.50	2.7197	2.2916	36.5507	30.7972	0.8426	43.9442
3.57	1.3924	1.1772	18.7131	15.8203	0.8454	23.0371
3.60	2.2630	1.9311	30.4134	25.9527	0.8533	37.4260
3.63	2.6486	2.2769	35.5949	30.5992	0.8597	41.7425
3.70	3.5171	2.8820	47.2675	38.7315	0.8194	54.9496

3.77	2.1710	1.7905	29.1759	24.0633	0.8248	34.8700
3.80	1.2335	1.0284	16.5772	13.8208	0.8337	19.8922
3.83	2.1791	1.8264	29.2860	24.5451	0.8381	34.4619
3.87	2.6393	2.2146	35.4705	29.7626	0.8391	41.7481
3.93	2.9130	2.4369	39.1479	32.7500	0.8366	45.6805
3.97	2.6163	2.1476	35.1604	28.8619	0.8209	40.5611
4.03	3.0953	2.5854	41.5985	34.7453	0.8353	49.6252
4.10	2.7559	2.3257	37.0365	31.2553	0.8439	44.7263
4.13	1.6976	1.4120	22.8146	18.9762	0.8318	27.3652
4.20	2.4758	2.1161	33.2730	28.4389	0.8547	39.7789
4.23	2.0709	1.7355	27.8318	23.3243	0.8380	32.2914
4.30	3.5757	2.9379	48.0540	39.4827	0.8216	54.3588
4.37	2.5202	2.1167	33.8692	28.4466	0.8399	39.7897
4.40	2.6030	2.1512	34.9820	28.9104	0.8264	40.9772
4.47	3.5328	2.9643	47.4783	39.8382	0.8391	55.8812
4.53	2.3938	2.0094	32.1715	27.0042	0.8394	38.0221
4.57	1.8022	1.4925	24.2208	20.0587	0.8282	28.7316
4.63	3.6272	3.0098	48.7461	40.4494	0.8298	55.8964
4.70	3.5313	2.9416	47.4574	39.5330	0.8330	54.7825
4.77	2.8051	2.3650	37.6981	31.7835	0.8431	44.4991
4.80	2.2641	1.9040	30.4273	25.5885	0.8410	36.2688
4.87	2.0194	1.7078	27.1394	22.9515	0.8457	31.9236
4.90	3.0736	2.5587	41.3074	34.3871	0.8325	48.6472
4.97	3.5359	2.9793	47.5193	40.0393	0.8426	57.1316
5.03	3.0050	2.5910	40.3855	34.8211	0.8622	48.6604
5.07	2.4293	2.0617	32.6476	27.7078	0.8487	39.3850
5.13	2.3606	2.0149	31.7247	27.0785	0.8535	37.8405
5.17	2.5701	2.1424	34.5399	28.7918	0.8336	41.3599
5.20	1.3576	1.1547	18.2445	15.5184	0.8506	22.2495
5.27	3.0443	2.6139	40.9126	35.1290	0.8586	49.4618
5.33	1.7716	1.4821	23.8093	19.9183	0.8366	28.9480
5.37	3.0220	2.5476	40.6129	34.2384	0.8430	50.3992
5.43	2.5687	2.1380	34.5218	28.7336	0.8323	40.5721
5.47	1.2161	1.0076	16.3435	13.5414	0.8285	19.5089
5.50	1.9343	1.6264	25.9954	21.8574	0.8408	30.9215
5.53	2.9530	2.5110	39.6860	33.7459	0.8503	47.6948
5.60	2.0428	1.7141	27.4543	23.0358	0.8391	31.4824
5.63	3.0254	2.4895	40.6585	33.4576	0.8229	46.2774
5.70	3.5889	2.9896	48.2314	40.1776	0.8330	57.2741
5.77	3.4305	2.9410	46.1026	39.5245	0.8573	54.3661

5.83	3.8228	3.2617	51.3751	43.8341	0.8532	59.0936
5.90	3.0349	2.5358	40.7865	34.0789	0.8355	46.2774
5.97	1.9855	1.6638	26.6842	22.3607	0.8380	30.5317
6.00	3.1231	2.6327	41.9719	35.3816	0.8430	48.2664
6.07	3.9658	3.3418	53.2975	44.9114	0.8427	61.7757
6.13	2.5945	2.1577	34.8678	28.9981	0.8317	40.5611
6.17	2.1036	1.7727	28.2703	23.8242	0.8427	34.4900
6.23	3.0114	2.6516	40.4709	35.6357	0.8805	50.8482
6.27	1.5924	1.3591	21.4003	18.2656	0.8535	26.3916
6.33	3.3230	2.8686	44.6583	38.5523	0.8633	54.9571
6.40	2.5915	2.2713	34.8276	30.5243	0.8764	43.3471
6.43	2.0124	1.7436	27.0457	23.4320	0.8664	33.6605
6.50	2.5696	2.2224	34.5333	29.8671	0.8649	42.3332
6.57	2.4054	2.0755	32.3268	27.8925	0.8628	39.1988
6.60	2.1960	1.8652	29.5127	25.0662	0.8493	35.4610
6.67	2.9756	2.5240	39.9891	33.9208	0.8483	46.8746
6.70	1.1610	0.9595	15.6025	12.8954	0.8265	17.7377
6.77	3.5568	2.9220	47.8003	39.2690	0.8215	53.9649
6.87	3.3083	2.7278	44.4609	36.6591	0.8245	49.6454
6.90	2.1010	1.6821	28.2359	22.6055	0.8006	31.9192
6.97	2.0273	1.7109	27.2457	22.9930	0.8439	32.4971
7.00	2.6817	2.2595	36.0394	30.3664	0.8426	43.3294
7.07	1.5230	1.3039	20.4676	17.5230	0.8561	25.4172
7.10	2.5101	2.1348	33.7335	28.6895	0.8505	41.5738
7.17	3.0725	2.6298	41.2917	35.3431	0.8559	51.1658
7.23	2.9782	2.5364	40.0242	34.0875	0.8517	47.2364
7.27	1.1700	0.9733	15.7232	13.0808	0.8319	18.1097
7.30	2.3286	1.9453	31.2943	26.1435	0.8354	35.4369
7.37	2.2505	1.8720	30.2443	25.1580	0.8318	34.2883
7.40	1.7600	1.4664	23.6535	19.7070	0.8332	26.9824
7.43	1.9292	1.6167	25.9264	21.7276	0.8381	29.3180
7.47	2.8512	2.3935	38.3178	32.1666	0.8395	43.0915
7.53	3.2263	2.7002	43.3594	36.2888	0.8369	48.2664
7.57	1.9540	1.5812	26.2600	21.2500	0.8092	29.3379
7.63	2.9453	2.5267	39.5831	33.9568	0.8579	47.4525
7.67	2.4357	2.0489	32.7344	27.5351	0.8412	38.6236
7.73	2.0350	1.7413	27.3485	23.4020	0.8557	32.7029
7.77	3.1023	2.6416	41.6925	35.5009	0.8515	50.2228
7.83	3.0086	2.5930	40.4334	34.8480	0.8619	50.0598
7.87	2.5676	2.2066	34.5064	29.6554	0.8594	42.5185

7.93	2.2626	1.9441	30.4070	26.1272	0.8592	36.2392
7.97	2.7394	2.3021	36.8161	30.9385	0.8404	43.5205
8.03	2.3485	1.9948	31.5622	26.8089	0.8494	38.4004
8.07	2.8124	2.3921	37.7960	32.1485	0.8506	46.0930
8.13	1.4192	1.2175	19.0732	16.3621	0.8579	22.8651
8.17	2.8047	2.3647	37.6930	31.7792	0.8431	44.4930
8.23	2.8578	2.4188	38.4060	32.5068	0.8464	46.6967
8.30	3.3821	2.9248	45.4528	39.3068	0.8648	54.5705
8.37	2.1551	1.8224	28.9626	24.4915	0.8456	32.4883
8.40	3.0621	2.5404	41.1517	34.1410	0.8296	45.7364
8.47	1.8412	1.4963	24.7441	20.1091	0.8127	27.5583
8.50	2.7885	2.2776	37.4749	30.6091	0.8168	42.9355
8.53	2.8283	2.3388	38.0102	31.4320	0.8269	44.8929
8.57	1.8903	1.6161	25.4042	21.7194	0.8550	30.1255
8.63	3.0957	2.6084	41.6034	35.0546	0.8426	50.0190
8.70	2.9546	2.5924	39.7078	34.8400	0.8774	49.8560
8.73	1.9269	1.6879	25.8955	22.6834	0.8760	32.0901
8.80	2.8940	2.5118	38.8927	33.7569	0.8679	45.5083
8.87	1.7958	1.5262	24.1347	20.5115	0.8499	27.5770
8.90	3.3737	2.8382	45.3395	38.1432	0.8413	51.6084
8.97	1.7669	1.5011	23.7464	20.1739	0.8496	27.9558
9.00	2.3185	1.9872	31.1587	26.7060	0.8571	37.0421
9.03	2.4982	2.1203	33.5733	28.4957	0.8488	39.5981
9.10	2.1811	1.8644	29.3126	25.0559	0.8548	35.8550
9.17	2.7510	2.3930	36.9718	32.1596	0.8698	44.8990
9.20	3.2064	2.7664	43.0918	37.1787	0.8628	51.1867
9.27	2.0602	1.7112	27.6879	22.9978	0.8306	31.6920
9.30	3.4360	2.8201	46.1771	37.9001	0.8208	53.1626
9.37	2.2457	1.8818	30.1808	25.2905	0.8380	35.4417
9.40	2.5767	2.1656	34.6291	29.1044	0.8405	41.5286
9.47	2.2748	1.9637	30.5719	26.3909	0.8632	37.2290
9.50	2.7016	2.3106	36.3079	31.0532	0.8553	43.6818
9.57	1.2017	1.0213	16.1498	13.7258	0.8499	19.0914
9.60	2.5864	2.1919	34.7588	29.4578	0.8475	41.3206
9.63	2.2006	1.8621	29.5737	25.0254	0.8462	35.4369
9.70	2.0930	1.7760	28.1286	23.8677	0.8485	33.8619
9.73	3.0863	2.5975	41.4771	34.9087	0.8416	49.2447
9.80	2.1038	1.7117	28.2739	23.0038	0.8136	32.1163
9.83	2.5073	2.0710	33.6965	27.8323	0.8260	39.7897
9.87	1.8129	1.5241	24.3636	20.4827	0.8407	28.5697

9.93	2.2304	1.8532	29.9748	24.9051	0.8309	34.4479
9.97	3.1440	2.6091	42.2523	35.0644	0.8299	49.2313
10.00	1.5149	1.2599	20.3595	16.9317	0.8316	24.0216

**Two cycling transitions**

Last Name	First Name	D.O.B	Weight	Height	Temp	Date
Santo	Tony	09-05-74	163.7 Lbs	67.0 in	21.1 deg C	04-02-1998

TIME(min)	VO2(L)	VCO2(L)	VO2(Kg)	VCO2(Kg)	RER	VE(stpd)
0.13	0.1143	0.0701	1.5365	0.9422	0.6132	11.0508
0.20	0.1458	0.1115	1.9589	1.4983	0.7649	9.4176
0.27	0.1792	0.1507	2.4089	2.0258	0.8409	7.7776
0.33	0.3629	0.2730	4.8766	3.6694	0.7524	13.1081
0.40	0.8716	0.7899	11.7132	10.6156	0.9063	21.6923
0.47	0.6496	0.4757	8.7308	6.3935	0.7323	12.4989
0.53	0.5462	0.3445	7.3403	4.6303	0.6308	11.0539
0.60	0.3239	0.2885	4.3524	3.8779	0.8910	11.4617
0.67	0.5348	0.4193	7.1879	5.6352	0.7840	12.4920
0.73	0.5946	0.4697	7.9910	6.3130	0.7900	11.9800
0.80	0.6806	0.5120	9.1472	6.8812	0.7523	12.7974
0.87	0.7803	0.5842	10.4872	7.8516	0.7487	14.8429
0.93	0.5191	0.3887	6.9767	5.2239	0.7488	9.8257
1.00	0.6218	0.4845	8.3571	6.5109	0.7791	12.4989
1.07	0.4855	0.3816	6.5246	5.1287	0.7861	9.6223
1.13	0.7443	0.5512	10.0025	7.4084	0.7406	16.3738
1.20	0.9197	0.7495	12.3605	10.0725	0.8149	21.4966
1.27	0.2572	0.1594	3.4564	2.1417	0.6196	7.3511
1.33	0.6142	0.5697	8.2546	7.6567	0.9276	16.0646
1.40	1.4552	1.0500	19.5572	14.1110	0.7215	31.5153
1.47	1.1082	0.9203	14.8929	12.3686	0.8305	21.3007
1.53	1.6747	1.1153	22.5063	14.9887	0.6660	27.0318
1.60	1.1800	0.9062	15.8588	12.1783	0.7679	20.1798
1.67	1.3190	0.9105	17.7263	12.2358	0.6903	23.3683
1.73	1.0314	0.8342	13.8606	11.2105	0.8088	21.7164
1.80	1.2180	0.9287	16.3694	12.4815	0.7625	22.6195
1.87	1.6040	1.1318	21.5563	15.2101	0.7056	27.7332
1.93	1.2496	0.9718	16.7938	13.0606	0.7777	22.4148
2.00	2.0628	1.4729	27.7226	19.7947	0.7140	33.5849
2.07	1.3976	1.0417	18.7830	14.0003	0.7454	22.7187
2.13	1.5193	1.1474	20.4179	15.4206	0.7553	26.8047
2.20	1.6687	1.1676	22.4266	15.6921	0.6997	27.0243
2.27	2.5708	2.0610	34.5490	27.6983	0.8017	42.5813
2.33	1.7842	1.3117	23.9782	17.6282	0.7352	27.6423
2.40	1.6101	1.2163	21.6386	16.3464	0.7554	27.9572

2.47	0.9484	0.7167	12.7458	9.6317	0.7557	17.8016
2.53	1.0045	0.8409	13.5000	11.3016	0.8372	21.6953
2.60	1.3105	1.1699	17.6117	15.7226	0.8927	28.2527
2.67	1.5618	1.3424	20.9898	18.0403	0.8595	31.2126
2.73	1.2274	1.0065	16.4949	13.5271	0.8201	26.4101
2.80	1.0640	0.8657	14.2994	11.6348	0.8137	22.3063
2.87	0.9789	0.9559	13.1557	12.8465	0.9765	22.1494
2.93	1.8597	1.5520	24.9934	20.8572	0.8345	35.4280
3.00	1.7784	1.2808	23.9008	17.2135	0.7202	30.7094
3.07	1.0023	0.8307	13.4700	11.1644	0.8288	22.8766
3.13	0.9239	0.9469	12.4162	12.7255	1.0249	22.5140
3.20	1.3664	1.1659	18.3635	15.6690	0.8533	27.6232
3.27	1.6785	1.1791	22.5578	15.8468	0.7025	32.1613
3.33	1.3321	1.1322	17.9028	15.2165	0.8500	27.8471
3.40	1.2471	0.9816	16.7601	13.1916	0.7871	25.9935
3.47	1.4041	1.2409	18.8700	16.6766	0.8838	30.2958
3.53	1.2612	1.1315	16.9501	15.2066	0.8971	26.0079
3.60	1.0237	0.8960	13.7571	12.0415	0.8753	23.3262
3.67	1.0721	1.0134	14.4082	13.6196	0.9453	22.8734
3.73	1.2772	1.0523	17.1652	14.1416	0.8238	27.4300
3.80	1.4325	1.2917	19.2523	17.3598	0.9017	28.6701
3.87	1.7563	1.5150	23.6036	20.3610	0.8626	34.5065
3.93	1.4007	1.1261	18.8243	15.1336	0.8039	28.6820
4.00	1.3902	1.1168	18.6826	15.0095	0.8034	29.0002
4.07	1.0245	0.9049	13.7681	12.1611	0.8833	25.3724
4.13	0.9995	1.0067	13.4319	13.5291	1.0072	23.4893
4.20	1.2381	1.1140	16.6393	14.9709	0.8997	25.0863
4.27	1.4691	1.2648	19.7435	16.9980	0.8609	29.0716
4.33	1.6467	1.2765	22.1298	17.1556	0.7752	32.2271
4.40	1.0878	0.9805	14.6196	13.1771	0.9013	22.5109
4.47	1.4081	1.1849	18.9231	15.9241	0.8415	24.9701
4.53	2.2591	1.8086	30.3607	24.3066	0.8006	38.3974
4.60	1.3446	1.0268	18.0710	13.7991	0.7636	24.9770
4.67	1.0833	0.9780	14.5592	13.1436	0.9028	21.8523
4.73	1.3280	1.1394	17.8467	15.3132	0.8580	26.1302
4.80	1.0166	0.8637	13.6618	11.6071	0.8496	22.5140
4.87	1.1637	1.0676	15.6393	14.3475	0.9174	27.9752
4.93	1.2281	1.1376	16.5047	15.2886	0.9263	28.0479
5.00	1.2260	1.1146	16.4760	14.9797	0.9092	27.3465
5.07	1.5499	1.2113	20.8291	16.2792	0.7816	28.9732



