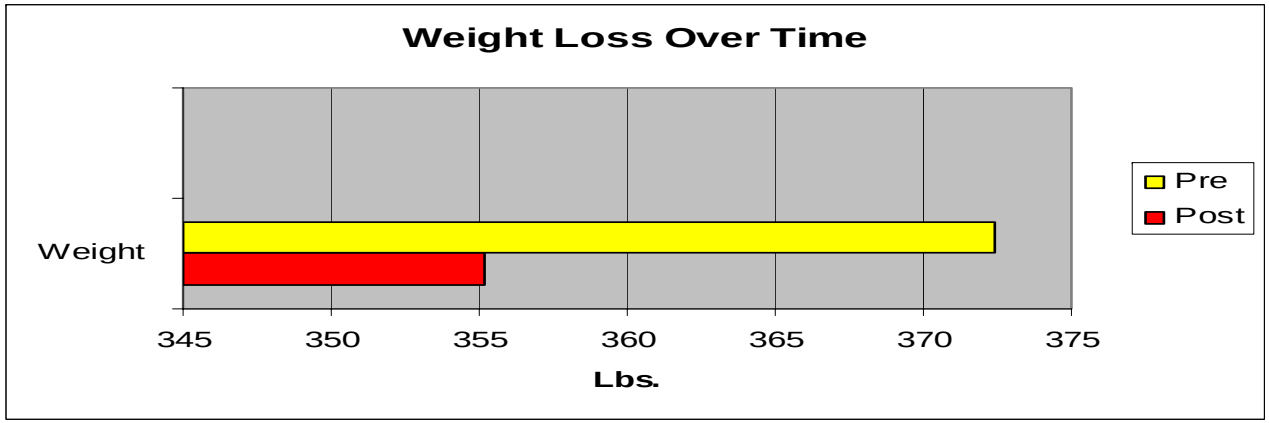
Weight Loss Case Study

Subject: Male
Age: 23
Height: 6 feet 7 ½ inches
Activity Level: Professional Football Player
Weight: Before: 372.4 lbs
After: 355.2 lbs

Diagnosis
Athlete consulted RD about a general weight loss goal on 6/14/05. His goal was to lose 15-20 lbs over 5 weeks. Athlete weighed in at 372.4 lbs with body fat at 25.7% and a lean body mass of 276.69 lbs. RD agreed with weight loss and designed a calorie restricted diet plan to accompany his exercise regimen.

Prescription
The athlete was restricted to a 3000 kcal diet. His nutrient breakdown consisted of 41% carbohydrate, 31% protein, and 29% fat. The athlete was put on a 5 week energy system development program focused on weight loss. The program consisted of two weeks of base training involving 5 minute intervals near anaerobic threshold followed by 5 minutes intervals at 15% below anaerobic threshold for 30-40 minutes on a Woodway treadmill. During the third week additional peak interval training was introduced using up to 90% of max heart rate. Week four and five included 1/1 minute work rest intervals two times a week with anaerobic threshold and recovery training on the treadmill using varied speeds and incline.

Prognosis
The athlete successfully lost 17.2 lbs over a 5 week period when weighed on 7/22/05.This was directly influenced by his caloric restriction and exercise prescription. Upon the athlete's departure, he was set up treadmill workouts to prevent overtraining and unneeded additional pounding by running outside. Starting Lineman on Super Bowel Championship Team.



	Carbs	Protein	Fat	Kcal
Breakfast	100	50	25	822
Post-workout	57	50	14	554
Lunch	80	60	25	782
Snack	30	35	25	480
Dinner	80	60	25	782
Post Workout	57	50	14	554
Total Kcal	404	305	127	3,973
	41%	31%	29%	

