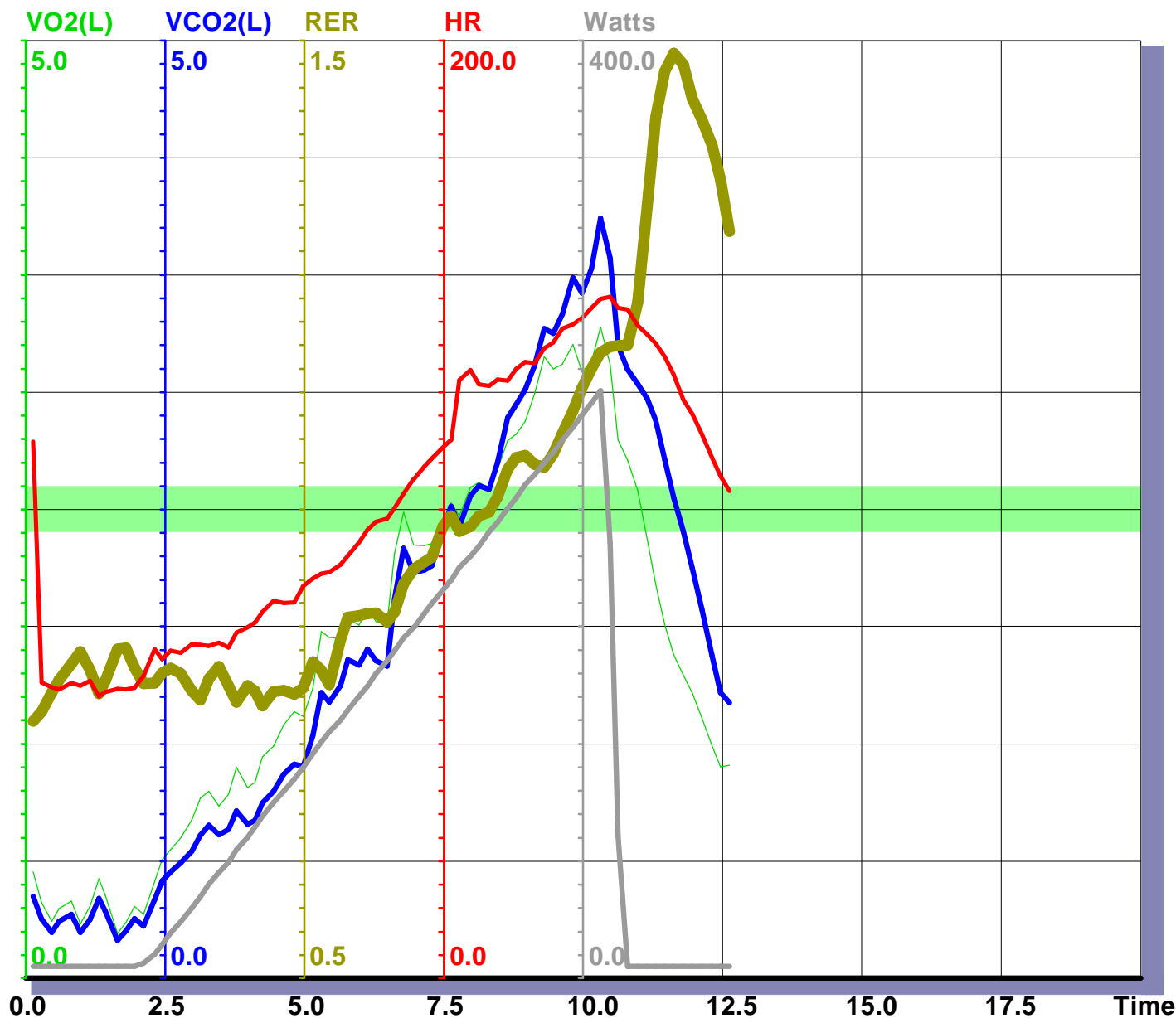


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