5.13	1.0391	0.9344	13.9645	12.5579	0.8993	20.4227
5.20	1.5779	1.2504	21.2058	16.8046	0.7925	24.9088
5.27	1.7852	1.3552	23.9918	18.2125	0.7591	33.2890
5.33	1.1534	1.0371	15.5008	13.9375	0.8991	27.5361
5.40	1.1164	0.9958	15.0040	13.3823	0.8919	21.6923
5.47	2.2712	1.8055	30.5237	24.2647	0.7949	37.8893
5.53	1.2453	0.9856	16.7358	13.2457	0.7915	24.1514
5.60	1.0692	0.8188	14.3697	11.0044	0.7658	21.4847
5.67	0.8088	0.8505	10.8697	11.4305	1.0516	21.4996
5.73	1.1700	1.1104	15.7235	14.9228	0.9491	24.7826
5.80	1.1542	1.0390	15.5121	13.9638	0.9002	24.5880
5.87	1.2658	1.0791	17.0118	14.5023	0.8525	29.4729
5.93	1.6011	1.4698	21.5180	19.7527	0.9180	30.0255
6.00	0.6393	0.5159	8.5914	6.9334	0.8070	12.8944
6.07	2.3147	1.7617	31.1081	23.6761	0.7611	36.9702
6.13	1.1614	1.0949	15.6084	14.7147	0.9427	23.7486
6.20	2.0015	1.7191	26.8985	23.1035	0.8589	35.6279
6.27	1.5902	1.3847	21.3712	18.6099	0.8708	34.3101
6.33	1.5771	1.3286	21.1944	17.8556	0.8425	30.0213
6.40	1.5070	1.2967	20.2535	17.4271	0.8604	28.2488
6.47	1.7763	1.5534	23.8725	20.8768	0.8745	35.7055
6.53	1.8645	1.4677	25.0579	19.7244	0.7872	34.8137
6.60	1.4078	1.2907	18.9194	17.3456	0.9168	29.0002
6.67	1.3425	1.2108	18.0424	16.2721	0.9019	26.2054
6.73	2.5657	2.1501	34.4806	28.8957	0.8380	43.3922
6.80	1.8990	1.5400	25.5213	20.6964	0.8109	35.6425
6.87	1.4187	1.2456	19.0663	16.7396	0.8780	27.0168
6.93	1.4237	1.2412	19.1331	16.6806	0.8718	25.8839
7.00	1.4420	1.2690	19.3798	17.0546	0.8800	29.4729
7.07	1.1955	1.1002	16.0660	14.7857	0.9203	26.5051
7.13	1.6245	1.4739	21.8326	19.8079	0.9073	32.9689
7.20	1.6842	1.5289	22.6341	20.5466	0.9078	34.0085
7.27	1.9082	1.6663	25.6453	22.3933	0.8732	34.7848
7.33	1.7951	1.5910	24.1253	21.3814	0.8863	35.6277
7.40	1.8950	1.5881	25.4669	21.3433	0.8381	37.9862
7.47	1.4038	1.3237	18.8664	17.7895	0.9429	27.0413
7.53	2.8997	2.2044	38.9693	29.6248	0.7602	45.7317
7.60	1.3437	1.2696	18.0587	17.0622	0.9448	27.4186
7.67	1.9753	1.7435	26.5467	23.4319	0.8827	37.6546
7.73	2.5177	2.1585	33.8362	29.0088	0.8573	45.6321

7.80	1.6364	1.2913	21.9913	17.3539	0.7891	30.2005
7.87	1.5838	1.5405	21.2845	20.7025	0.9727	30.6255
7.93	2.2301	1.9468	29.9702	26.1629	0.8730	38.5882
8.00	2.4075	2.0240	32.3551	27.2010	0.8407	41.6450
8.07	1.7201	1.4180	23.1165	19.0567	0.8244	31.0253
8.13	1.3849	1.3103	18.6124	17.6089	0.9461	27.1546
8.20	2.0312	1.8326	27.2976	24.6284	0.9022	39.0716
8.27	2.1584	1.9410	29.0071	26.0861	0.8993	39.2919
8.33	2.2132	1.9445	29.7432	26.1321	0.8786	39.9263
8.40	1.7952	1.4783	24.1255	19.8676	0.8235	33.7855
8.47	1.5016	1.4462	20.1808	19.4354	0.9631	28.1638
8.53	2.7740	2.2655	37.2807	30.4470	0.8167	46.0000
8.60	1.6086	1.3823	21.6183	18.5768	0.8593	29.7883
8.67	1.5569	1.4103	20.9237	18.9527	0.9058	28.7800
8.73	2.5550	2.2012	34.3378	29.5829	0.8615	45.1987
8.80	1.7054	1.4388	22.9189	19.3358	0.8437	31.1058
8.87	1.8289	1.6492	24.5793	22.1636	0.9017	32.5607
8.93	2.9289	2.3904	39.3622	32.1257	0.8162	48.0489
9.00	2.3547	1.9773	31.6456	26.5737	0.8397	38.5828
9.07	1.6499	1.4654	22.1737	19.6941	0.8882	30.8169
9.13	2.7566	2.3480	37.0460	31.5550	0.8518	48.6610
9.20	1.3889	1.2026	18.6655	16.1619	0.8659	24.5923
9.27	2.1755	1.7856	29.2376	23.9970	0.8208	39.7637
9.33	1.4013	1.2910	18.8323	17.3505	0.9213	27.2643
9.40	2.3017	2.0695	30.9327	27.8124	0.8991	44.7906
9.47	1.5215	1.4066	20.4483	18.9035	0.9245	33.4839
9.53	1.9158	1.5922	25.7462	21.3983	0.8311	37.8579
9.60	1.6145	1.4577	21.6972	19.5905	0.9029	31.2121
9.67	1.5208	1.3864	20.4388	18.6319	0.9116	26.5348
9.73	3.2409	2.5840	43.5555	34.7265	0.7973	51.3204
9.80	1.2228	1.1204	16.4335	15.0570	0.9162	23.3646
9.87	2.2949	2.0233	30.8415	27.1915	0.8817	41.3330
9.93	2.1424	1.5876	28.7924	21.3356	0.7410	36.9140
10.00	1.2515	1.2539	16.8186	16.8511	1.0019	29.8130
10.07	2.2864	2.1000	30.7269	28.2222	0.9185	39.7747
10.13	2.1352	1.6964	28.6949	22.7979	0.7945	36.3222
10.20	2.2505	1.9886	30.2444	26.7246	0.8836	39.3776
10.27	2.0605	1.7054	27.6918	22.9190	0.8276	35.3068
10.33	2.4368	2.1168	32.7488	28.4477	0.8687	42.9793
10.40	1.6757	1.4423	22.5197	19.3830	0.8607	34.3742

10.47	1.9556	1.7978	26.2819	24.1608	0.9193	35.6706
10.53	2.0495	1.7451	27.5430	23.4524	0.8515	36.5061
10.60	1.9875	1.7023	26.7108	22.8772	0.8565	35.6854
10.67	2.4062	2.0192	32.3374	27.1360	0.8392	41.3330
10.73	1.6408	1.4139	22.0508	19.0011	0.8617	28.1366
10.80	2.1101	1.8606	28.3583	25.0050	0.8818	40.7094
10.87	1.7829	1.4338	23.9603	19.2687	0.8042	34.5000
10.93	1.5228	1.4627	20.4656	19.6580	0.9605	29.3721
11.00	2.6755	2.3055	35.9562	30.9845	0.8617	46.9073
11.07	1.7036	1.3794	22.8951	18.5377	0.8097	28.8861
11.13	1.5115	1.2793	20.3132	17.1922	0.8464	26.2943
11.20	2.3067	1.9936	30.9999	26.7928	0.8643	40.1937
11.27	2.5062	2.1212	33.6810	28.5079	0.8464	44.7968
11.33	1.4868	1.2544	19.9819	16.8585	0.8437	26.0245
11.40	1.6360	1.4744	21.9872	19.8145	0.9012	32.3297
11.47	2.3748	2.0760	31.9154	27.9001	0.8742	45.0780
11.53	1.5885	1.3419	21.3475	18.0339	0.8448	28.9801
11.60	1.7484	1.5827	23.4970	21.2698	0.9052	31.4335
11.67	2.8824	2.2719	38.7371	30.5320	0.7882	46.5058
11.73	2.0816	1.8151	27.9748	24.3931	0.8720	34.3457
11.80	2.2735	1.8127	30.5546	24.3614	0.7973	39.6617
11.87	1.7423	1.5997	23.4147	21.4990	0.9182	33.4654
11.93	2.1830	1.8689	29.3379	25.1163	0.8561	38.5722
12.00	2.7797	2.2936	37.3565	30.8245	0.8251	45.6899
12.07	1.4597	1.2515	19.6173	16.8194	0.8574	28.1521
12.13	2.4343	2.1913	32.7156	29.4498	0.9002	46.9202
12.20	1.9066	1.6018	25.6234	21.5273	0.8401	38.0409
12.27	1.8475	1.7297	24.8292	23.2457	0.9362	35.8843
12.33	2.4661	1.9957	33.1430	26.8207	0.8092	43.4282
12.40	1.2945	1.2336	17.3970	16.5789	0.9530	26.5275
12.47	2.1812	1.9822	29.3131	26.6390	0.9088	43.6080
12.53	1.5927	1.4403	21.4053	19.3567	0.9043	31.1058
12.60	3.3560	2.7105	45.1016	36.4270	0.8077	54.2642
12.67	1.4481	1.2873	19.4619	17.3005	0.8889	26.4872
12.73	2.4629	2.1775	33.0998	29.2644	0.8841	48.4919
12.80	1.6588	1.4526	22.2936	19.5220	0.8757	34.8697
12.87	1.3163	1.3074	17.6904	17.5704	0.9932	26.9281
12.93	2.9004	2.4646	38.9793	33.1222	0.8497	50.6062
13.00	1.7540	1.5801	23.5730	21.2349	0.9008	30.0694

**Stepping and cycling transitions**

Last Name	First Name	D.O.B	Weight	Height	Temp	Date
Santo	Tony	09-05-74	163.7 Lbs	67.0 in	22.4 deg C	04-04-1998

TIME(min)	VO2(L)	VCO2(L)	VO2(Kg)	VCO2(Kg)	RER	VE(stpd)
0.13	0.0923	0.0520	1.2404	0.6992	0.5637	9.0567
0.20	0.1698	0.1411	2.2824	1.8958	0.8306	9.2593
0.27	0.4194	0.3545	5.6367	4.7637	0.8451	13.8870
0.33	0.2970	0.2370	3.9908	3.1857	0.7983	8.0571
0.40	0.3433	0.2867	4.6132	3.8528	0.8352	9.4554
0.47	0.3841	0.2995	5.1623	4.0245	0.7796	8.8555
0.53	0.4714	0.3698	6.3353	4.9697	0.7844	10.4713
0.60	0.5067	0.3905	6.8090	5.2487	0.7708	10.6668
0.67	0.4647	0.3542	6.2454	4.7598	0.7621	9.4541
0.73	0.5516	0.4163	7.4125	5.5953	0.7548	11.1731
0.80	0.5651	0.4252	7.5947	5.7141	0.7524	11.4719
0.87	0.5154	0.3878	6.9266	5.2114	0.7524	10.4627
0.93	0.5330	0.3997	7.1637	5.3718	0.7499	10.8726
1.00	0.4120	0.3109	5.5369	4.1787	0.7547	8.4576
1.07	0.8167	0.6173	10.9758	8.2960	0.7558	16.9059
1.13	0.4523	0.3435	6.0792	4.6168	0.7594	9.5520
1.20	0.6755	0.5173	9.0787	6.9522	0.7658	14.6900
1.27	0.8517	0.6533	11.4462	8.7803	0.7671	19.0113
1.33	1.0960	0.8480	14.7300	11.3958	0.7736	23.9435
1.40	0.9856	0.7513	13.2451	10.0967	0.7623	19.2337
1.47	1.6020	1.1503	21.5302	15.4598	0.7181	26.5628
1.53	1.2444	0.8709	16.7233	11.7045	0.6999	19.5250
1.60	1.1942	0.8289	16.0488	11.1400	0.6941	18.5211
1.67	1.7713	1.2566	23.8049	16.8880	0.7094	27.2859
1.73	1.7112	1.1939	22.9977	16.0452	0.6977	25.5637
1.80	2.1736	1.5005	29.2111	20.1656	0.6903	31.4227
1.87	1.5752	1.1130	21.1689	14.9577	0.7066	23.2104
1.93	1.4189	1.0175	19.0688	13.6747	0.7171	21.3307
2.00	1.7762	1.2958	23.8713	17.4148	0.7295	26.8832
2.07	2.6608	1.9676	35.7589	26.4425	0.7395	39.0392
2.13	1.5797	1.1566	21.2295	15.5437	0.7322	22.7456
2.20	1.6439	1.2179	22.0929	16.3682	0.7409	24.4566
2.27	2.5827	1.9483	34.7098	26.1832	0.7543	38.2396
2.33	2.0862	1.5813	28.0365	21.2520	0.7580	30.4994
2.40	2.2445	1.6964	30.1649	22.7987	0.7558	34.3055

2.47	2.1126	1.6505	28.3913	22.1816	0.7813	33.8212
2.53	1.7213	1.3603	23.1323	18.2812	0.7903	27.9599
2.60	2.5254	2.0387	33.9393	27.3989	0.8073	41.4369
2.67	1.6310	1.3055	21.9198	17.5449	0.8004	26.7788
2.73	2.2722	1.8819	30.5369	25.2910	0.8282	38.0174
2.80	1.3524	1.1010	18.1754	14.7959	0.8141	22.1296
2.87	2.7209	2.2181	36.5667	29.8096	0.8152	45.5919
2.93	1.3676	1.1273	18.3792	15.1494	0.8243	22.5226
3.00	2.5989	2.1237	34.9267	28.5405	0.8172	42.6438
3.07	1.4076	1.1724	18.9176	15.7559	0.8329	23.4243
3.13	2.5011	2.0941	33.6131	28.1424	0.8372	41.8392
3.20	1.6638	1.3841	22.3602	18.6006	0.8319	27.6810
3.27	2.2503	1.8487	30.2418	24.8457	0.8216	37.9220
3.33	2.3468	1.9816	31.5389	26.6316	0.8444	40.3584
3.40	1.3183	1.1080	17.7164	14.8913	0.8405	22.7519
3.47	2.4632	2.0660	33.1035	27.7657	0.8388	42.6850
3.53	1.2904	1.0931	17.3422	14.6898	0.8471	22.3523
3.60	2.4579	2.0602	33.0320	27.6869	0.8382	41.6610
3.67	1.3192	1.0954	17.7286	14.7216	0.8304	22.1296
3.73	2.3199	1.9258	31.1780	25.8811	0.8301	38.7481
3.80	1.3191	1.0875	17.7281	14.6149	0.8244	22.1479
3.87	2.1764	1.8108	29.2495	24.3352	0.8320	36.8409
3.93	1.5201	1.2421	20.4288	16.6935	0.8172	24.9426
4.00	1.5764	1.2902	21.1855	17.3398	0.8185	25.5496
4.07	1.8176	1.4650	24.4275	19.6890	0.8060	26.9578
4.13	2.2387	1.7869	30.0868	24.0150	0.7982	33.4028
4.20	1.6575	1.3250	22.2761	17.8064	0.7993	24.2687
4.27	2.8347	2.2321	38.0958	29.9974	0.7874	42.2764
4.33	2.2873	1.8581	30.7389	24.9719	0.8124	36.1164
4.40	1.6032	1.3265	21.5455	17.8269	0.8274	26.4768
4.47	2.5967	2.1908	34.8975	29.4433	0.8437	44.2591
4.53	1.9294	1.6564	25.9290	22.2602	0.8585	33.8025
4.60	1.3733	1.1731	18.4555	15.7650	0.8542	24.0374
4.67	2.5080	2.1459	33.7060	28.8386	0.8556	43.0461
4.73	1.7605	1.4717	23.6603	19.7791	0.8360	29.7620
4.80	1.3679	1.1570	18.3832	15.5487	0.8458	23.6351
4.87	2.3363	1.9719	31.3976	26.5011	0.8441	40.5317
4.93	1.4571	1.2349	19.5827	16.5966	0.8475	24.7483
5.00	2.2586	1.8957	30.3536	25.4774	0.8394	37.3185
5.07	1.8492	1.5458	24.8521	20.7743	0.8359	30.7929