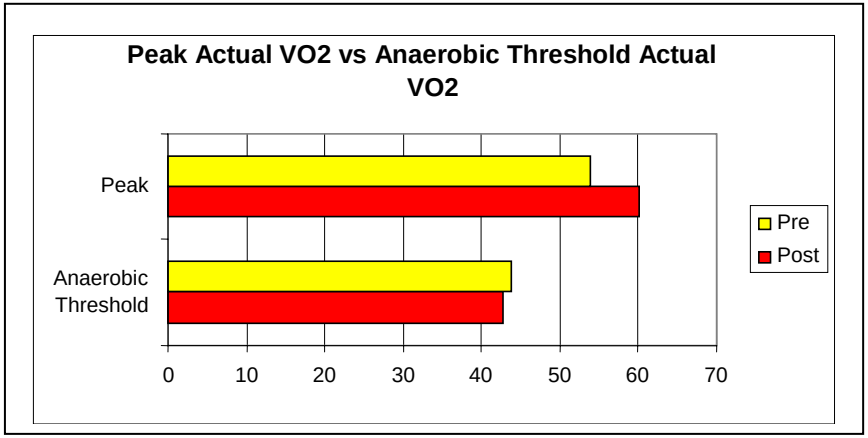
VO2 Case Study

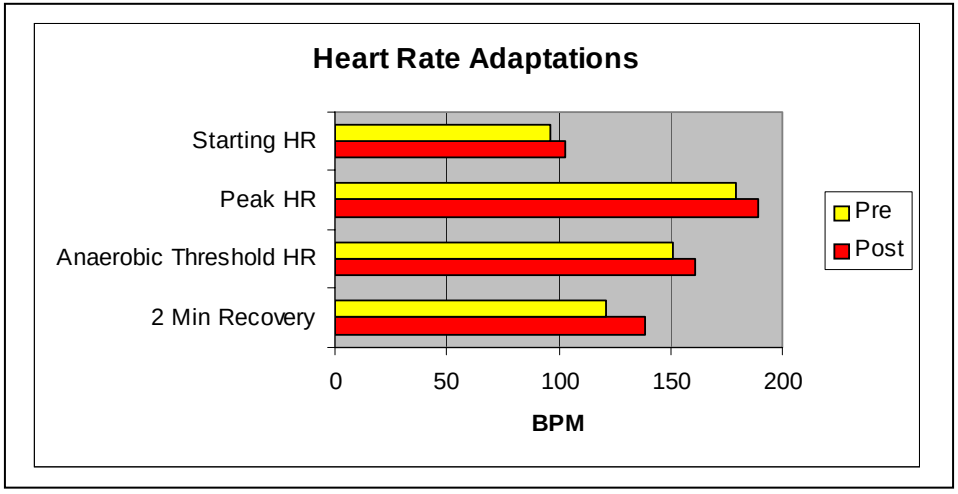
Subject: Male
Age: 22
Height: 6 feet 4 inches
Activity Level: Professional Hockey Player
Weight: Before: 202 lbs
After: 207 lbs

Diagnosis:
Subject underwent an indirect VO2 max test on the treadmill on 6/5/2006 with a test protocol of 8 mph. Subject's starting heart rate was 106 bpm, heart rate at anaerobic threshold was 178 bpm, and his peak heart rate was 190 bpm. His VO2 at anaerobic threshold was 43.8 and peak VO2 was 53.8. The subject's % peak anaerobic threshold was 81%. After a two minute recovery the subject's heart rate decreased to 149 bpm. The athlete's overall fitness score was excellent but emphasis for improvement was on both cardio and leg strength.

Prescription
The energy system development program prescribed was developed to increase overall cardio and leg strength over 5 weeks. The athlete was at the beginning of his off-season so his training focus was on improving his peak VO2. The program began with one week of base running on Woodway treadmills and Force followed by one week of peak training of 1 min work/rest intervals at peak heart rate 6x. (total time was kept short due to weight gain goals at this phase) The third week progressed to 1 min work/rest intervals repeated eight times through. The intervals advanced to 1:30 min work/rest ratios repeated five times in the forth week and then in the fifth week repetitions increased to eight. These progressions were followed by anaerobic threshold training days incorporating recovery days as well

Prognosis:
The athlete underwent a second indirect VO2 max test on 6/21/2006, improving in several areas. With a test protocol of 9 mph, the subject's peak heart rate increased to 193 bpm. His peak VO2 increased to 60.2 and his anaerobic threshold VO2 increased as well to 43.8. The athlete's recovery heart rate was relatively consistent at 146 bpm. His % peak anaerobic threshold decreased %10 which is a result of the program/s emphasis on cardio strength. However, the athlete maintained an overall fitness score of excellent while gaining 5.0 lbs of lean weight. The next exercise progression will be to increase anaerobic threshold by adding more runs on the treadmill for 30-45 mins above AT.





VO2 Case Study

Subject: Male
Age: 24
Height: 6 feet 0 inches
Activity Level: Professional Hockey Player
Weight: Before: 210 lbs
After: 217 lbs

Diagnosis:
Subject underwent an indirect VO2 max test on the treadmill on 5/8/2006 with a test protocol of 7 mph. Subject's starting heart rate was 96 bpm, heart rate at anaerobic threshold was 151 bpm, and his peak heart rate was 179 bpm. His VO2 at anaerobic threshold was 38.7 and peak VO2 was 47.5. The subject's % peak anaerobic threshold was 81%. After a two minute recovery, the subject's heart rate decreased to 149 bpm. Athlete's overall fitness score was good but improvement was needed in overall VO2 scores.

Prescription
The energy system development program prescribed was developed to increase overall cardio and leg strength over 5 weeks. The athlete was at the beginning of his off-season so his training focus was on improving his peak VO2. The program began with one week of base running on Woodway treadmills and Force followed by one week of peak training of 1 min work/rest intervals at peak heart rate 6x. (total time was kept short due to weight gain goals at this phase) The third week progressed to 1 min work/rest intervals repeated eight times through. The intervals advanced to 1:30 min work/rest ratios repeated five times in the forth week and then in the fifth week repetitions increased to eight. These progressions were followed by anaerobic threshold training days incorporating recovery days as well.

Prognosis:
The athlete improved in all areas of the indirect VO2 max test at the duration of the 6 weeks on 6/21/2006. With a test protocol of 8 mph, the subject's heart rate at anaerobic threshold and peak heart rate increased to 161 bpm and 189 bpm respectively. His VO2 at anaerobic threshold increased to 43.8 while his peak VO2 increased to 55.5. His recovery heart rate remained consistent; however, his % peak anaerobic threshold dropped 3% due to the program's heavy focus on cardio strength. The athlete maintained his initial weight gain goal throughout the 6 weeks gaining 7 lbs. The athlete improved his overall fitness score from good to excellent. The next exercise progression will be to increase anaerobic threshold by adding more runs on the treadmill for 30-45 mins above AT.