BODYINSIGHT

VO2 Max Test Report

Name:	[redacted]
Date:	
Test Type:	Run 1

Age:	26
Weight:	82.5 kgs
Height:	183 cms

Training Values:	VO_2	HR	% of VO_2 Max	% of Max HR
VO2 max	47.7	192	100%	100%
Anaerobic Threshold	43.9	180	92%	94%
Aerobic Threshold	26.8	144	56%	75%

Your VO2 Max Score is 47.7ml O2/kg-min . You can see you how your score compares to other Males in the reference chart below. For optimal health you should aim for a score in the 75th percentile for your age group.

Your **Anaerobic Threshold (AeT)** is the point above which your body cannot sustain an effort, circulating lactate concentrations, muscle and blood acidity cannot stabilize and fatigue progressively develops.

You **Aerobic Threshold (AT)** is the point at which your body starts to use anaerobic metabolism to provide energy to your muscles. Up to this point, your body works aerobically to fuel your muscles. As your aerobic conditioning improves, your aerobic threshold heart rate will increase. In well conditioned athletes, the AT occurs >80% of your max HR and >80% of your VO2 Max

VO2 Max Percentile Scores for Males:

Age Group	5th	10th	25th	50th	75th	90th	95th
20-29	29	32.1	40.1	48	55.2	61.8	66.3
30-39	27.2	30.2	35.9	42.4	49.2	56.5	59.8
40-49	24.2	26.8	31.9	37.8	45	52.1	55.6
50-59	20.9	22.8	27.1	32.6	39.7	45.6	50.7
60-69	17.4	19.8	23.7	28.2	34.5	40.3	43
70-79	16.3	17.1	20.4	24.4	30.4	36.6	39.7

Training Heart Rate Zones:

Zone	HR (BPM)	How it Feels:	Stimulus:	Benefits:
Zone 1	**< 129**	Easy pace. Feels like you can maintain this intensity for hours.	Recovery	Active recovery. Warm up and cool down.
Zone 2	**130 - 145**	Feels like you can maintain this pace for long periods of time. Able to talk comfortably	Endurance	Build Basic Endurance. Improve Fat Burning
Zone 3	**146 - 168**	Becoming challenging. 6/10 effort	Tempo	Improve aerobic fitness and muscle strength
Zone 4	**169 - 184**	Hard to maintain this intensity. Short of breath, hard to speak	Threshold	Increase anaerobic threshold and max capacity for shorter efforts
Zone 5	**185 - 192**	Very demanding. Can only sustain for a few minutes	VO2 Peak	Develop fast twitch fibers. Increase Sprint Speed