5.13	1.9731	1.6718	26.5164	22.4673	0.8473	33.0068
5.20	1.7478	1.4613	23.4885	19.6381	0.8361	29.1668
5.27	2.0837	1.7830	28.0027	23.9618	0.8557	34.9953
5.33	1.7863	1.4966	24.0068	20.1128	0.8378	29.6942
5.40	2.4301	2.0512	32.6588	27.5660	0.8441	40.5373
5.47	1.4329	1.2082	19.2566	16.2376	0.8432	23.6449
5.53	2.6548	2.2291	35.6789	29.9571	0.8396	42.8686
5.60	1.5508	1.2952	20.8413	17.4060	0.8352	25.5461
5.67	2.3304	1.9785	31.3189	26.5893	0.8490	38.8327
5.73	2.4061	2.0227	32.3365	27.1831	0.8406	40.4534
5.80	2.0098	1.6939	27.0101	22.7651	0.8428	34.3244
5.87	1.5530	1.3195	20.8714	17.7337	0.8497	26.7382
5.93	2.4305	2.0760	32.6641	27.9000	0.8541	41.5203
6.00	0.5826	0.4990	7.8303	6.7065	0.8565	10.4612
6.07	1.4549	1.2819	19.5532	17.2274	0.8811	26.5664
6.13	2.4321	2.1413	32.6861	28.7776	0.8804	42.1525
6.20	1.8047	1.5072	24.2544	20.2558	0.8351	29.2956
6.27	2.6231	2.1517	35.2527	28.9175	0.8203	41.6610
6.33	1.9395	1.6235	26.0659	21.8179	0.8370	31.8955
6.40	2.2342	1.8982	30.0263	25.5102	0.8496	37.9638
6.47	1.4449	1.2466	19.4180	16.7540	0.8628	25.3379
6.53	2.3300	2.0197	31.3132	27.1426	0.8668	40.3528
6.60	2.0210	1.7538	27.1606	23.5698	0.8678	34.6264
6.67	1.4614	1.2571	19.6395	16.8944	0.8602	24.9426
6.73	2.6385	2.2418	35.4598	30.1281	0.8496	43.7863
6.80	1.9687	1.6876	26.4582	22.6797	0.8572	32.5171
6.87	1.4705	1.2451	19.7629	16.7329	0.8467	23.5378
6.93	2.0492	1.7369	27.5401	23.3425	0.8476	32.0190
7.00	2.1789	1.8159	29.2824	24.4047	0.8334	34.0084
7.07	2.5063	2.1187	33.6830	28.4743	0.8454	39.4580
7.13	1.7829	1.5018	23.9613	20.1831	0.8423	27.9946
7.20	2.6525	2.2442	35.6473	30.1597	0.8461	43.1586
7.27	2.0851	1.7996	28.0227	24.1853	0.8631	34.4109
7.33	1.7717	1.5388	23.8108	20.6805	0.8685	28.5515
7.40	3.0251	2.5770	40.6555	34.6325	0.8519	49.1812
7.47	1.9395	1.6872	26.0654	22.6748	0.8699	32.6043
7.53	1.7742	1.5715	23.8445	21.1199	0.8857	29.9920
7.60	1.8057	1.5886	24.2674	21.3499	0.8798	30.2898
7.67	2.4622	2.1884	33.0902	29.4102	0.8888	40.9453
7.73	2.5555	2.2319	34.3435	29.9956	0.8734	41.5661

7.80	1.8088	1.5786	24.3083	21.2152	0.8728	29.7866
7.87	1.7857	1.5839	23.9981	21.2868	0.8870	30.0003
7.93	2.2327	1.9621	30.0051	26.3697	0.8788	36.8155
8.00	2.9037	2.5570	39.0233	34.3636	0.8806	48.2020
8.07	2.2542	1.9838	30.2948	26.6602	0.8800	37.8959
8.13	1.7486	1.5516	23.5000	20.8524	0.8873	29.9549
8.20	1.7789	1.5850	23.9068	21.3012	0.8910	30.3653
8.27	2.5932	2.2747	34.8508	30.5699	0.8772	43.6616
8.33	2.3777	2.0640	31.9539	27.7385	0.8681	40.0399
8.40	1.4881	1.3122	19.9988	17.6345	0.8818	25.6288
8.47	3.0493	2.6921	40.9804	36.1791	0.8828	52.5291
8.53	1.5811	1.4149	21.2493	19.0147	0.8948	27.3677
8.60	2.6449	2.3245	35.5454	31.2390	0.8788	45.6233
8.67	1.6670	1.4533	22.4038	19.5307	0.8718	27.9753
8.73	2.5979	2.2083	34.9143	29.6773	0.8500	43.3001
8.80	2.1426	1.8648	28.7943	25.0615	0.8704	36.8907
8.87	1.8229	1.5901	24.4985	21.3700	0.8723	29.8914
8.93	2.8372	2.3759	38.1299	31.9309	0.8374	46.2709
9.00	2.3794	2.0524	31.9779	27.5821	0.8625	40.7217
9.07	1.8287	1.6158	24.5759	21.7157	0.8836	32.2846
9.13	2.4144	2.1354	32.4476	28.6977	0.8844	42.5374
9.20	1.5812	1.4134	21.2495	18.9956	0.8939	27.8516
9.27	2.2768	2.0082	30.5983	26.9882	0.8820	39.6484
9.33	2.5476	2.2126	34.2378	29.7351	0.8685	41.8277
9.40	1.8557	1.5771	24.9390	21.1948	0.8499	30.1559
9.47	2.6170	2.2437	35.1702	30.1534	0.8574	43.7803
9.53	1.7460	1.4987	23.4652	20.1411	0.8583	29.8543
9.60	1.6825	1.4911	22.6116	20.0398	0.8863	28.5672
9.67	2.3680	2.0672	31.8247	27.7819	0.8730	36.6897
9.73	3.0733	2.5829	41.3025	34.7127	0.8404	47.6594
9.80	2.1156	1.8289	28.4317	24.5792	0.8645	35.0717
9.87	1.5559	1.3655	20.9107	18.3511	0.8776	26.5408
9.93	2.8571	2.5044	38.3977	33.6573	0.8765	48.7252
10.00	2.2415	1.9342	30.1243	25.9945	0.8629	37.7052
10.07	1.4876	1.2962	19.9927	17.4197	0.8713	25.3414
10.13	2.3488	2.0531	31.5658	27.5922	0.8741	40.2973
10.20	2.4031	2.0619	32.2964	27.7105	0.8580	39.6157
10.27	1.5949	1.3672	21.4348	18.3737	0.8572	26.3434
10.33	2.9952	2.5277	40.2535	33.9701	0.8439	48.6112
10.40	2.1614	1.8496	29.0471	24.8569	0.8557	35.9152

10.47	1.9758	1.7054	26.5533	22.9188	0.8631	33.3087
10.53	2.9074	2.5288	39.0728	33.9844	0.8698	50.2737
10.60	1.7687	1.5771	23.7695	21.1951	0.8917	30.8638
10.67	2.5009	2.1961	33.6106	29.5132	0.8781	42.8509
10.73	1.5263	1.3204	20.5123	17.7448	0.8651	26.2501
10.80	2.8104	2.4517	37.7694	32.9491	0.8724	48.8391
10.87	1.5297	1.3213	20.5573	17.7575	0.8638	26.2429
10.93	2.9846	2.5518	40.1106	34.2945	0.8550	50.8840
11.00	1.5003	1.2738	20.1623	17.1187	0.8490	25.3240
11.07	2.8979	2.4621	38.9457	33.0881	0.8496	49.2411
11.13	1.5961	1.3686	21.4499	18.3932	0.8575	27.3451
11.20	2.5380	2.1912	34.1084	29.4481	0.8634	43.3478
11.27	2.3319	1.9862	31.3388	26.6933	0.8518	38.3085
11.33	1.8362	1.5459	24.6770	20.7754	0.8419	30.1642
11.40	3.1420	2.6675	42.2259	35.8492	0.8490	52.3563
11.47	1.6983	1.4429	22.8236	19.3908	0.8496	28.8571
11.53	2.6066	2.2527	35.0305	30.2749	0.8642	44.9199
11.60	2.0800	1.8157	27.9531	24.4020	0.8730	35.9910
11.67	1.5833	1.3850	21.2784	18.6138	0.8748	26.8166
11.73	3.0425	2.6135	40.8884	35.1233	0.8590	50.6997
11.80	1.9651	1.6772	26.4089	22.5405	0.8535	32.5684
11.87	2.7793	2.3435	37.3515	31.4952	0.8432	46.4529
11.93	1.8890	1.6338	25.3863	21.9568	0.8649	32.7739
12.00	2.0297	1.7896	27.2772	24.0510	0.8817	35.5791
12.07	1.9830	1.7326	26.6496	23.2845	0.8737	33.5782
12.13	1.8344	1.5848	24.6528	21.2987	0.8639	30.8638
12.20	2.9906	2.5410	40.1917	34.1486	0.8496	49.6294
12.27	1.7179	1.4581	23.0866	19.5961	0.8488	28.5633
12.33	2.3472	1.9960	31.5450	26.8250	0.8504	39.2924
12.40	2.2948	1.9520	30.8401	26.2337	0.8506	39.0016
12.47	2.2969	1.9851	30.8685	26.6779	0.8642	39.5830
12.53	1.9312	1.6629	25.9540	22.3483	0.8611	33.2583
12.60	1.9850	1.7232	26.6770	23.1585	0.8681	34.4640
12.67	2.6029	2.2547	34.9803	30.3009	0.8662	43.9090
12.73	1.4798	1.2657	19.8872	17.0096	0.8553	24.7449
12.80	2.7607	2.3478	37.1016	31.5531	0.8504	46.8164
12.87	1.4733	1.2818	19.8003	17.2268	0.8700	25.0363
12.93	2.5223	2.1781	33.8975	29.2722	0.8636	42.7091
13.00	1.9004	1.6394	25.5398	22.0325	0.8627	31.5588



**One cycling transition**

Last Name	First Name	D.O.B	Weight	Height	Temp	Date
Wake	Doug	03-03-77	188.0 Lbs	75.0 in	21.6 deg C	03-19-1998

TIME(min)	VO2(L)	VCO2(L)	VO2(Kg)	VCO2(Kg)	RER	VE(stpd)
0.13	1.1084	0.9328	12.9704	10.9156	0.8416	23.6985
0.20	0.6661	0.5580	7.7950	6.5303	0.8378	14.5092
0.27	0.7677	0.6412	8.9835	7.5039	0.8353	16.7594
0.33	0.8470	0.7295	9.9119	8.5367	0.8613	18.1875
0.40	1.2670	1.0720	14.8262	12.5451	0.8461	26.8949
0.47	0.9997	0.8654	11.6985	10.1273	0.8657	21.3110
0.53	0.5719	0.4894	6.6923	5.7273	0.8558	12.0669
0.60	0.8795	0.7463	10.2921	8.7327	0.8485	19.5293
0.67	0.5589	0.4901	6.5407	5.7352	0.8768	13.0823
0.73	0.4836	0.4295	5.6591	5.0257	0.8881	11.4486
0.80	0.4434	0.3903	5.1882	4.5671	0.8803	10.8368
0.87	0.4815	0.4255	5.6343	4.9787	0.8836	12.2731
0.93	0.6904	0.6192	8.0795	7.2460	0.8968	17.9399
1.00	0.5806	0.5191	6.7947	6.0741	0.8939	14.9302
1.07	0.8979	0.8030	10.5078	9.3964	0.8942	22.8668
1.13	0.9653	0.8704	11.2964	10.1856	0.9017	24.5429
1.20	0.8304	0.7639	9.7176	8.9389	0.9199	20.0954
1.27	0.5106	0.4563	5.9756	5.3394	0.8935	12.0669
1.33	0.9657	0.8799	11.3010	10.2965	0.9111	22.9067
1.40	0.8198	0.7437	9.5932	8.7029	0.9072	18.9185
1.47	0.9288	0.8302	10.8690	9.7154	0.8939	21.0660
1.53	0.9289	0.8140	10.8705	9.5257	0.8763	19.6343
1.60	1.3696	1.1487	16.0271	13.4422	0.8387	26.3726
1.67	1.1843	0.9462	13.8593	11.0730	0.7990	21.0485
1.73	1.9575	1.5166	22.9065	17.7480	0.7748	32.3014
1.80	1.8446	1.3912	21.5856	16.2802	0.7542	29.8522
1.87	1.9638	1.4574	22.9807	17.0550	0.7421	29.8646
1.93	1.9535	1.3952	22.8598	16.3268	0.7142	28.0159
2.00	3.0938	2.2088	36.2042	25.8479	0.7139	43.8697
2.07	1.7812	1.2846	20.8437	15.0329	0.7212	25.9781
2.13	2.5547	1.8457	29.8953	21.5981	0.7225	37.7041
2.20	2.0739	1.5321	24.2694	17.9285	0.7387	31.2662
2.27	2.7041	2.0253	31.6438	23.7000	0.7490	40.1445
2.33	2.2039	1.6592	25.7899	19.4167	0.7529	31.8793
2.40	3.0836	2.3127	36.0842	27.0634	0.7500	45.3478

2.47	2.0456	1.5539	23.9383	18.1842	0.7596	30.5594
2.53	3.0033	2.2869	35.1454	26.7617	0.7615	44.5369
2.60	1.8442	1.4322	21.5815	16.7598	0.7766	27.2813
2.67	3.0325	2.3695	35.4870	27.7282	0.7814	45.8775
2.73	2.5608	1.9851	29.9664	23.2299	0.7752	39.6228
2.80	1.5947	1.3061	18.6619	15.2844	0.8190	25.6358
2.87	3.2848	2.5941	38.4391	30.3563	0.7897	50.0806
2.93	3.0048	2.3402	35.1624	27.3854	0.7788	46.1585
3.00	1.7598	1.3978	20.5939	16.3567	0.7942	27.6785
3.07	3.1965	2.5413	37.4064	29.7386	0.7950	51.6516
3.13	1.8353	1.5148	21.4767	17.7262	0.8254	29.3005
3.20	3.3364	2.6871	39.0432	31.4444	0.8054	53.4743
3.27	2.0321	1.6696	23.7802	19.5378	0.8216	32.4833
3.33	3.0722	2.5077	35.9514	29.3458	0.8163	50.5078
3.40	1.7003	1.4132	19.8973	16.5377	0.8312	27.9849
3.47	3.0549	2.5513	35.7494	29.8557	0.8351	49.5895
3.53	2.1694	1.7947	25.3871	21.0020	0.8273	34.0895
3.60	2.6913	2.1910	31.4934	25.6391	0.8141	42.3391
3.67	1.6322	1.3669	19.1001	15.9953	0.8374	25.9136
3.73	2.9290	2.4109	34.2756	28.2121	0.8231	45.7058
3.80	2.6642	2.2090	31.1771	25.8499	0.8291	42.4822
3.87	3.1299	2.5672	36.6260	30.0414	0.8202	50.5357
3.93	1.7137	1.4335	20.0542	16.7749	0.8365	28.3582
4.00	3.0843	2.5987	36.0933	30.4102	0.8425	51.1059
4.07	2.1305	1.8345	24.9314	21.4671	0.8610	35.5183
4.13	3.1705	2.6686	37.1018	31.2284	0.8417	52.6361
4.20	2.1671	1.8463	25.3595	21.6052	0.8520	36.5239
4.27	2.9799	2.5812	34.8708	30.2061	0.8662	50.2691
4.33	2.0650	1.7974	24.1654	21.0330	0.8704	34.8674
4.40	2.2961	2.0107	26.8690	23.5298	0.8757	38.1562
4.47	2.6990	2.2901	31.5838	26.7995	0.8485	43.6654
4.53	2.3637	1.9975	27.6605	23.3749	0.8451	38.4517
4.60	2.4460	2.1119	28.6230	24.7132	0.8634	42.2371
4.67	2.3316	2.0139	27.2851	23.5669	0.8637	39.1440
4.73	2.0698	1.7939	24.2214	20.9920	0.8667	35.0713
4.80	2.7548	2.3682	32.2376	27.7124	0.8596	44.7691
4.87	2.5092	2.1510	29.3632	25.1717	0.8573	40.5879
4.93	2.3026	1.9171	26.9452	22.4347	0.8326	36.5188
5.00	2.7354	2.3219	32.0104	27.1707	0.8488	45.4830
5.07	2.7797	2.3572	32.5288	27.5848	0.8480	46.9107