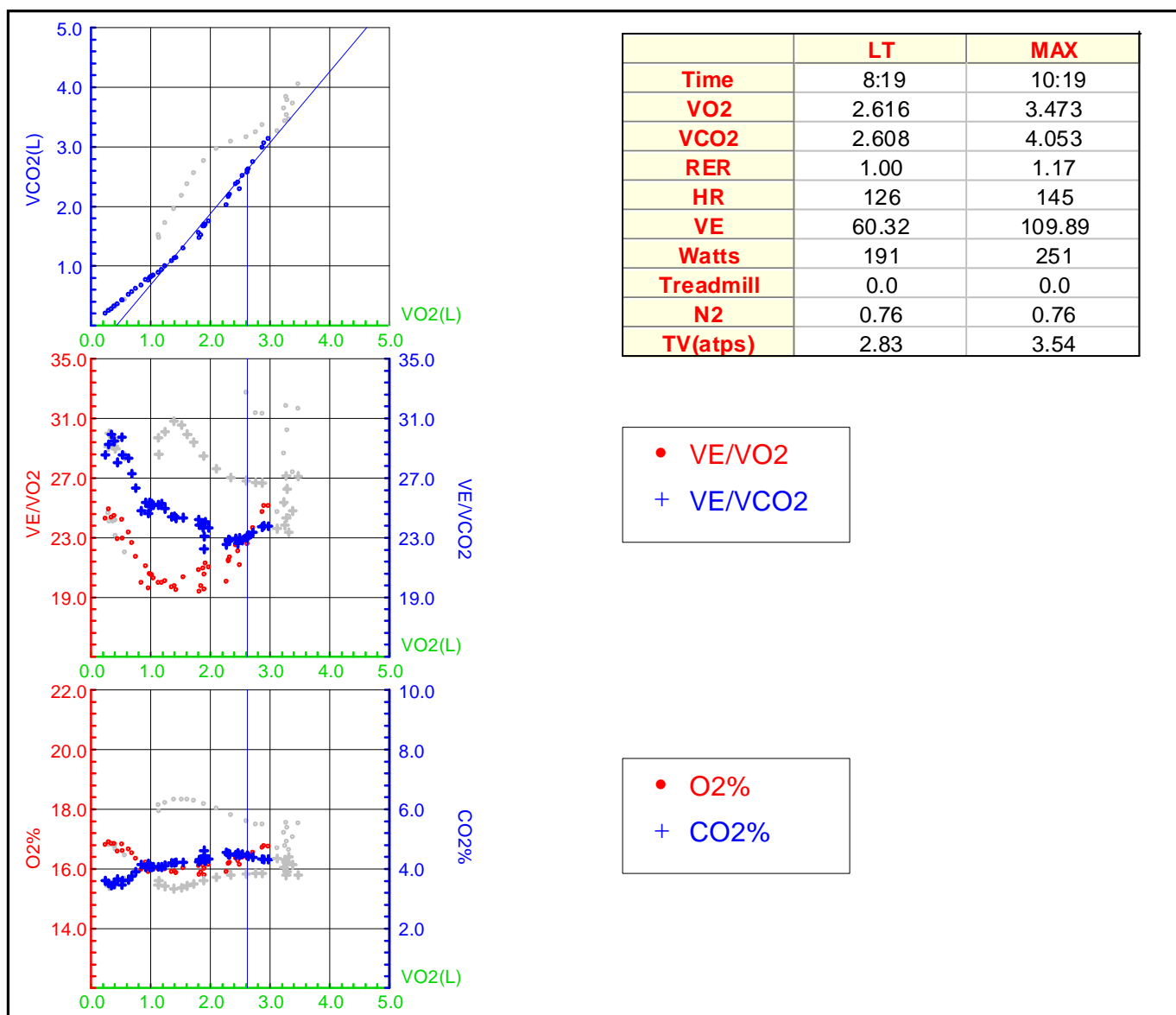