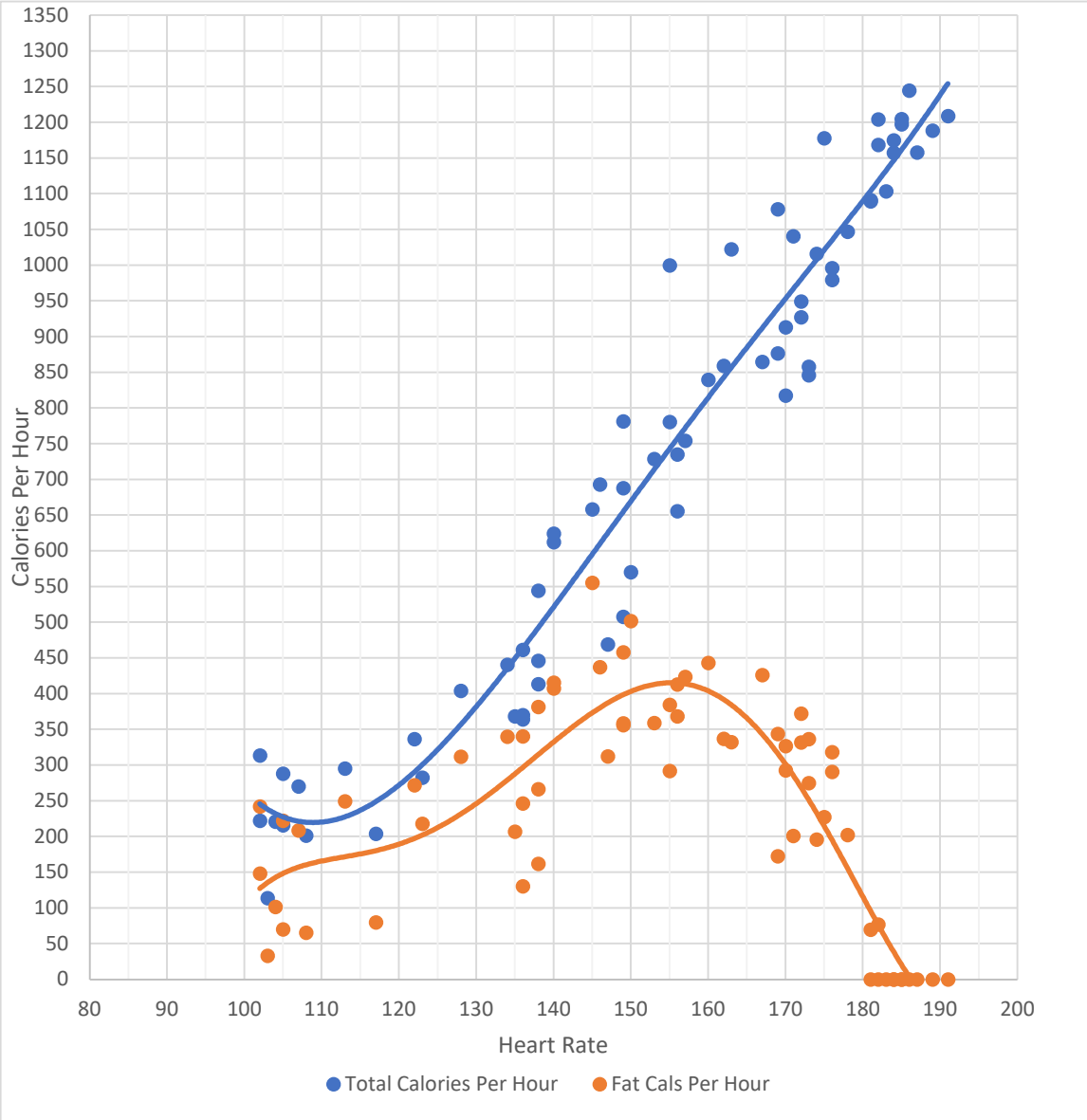
These heart rate zones were determined from your body's response during your graded exercise test and are specific to the mode of testing (i.e. treadmill testing establishes running heart rate zones and bike ergometer testing establishes cycling heart rate zones). These zones will change over time as your fitness improves. We recommend redoing VO2 testing every 3-6 months to measure your progress.

Heart Rate Recovery:

	BPM	HRR
Peak HR	192	-
1-minute HR	170	22
2-minute HR	147	45

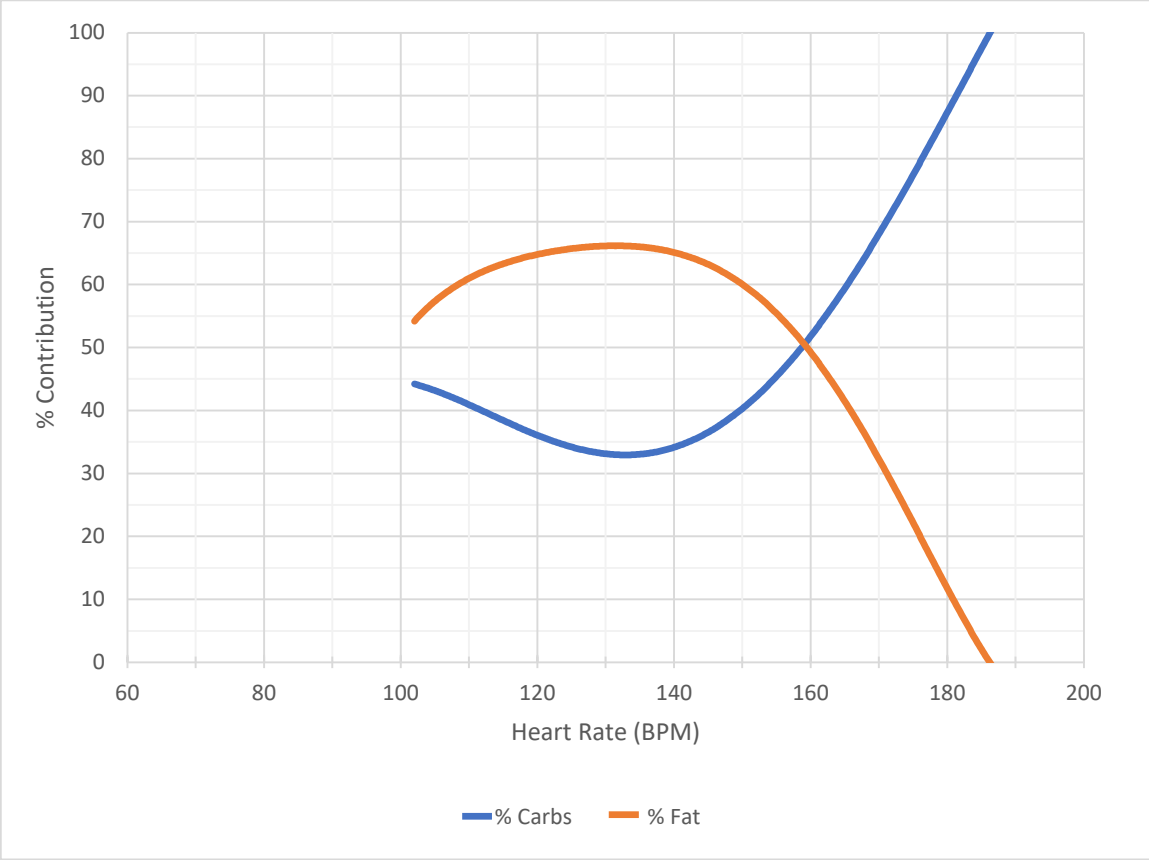
Heart Rate Recovery (HRR) is the drop in your heart rate after a maximum effort. Well trained individuals will exhibit larger HRR scores. A one-minute HRR >20 BPM is considered good for heart health.
Elite athletes have one-minute HRR >23 BPM and two-minute HRR >58 BPM.

Energy Needs:



This graph shows your rate of energy consumption, measured in calories per hour, as a function of your heart rate.
At intensities below your AT, your body is able to burn fat as the primary fuel source. At higher intensities, the rate of energy consumption increases and your body increases its reliance on the anaerobic system. The anaerobic system burns glucose (carbs) for energy, so the body draws less of energy from fats and more from carbs as intensity increases.

Metabolic Efficency:



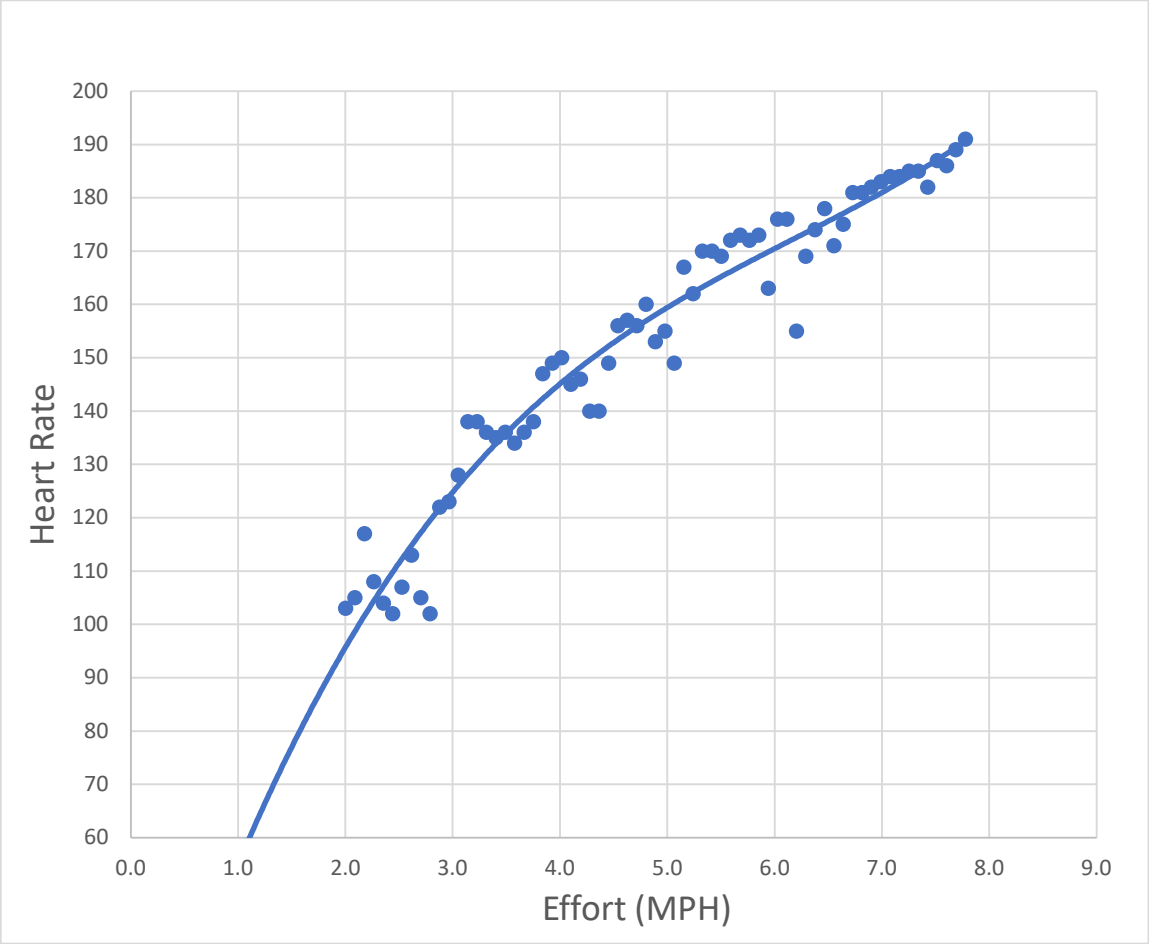
Crossover Heart Rate	158 BPM

This graph shows the proportion of your body's energy that is coming from fat and sugar as a function of heart rate and is useful for identifying your 'crossover point' heart rate. At this heart rate, your body burns equal portions of fat and sugar.

Training at intensities below your crossover point and/or adopting specific nutrition strategies can improve your body's ability to utilize fat as a fuel source and increase your crossover point heart rate. Increasing your crossover point heart rate is important for endurance athletes since it helps preserve your body's sugar stores for more intense efforts during a race.

Some individuals do not have a crossover point - the lines do not intersect. This indicates a strong reliance on aerobic glycolysis and anaerobic metabolism. If you do not have a crossover point, consider adopting training and nutrition strategies to improve fat burning pathways.

Heart Rate and Effort:



This graph shows your heart rate response to increasing exercise intensity during your VO2 Test.

Increasing your aerobic fitness or improving your running or cycling technique (i.e. economy) will help lower your heart rate for a given running speed or biking wattage. A successful training program will shift this curve down and to the right over time.