5.13	1.8741	1.6047	21.9315	18.7787	0.8562	32.0305
5.20	1.6573	1.4260	19.3941	16.6874	0.8604	28.3504
5.27	3.2143	2.7259	37.6145	31.8989	0.8480	52.3228
5.33	2.3831	2.0298	27.8871	23.7533	0.8518	39.1494
5.40	3.0649	2.5573	35.8658	29.9264	0.8344	48.5290
5.47	1.8001	1.4462	21.0652	16.9237	0.8034	29.5741
5.53	2.9843	2.5000	34.9227	29.2552	0.8377	50.2507
5.60	3.0436	2.4968	35.6170	29.2178	0.8203	49.2471
5.67	2.5453	2.1065	29.7851	24.6507	0.8276	41.5084
5.73	1.8764	1.5396	21.9573	18.0169	0.8205	31.6137
5.80	2.9454	2.4902	34.4675	29.1408	0.8455	50.6646
5.87	2.5764	2.1813	30.1491	25.5260	0.8467	43.8452
5.93	2.2749	1.9404	26.6209	22.7074	0.8530	38.3493
6.00	2.1678	1.8596	25.3673	21.7610	0.8578	35.2879
6.07	2.4948	2.0972	29.1945	24.5414	0.8406	40.2931
6.13	2.7132	2.2919	31.7499	26.8201	0.8447	43.9500
6.20	1.9471	1.5920	22.7856	18.6297	0.8176	31.0338
6.27	2.9356	2.4321	34.3531	28.4609	0.8285	47.7831
6.33	2.1055	1.8108	24.6391	21.1902	0.8600	35.0941
6.40	2.8833	2.4130	33.7406	28.2368	0.8369	47.3139
6.47	2.6649	2.2211	31.1851	25.9911	0.8334	43.4234
6.53	2.6743	2.2541	31.2946	26.3780	0.8429	43.9411
6.60	2.3358	1.9490	27.3333	22.8074	0.8344	37.5182
6.67	2.0869	1.8008	24.4208	21.0730	0.8629	35.1038
6.73	2.4069	2.0781	28.1662	24.3182	0.8634	38.6651
6.80	2.7665	2.3551	32.3736	27.5601	0.8513	44.6918
6.87	2.8229	2.2840	33.0339	26.7273	0.8091	45.0937
6.93	2.3658	1.9708	27.6854	23.0625	0.8330	39.4553
7.00	3.2902	2.7692	38.5022	32.4058	0.8417	55.3292
7.07	1.8741	1.6463	21.9304	19.2657	0.8785	32.8284
7.13	2.6370	2.3129	30.8584	27.0657	0.8771	46.4899
7.20	1.7669	1.5351	20.6766	17.9639	0.8688	30.8871
7.27	2.7518	2.3970	32.2025	28.0506	0.8711	46.7728
7.33	2.4519	2.0619	28.6926	24.1285	0.8409	39.7679
7.40	2.6237	2.2034	30.7026	25.7849	0.8398	43.6328
7.47	2.7773	2.3332	32.5008	27.3037	0.8401	46.9932
7.53	2.2005	1.8934	25.7506	22.1567	0.8604	37.2354
7.60	2.9641	2.5655	34.6865	30.0220	0.8655	51.2080
7.67	2.8288	2.4782	33.1025	29.0006	0.8761	49.4165
7.73	1.6505	1.4652	19.3142	17.1456	0.8877	29.3621

7.80	2.8725	2.5616	33.6145	29.9760	0.8918	50.5750
7.87	1.6382	1.4353	19.1702	16.7961	0.8762	28.3660
7.93	3.0034	2.6083	35.1463	30.5224	0.8684	50.2577
8.00	2.6768	2.2856	31.3244	26.7462	0.8538	43.5371

**Two cycling transitions**

Last Name	First Name	D.O.B	Weight	Height	Temp	Date
Wake	Doug	03-03-77	188.0 Lbs	75.0 in	22.8 deg C	03-17-1998

TIME(min)	VO2(L)	VCO2(L)	VO2(Kg)	VCO2(Kg)	RER	VE(stpd)
0.13	1.2391	1.0310	14.4996	12.0647	0.8321	26.8055
0.20	1.3423	1.0826	15.7080	12.6682	0.8065	26.7235
0.27	0.6986	0.5804	8.1750	6.7924	0.8309	14.2758
0.33	0.9764	0.8160	11.4260	9.5491	0.8357	20.2938
0.40	0.8316	0.6846	9.7316	8.0112	0.8232	19.8919
0.47	0.5324	0.4770	6.2302	5.5819	0.8959	13.2631
0.53	1.0143	0.9194	11.8691	10.7590	0.9065	25.0087
0.60	1.0029	0.9083	11.7363	10.6290	0.9057	25.1161
0.67	0.7690	0.6957	8.9986	8.1415	0.9048	19.1324
0.73	0.8513	0.8040	9.9625	9.4088	0.9444	20.5839
0.80	0.5334	0.5086	6.2423	5.9512	0.9534	13.3262
0.87	0.6497	0.6292	7.6031	7.3626	0.9684	16.2319
0.93	0.4909	0.4810	5.7452	5.6284	0.9797	12.8559
1.00	0.5710	0.5564	6.6820	6.5107	0.9744	15.8668
1.07	1.0357	1.0305	12.1204	12.0589	0.9949	29.9425
1.13	0.4389	0.4296	5.1365	5.0278	0.9788	12.1662
1.20	0.7730	0.7593	9.0462	8.8859	0.9823	20.7961
1.27	0.6413	0.6213	7.5048	7.2705	0.9688	16.1748
1.33	0.8308	0.7864	9.7223	9.2025	0.9465	21.1892
1.40	0.7242	0.6989	8.4744	8.1784	0.9651	18.4829
1.47	1.0314	0.9591	12.0697	11.2230	0.9298	24.7108
1.53	0.6377	0.5850	7.4628	6.8459	0.9173	15.4715
1.60	1.0020	0.9160	11.7252	10.7191	0.9142	22.5009
1.67	1.2692	1.1015	14.8520	12.8905	0.8679	26.6340
1.73	1.3316	1.1290	15.5821	13.2119	0.8479	26.7489
1.80	0.9211	0.7411	10.7789	8.6726	0.8046	17.4760
1.87	1.2288	0.9811	14.3798	11.4814	0.7984	21.4905
1.93	1.9282	1.4259	22.5644	16.6863	0.7395	32.5506
2.00	1.2824	0.9611	15.0063	11.2466	0.7495	21.8892
2.07	1.7364	1.2621	20.3193	14.7688	0.7268	27.5234
2.13	2.2624	1.6095	26.4747	18.8343	0.7114	35.3695
2.20	1.6857	1.1899	19.7266	13.9240	0.7058	26.3217
2.27	1.9577	1.3971	22.9090	16.3492	0.7137	29.3497
2.33	1.9900	1.4152	23.2875	16.5610	0.7112	30.7294
2.40	2.0845	1.4984	24.3925	17.5345	0.7188	32.6419

2.47	1.4765	1.1255	17.2777	13.1709	0.7623	28.7407
2.53	1.3430	0.9910	15.7159	11.5964	0.7379	24.0473
2.60	1.6471	1.2936	19.2751	15.1381	0.7854	29.7340
2.67	1.7573	1.3509	20.5640	15.8087	0.7688	27.9396
2.73	1.8243	1.3543	21.3477	15.8484	0.7424	28.5405
2.80	1.5648	1.1893	18.3111	13.9177	0.7601	25.2496
2.87	2.4335	1.7852	28.4766	20.8902	0.7336	38.4704
2.93	1.1959	0.9054	13.9947	10.5949	0.7571	19.4901
3.00	2.0083	1.4977	23.5018	17.5267	0.7458	32.0349
3.07	1.7618	1.3056	20.6165	15.2778	0.7410	28.0141
3.13	2.3008	1.6784	26.9238	19.6405	0.7295	35.7458
3.20	1.7355	1.2606	20.3089	14.7513	0.7263	27.8548
3.27	2.4389	1.7356	28.5405	20.3103	0.7116	37.9747
3.33	1.6114	1.2054	18.8569	14.1061	0.7481	26.5486
3.40	2.2870	1.6814	26.7628	19.6763	0.7352	37.6534
3.47	1.2752	0.9679	14.9223	11.3262	0.7590	20.8352
3.53	2.1864	1.6336	25.5861	19.1168	0.7472	35.8607
3.60	1.3608	1.0395	15.9245	12.1639	0.7638	22.8933
3.67	1.9048	1.4457	22.2905	16.9177	0.7590	31.3233
3.73	2.3336	1.7480	27.3075	20.4556	0.7491	38.3721
3.80	1.9080	1.4254	22.3276	16.6803	0.7471	31.4280
3.87	2.0811	1.5648	24.3532	18.3115	0.7519	34.5395
3.93	1.7274	1.3144	20.2142	15.3813	0.7609	28.5405
4.00	2.2201	1.7003	25.9797	19.8973	0.7659	36.6419
4.07	1.4274	1.0717	16.7040	12.5417	0.7508	23.8403
4.13	1.5776	1.2603	18.4616	14.7476	0.7988	27.0420
4.20	2.2067	1.7689	25.8226	20.7003	0.8016	36.4717
4.27	1.9503	1.5237	22.8224	17.8307	0.7813	31.2229
4.33	2.5095	1.9097	29.3666	22.3477	0.7610	40.8467
4.40	1.4454	1.1219	16.9144	13.1286	0.7762	24.8182
4.47	2.2906	1.7984	26.8055	21.0451	0.7851	40.7746
4.53	1.3624	1.0775	15.9432	12.6090	0.7909	23.6270
4.60	1.9223	1.5388	22.4950	18.0076	0.8005	34.6539
4.67	1.7933	1.3901	20.9852	16.2675	0.7752	30.9226
4.73	1.1668	0.9096	13.6540	10.6442	0.7796	22.2346
4.80	2.0788	1.7868	24.3261	20.9098	0.8596	37.2630
4.87	2.1867	1.7408	25.5894	20.3713	0.7961	36.6469
4.93	1.5903	1.2381	18.6099	14.4881	0.7785	25.7118
5.00	1.4772	1.1563	17.2862	13.5317	0.7828	26.0405
5.07	2.2447	1.8321	26.2676	21.4395	0.8162	38.3668

5.13	1.7932	1.4046	20.9843	16.4367	0.7833	28.8409
5.20	2.1440	1.6485	25.0892	19.2910	0.7689	35.9510
5.27	2.2679	1.7772	26.5394	20.7970	0.7836	39.4451
5.33	2.4596	1.9541	28.7826	22.8668	0.7945	43.3708
5.40	2.3615	1.8809	27.6350	22.0101	0.7965	41.4702
5.47	1.6820	1.3515	19.6830	15.8158	0.8035	30.1310
5.53	1.6856	1.3602	19.7256	15.9173	0.8069	31.1570
5.60	1.9352	1.6056	22.6457	18.7894	0.8297	36.7369
5.67	1.5383	1.2807	18.0010	14.9865	0.8325	28.4559
5.73	2.2917	1.9016	26.8179	22.2528	0.8298	40.6297
5.80	2.3038	1.8763	26.9598	21.9562	0.8144	41.3685
5.87	1.8277	1.4924	21.3882	17.4647	0.8166	33.5337
5.93	1.6491	1.3648	19.2974	15.9714	0.8276	30.8395
6.00	2.2735	1.9119	26.6051	22.3732	0.8409	43.0551
6.07	2.0239	1.7055	23.6836	19.9578	0.8427	38.0644
6.13	1.3964	1.1786	16.3405	13.7918	0.8440	26.3337
6.20	2.3175	1.9469	27.1192	22.7825	0.8401	42.7371
6.27	1.9972	1.6758	23.3714	19.6100	0.8391	37.4428
6.33	1.8075	1.5196	21.1513	17.7824	0.8407	32.6418
6.40	2.3650	1.9722	27.6750	23.0794	0.8339	41.8708
6.47	2.3724	1.9702	27.7619	23.0556	0.8305	43.2494
6.53	1.9425	1.6289	22.7318	19.0611	0.8385	35.0641
6.60	1.8888	1.5737	22.1033	18.4160	0.8332	34.1343
6.67	2.0941	1.7175	24.5051	20.0981	0.8202	38.6336
6.73	2.2696	1.8921	26.5592	22.1411	0.8337	41.3075
6.80	1.7814	1.4761	20.8468	17.2741	0.8286	31.0099
6.87	2.7556	2.1916	32.2464	25.6465	0.7953	48.2684
6.93	2.7719	2.2659	32.4373	26.5159	0.8174	48.5688
7.00	1.7726	1.4473	20.7430	16.9367	0.8165	31.1228
7.07	2.5636	2.1277	29.9997	24.8989	0.8300	44.8389
7.13	2.5319	2.0674	29.6290	24.1930	0.8165	43.5677
7.20	2.3737	1.9209	27.7775	22.4782	0.8092	40.7802
7.27	2.1481	1.7251	25.1378	20.1872	0.8031	36.9372
7.33	2.0865	1.6870	24.4162	19.7420	0.8086	36.1612
7.40	2.0223	1.5133	23.6652	17.7093	0.7483	39.2449
7.47	2.4209	2.2382	28.3298	26.1920	0.9245	47.3671
7.53	2.0419	1.6818	23.8947	19.6805	0.8236	33.8387
7.60	2.7112	2.1615	31.7267	25.2936	0.7972	45.6459
7.67	2.7341	2.1788	31.9947	25.4962	0.7969	47.0538
7.73	2.6860	2.1682	31.4317	25.3727	0.8072	46.2275

7.80	1.4924	1.2376	17.4640	14.4821	0.8293	25.8083
7.87	2.7709	2.2774	32.4255	26.6501	0.8219	47.8416
7.93	2.6742	2.1852	31.2940	25.5720	0.8172	43.8803
8.00	2.5087	1.9923	29.3566	23.3144	0.7942	42.2077
8.07	2.7718	2.2433	32.4354	26.2513	0.8093	48.9224
8.13	2.2045	1.7937	25.7972	20.9906	0.8137	36.5317
8.20	2.7300	2.2250	31.9463	26.0377	0.8150	46.5468
8.27	2.8139	2.3731	32.9289	27.7702	0.8433	49.0291
8.33	2.6810	2.2503	31.3732	26.3331	0.8393	47.5217
8.40	2.1265	1.8050	24.8848	21.1219	0.8488	38.1174
8.47	2.2086	1.8515	25.8448	21.6670	0.8383	38.6124
8.53	2.2637	1.8483	26.4900	21.6291	0.8165	39.7454
8.60	2.1252	1.7254	24.8698	20.1903	0.8118	36.1314
8.67	3.0371	2.4185	35.5401	28.3013	0.7963	53.0898
8.73	2.5217	2.0848	29.5093	24.3964	0.8267	43.2960
8.80	2.5807	2.0586	30.1992	24.0899	0.7977	42.7078
8.87	2.2403	1.8305	26.2167	21.4212	0.8171	39.7909
8.93	2.5946	2.1182	30.3627	24.7876	0.8164	45.4520
9.00	2.3979	1.9627	28.0604	22.9678	0.8185	42.0250
9.07	2.4187	1.9806	28.3034	23.1775	0.8189	43.5737
9.13	2.2418	1.9208	26.2339	22.4773	0.8568	47.8284
9.20	2.0253	1.7552	23.7006	20.5394	0.8666	37.7431
9.27	2.6689	2.1922	31.2322	25.6535	0.8214	44.0201
9.33	2.4304	1.9539	28.4407	22.8645	0.8039	41.6133
9.40	2.5124	2.0651	29.4009	24.1662	0.8220	46.9279
9.47	2.5879	2.1418	30.2835	25.0631	0.8276	45.8587
9.53	2.0491	1.6767	23.9784	19.6211	0.8183	36.4866
9.60	2.5304	2.0892	29.6108	24.4477	0.8256	46.6277
9.67	1.4369	1.2257	16.8143	14.3436	0.8531	25.4291
9.73	2.6355	2.1607	30.8406	25.2843	0.8198	43.8260
9.80	2.7944	2.2717	32.6999	26.5839	0.8130	44.6756
9.87	2.0738	1.6062	24.2673	18.7963	0.7746	33.2197
9.93	3.3262	2.5986	38.9234	30.4092	0.7813	56.7948
10.00	1.6145	1.3607	18.8929	15.9228	0.8428	28.3168
10.07	2.9211	2.3780	34.1831	27.8281	0.8141	48.8290
10.13	2.8796	2.3086	33.6970	27.0150	0.8017	49.0628
10.20	2.8316	2.3094	33.1356	27.0252	0.8156	48.8223
10.27	2.7010	2.2014	31.6071	25.7613	0.8150	46.0526
10.33	2.8206	2.2844	33.0068	26.7325	0.8099	49.2293
10.40	2.6620	2.2090	31.1505	25.8495	0.8298	46.4531