<b>ID</b>	: 007	<b>Protocol</b>	: Ramp 30
<b>Sex</b>	: Male	<b>Date of Test</b>	: 08/20/2003 18:32:54
<b>First Name</b>	: DOE	<b>Baro</b>	: 755
<b>Last Name</b>	: JOHN	<b>Temperature</b>	: 25.9 °C
<b>DOB</b>	: 11 March 1951(53)	<b>Humidity</b>	: 51 %
<b>Weight</b>	: 93.6 Kg (208 Lbs)	<b>Filter</b>	: Avg 20 Sec, Report every 10 sec (BBB)
<b>Height</b>	: 188 cm (74.0 inches)	<b>File</b>	: JohnDoe1.stress
<b>BMI</b>	: 26.49	<b>Tested by</b>	:
<b>BSA</b>	: 2.20 m2	<b>Physician</b>	:
<b>Date Printed</b>	: 03/23/2004		





<b>ID</b>	: 007	<b>Protocol</b>	: Ramp 30
<b>Sex</b>	: Male	<b>Date of Test</b>	: 08/20/2003 18:32:54
<b>First Name</b>	: DOE	<b>Baro</b>	: 755
<b>Last Name</b>	: JOHN	<b>Temperature</b>	: 25.9 °C
<b>DOB</b>	: 11 March 1951(53)	<b>Humidity</b>	: 51 %
<b>Weight</b>	: 93.6 Kg (208 Lbs)	<b>Filter</b>	: Avg 20 Sec, Report every 10 sec (BBB)
<b>Height</b>	: 188 cm (74.0 inches)	<b>File</b>	: JohnDoe1.stress
<b>BMI</b>	: 26.49	<b>Tested by</b>	:
<b>BSA</b>	: 2.20 m2	<b>Physician</b>	:
<b>Date Printed</b>	: 03/23/2004		





**Fitness Analysis**

<b>ID(M/F)</b>	007	<b>BMI</b>	26.49
<b>Sex</b>	Male	<b>BSA</b>	2.20 (m2)
<b>First Name</b>	Doe	<b>File Name</b>	JohnDoe1.stress
<b>Last Name</b>	John	<b>Predict Weight</b>	163 Lbs
<b>D.O.B (Age)</b>	11 March 1951(53)	<b>Tested by</b>	
<b>Weight</b>	93.6 Kg (208 Lbs)	<b>Physician</b>	
<b>Height</b>	188 cm (74.0 inches)	<b>Date Printed</b>	03/23/2004

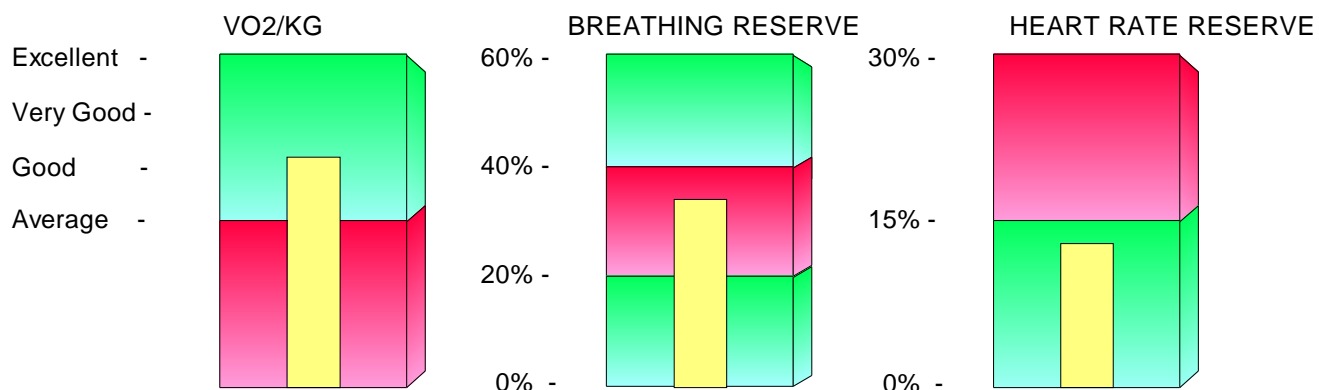
**Test Conditions**

<b>Date</b>	08/20/2003	<b>Filter</b>	Avg 20 Sec, Report every 10 sec (BBB)
<b>Temperature</b>	25.9 °C	<b>Time</b>	18:32:54
<b>Baro Pressure</b>	755	<b>Duration</b>	12 Minutes
<b>Room Humidity</b>	51 %	<b>Exercise Device</b>	None
<b>Last Calibration</b>	03-08-2004	<b>Protocol</b>	Ramp 30

