**How hungry does your workout make you?**

Are you hungrier after a workout or not? That’s the question for today’s topic. Personally, I find myself not very hungry after cardiovascular workout but can raid the refrigerator clean after I lift weights. Not sure why that is, but it’s the way I work.

As we know, it takes energy for your body to use during any activity or workout. Energy is stored in your body in some form, whether it is in blood glucose, body fat or as glycogen in your muscles. As we exercise our bodies draw from the easiest energy source first which is the glucose in our blood stream and when that is gone it’ll go through a couple of different processes to metabolize energy from fat and muscle. Getting to that level of energy burning requires longer durations and/or harder intensities in your exercise.

From the International Journal of Obesity, researchers at the University of Australia along with other institutions studied the affects of easy versus exhausting exercise on people’s subsequent desire to eat. (Reynolds, PhysEd, 9/11/13, NYTimes)

In the study they recruited 17 overweight but healthy men in their 20s and 30s for a four-day study. The participants participated in four levels of activity on the various days. Prior to and following every session their blood was drawn to check for levels of various substances known to influence appetite. The participants were also provided a standard liquid breakfast at the end of each session.

The four sessions included a 30-min session spent idly reading or otherwise resting. The second day they rode an exercise bike continuously for 30-mins at a moderate pace (65% of their predetermined max aerobic capacity). Day three they completed 30-mins of intervals, riding hard for 1-min at 100% of their endurance capacity and then spinning gently for 4-mins. The final day they were challenged with a workout of 15 seconds pedaling at 170% of their endurance capacity followed by 30% for 1-min for the entire 30-minutes.

About an hour after each session the participants were able to eat a sweetened but otherwise bland porridge avoiding any rich aromas or other aspects of food that might influence the men’s desire to eat. They wanted to isolate the affects of an individual’s appetite. The appetite had to be robust to enjoy eating the porridge.

The results showed that the porridge was very appealing to the men after resting or pedaling moderately, in fact they loaded their bowls. However, after each of the interval workouts their appetites were noticeably blunt and more so after the strenuous workout. After the hardest session, the men picked at their porridge, consuming significantly less then the other sessions.

After the two interval sessions the blood work showed that they also displayed significantly lower levels of the hormone ghrelin, which is known to stimulate appetite, and elevated levels of both blood lactate and blood sugar, which have been shown to lessen the drive to eat. The appetite suppressing effects from the highest intensity workout lingered into the next day, according to the food diaries that the men completed. Their diaries showed that they consumed fewer calories the next 24 hours than following any other workout.

Another study from the Journal of PLoS One, also found that obese teenage boys were asked to do a similar study in an enclosed metabolic chamber while measurements of energy were taken while they rested, rode a stationary bike moderately and then again at a higher intensity level. Following their sessions, they were allowed to eat anything from a buffet. They more than replaced their calories. However, after the most intense session their calorie intake was significantly less overall.

The bottom line is that your body needs to replenish itself after every activity or exercise session. If you are looking for weight loss, then maybe you need to adjust your exercise program to include higher intensity exercise sessions.

Both studies tend to suggest that higher intensity workouts will suppress your food intake temporarily. Knowing that weight loss needs to focus heavier on the eating side of calorie intake, keep in mind that temporary suppression needs to be followed by continuous moderation.

Interesting food for thought!