10.47	2.9536	2.3734	34.5638	27.7742	0.8036	51.4800
10.53	2.3123	1.9151	27.0594	22.4103	0.8282	41.3586
10.60	2.6296	2.1664	30.7720	25.3518	0.8239	45.3207
10.67	1.7287	1.4035	20.2293	16.4242	0.8119	30.8099
10.73	2.1851	1.7960	25.5699	21.0173	0.8220	40.8131
10.80	2.4354	2.0508	28.4999	23.9986	0.8421	46.8150
10.87	1.6816	1.5237	19.6778	17.8311	0.9062	33.8573
10.93	2.0200	1.7748	23.6383	20.7684	0.8786	36.4417
11.00	2.1897	1.7508	25.6239	20.4875	0.7995	34.0623
11.07	2.8366	2.2435	33.1947	26.2538	0.7909	45.4145
11.13	3.3853	2.5892	39.6147	30.2996	0.7649	57.0887
11.20	2.2263	1.8629	26.0522	21.7993	0.8368	39.8018
11.27	2.8452	2.3252	33.2951	27.2099	0.8172	48.6423
11.33	2.5855	2.0928	30.2556	24.4901	0.8094	45.7397
11.40	1.9085	1.5871	22.3338	18.5725	0.8316	34.8016
11.47	2.7251	2.2705	31.8898	26.5699	0.8332	50.9023
11.53	2.6653	2.2584	31.1893	26.4284	0.8474	48.2022
11.60	2.2028	1.8437	25.7774	21.5746	0.8370	38.3280
11.67	2.0090	1.6578	23.5099	19.4000	0.8252	35.4211
11.73	3.0470	2.3929	35.6566	28.0024	0.7853	51.9594
11.80	1.4856	1.2498	17.3846	14.6249	0.8413	27.0198
11.87	3.1073	2.5759	36.3625	30.1434	0.8290	53.4951
11.93	2.8780	2.3305	33.6791	27.2716	0.8097	47.7546
12.00	1.5202	1.2200	17.7900	14.2763	0.8025	25.7365
12.07	2.3904	1.9735	27.9722	23.0937	0.8256	42.4369
12.13	2.1676	1.8066	25.3659	21.1413	0.8335	35.8459
12.20	2.7144	2.1550	31.7645	25.2185	0.7939	43.6679
12.27	2.5188	1.9987	29.4754	23.3894	0.7935	39.9347
12.33	2.7680	2.1623	32.3914	25.3037	0.7812	44.0382
12.40	2.5402	1.9835	29.7256	23.2108	0.7808	42.1540
12.47	2.6078	2.0000	30.5167	23.4040	0.7669	46.6661
12.53	1.5768	1.3586	18.4519	15.8984	0.8616	29.9219
12.60	3.0461	2.5135	35.6458	29.4136	0.8252	51.8237
12.67	3.0895	2.4672	36.1534	28.8716	0.7986	49.4429
12.73	1.9702	1.5620	23.0555	18.2787	0.7928	32.7105
12.80	2.7679	2.2135	32.3908	25.9031	0.7997	45.8272
12.87	3.1572	2.5192	36.9455	29.4799	0.7979	54.3472
12.93	2.5427	2.0672	29.7549	24.1908	0.8130	48.6889

**Stepping and cycling transitions**

Last Name	First Name	D.O.B	Weight	Height	Temp	Date
Wake	Doug	03-03-77	188.0 Lbs	75.0 in	20.9 deg C	03-18-1998

TIME(min)	VO2(L)	VCO2(L)	VO2(Kg)	VCO2(Kg)	RER	VE(stpd)
0.13	0.7751	0.6398	9.0702	7.4874	0.8255	16.7443
0.20	1.2797	1.0379	14.9757	12.1458	0.8110	26.0389
0.27	1.0558	0.8576	12.3548	10.0355	0.8123	21.4877
0.33	0.7152	0.5898	8.3692	6.9018	0.8247	14.9086
0.40	0.7549	0.6361	8.8342	7.4441	0.8426	16.3693
0.47	0.9654	0.8262	11.2971	9.6681	0.8558	21.5930
0.53	0.5178	0.4510	6.0594	5.2773	0.8709	12.2502
0.60	0.9104	0.8117	10.6535	9.4992	0.8916	22.4463
0.67	0.9238	0.8229	10.8108	9.6299	0.8908	23.7388
0.73	0.7080	0.6420	8.2851	7.5128	0.9068	18.6816
0.80	0.7809	0.7162	9.1378	8.3814	0.9172	20.5134
0.87	1.1326	1.0287	13.2535	12.0376	0.9083	30.1963
0.93	0.6110	0.5633	7.1499	6.5922	0.9220	16.7327
1.00	0.8733	0.8248	10.2198	9.6519	0.9444	24.2828
1.07	1.0865	1.0227	12.7138	11.9674	0.9413	30.8340
1.13	1.0392	0.9906	12.1614	11.5916	0.9531	30.8891
1.20	0.8744	0.8509	10.2328	9.9578	0.9731	23.9602
1.27	1.2128	1.1649	14.1920	13.6317	0.9605	29.7841
1.33	1.0626	0.9922	12.4341	11.6110	0.9338	25.4016
1.40	1.9146	1.7373	22.4045	20.3305	0.9074	41.4065
1.47	0.9666	0.8670	11.3108	10.1454	0.8970	19.1787
1.53	1.8654	1.5791	21.8286	18.4785	0.8465	35.2824
1.60	1.7138	1.4432	20.0549	16.8881	0.8421	32.4631
1.67	1.7080	1.4129	19.9869	16.5339	0.8272	30.6128
1.73	1.3523	1.0818	15.8246	12.6590	0.8000	23.9834
1.80	2.1565	1.7185	25.2352	20.1096	0.7969	37.1128
1.87	1.3901	1.0674	16.2675	12.4905	0.7678	22.3288
1.93	2.8453	2.0962	33.2965	24.5295	0.7367	43.2183
2.00	1.7419	1.2646	20.3841	14.7989	0.7260	26.2907
2.07	2.5643	1.8828	30.0081	22.0329	0.7342	38.6208
2.13	1.6867	1.2394	19.7385	14.5036	0.7348	24.9625
2.20	3.5053	2.5394	41.0195	29.7166	0.7245	52.5741
2.27	1.5273	1.1548	17.8729	13.5141	0.7561	22.6222
2.33	3.6441	2.6860	42.6441	31.4323	0.7371	56.3673
2.40	1.8058	1.4758	21.1316	17.2694	0.8172	30.8720

2.47	2.3909	1.8973	27.9781	22.2027	0.7936	36.6999
2.53	2.6655	2.0611	31.1925	24.1191	0.7732	40.6532
2.60	2.0814	1.5923	24.3571	18.6329	0.7650	31.6871
2.67	3.0953	2.4053	36.2219	28.1467	0.7771	47.9137
2.73	1.8304	1.4289	21.4191	16.7214	0.7807	28.1288
2.80	2.7823	2.1870	32.5589	25.5927	0.7860	42.3853
2.87	1.6215	1.2596	18.9752	14.7404	0.7768	24.5550
2.93	3.3792	2.6155	39.5443	30.6072	0.7740	50.5433
3.00	1.5952	1.2401	18.6672	14.5116	0.7774	23.4213
3.07	3.2137	2.4391	37.6067	28.5424	0.7590	46.4608
3.13	2.0112	1.5549	23.5351	18.1960	0.7731	30.2523
3.20	3.0612	2.4080	35.8223	28.1792	0.7866	45.9134
3.27	2.5874	1.9909	30.2782	23.2982	0.7695	38.2887
3.33	2.7573	2.1996	32.2658	25.7395	0.7977	42.9611
3.40	2.6533	2.1256	31.0493	24.8745	0.8011	42.0506
3.47	2.0268	1.6600	23.7182	19.4256	0.8190	32.5816
3.53	2.8060	2.2828	32.8364	26.7138	0.8135	44.5004
3.60	2.2335	1.8370	26.1371	21.4967	0.8225	35.6361
3.67	2.9260	2.3676	34.2406	27.7056	0.8091	44.8004
3.73	1.8799	1.5002	21.9991	17.5550	0.7980	29.5312
3.80	2.9790	2.4494	34.8610	28.6635	0.8222	47.3335
3.87	1.7364	1.3783	20.3201	16.1288	0.7937	26.8156
3.93	3.5259	2.7811	41.2601	32.5443	0.7888	53.6385
4.00	1.6504	1.3133	19.3131	15.3679	0.7957	25.6002
4.07	3.0791	2.4917	36.0319	29.1582	0.8092	47.2385
4.13	1.9620	1.5701	22.9591	18.3738	0.8003	30.3416
4.20	3.0833	2.4880	36.0811	29.1149	0.8069	47.8480
4.27	2.6041	2.0837	30.4735	24.3833	0.8001	40.1106
4.33	2.3238	1.8513	27.1938	21.6643	0.7967	36.0538
4.40	2.3547	1.8690	27.5552	21.8717	0.7937	36.3635
4.47	2.5135	1.9687	29.4137	23.0383	0.7833	38.1919
4.53	2.0876	1.6551	24.4288	19.3686	0.7929	32.2961
4.60	2.6950	2.1224	31.5374	24.8361	0.7875	42.1525
4.67	2.9526	2.3434	34.5519	27.4233	0.7937	45.5052
4.73	2.3500	1.8763	27.5005	21.9568	0.7984	36.3285
4.80	2.1722	1.7313	25.4190	20.2599	0.7970	34.1148
4.87	2.9083	2.3456	34.0332	27.4485	0.8065	44.6803
4.93	3.2100	2.5666	37.5635	30.0341	0.7996	51.3823
5.00	1.7709	1.4395	20.7227	16.8449	0.8129	28.8471
5.07	3.1176	2.5425	36.4824	29.7523	0.8155	50.4963

5.13	2.2566	1.8864	26.4075	22.0745	0.8359	37.5773
5.20	2.6120	2.2051	30.5656	25.8046	0.8442	42.5713
5.27	2.5427	2.1463	29.7554	25.1157	0.8441	40.8441
5.33	2.1796	1.8184	25.5059	21.2789	0.8343	34.9367
5.40	2.5532	2.1210	29.8773	24.8203	0.8307	41.7527
5.47	2.4544	2.0541	28.7214	24.0374	0.8369	39.2022
5.53	2.5296	2.0872	29.6016	24.4250	0.8251	40.2178
5.60	2.7068	2.2248	31.6757	26.0345	0.8219	44.2741
5.67	2.5239	2.1838	29.5353	25.5555	0.8653	41.3236
5.73	1.9063	1.5843	22.3083	18.5392	0.8310	30.8530
5.80	3.4145	2.8002	39.9565	32.7686	0.8201	55.0153
5.87	1.4683	1.2486	17.1827	14.6112	0.8503	25.1730
5.93	3.5773	2.9530	41.8623	34.5559	0.8255	55.4060
6.00	2.8026	2.3205	32.7964	27.1546	0.8280	43.8679
6.07	2.1978	1.8190	25.7185	21.2858	0.8276	34.7479
6.13	2.5010	2.0442	29.2667	23.9210	0.8173	42.8525
6.20	2.5252	2.1793	29.5505	25.5020	0.8630	43.8921
6.27	2.0062	1.6770	23.4772	19.6241	0.8359	32.9146
6.33	2.7326	2.2767	31.9770	26.6421	0.8332	45.6706
6.40	2.8532	2.4866	33.3884	29.0986	0.8715	46.8755
6.47	1.9798	1.6837	23.1674	19.7033	0.8505	32.7904
6.53	2.6441	2.2756	30.9413	26.6294	0.8606	44.8401
6.60	2.7363	2.4007	32.0203	28.0930	0.8773	46.5712
6.67	1.7345	1.5146	20.2971	17.7246	0.8733	29.2413
6.73	2.7039	2.3254	31.6415	27.2125	0.8600	45.0678
6.80	2.5184	2.1186	29.4701	24.7917	0.8412	41.0190
6.87	2.8505	2.5011	33.3574	29.2681	0.8774	48.0997
6.93	2.4827	2.1332	29.0524	24.9636	0.8593	39.3619
7.00	2.0296	1.7206	23.7501	20.1351	0.8478	32.1635
7.07	3.1132	2.6002	36.4309	30.4279	0.8352	49.2024
7.13	1.9690	1.6769	23.0413	19.6236	0.8517	31.9430
7.20	3.1214	2.6471	36.5273	30.9766	0.8480	48.4856
7.27	2.6100	2.1449	30.5424	25.1000	0.8218	40.4723
7.33	2.2112	1.8624	25.8759	21.7938	0.8422	36.0240
7.40	2.7979	2.3927	32.7414	28.0001	0.8552	44.2314
7.47	2.2474	1.8905	26.2998	22.1226	0.8412	35.6378
7.53	2.8981	2.4499	33.9140	28.6692	0.8453	45.0803
7.60	2.1162	1.7886	24.7640	20.9301	0.8452	32.4634
7.67	3.4486	2.9081	40.3556	34.0310	0.8433	54.1585
7.73	3.3045	2.8150	38.6699	32.9411	0.8519	53.7232

7.80	2.2445	1.9663	26.2653	23.0099	0.8761	38.1078
7.87	2.6095	2.3499	30.5373	27.4986	0.9005	45.3224
7.93	3.0739	2.7861	35.9712	32.6032	0.9064	52.0798
8.00	2.4502	2.1537	28.6730	25.2033	0.8790	41.1823
8.07	2.2292	1.9823	26.0865	23.1966	0.8892	38.4542
8.13	2.9728	2.6403	34.7880	30.8970	0.8882	51.2693
8.20	3.0170	2.6675	35.3053	31.2157	0.8842	52.1013
8.27	1.9083	1.6847	22.3314	19.7150	0.8828	32.8738
8.33	2.7633	2.4725	32.3366	28.9330	0.8947	47.4125
8.40	2.2516	1.9943	26.3490	23.3376	0.8857	37.4189
8.47	2.4843	2.1640	29.0721	25.3238	0.8711	40.6416
8.53	2.4800	2.1600	29.0216	25.2765	0.8710	40.1514
8.60	3.3147	2.8554	38.7885	33.4139	0.8614	54.3388
8.67	2.8650	2.4940	33.5264	29.1849	0.8705	47.0590
8.73	2.5143	2.1733	29.4224	25.4320	0.8644	42.4893
8.80	2.5380	2.2388	29.7003	26.1986	0.8821	42.6862
8.87	2.4638	2.1560	28.8314	25.2302	0.8751	41.4638
8.93	3.0954	2.7469	36.2223	32.1441	0.8874	54.4477
9.00	1.3097	1.1760	15.3266	13.7622	0.8979	22.4874
9.07	2.3557	2.0725	27.5669	24.2528	0.8798	39.5158
9.13	2.7485	2.4480	32.1628	28.6469	0.8907	44.5942
9.20	2.8523	2.4979	33.3782	29.2313	0.8758	44.5713
9.27	3.4190	2.8753	40.0096	33.6474	0.8410	52.0942
9.33	2.8517	2.4360	33.3715	28.5066	0.8542	46.5798
9.40	2.2240	1.9722	26.0252	23.0786	0.8868	37.6027
9.47	3.1368	2.8393	36.7076	33.2256	0.9051	52.6805
9.53	3.0778	2.7693	36.0169	32.4064	0.8998	52.7506
9.60	2.1247	1.9489	24.8636	22.8061	0.9172	37.6972
9.67	3.1517	2.9187	36.8816	34.1552	0.9261	56.0237
9.73	1.7440	1.6063	20.4088	18.7970	0.9210	30.2237
9.80	3.1254	2.8655	36.5737	33.5320	0.9168	53.4139
9.87	3.1150	2.8103	36.4521	32.8861	0.9022	52.7288
9.93	2.9863	2.6571	34.9463	31.0942	0.8898	51.7471
10.00	1.7061	1.5461	19.9647	18.0931	0.9063	30.1988
10.07	3.2927	2.9971	38.5320	35.0724	0.9102	58.5956
10.13	2.1389	1.9653	25.0299	22.9983	0.9188	37.2943
10.20	2.8276	2.5925	33.0884	30.3383	0.9169	48.0137
10.27	1.8476	1.6616	21.6205	19.4439	0.8993	31.3227
10.33	3.2049	2.8803	37.5046	33.7051	0.8987	54.9169
10.40	1.9419	1.7577	22.7242	20.5686	0.9051	32.6124