**Result Summary**

	At Rest	Predicted Max	Measured at LT	Measured at Peak	% of Predicted
<b>Time</b>	0:48	N/A	8:19	10:19	N/A
<b>VO2(lpm)</b>	0.36	2.50	2.62	3.47	139%
<b>VO2(ml/kg)</b>	3.82	26.75	27.95	37.10	139%
<b>LT % of VO2max</b>	N/A	N/A	76%	N/A	N/A
<b>VE(stpd)</b>	8.66	112.00	60.32	109.89	98%
<b>RQ</b>	0.83	N/A	1.000	1.17	N/A
<b>Heart Rate</b>	62	167	126	145	87%

**Bar Graphs**



Print the optional Training Schedule for a training heart rate recommendation.  
Recommended weight loss 0 - 50 Lbs

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<b>ID</b>	: 007	<b>Protocol</b>	: Ramp 30
<b>Sex</b>	: Male	<b>Date of Test</b>	: 08/20/2003 18:32:54
<b>First Name</b>	: DOE	<b>Baro</b>	: 755
<b>Last Name</b>	: JOHN	<b>Temperature</b>	: 25.9 °C
<b>DOB</b>	: 11 March 1951(53)	<b>Humidity</b>	: 51 %
<b>Weight</b>	: 93.6 Kg (208 Lbs)	<b>Filter</b>	: Avg 20 Sec, Report every 10 sec (BBB)
<b>Height</b>	: 188 cm (74.0 inches)	<b>File</b>	: JohnDoe1.stress
<b>BMI</b>	: 26.49	<b>Tested by</b>	:
<b>BSA</b>	: 2.20 m2	<b>Physician</b>	:
<b>Date Printed</b>	: 03/23/2004		

Time	VO2(L)	VO2(Kg)	VCO2(L)	RER	TV(atps)	VE(stpd)	RR	Watts	HR	METS
00:08	0.567	6.1	0.439	0.77	1.09	12.48	14	5	115	1.73
00:17	0.405	4.3	0.316	0.78	0.77	9.28	15	5	63	1.24
00:28	0.305	3.3	0.246	0.80	0.58	7.38	15	5	62	0.93
00:36	0.372	4.0	0.306	0.82	0.68	8.97	16	5	62	1.14
00:49	0.411	4.4	0.343	0.83	0.81	9.90	15	5	63	1.26
00:59	0.290	3.1	0.246	0.85	0.57	7.10	16	5	62	0.89
01:09	0.383	4.1	0.313	0.83	0.59	9.06	18	5	63	1.17
01:19	0.531	5.7	0.426	0.80	0.77	12.12	19	5	60	1.62
01:26	0.442	4.7	0.360	0.82	0.66	10.11	18	5	61	1.35
01:39	0.239	2.6	0.203	0.85	0.45	5.78	15	5	62	0.73
01:48	0.299	3.2	0.254	0.85	0.50	7.47	17	5	62	0.91
01:57	0.385	4.1	0.320	0.83	0.57	9.42	20	5	62	1.17
02:07	0.342	3.7	0.278	0.81	0.51	8.32	19	6	64	1.04
02:19	0.517	5.5	0.421	0.81	0.73	12.41	20	10	70	1.58
02:27	0.632	6.7	0.521	0.83	0.84	14.76	21	15	68	1.93
02:36	0.685	7.3	0.568	0.83	0.90	15.55	21	19	70	2.09
02:47	0.749	8.0	0.617	0.82	1.04	16.27	19	24	69	2.29
02:59	0.845	9.0	0.678	0.81	1.09	16.77	18	30	71	2.58
03:08	0.961	10.3	0.763	0.80	1.14	18.81	20	35	71	2.93
03:17	0.998	10.7	0.817	0.82	1.16	20.46	21	40	71	3.05
03:28	0.918	9.8	0.765	0.83	1.00	19.35	24	45	72	2.80
03:38	0.980	10.5	0.793	0.81	1.08	20.07	23	50	71	2.99
03:47	1.125	12.0	0.893	0.79	1.34	22.50	20	55	74	3.43
03:59	1.016	10.9	0.823	0.81	1.24	20.80	20	60	75	3.10
04:07	1.046	11.2	0.841	0.81	1.23	21.19	20	65	76	3.19
04:15	1.182	12.6	0.934	0.79	1.57	23.66	19	69	78	3.61
04:27	1.238	13.2	0.996	0.81	1.89	24.81	16	75	80	3.78
04:38	1.350	14.4	1.088	0.81	1.69	26.54	19	80	80	4.12
04:49	1.422	15.2	1.142	0.80	1.53	27.76	22	85	80	4.34
04:59	1.397	14.9	1.130	0.81	1.57	27.62	21	90	84	4.26
05:09	1.544	16.5	1.294	0.84	1.96	31.52	22	96	85	4.71
05:18	1.846	19.7	1.523	0.83	2.07	36.43	24	101	86	5.64
05:27	1.815	19.4	1.473	0.81	1.86	35.12	23	105	87	5.54
05:39	1.810	19.3	1.560	0.86	2.01	37.79	23	110	88	5.52
05:47	1.918	20.5	1.697	0.88	2.06	40.80	24	114	90	5.86