Raw Test Data

Time	HR (BPM)	VO2 (ml/min)	VCO2 (ml/min)	Ve (LPM)	FeO2%	FeCO2%	RER	Speed (MPH)	Incline
0:15	103	384	351	15.2	17.38	2.69	0.91	2	0
0:30	105	730	657	28.76	17.39	2.65	0.9	2	0
0:45	117	694	612	23.44	16.92	3.03	0.88	2	0
1:00	108	682	611	23.2	16.94	3.05	0.9	2	0
1:15	104	755	650	25.04	16.89	3	0.86	2.5	0
1:30	102	772	620	24	16.71	2.98	0.8	2.5	0
1:45	107	945	731	28.04	16.56	3.01	0.77	2.5	0
2:00	113	1039	780	28.92	16.34	3.11	0.75	2.5	0
2:15	105	1008	772	29.36	16.5	3.03	0.77	3	0
2:30	102	1097	844	31.48	16.44	3.09	0.77	3	0
2:45	122	1180	898	31.64	16.18	3.27	0.76	3	0
3:00	123	988	759	27.76	16.36	3.15	0.77	3	0
3:30	128	1414	1084	36.56	16.03	3.41	0.77	3.5	0
3:45	138	1541	1266	42.4	16.24	3.44	0.82	3.5	0
4:00	138	1406	1238	40.6	16.37	3.53	0.88	3.5	0
4:15	136	1236	1101	36.52	16.45	3.49	0.89	3.5	0
4:30	135	1269	1053	35.68	16.31	3.41	0.83	3.5	1
4:45	136	1285	1028	34.76	16.18	3.41	0.8	3.5	1
5:00	134	1541	1192	39.04	15.94	3.51	0.77	3.5	1
5:15	136	1611	1252	41.56	16.01	3.47	0.78	3.5	1
5:30	138	1894	1501	50.72	16.15	3.41	0.79	4.2	1
5:45	147	1628	1302	43.36	16.12	3.46	0.8	4.2	1
6:00	149	1768	1404	47.6	16.17	3.4	0.79	4.2	1
6:15	150	2010	1491	48.24	15.73	3.55	0.74	4.2	1
6:30	145	2315	1745	54.48	15.63	3.68	0.75	4.2	2
6:45	146	2400	1940	62.48	16.02	3.58	0.81	4.2	2
7:00	140	2167	1741	57.08	16.08	3.51	0.8	4.2	2
7:15	140	2125	1706	55.32	16.03	3.55	0.8	4.2	2
7:30	149	2388	1911	60.4	15.91	3.64	0.8	4.9	2
7:45	156	2533	2110	65.08	15.94	3.74	0.83	4.9	2
8:00	157	2598	2157	67.64	16	3.68	0.83	4.9	2
8:15	156	2258	1872	57.08	15.88	3.78	0.83	4.9	2
8:30	160	2885	2415	71.72	15.8	3.88	0.84	4.9	3
8:45	153	2498	2124	64.72	15.96	3.79	0.85	4.9	3
9:00	155	2675	2269	68.76	15.93	3.81	0.85	4.9	3
9:15	149	2671	2288	71.44	16.09	3.7	0.86	4.9	3
9:30	167	2964	2533	79.84	16.13	3.66	0.85	5.6	3
9:45	162	2923	2579	79.64	16.15	3.74	0.88	5.6	3
10:00	170	2775	2471	76.24	16.17	3.75	0.89	5.6	3
10:15	170	3099	2750	87.92	16.3	3.62	0.89	5.6	3
10:30	169	2982	2637	84.16	16.29	3.62	0.88	5.6	4
10:45	172	3146	2808	89.52	16.31	3.63	0.89	5.6	4
11:00	173	2864	2580	82.52	16.35	3.62	0.9	5.6	4
11:15	172	3230	2845	87.28	16.11	3.77	0.88	5.6	4
11:30	173	2919	2579	81.28	16.23	3.67	0.88	6.3	4
11:45	163	3461	3109	95.68	16.19	3.76	0.9	6.3	4
12:00	176	3315	2968	91.84	16.2	3.74	0.9	6.3	4
12:15	176	3363	3049	96.72	16.34	3.65	0.91	6.3	4
12:30	155	3376	3078	98.48	16.39	3.62	0.91	6.3	5
12:45	169	3605	3413	108.76	16.49	3.64	0.95	6.3	5
13:00	174	3405	3205	102.4	16.48	3.63	0.94	6.3	5
13:15	178	3509	3293	104.04	16.43	3.67	0.94	6.3	5
13:30	171	3487	3293	104.64	16.47	3.65	0.94	7	5
13:45	175	3948	3718	115.92	16.39	3.72	0.94	7	5
14:00	181	3621	3555	116.32	16.69	3.55	0.98	7	5
14:15	181	3598	3595	118.04	16.75	3.54	1	7	5
14:30	182	3997	3937	126.68	16.64	3.61	0.98	7	6

14:45	183	3644	3691	120.56	16.77	3.56	1.01	7	6
15:00	184	3822	3868	124.64	16.71	3.62	1.01	7	6
15:15	184	3880	3998	130	16.79	3.59	1.03	7	6