10.47	2.9563	2.6752	34.5953	31.3060	0.9049	48.5129
10.53	3.0786	2.7283	36.0263	31.9266	0.8862	50.5274
10.60	2.6127	2.3114	30.5737	27.0483	0.8847	44.1548
10.67	1.9676	1.7745	23.0254	20.7660	0.9019	33.7384
10.73	3.4101	3.0477	39.9055	35.6647	0.8937	57.1303
10.80	2.0299	1.8089	23.7536	21.1685	0.8912	34.1330
10.87	2.8140	2.5308	32.9298	29.6159	0.8994	47.0008
10.93	3.0826	2.7280	36.0734	31.9229	0.8849	51.3287
11.00	2.9129	2.5830	34.0868	30.2267	0.8868	48.8308
11.07	2.2549	2.0323	26.3871	23.7819	0.9013	38.4920
11.13	2.1315	1.9272	24.9431	22.5528	0.9042	36.8865
11.20	2.9347	2.6577	34.3420	31.1011	0.9056	49.8200
11.27	3.1735	2.8123	37.1363	32.9098	0.8862	51.6532
11.33	2.2980	2.0017	26.8909	23.4238	0.8711	37.5923
11.40	2.1327	1.8628	24.9576	21.7991	0.8734	35.3497
11.47	3.2378	2.8687	37.8886	33.5703	0.8860	55.8134
11.53	2.0169	1.8214	23.6018	21.3143	0.9031	34.3680
11.60	3.2625	2.8677	38.1787	33.5587	0.8790	54.8350
11.67	3.1976	2.8585	37.4182	33.4508	0.8940	54.9738
11.73	2.8126	2.4890	32.9131	29.1268	0.8850	48.4729
11.80	1.8754	1.6967	21.9462	19.8548	0.9047	33.3343
11.87	3.1382	2.8574	36.7239	33.4375	0.9105	54.7416
11.93	1.6281	1.4514	19.0517	16.9847	0.8915	27.6738
12.00	2.9950	2.6702	35.0482	31.2468	0.8915	49.3147

**One cycling transition**

Last Name	First Name	D.O.B	Weight	Height	Temp	Date
Young	Robert	06-26-75	143.0 Lbs	70.8 in	23.0 deg C	03-12-1998

TIME(min)	VO2(L)	VCO2(L)	VO2(Kg)	VCO2(Kg)	RER	VE(stpd)
0.13	0.5519	0.5521	8.4903	8.4941	1.0004	17.8279
0.20	0.6236	0.6233	9.5933	9.5888	0.9995	22.2818
0.27	0.6371	0.6946	9.8014	10.6854	1.0902	22.4998
0.33	0.4186	0.4204	6.4395	6.4677	1.0044	13.9806
0.40	0.3713	0.3850	5.7117	5.9230	1.0370	12.3321
0.47	0.5265	0.5450	8.0997	8.3840	1.0351	17.6253
0.53	0.5161	0.5327	7.9396	8.1952	1.0322	17.4825
0.60	0.5140	0.5390	7.9075	8.2929	1.0487	18.6382
0.67	0.3644	0.3924	5.6063	6.0368	1.0768	13.7818
0.73	0.2947	0.3173	4.5332	4.8813	1.0768	11.1440
0.80	0.4914	0.5164	7.5601	7.9445	1.0508	18.2331
0.87	0.3670	0.3795	5.6461	5.8391	1.0342	14.1496
0.93	0.7605	0.7969	11.7007	12.2595	1.0478	27.6966
1.00	0.4534	0.4658	6.9757	7.1665	1.0273	15.8063
1.07	0.2177	0.2202	3.3487	3.3884	1.0119	7.4989
1.13	0.2803	0.2784	4.3124	4.2824	0.9931	9.8283
1.20	0.7637	0.7848	11.7492	12.0744	1.0277	27.0901
1.27	0.6139	0.6016	9.4444	9.2561	0.9801	21.2807
1.33	0.7920	0.7119	12.1850	10.9520	0.8988	23.0984
1.40	0.6089	0.5919	9.3675	9.1067	0.9722	15.9710
1.47	1.5823	1.3573	24.3430	20.8820	0.8578	34.1377
1.53	1.6062	1.2918	24.7106	19.8739	0.8043	32.1266
1.60	1.3230	1.0408	20.3533	16.0125	0.7867	25.5668
1.67	1.4004	1.0852	21.5451	16.6947	0.7749	26.3330
1.73	1.2916	0.9906	19.8715	15.2405	0.7670	24.0102
1.80	1.2794	0.9828	19.6827	15.1197	0.7682	25.1280
1.87	1.3177	0.9781	20.2723	15.0475	0.7423	23.5069
1.93	1.4270	1.0293	21.9535	15.8351	0.7213	23.5230
2.00	1.8248	1.2713	28.0732	19.5583	0.6967	29.5944
2.07	1.8207	1.2752	28.0113	19.6189	0.7004	29.6172
2.13	1.7721	1.2514	27.2636	19.2525	0.7062	27.9612
2.20	2.1291	1.4627	32.7556	22.5028	0.6870	31.4194
2.27	2.1116	1.4474	32.4861	22.2681	0.6855	30.7291
2.33	1.7730	1.2232	27.2771	18.8185	0.6899	26.0793
2.40	2.5338	1.8074	38.9823	27.8063	0.7133	38.9079

2.47	2.4221	1.7806	37.2624	27.3938	0.7352	38.7053
2.53	1.7711	1.3298	27.2479	20.4592	0.7509	29.5161
2.60	2.1958	1.6951	33.7820	26.0788	0.7720	37.1701
2.67	2.2048	1.7409	33.9200	26.7836	0.7896	37.8843
2.73	2.4074	1.9263	37.0362	29.6351	0.8002	41.6460
2.80	1.9642	1.5550	30.2185	23.9233	0.7917	35.1767
2.87	1.5805	1.2849	24.3154	19.7681	0.8130	28.1755
2.93	2.7414	2.1773	42.1760	33.4965	0.7942	47.8999
3.00	1.6101	1.3104	24.7707	20.1596	0.8138	28.5769
3.07	2.6346	2.1530	40.5325	33.1232	0.8172	46.9023
3.13	1.6852	1.4036	25.9268	21.5934	0.8329	30.3122
3.20	1.5869	1.3167	24.4143	20.2571	0.8297	28.5906
3.27	2.2868	1.9374	35.1813	29.8057	0.8472	41.8405
3.33	2.1738	1.8542	33.4435	28.5265	0.8530	38.9114
3.40	1.7961	1.5065	27.6324	23.1768	0.8388	31.1248
3.47	2.8736	2.4117	44.2095	37.1028	0.8392	50.1369
3.53	1.4329	1.2014	22.0447	18.4830	0.8384	25.4518
3.60	2.7493	2.3870	42.2962	36.7226	0.8682	49.8302
3.67	1.5428	1.3035	23.7348	20.0545	0.8449	27.0715
3.73	2.9621	2.4996	45.5711	38.4554	0.8439	53.4066
3.80	1.5412	1.3275	23.7110	20.4235	0.8614	28.4857
3.87	2.8087	2.4109	43.2110	37.0912	0.8584	52.7506
3.93	2.2662	1.9809	34.8645	30.4747	0.8741	43.4356
4.00	1.5332	1.3420	23.5884	20.6462	0.8753	29.3948
4.07	2.5316	2.2073	38.9480	33.9578	0.8719	49.0991
4.13	2.5738	2.2850	39.5970	35.1544	0.8878	51.2277
4.20	1.3512	1.1942	20.7872	18.3720	0.8838	27.0752
4.27	2.6074	2.3092	40.1133	35.5262	0.8856	51.4813
4.33	1.6273	1.4363	25.0346	22.0972	0.8827	31.0195
4.40	2.5028	2.1717	38.5044	33.4101	0.8677	47.6716
4.47	1.4740	1.3081	22.6776	20.1247	0.8874	28.6838
4.53	2.3136	2.0798	35.5939	31.9968	0.8989	42.7051
4.60	2.0038	1.6920	30.8276	26.0310	0.8444	34.9217
4.67	2.2625	1.8969	34.8071	29.1834	0.8384	40.1866
4.73	2.5731	2.2088	39.5863	33.9808	0.8584	47.7529
4.80	1.7150	1.4852	26.3853	22.8486	0.8660	32.1089
4.87	2.2565	1.9525	34.7156	30.0392	0.8653	42.4430
4.93	2.5900	2.2547	39.8462	34.6883	0.8706	49.6042
5.00	2.2695	1.9843	34.9152	30.5284	0.8744	43.6077
5.07	1.9325	1.6846	29.7307	25.9172	0.8717	37.0209



5.13	2.1421	1.8799	32.9559	28.9208	0.8776	41.4936
5.20	1.9445	1.7186	29.9151	26.4393	0.8838	38.9643
5.27	2.6470	2.3501	40.7238	36.1547	0.8878	52.6854
5.33	1.4072	1.2655	21.6499	19.4692	0.8993	27.6586
5.40	2.3789	2.1358	36.5986	32.8579	0.8978	45.8285
5.47	2.4323	2.1414	37.4194	32.9453	0.8804	45.0333
5.53	2.2946	1.9384	35.3012	29.8217	0.8448	41.8629
5.60	1.7945	1.5428	27.6070	23.7353	0.8598	33.7930
5.67	2.5194	2.1655	38.7607	33.3159	0.8595	47.3296
5.73	2.0159	1.7431	31.0143	26.8172	0.8647	38.5605
5.80	1.9962	1.7296	30.7109	26.6094	0.8664	37.5562
5.87	2.7934	2.3630	42.9750	36.3542	0.8459	52.4475
5.93	2.5864	2.2140	39.7900	34.0611	0.8560	49.1394
6.00	2.0113	1.7292	30.9431	26.6033	0.8597	38.3376
6.07	2.2043	1.9143	33.9122	29.4513	0.8685	42.3012
6.13	1.8010	1.5616	27.7074	24.0253	0.8671	34.8930
6.20	2.4967	2.1573	38.4111	33.1885	0.8640	48.5806
6.27	1.8747	1.6370	28.8412	25.1852	0.8732	34.9026
6.33	2.2257	1.8586	34.2416	28.5937	0.8351	40.0527
6.40	2.7993	2.3194	43.0661	35.6825	0.8286	51.2513
6.47	2.6982	2.2784	41.5112	35.0524	0.8444	51.1364
6.53	2.0429	1.7431	31.4290	26.8172	0.8533	38.6032
6.60	2.0791	1.7780	31.9861	27.3537	0.8552	40.6803
6.67	2.2178	1.9164	34.1202	29.4826	0.8641	43.6966
6.73	2.5724	2.2285	39.5758	34.2853	0.8663	51.2232
6.80	2.0029	1.7648	30.8142	27.1507	0.8811	39.2133
6.87	1.9382	1.6686	29.8185	25.6715	0.8609	37.4090
6.93	2.7382	2.3335	42.1254	35.9001	0.8522	52.4908
7.00	2.4429	2.0820	37.5837	32.0302	0.8522	48.1303
7.07	2.0795	1.8445	31.9929	28.3766	0.8870	42.7884
7.13	2.4234	2.1182	37.2828	32.5872	0.8741	47.9702
7.20	2.3003	1.9389	35.3895	29.8288	0.8429	43.3701
7.27	1.8552	1.5545	28.5423	23.9160	0.8379	34.7731
7.33	2.1184	1.7900	32.5906	27.5385	0.8450	39.8618
7.40	2.2611	1.9041	34.7862	29.2932	0.8421	42.8305
7.47	2.4612	2.0912	37.8643	32.1720	0.8497	47.0398
7.53	2.5577	2.1456	39.3488	33.0098	0.8389	49.3743
7.60	1.6906	1.4543	26.0088	22.3732	0.8602	32.3852
7.67	2.3378	2.0072	35.9662	30.8799	0.8586	44.5499
7.73	2.5012	2.1062	38.4800	32.4037	0.8421	47.3785

7.80	1.6977	1.4401	26.1182	22.1559	0.8483	32.3585
7.87	2.8683	2.3870	44.1280	36.7228	0.8322	54.6140
7.93	2.3592	1.9903	36.2950	30.6193	0.8436	45.5890
8.00	1.9582	1.6424	30.1257	25.2670	0.8387	37.7064
8.07	2.0685	1.7310	31.8237	26.6312	0.8368	39.4257
8.13	1.8738	1.5618	28.8274	24.0278	0.8335	35.1714
8.20	2.2864	1.8991	35.1756	29.2165	0.8306	42.4798
8.27	2.9535	2.3600	45.4389	36.3073	0.7990	52.6132
8.33	2.1220	1.7622	32.6465	27.1108	0.8304	39.3303
8.40	2.1692	1.8341	33.3719	28.2176	0.8455	40.5293
8.47	1.8010	1.4886	27.7084	22.9011	0.8265	33.6736
8.53	2.6432	2.2211	40.6645	34.1715	0.8403	50.4165
8.60	2.5290	2.1263	38.9077	32.7117	0.8408	47.7752
8.67	2.3875	2.0110	36.7314	30.9381	0.8423	45.3375
8.73	2.1488	1.8417	33.0578	28.3341	0.8571	41.8514
8.80	1.7465	1.5028	26.8695	23.1200	0.8605	34.3840
8.87	2.3580	2.0524	36.2770	31.5757	0.8704	46.6395
8.93	2.6146	2.2398	40.2243	34.4581	0.8566	50.6670

**Two cycling transitions**

Last Name	First Name	D.O.B	Weight	Height	Temp	Date
Young	Robert	06-25-75	143.0 Lbs	70.0 in	21.9 deg C	03-17-1998

TIME(min)	VO2(L)	VCO2(L)	VO2(Kg)	VCO2(Kg)	RER	VE(stpd)
0.13	0.8014	0.6867	12.3287	10.5654	0.8570	20.9903
0.20	0.7287	0.6768	11.2100	10.4120	0.9288	19.9839
0.27	0.9257	0.8758	14.2410	13.4743	0.9462	25.7475
0.33	0.4447	0.4325	6.8411	6.6538	0.9726	13.3208
0.40	0.5533	0.5587	8.5130	8.5947	1.0096	16.7680
0.47	0.0622	0.0648	0.9568	0.9969	1.0418	1.9190
0.53	0.5436	0.5667	8.3631	8.7188	1.0425	16.1620
0.60	0.6041	0.6111	9.2939	9.4008	1.0115	18.1772
0.67	0.5172	0.5375	7.9566	8.2693	1.0393	16.7093
0.73	0.3193	0.3342	4.9118	5.1410	1.0467	10.3721
0.80	0.4820	0.4886	7.4160	7.5172	1.0137	15.3085
0.87	0.6787	0.6962	10.4411	10.7101	1.0258	21.6077
0.93	0.3039	0.3105	4.6753	4.7768	1.0217	9.6672
1.00	0.4328	0.4423	6.6579	6.8046	1.0220	14.0999
1.07	0.2006	0.2076	3.0861	3.1938	1.0349	6.6604
1.13	0.5763	0.6101	8.8668	9.3869	1.0587	19.3890
1.20	0.4433	0.4651	6.8201	7.1553	1.0492	14.9457
1.27	0.8072	0.8276	12.4180	12.7325	1.0253	26.6378
1.33	0.7916	0.7517	12.1790	11.5644	0.9495	24.2329
1.40	0.6142	0.5802	9.4490	8.9267	0.9447	15.9128
1.47	0.9364	0.8466	14.4056	13.0241	0.9041	21.3454
1.53	0.6145	0.5439	9.4540	8.3676	0.8851	13.1189
1.60	1.1410	1.0095	17.5538	15.5309	0.8848	24.8285
1.67	0.9001	0.7862	13.8484	12.0958	0.8734	19.4324
1.73	0.4664	0.3949	7.1751	6.0749	0.8467	10.2933
1.80	1.3472	1.1103	20.7256	17.0820	0.8242	27.2746
1.87	1.1770	0.9499	18.1074	14.6144	0.8071	22.4530
1.93	1.2392	0.9400	19.0643	14.4619	0.7586	21.4343
2.00	0.8213	0.6231	12.6359	9.5863	0.7587	16.3066
2.07	0.5651	0.4346	8.6944	6.6866	0.7691	10.0943
2.13	0.9116	0.6885	14.0240	10.5924	0.7553	16.0091
2.20	0.6534	0.4942	10.0524	7.6029	0.7563	11.5043
2.27	1.6685	1.2503	25.6692	19.2350	0.7493	28.6718
2.33	1.2690	0.9078	19.5235	13.9655	0.7153	20.9369
2.40	1.0608	0.7251	16.3193	11.1554	0.6836	16.5148