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<b>ID</b>	: 007	<b>Protocol</b>	: Ramp 30
<b>Sex</b>	: Male	<b>Date of Test</b>	: 08/20/2003 18:32:54
<b>First Name</b>	: DOE	<b>Baro</b>	: 755
<b>Last Name</b>	: JOHN	<b>Temperature</b>	: 25.9 °C
<b>DOB</b>	: 11 March 1951(53)	<b>Humidity</b>	: 51 %
<b>Weight</b>	: 93.6 Kg (208 Lbs)	<b>Filter</b>	: Avg 20 Sec, Report every 10 sec (BBB)
<b>Height</b>	: 188 cm (74.0 inches)	<b>File</b>	: JohnDoe1.stress
<b>BMI</b>	: 26.49	<b>Tested by</b>	:
<b>BSA</b>	: 2.20 m2	<b>Physician</b>	:
<b>Date Printed</b>	: 03/23/2004		

Time	VO2(L)	VO2(Kg)	VCO2(L)	RER	TV(atps)	VE(stpd)	RR	Watts	HR	METS
05:59	1.881	20.1	1.669	0.89	2.07	39.44	23	120	93	5.74
06:08	1.971	21.1	1.754	0.89	2.08	41.55	24	125	96	6.02
06:17	1.902	20.3	1.692	0.89	1.99	39.26	24	130	97	5.81
06:29	1.894	20.2	1.664	0.88	2.18	36.96	20	135	98	5.78
06:37	2.268	24.2	2.023	0.89	2.36	45.69	23	140	100	6.92
06:47	2.487	26.6	2.292	0.92	2.40	52.72	26	145	103	7.59
06:58	2.310	24.7	2.163	0.94	2.66	49.49	23	150	107	7.05
07:09	2.307	24.7	2.177	0.94	2.81	49.48	21	156	109	7.04
07:17	2.319	24.8	2.199	0.95	2.69	50.22	22	160	111	7.08
07:29	2.424	25.9	2.383	0.98	3.13	54.69	21	166	113	7.40
07:38	2.533	27.1	2.517	0.99	3.33	57.39	21	170	115	7.73
07:47	2.466	26.3	2.410	0.98	2.85	54.43	23	175	128	7.53
07:59	2.618	28.0	2.575	0.98	2.79	59.24	26	180	130	7.99
08:08	2.643	28.2	2.628	0.99	2.95	60.89	25	184	127	8.07
08:19	2.616	28.0	2.608	1.00	2.83	60.32	25	191	126	7.99
08:28	2.714	29.0	2.751	1.01	2.93	64.29	26	195	128	8.28
08:39	2.868	30.6	2.990	1.04	3.13	70.96	27	201	127	8.75
08:48	2.902	31.0	3.060	1.06	3.50	72.85	25	205	130	8.86
08:58	2.969	31.7	3.138	1.06	4.02	74.59	22	211	131	9.06
09:08	3.118	33.3	3.268	1.05	3.63	77.18	26	215	131	9.52
09:18	3.315	35.4	3.464	1.05	3.38	80.97	28	220	134	10.12
09:28	3.248	34.7	3.438	1.06	3.29	81.94	30	225	136	9.91
09:38	3.273	35.0	3.541	1.08	3.32	86.24	31	230	139	9.99
09:49	3.379	36.1	3.734	1.10	3.45	92.67	32	235	139	10.32
09:59	3.234	34.5	3.652	1.13	3.27	92.85	34	240	141	9.87
10:09	3.286	35.1	3.784	1.15	3.30	99.65	36	246	143	10.03
Recovery	Recovery	Recovery	Recovery	Recovery	Recovery	Recovery	Recovery	Recovery	Recovery	Recovery
10:19	3.473	37.1	4.053	1.17	3.54	109.89	37	251	145	10.60
10:29	3.273	35.0	3.838	1.17	3.62	104.13	34	186	145	9.99
10:38	2.871	30.7	3.372	1.17	3.71	90.01	29	61	143	8.76
10:48	2.762	29.5	3.247	1.18	3.52	86.69	30	5	143	8.43
10:59	2.603	27.8	3.169	1.22	3.37	85.02	30	5	139	7.95
11:09	2.342	25.0	3.092	1.32	3.42	83.56	29	5	137	7.15
11:18	2.102	22.5	2.975	1.42	3.22	82.17	30	5	135	6.41
11:28	1.885	20.1	2.765	1.47	3.05	78.69	31	5	133	5.75