2.47	2.0816	1.4087	32.0244	21.6719	0.6767	30.5874
2.53	1.4591	0.9661	22.4470	14.8629	0.6621	21.5379
2.60	0.9089	0.6130	13.9833	9.4310	0.6744	13.6971
2.67	1.4355	0.9903	22.0839	15.2348	0.6899	22.1509
2.73	1.2788	0.9086	19.6745	13.9787	0.7105	20.3246
2.80	1.9510	1.4134	30.0153	21.7441	0.7244	31.3004
2.87	2.0040	1.4906	30.8311	22.9330	0.7438	33.4185
2.93	1.0837	0.8345	16.6728	12.8390	0.7701	18.9211
3.00	1.1072	0.8700	17.0343	13.3851	0.7858	19.3104
3.07	1.1890	0.9498	18.2930	14.6126	0.7988	21.0347
3.13	1.3890	1.1004	21.3694	16.9292	0.7922	24.3694
3.20	1.3554	1.0578	20.8519	16.2745	0.7805	23.5573
3.27	1.4661	1.1514	22.5561	17.7132	0.7853	24.9460
3.33	1.3690	1.0593	21.0621	16.2964	0.7737	22.3461
3.40	1.4845	1.1427	22.8380	17.5806	0.7698	24.1580
3.47	1.7118	1.3145	26.3354	20.2228	0.7679	28.7605
3.53	1.5551	1.2086	23.9253	18.5945	0.7772	26.6487
3.60	1.3348	1.0541	20.5349	16.2167	0.7897	23.0380
3.67	1.3598	1.0568	20.9193	16.2588	0.7772	23.3527
3.73	1.3126	1.0312	20.1931	15.8645	0.7856	22.7362
3.80	0.7381	0.5719	11.3547	8.7987	0.7749	12.3116
3.87	1.9032	1.4746	29.2795	22.6858	0.7748	31.4054
3.93	1.8083	1.3797	27.8205	21.2257	0.7630	29.3841
4.00	1.5341	1.1543	23.6010	17.7579	0.7524	24.5572
4.07	1.5760	1.2039	24.2467	18.5220	0.7639	25.9448
4.13	1.1612	0.9001	17.8641	13.8480	0.7752	20.0227
4.20	1.5864	1.2695	24.4054	19.5310	0.8003	28.3974
4.27	1.5495	1.2472	23.8384	19.1871	0.8049	27.9599
4.33	1.4723	1.1907	22.6506	18.3189	0.8088	26.2827
4.40	1.4107	1.1190	21.7027	17.2162	0.7933	24.7551
4.47	1.3225	1.0642	20.3461	16.3726	0.8047	23.7521
4.53	1.0960	0.8956	16.8609	13.7785	0.8172	19.9221
4.60	1.4019	1.1742	21.5676	18.0648	0.8376	25.3589
4.67	1.8800	1.5770	28.9225	24.2615	0.8388	33.0937
4.73	1.4783	1.2201	22.7433	18.7702	0.8253	25.6572
4.80	1.1291	0.9204	17.3702	14.1604	0.8152	19.7290
4.87	1.6684	1.3612	25.6674	20.9417	0.8159	29.5568
4.93	1.2282	0.9850	18.8950	15.1542	0.8020	21.7422
5.00	1.3004	1.0670	20.0058	16.4152	0.8205	22.7488
5.07	1.4762	1.1977	22.7111	18.4257	0.8113	25.3729

5.13	1.2139	0.9766	18.6758	15.0253	0.8045	21.1149
5.20	1.5260	1.2415	23.4763	19.1005	0.8136	26.3579
5.27	1.4093	1.1315	21.6816	17.4081	0.8029	24.1247
5.33	1.7847	1.4216	27.4566	21.8705	0.7965	30.3737
5.40	1.4542	1.1328	22.3727	17.4271	0.7789	24.3325
5.47	1.1855	0.9473	18.2379	14.5742	0.7991	20.5032
5.53	1.4658	1.1714	22.5508	18.0208	0.7991	25.3519
5.60	1.4673	1.1655	22.5734	17.9309	0.7943	25.7543
5.67	1.3493	1.1004	20.7579	16.9291	0.8155	23.7390
5.73	1.2890	1.0497	19.8307	16.1488	0.8143	22.1204
5.80	1.8605	1.5053	28.6224	23.1592	0.8091	31.8911
5.87	1.5046	1.2248	23.1473	18.8428	0.8140	26.2248
5.93	1.3528	1.0985	20.8123	16.9002	0.8120	23.6221
6.00	2.0351	1.6359	31.3092	25.1669	0.8038	35.7140
6.07	2.2851	1.8176	35.1552	27.9623	0.7954	40.1184
6.13	2.0621	1.6292	31.7254	25.0653	0.7901	37.7954
6.20	1.3281	1.0875	20.4315	16.7302	0.8188	26.0418
6.27	1.5263	1.3234	23.4823	20.3594	0.8670	31.3535
6.33	1.4417	1.2531	22.1808	19.2783	0.8691	29.1708
6.40	1.8703	1.6036	28.7745	24.6706	0.8574	36.0717
6.47	1.2802	1.0813	19.6955	16.6349	0.8446	24.3224
6.53	1.6350	1.3771	25.1541	21.1868	0.8423	31.0478
6.60	1.4427	1.2171	22.1946	18.7244	0.8436	27.0733
6.67	1.6799	1.4111	25.8447	21.7088	0.8400	30.4742
6.73	1.5423	1.2296	23.7276	18.9165	0.7972	25.9662
6.80	1.7388	1.3263	26.7501	20.4050	0.7628	29.5691
6.87	2.4731	2.0228	38.0480	31.1203	0.8179	44.6492
6.93	1.7458	1.4710	26.8579	22.6311	0.8426	30.5496
7.00	2.1456	1.7510	33.0086	26.9389	0.8161	38.1870
7.07	2.2011	1.8603	33.8638	28.6197	0.8451	39.7893
7.13	1.6026	1.3539	24.6561	20.8289	0.8448	29.2391
7.20	2.3923	2.0623	36.8054	31.7272	0.8620	44.0155
7.27	1.4160	1.2225	21.7842	18.8082	0.8634	26.1207
7.33	2.4498	2.1008	37.6888	32.3199	0.8575	44.5057
7.40	1.7625	1.5010	27.1147	23.0930	0.8517	31.4670
7.47	1.6976	1.4570	26.1175	22.4153	0.8582	30.3528
7.53	2.6090	2.2226	40.1387	34.1933	0.8519	46.6902
7.60	1.6398	1.4005	25.2281	21.5466	0.8541	29.3598
7.67	1.9126	1.6401	29.4243	25.2327	0.8575	34.7463
7.73	2.5115	2.1772	38.6392	33.4954	0.8669	45.4036

7.80	1.6189	1.4086	24.9068	21.6713	0.8701	28.9536
7.87	2.5911	2.2545	39.8627	34.6843	0.8701	46.3396
7.93	1.9254	1.6741	29.6222	25.7558	0.8695	34.5883
8.00	2.4278	2.1001	37.3513	32.3087	0.8650	45.0142
8.07	1.6625	1.4709	25.5770	22.6285	0.8847	31.6289
8.13	2.3442	2.0761	36.0652	31.9393	0.8856	44.4996
8.20	1.7285	1.5212	26.5923	23.4033	0.8801	32.5370
8.27	2.7531	2.3804	42.3559	36.6219	0.8646	52.0262
8.33	1.4872	1.3104	22.8798	20.1604	0.8811	28.8293
8.40	2.3879	2.1204	36.7366	32.6212	0.8880	45.7928
8.47	1.7569	1.5580	27.0292	23.9687	0.8868	33.3587
8.53	2.2375	1.9641	34.4229	30.2172	0.8778	41.6984
8.60	1.9771	1.7300	30.4167	26.6146	0.8750	36.6493
8.67	2.2985	1.9804	35.3617	30.4671	0.8616	42.5852
8.73	1.9843	1.7267	30.5281	26.5648	0.8702	37.4526
8.80	1.9669	1.7322	30.2594	26.6487	0.8807	36.8522
8.87	2.4066	2.0642	37.0253	31.7568	0.8577	44.8698
8.93	1.9273	1.6995	29.6503	26.1457	0.8818	36.4667
9.00	1.8477	1.6454	28.4261	25.3145	0.8905	34.8590
9.07	2.6296	2.2969	40.4550	35.3374	0.8735	49.0763
9.13	2.1515	1.8909	33.0999	29.0903	0.8789	40.8804
9.20	2.2745	1.9973	34.9921	30.7276	0.8781	44.2810
9.27	2.0759	1.8297	31.9374	28.1497	0.8814	40.7466
9.33	1.7024	1.5294	26.1906	23.5295	0.8984	33.5366
9.40	2.5913	2.2515	39.8662	34.6383	0.8689	49.3700
9.47	1.7742	1.5624	27.2948	24.0369	0.8806	33.5614
9.53	2.7295	2.3375	41.9922	35.9616	0.8564	50.1573
9.60	2.6049	2.2440	40.0751	34.5226	0.8614	52.4816
9.67	1.8201	1.6555	28.0020	25.4694	0.9096	38.5388
9.73	1.7935	1.6541	27.5916	25.4481	0.9223	37.6741
9.80	2.2294	2.0187	34.2977	31.0568	0.9055	43.5498
9.87	1.7261	1.4963	26.5558	23.0203	0.8669	32.2457
9.93	1.6922	1.4538	26.0342	22.3657	0.8591	31.2615
10.00	2.4024	2.0347	36.9607	31.3034	0.8469	42.6546
10.07	2.9110	2.3834	44.7843	36.6673	0.8188	51.2515
10.13	2.5846	2.1789	39.7624	33.5221	0.8431	48.8491
10.20	2.6248	2.3190	40.3818	35.6775	0.8835	52.4600
10.27	2.5811	2.2064	39.7096	33.9450	0.8548	53.8690
10.33	1.2778	1.1830	19.6585	18.2003	0.9258	28.1283
10.40	2.3543	2.1682	36.2194	33.3571	0.9210	49.8365

10.47	1.3064	1.2116	20.0983	18.6406	0.9275	26.6268
10.53	2.7398	2.4168	42.1508	37.1818	0.8821	51.4730
10.60	1.5011	1.2826	23.0941	19.7320	0.8544	27.3162
10.67	2.6761	2.2813	41.1710	35.0976	0.8525	48.2287
10.73	2.4533	2.0532	37.7425	31.5875	0.8369	43.9623
10.80	1.6968	1.4113	26.1043	21.7121	0.8317	31.0142
10.87	2.9036	2.4220	44.6705	37.2621	0.8342	54.1173
10.93	1.3762	1.1757	21.1730	18.0876	0.8543	25.6399
11.00	2.6257	2.2013	40.3952	33.8655	0.8384	48.7490
11.07	1.6872	1.4457	25.9563	22.2420	0.8569	30.4348
11.13	2.6525	2.1912	40.8083	33.7115	0.8261	45.8398
11.20	2.7624	2.2482	42.4988	34.5876	0.8138	49.0291
11.27	2.2116	1.8405	34.0239	28.3157	0.8322	40.0513
11.33	1.6672	1.3843	25.6497	21.2975	0.8303	30.3222
11.40	2.6390	2.2110	40.5994	34.0156	0.8378	48.6423
11.47	2.7819	2.3245	42.7981	35.7615	0.8356	51.2515
11.53	1.9002	1.6107	29.2344	24.7802	0.8476	35.4356
11.60	1.8280	1.5648	28.1223	24.0733	0.8560	34.7302
11.67	2.3224	1.9910	35.7288	30.6302	0.8573	42.5844
11.73	2.4635	2.0514	37.9005	31.5597	0.8327	44.9329
11.80	2.2124	1.8488	34.0375	28.4427	0.8356	41.4474
11.87	1.9698	1.6610	30.3048	25.5545	0.8433	37.3222
11.93	2.6725	2.2505	41.1152	34.6228	0.8421	50.6231
12.00	2.2559	1.9260	34.7054	29.6306	0.8538	42.3251

**Stepping and cycling transitions**

Last Name	First Name	D.O.B	Weight	Height	Temp	Date
Young	Robert	06-26-75	143.0 Lbs	70.8 in	20.9 deg C	03-19-1998

TIME(min)	VO2(L)	VCO2(L)	VO2(Kg)	VCO2(Kg)	RER	VE(stpd)
0.13	0.8001	0.6333	12.3087	9.7427	0.7915	21.5248
0.20	1.0844	0.8617	16.6833	13.2568	0.7946	27.4698
0.27	0.5799	0.4750	8.9222	7.3083	0.8191	15.1678
0.33	0.7524	0.6420	11.5752	9.8763	0.8532	20.3033
0.40	0.5878	0.5018	9.0432	7.7201	0.8537	17.2318
0.47	0.6692	0.6494	10.2949	9.9900	0.9704	20.7336
0.53	0.7197	0.6660	11.0720	10.2462	0.9254	21.7509
0.60	0.6413	0.6040	9.8661	9.2928	0.9419	19.5991
0.67	0.7531	0.7043	11.5858	10.8359	0.9353	22.3820
0.73	0.2433	0.2259	3.7431	3.4752	0.9284	7.0882
0.80	0.4087	0.3777	6.2876	5.8105	0.9241	12.8373
0.87	0.5046	0.4826	7.7626	7.4239	0.9564	16.0209
0.93	0.5152	0.4454	7.9257	6.8519	0.8645	16.6348
1.00	0.3901	0.4102	6.0023	6.3112	1.0515	13.5524
1.07	0.5453	0.5222	8.3896	8.0336	0.9576	17.2509
1.13	0.3781	0.3603	5.8167	5.5424	0.9528	11.9014
1.20	0.2639	0.2514	4.0598	3.8670	0.9525	8.2090
1.27	0.5799	0.5389	8.9210	8.2901	0.9293	17.9498
1.33	0.3985	0.3533	6.1315	5.4347	0.8864	12.5170
1.40	0.4928	0.4075	7.5808	6.2698	0.8271	15.2787
1.47	1.0040	0.7352	15.4457	11.3115	0.7323	25.3349
1.53	1.5461	0.9816	23.7861	15.1019	0.6349	30.8993
1.60	0.5427	0.3267	8.3495	5.0267	0.6020	9.0224
1.67	1.1486	0.6761	17.6703	10.4013	0.5886	17.6470
1.73	2.7325	1.6392	42.0392	25.2178	0.5999	42.1798
1.80	1.0944	0.6523	16.8372	10.0350	0.5960	16.2016
1.87	1.4605	0.8878	22.4692	13.6588	0.6079	21.3376
1.93	2.8980	1.8143	44.5847	27.9126	0.6261	44.0808
2.00	1.1585	0.7335	17.8229	11.2851	0.6332	16.7259
2.07	2.3637	1.4929	36.3646	22.9674	0.6316	33.6570
2.13	1.2298	0.7877	18.9194	12.1192	0.6406	18.0649
2.20	2.7551	1.7711	42.3855	27.2473	0.6428	40.0190
2.27	1.8239	1.1621	28.0593	17.8784	0.6372	26.0528
2.33	2.4425	1.5865	37.5764	24.4077	0.6495	36.3822
2.40	1.3926	0.9428	21.4252	14.5039	0.6770	21.4720