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<b>ID</b>	: 007	<b>Protocol</b>	: Ramp 30
<b>Sex</b>	: Male	<b>Date of Test</b>	: 08/20/2003 18:32:54
<b>First Name</b>	: DOE	<b>Baro</b>	: 755
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<b>BMI</b>	: 26.49	<b>Tested by</b>	:
<b>BSA</b>	: 2.20 m2	<b>Physician</b>	:
<b>Date Printed</b>	: 03/23/2004		

Time	VO2(L)	VO2(Kg)	VCO2(L)	RER	TV(atps)	VE(stpd)	RR	Watts	HR	METS
11:38	1.724	18.4	2.563	1.49	2.96	75.29	30	5	129	5.26
11:48	1.616	17.3	2.384	1.47	2.81	71.33	30	5	123	4.93
11:58	1.519	16.2	2.187	1.44	2.64	66.76	30	5	120	4.64
12:08	1.388	14.8	1.966	1.42	2.58	60.60	28	5	116	4.24
12:19	1.240	13.2	1.721	1.39	2.41	51.84	26	5	111	3.79
12:28	1.126	12.0	1.523	1.35	2.19	45.22	25	5	107	3.44
12:38	1.135	12.1	1.469	1.30	2.14	41.86	23	5	104	3.47



## Explanation

### **Maximum Oxygen Consumption (VO<sub>2</sub>max)**

VO<sub>2</sub>max relates strongly to your cardiopulmonary fitness level.

A VO<sub>2</sub>max test requires you to exercise to exhaustion in order to measure your maximum oxygen uptake or consumption. VO<sub>2</sub>max is expressed either as an absolute value or as a value relative to your body weight.

Absolute VO<sub>2</sub> is simply the maximal oxygen uptake level you reached during the test and is expressed in liters per minute (L/min). However, it should be obvious that a 300-pound person will have a larger O<sub>2</sub> uptake than a 150-pound person. Therefore, VO<sub>2</sub> is divided by body weight (ml/kg/min) to express VO<sub>2</sub> relative to your body weight.

The predicted VO<sub>2</sub>max is based on a cross-section of normal, healthy individuals and is adjusted to your age, weight, height, sex and form of exercise. Very athletic individuals may substantially exceed the predicted norms.

If you were holding the handrails of a treadmill during the test, your measured VO<sub>2</sub>max may be up to 15% lower than predicted.

### **Lactate (Anaerobic) Threshold (LT or AT)**

The LT has been described as the workload that may be sustained for a prolonged period of time. Therefore, training above the LT will lead to rapid exhaustion. While the well-published heart rate training zones provide rough guidelines for a broad cross-section of the population, they may be totally meaningless for you.

The LT-based recommendation printed above is the result of precise measurement of your current fitness level and suggests specific exercise recommendations for you. As your fitness level improves, re-testing will document improvement and change the recommended training heart rate accordingly.

Depending on the test protocol used, it may at times be difficult to determine the AT.

Typical values for the LT are 50 to 60% of VO<sub>2</sub>max. If the LT is below 40%, it should be considered as improperly determined.

Very high LT's, perhaps even equal to VO<sub>2</sub>max may be seen in subjects with very low VO<sub>2</sub>max (due to illness, debilitation) or in athletes, where a high LT reflects their ability to perform at high workloads for prolonged periods.



### **Breathing Reserve (BR)**

BR is an indicator of the effort you made to reach maximum VO<sub>2</sub>. Accuracy of this indicator may be influenced by to improper measurement of the Maximum Voluntary Ventilation (MVV) test, because the MVV test is highly dependent on your motivation and effort.

A low BR suggests that your exercise capacity may be limited by your ventilatory (breathing) capacity. Typically, BR is reduced in the presence of moderate or severe restrictive or obstructive lung disease. The BR may also be somewhat low if your VO<sub>2</sub>max is considerably higher than your predicted value, in other words, when you are in very good physical condition.

A high BR (especially if both BR and HRR are high) suggests that you may have quit prematurely and that your fitness level may actually be higher, or that the reason for early test termination needs further medical investigation.

### **Heart Rate Reserve (%)**

Percent HRR is an estimation of the potential heart rate increase that remains at the end of a maximal exercise test. It is computed by subtracting the highest heart rate measured during the test from your predicted maximum heart rate.

A high HRR may be the result of early test termination due to poor effort or it may be an indicator of cardiac or pulmonary disease. HRR may also be affected by certain medications. Normally, HRR is less than 15%.

### **METS**

A met equals 3.5 milliliter of VO<sub>2</sub> per kilogram of your body weight. It is assumed to be the typical oxygen adult consumption at rest.

So if your maximum VO<sub>2</sub> was 35 ml/minute/kg of bodyweight, you achieved 10 mets.

Mets are sometimes also estimated from achieving certain exercise levels on treadmills or ergometers, but these are estimates. Only a VO<sub>2</sub> test measures mets.

Normal met level is 7.1 or higher. Met levels below 7 are grouped into the following impairment classifications:

<b>METS</b>	<b>Impairment Classification</b>
7.1 or higher	Normal
5.7 to 7.0	10 - 25%
4.3 to 5.7	26 - 50%
Less than 4.3	51 - 100%

### **Recommended Training Heart Rate**

We recommend you exercise with the activity of your choice 5 times per week at heart rate recommended in the attached Training Schedule. You should be retested in 4 to 6 weeks.





**Body Mass Index (BMI)**

BMI (BMI = body weight in kg/height in m<sup>2</sup>) is a simple and internationally used indicator in judging body weight and applies equally to men and women. A BMI of between 20 and 25 is considered to be the range with the lowest health risk. If your BMI is less than 18, you are underweight.

A BMI of more than 25 is an indication that you are starting to be overweight. A BMI of over 30 is considered obese.

An acceptable BMI is usually age-dependent:

<b>Age</b>	<b>BMI</b>
19-24	19-20
25-34	20-25
35-44	21-26
45-54	22-27
55-65	23-28
above 65	24-29

**Body Surface Area (BSA)**

BSA is a measurement used in many medical tasks, such as for the determination of a proper dose of medication. Various formulas have been developed, all giving slightly different results. This software uses the Mosteller formula:

$$BSA (m^2) = ([Ht (cm) \times Wt (kg)]/3600)^{1/2}$$

**Ideal Body Weight**

Your weight should be measured without shoes, without objects in pockets and while wearing light clothing. The reported Ideal Body Weight does not account for body frame size. We believe that when you review your Ideal Body Weight and the Recommended Weight Loss you should also consider your BMI and other fitness indicators measured in this report.