2.47	1.5790	1.0956	24.2929	16.8554	0.6938	24.5896
2.53	2.3330	1.6308	35.8921	25.0885	0.6990	36.0747
2.60	1.9088	1.3715	29.3666	21.0998	0.7185	29.5239
2.67	2.6334	1.8661	40.5134	28.7093	0.7086	40.4760
2.73	1.5746	1.1594	24.2246	17.8371	0.7363	25.8191
2.80	2.2647	1.6981	34.8419	26.1251	0.7498	37.8160
2.87	1.4695	1.1001	22.6071	16.9243	0.7486	24.8014
2.93	2.6216	1.9508	40.3326	30.0122	0.7441	43.1545
3.00	1.5334	1.1222	23.5902	17.2650	0.7319	24.7980
3.07	1.7034	1.2826	26.2065	19.7318	0.7529	28.2165
3.13	2.7429	2.0822	42.1977	32.0342	0.7591	43.9726
3.20	1.8218	1.3583	28.0271	20.8967	0.7456	29.3026
3.27	2.2665	1.7154	34.8686	26.3903	0.7568	37.8212
3.33	2.0181	1.5559	31.0476	23.9366	0.7710	34.2293
3.40	1.7110	1.3333	26.3232	20.5126	0.7793	29.3329
3.47	1.4820	1.1627	22.7999	17.8884	0.7846	27.1941
3.53	2.6182	2.0920	40.2798	32.1854	0.7990	45.1810
3.60	1.7891	1.3521	27.5241	20.8022	0.7558	30.0442
3.67	2.7192	2.0701	41.8335	31.8484	0.7613	51.1027
3.73	1.1211	0.9562	17.2477	14.7106	0.8529	22.2592
3.80	1.8046	1.4626	27.7630	22.5022	0.8105	33.5419
3.87	2.5558	2.0252	39.3201	31.1570	0.7924	45.1498
3.93	1.5228	1.1803	23.4283	18.1590	0.7751	25.9673
4.00	2.5213	1.9621	38.7898	30.1861	0.7782	43.1187
4.07	2.1271	1.6801	32.7240	25.8480	0.7899	36.9626
4.13	1.4458	1.1366	22.2427	17.4868	0.7862	25.7415
4.20	1.7593	1.3878	27.0662	21.3513	0.7889	32.0836
4.27	2.1586	1.7060	33.2098	26.2462	0.7903	38.2037
4.33	2.0817	1.6196	32.0254	24.9170	0.7780	35.1295
4.40	1.8816	1.4662	28.9479	22.5570	0.7792	32.1858
4.47	2.1680	1.6874	33.3535	25.9602	0.7783	37.4938
4.53	1.7277	1.3268	26.5802	20.4124	0.7680	30.1506
4.60	1.4948	1.1480	22.9970	17.6614	0.7680	26.5697
4.67	2.4325	1.8759	37.4230	28.8600	0.7712	43.1672
4.73	1.3083	1.0171	20.1271	15.6471	0.7774	22.8782
4.80	2.4474	1.9071	37.6522	29.3397	0.7792	41.8637
4.87	2.4805	1.9300	38.1609	29.6927	0.7781	42.0447
4.93	1.8955	1.4657	29.1614	22.5488	0.7732	33.2683
5.00	1.3548	1.0605	20.8436	16.3149	0.7827	23.7744
5.07	2.8129	2.1864	43.2755	33.6377	0.7773	48.6363

5.13	2.0227	1.5555	31.1188	23.9303	0.7690	35.2268
5.20	1.7110	1.3515	26.3227	20.7930	0.7899	32.6786
5.27	2.1836	1.7606	33.5933	27.0862	0.8063	40.8426
5.33	1.8219	1.4586	28.0289	22.4397	0.8006	35.1392
5.40	1.4615	1.1957	22.4842	18.3959	0.8182	27.6747
5.47	2.5891	2.0494	39.8321	31.5295	0.7916	46.1521
5.53	2.2156	1.7298	34.0862	26.6127	0.7807	39.2197
5.60	1.3444	1.0892	20.6835	16.7576	0.8102	24.8085
5.67	2.4602	1.9865	37.8499	30.5622	0.8075	44.8372
5.73	1.9738	1.6030	30.3669	24.6614	0.8121	35.3435
5.80	2.3859	1.9035	36.7064	29.2848	0.7978	42.2955
5.87	1.7291	1.3582	26.6019	20.8960	0.7855	31.4358
5.93	1.8526	1.4707	28.5016	22.6258	0.7938	33.1938
6.00	2.4659	1.9823	37.9366	30.4964	0.8039	44.5898
6.07	1.7899	1.4383	27.5368	22.1279	0.8036	33.0597
6.13	1.8731	1.5408	28.8170	23.7049	0.8226	36.1208
6.20	1.9859	1.7069	30.5524	26.2594	0.8595	39.1872
6.27	1.8494	1.5687	28.4528	24.1337	0.8482	36.2228
6.33	2.1939	1.8475	33.7521	28.4224	0.8421	41.5574
6.40	1.8265	1.5096	28.1003	23.2240	0.8265	33.5048
6.47	2.4717	2.0220	38.0262	31.1071	0.8180	44.7288
6.53	1.9013	1.5533	29.2502	23.8964	0.8170	33.6905
6.60	2.1682	1.7175	33.3563	26.4233	0.7922	37.9522
6.67	2.5496	2.0831	39.2242	32.0478	0.8170	47.2296
6.73	1.5485	1.2914	23.8234	19.8677	0.8340	27.8597
6.80	2.3722	1.9456	36.4951	29.9316	0.8202	41.2169
6.87	2.6668	2.1831	41.0282	33.5866	0.8186	45.9099
6.93	1.7859	1.4603	27.4751	22.4662	0.8177	30.8064
7.00	2.2924	1.9307	35.2673	29.7037	0.8422	40.4748
7.07	2.9154	2.4542	44.8526	37.7566	0.8418	49.7798
7.13	2.1721	1.8377	33.4167	28.2718	0.8460	38.6450
7.20	1.7529	1.5131	26.9680	23.2785	0.8632	32.6425
7.27	2.4211	2.1547	37.2474	33.1495	0.8900	45.8909
7.33	2.2900	1.9996	35.2313	30.7637	0.8732	41.7443
7.40	2.0255	1.7343	31.1620	26.6815	0.8562	36.7026
7.47	2.5197	2.2123	38.7639	34.0360	0.8780	47.5225
7.53	2.1245	1.9136	32.6845	29.4393	0.9007	40.0725
7.60	1.8019	1.5910	27.7209	24.4775	0.8830	33.4586
7.67	2.1172	1.8713	32.5726	28.7898	0.8839	38.8632
7.73	2.5722	2.2550	39.5719	34.6917	0.8767	47.9239

7.80	2.6804	2.3793	41.2374	36.6054	0.8877	51.2750
7.87	1.5609	1.4153	24.0144	21.7743	0.9067	30.5004
7.93	2.4806	2.2537	38.1635	34.6729	0.9085	47.8979
8.00	2.5898	2.3215	39.8428	35.7147	0.8964	50.2438
8.07	1.9354	1.7462	29.7754	26.8643	0.9022	38.5430
8.13	1.9858	1.8392	30.5504	28.2949	0.9262	39.2539
8.20	2.6937	2.4350	41.4421	37.4614	0.9039	52.4742
8.27	1.9602	1.7933	30.1572	27.5887	0.9148	38.2741
8.33	2.1923	1.9678	33.7276	30.2736	0.8976	42.5432
8.40	2.6148	2.3339	40.2279	35.9057	0.8926	51.0645
8.47	1.6719	1.5024	25.7212	23.1143	0.8987	32.1353
8.53	2.2400	1.9772	34.4613	30.4178	0.8827	42.6998
8.60	2.0536	1.8444	31.5935	28.3748	0.8981	39.6607
8.67	2.1842	1.9153	33.6037	29.4661	0.8769	41.1861
8.73	2.7959	2.4358	43.0134	37.4737	0.8712	54.4855
8.80	2.2859	2.0604	35.1674	31.6982	0.9014	45.6292
8.87	2.3357	2.1229	35.9334	32.6598	0.9089	46.3470
8.93	2.7442	2.3592	42.2181	36.2961	0.8597	54.2897
9.00	1.8434	1.6266	28.3595	25.0253	0.8824	39.7624
9.07	2.0702	1.9423	31.8486	29.8817	0.9382	44.3386
9.13	1.8836	1.6879	28.9790	25.9680	0.8961	38.5315
9.20	2.3323	2.1023	35.8822	32.3425	0.9014	46.5567
9.27	2.2822	2.0090	35.1107	30.9071	0.8803	43.9076
9.33	2.3752	2.0409	36.5420	31.3992	0.8593	46.1691
9.40	2.1439	1.8412	32.9833	28.3258	0.8588	41.4626
9.47	2.2424	1.9174	34.4987	29.4991	0.8551	42.6998
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9.60	1.4901	1.2792	22.9240	19.6806	0.8585	29.4710
9.67	2.6074	2.2910	40.1139	35.2458	0.8786	48.9491
9.73	2.8767	2.4207	44.2572	37.2421	0.8415	54.8846
9.80	2.4587	2.1435	37.8269	32.9762	0.8718	49.2673
9.87	1.7712	1.5770	27.2487	24.2617	0.8904	35.9997
9.93	2.6262	2.3235	40.4031	35.7462	0.8847	53.0405
10.00	2.1951	1.9354	33.7707	29.7756	0.8817	43.1962
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10.13	2.5511	2.2100	39.2473	34.0007	0.8663	50.7980
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10.27	2.8000	2.3766	43.0772	36.5630	0.8488	52.2276
10.33	2.5813	2.1532	39.7126	33.1257	0.8341	47.3177
10.40	1.4872	1.2464	22.8798	19.1754	0.8381	27.9428

10.47	2.6228	2.2032	40.3511	33.8959	0.8400	49.0642
10.53	2.7914	2.3154	42.9450	35.6211	0.8295	51.8497
10.60	1.8728	1.5498	28.8130	23.8425	0.8275	34.9394
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10.73	2.6776	2.2296	41.1932	34.3012	0.8327	50.4933
10.80	1.4483	1.2309	22.2812	18.9372	0.8499	27.0208
10.87	2.6946	2.2499	41.4558	34.6138	0.8350	49.9922
10.93	2.7823	2.2889	42.8043	35.2141	0.8227	51.6037
11.00	2.5975	2.1435	39.9613	32.9774	0.8252	49.3825
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11.13	2.3691	2.0252	36.4480	31.1562	0.8548	47.4193
11.20	2.1364	1.8488	32.8682	28.4427	0.8654	42.6410
11.27	2.1678	1.8580	33.3508	28.5839	0.8571	42.7543
11.33	2.2219	1.9037	34.1835	29.2881	0.8568	44.2654
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11.47	2.4439	2.1128	37.5989	32.5039	0.8645	50.1747
11.53	2.4865	2.1769	38.2541	33.4905	0.8755	51.5753
11.60	2.3955	2.0814	36.8534	32.0210	0.8689	48.3398
11.67	2.5459	2.1729	39.1678	33.4296	0.8535	51.6037
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11.80	2.0004	1.7300	30.7749	26.6154	0.8648	39.7186
11.87	2.2230	1.8816	34.2005	28.9480	0.8464	43.8533
11.93	2.3902	2.0376	36.7723	31.3478	0.8525	48.5629
12.00	2.6763	2.2929	41.1737	35.2754	0.8567	54.0045
12.07	1.8644	1.5866	28.6828	24.4100	0.8510	36.7222
12.13	2.3465	2.0191	36.1000	31.0625	0.8605	46.7843
12.20	2.4236	2.0876	37.2859	32.1172	0.8614	45.8772
12.27	2.2122	1.8350	34.0335	28.2305	0.8295	42.6175
12.33	2.4328	2.0503	37.4281	31.5436	0.8428	48.6924
12.40	2.6564	2.2604	40.8681	34.7752	0.8509	52.9894
12.47	2.4440	2.0574	37.6005	31.6518	0.8418	48.2866
12.53	1.4818	1.2430	22.7971	19.1227	0.8388	29.0365
12.60	2.5607	2.1276	39.3958	32.7326	0.8309	48.6244
12.67	2.6332	2.1656	40.5113	33.3167	0.8224	48.6043
12.73	1.6378	1.3286	25.1974	20.4402	0.8112	30.1574
12.80	2.5271	2.0686	38.8785	31.8239	0.8185	47.1667
12.87	2.7443	2.2540	42.2200	34.6776	0.8214	51.7499
12.93	2.4601	2.0688	37.8472	31.8270	0.8409	46.5877
13.00	2.5611	2.1234	39.4021	32.6678	0.8291	48.1433

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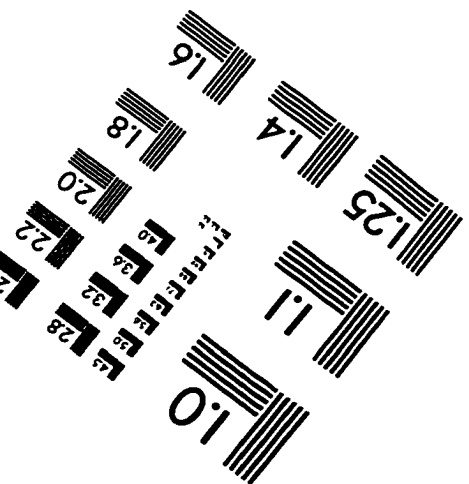
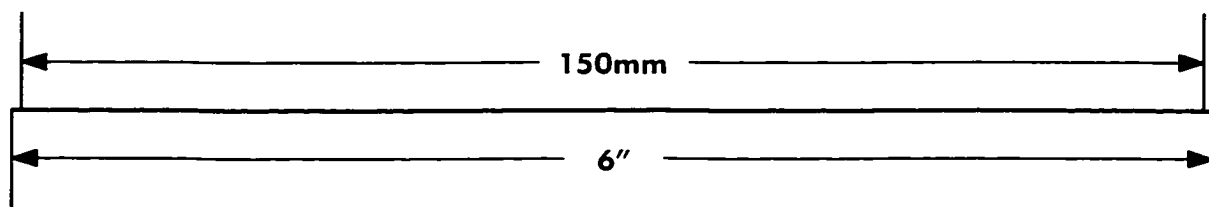
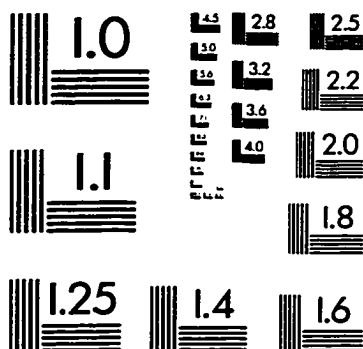
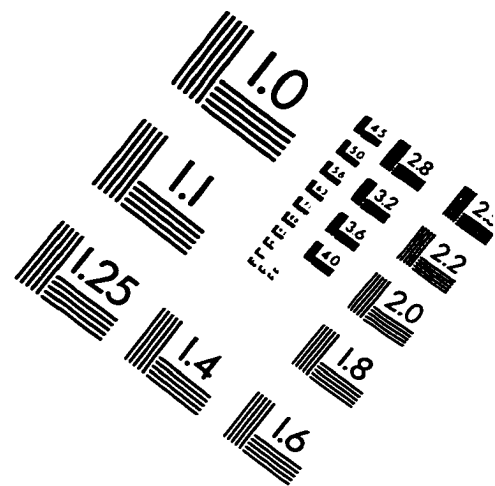
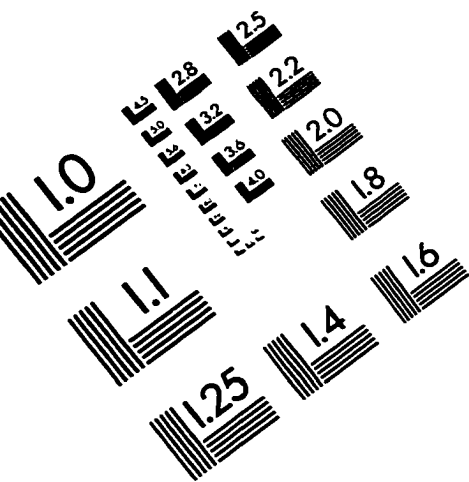
National Association of Collegiate Directors of Athletics/ Sears Directors' Cup  
Scholarship  
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Ellison Onizuka Recognition Award  
Eagle Scout Award

Thesis Title:  $\text{VO}_2$  transitional response to a crossover from priming exercise

Thesis Examination Committee:

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# IMAGE EVALUATION TEST TARGET (QA-3)



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