Burn up that fat and save the carbos

Determining, staying within target heart rate is the key

by Caroline Smith

One of the most commonly asked questions I get in consulting is how do I get rid of this extra fat I am carrying? Since we are given a certain number of fat cells at birth and cannot change the number, we need to manage the size of the cell. Your goal is to try and make them as small as possible.

You see, all food is fuel and eventually becomes glucose (blood sugar). This is stored in the liver, brain and muscles as gylcogen. It is the fuel source for high-intensity exercise. We want to try and choose the best choices within the food groups to avoid excess fat ingested for the body to process.

Therefore, the only way to rid the body of fat is through dietary modifications and aerobic exercise. The athlete responds, "but I do a lot of aerobic exercise!" I respond, "Do you know if the exercise you are doing is between 60-70 percent of your target heart rate? A rate too high will be unsuccessful in achieving fat burning and weight loss."

When we calculate their heart rate zone we often find they are not working out at a low enough percent to burn fat and consequently end up burning the carbohydrate (CHO). When they eat they simply replace it with the food they consume after the workout, since the muscle is depleted, and capable of resynthesizing new gylcogen storage.

It is often hard to go at a low intensity because you do not feel as though you are working and there is a disbelief that you are not getting conditioned. You are, moreso in some ways. As you clean the body of fat cells the blood supply can be more efficient to the working muscles. What happens over time is the workload it took to get you to a fat burning level, now has to be increased because you are more efficient. In the long run you get faster without a huge increase in expenditure.

A great way to get started with an effective weight-loss program is to incorporate walking. Try to schedule five days a week at a minimum of 30 minutes each session. Once you get more conditioned you will find the time you can go will be longer and longer without a substantial increase in your overall fatigue. If you are presently running, you may have to slow down to stay within the appropriate zone and then you will find you are running faster within a few weeks without a big change in your program.

FIGURING YOUR TARGET HEART RATE ZONE

To figure your target heart rate you need to know your true resting pulse. Otherwise, you can use the average of 72 beats per minute. To obtain your true resting heart rate try to pick three mornings that you wake up without an alarm if possible. Place the watch by the bed the night before. When you awaken, reach for the watch before you ever get out of bed. Count your beats for a full minute and make a note of it. Do this three different mornings and take an average. This is your true resting heart rate. The most important factor is to take this first thing in the morning before you get out of bed!

This can tell you quite a bit. If you are highly conditioned it will be low. It is not uncommon to see marathon runners down in the low 40s. It can tell you how well you have recovered. If it is 3-5 beats higher than normal do not workout. You might be fighting an infection indicated by an internal temperature rise, which causes the heart to beat faster. Or you might be experiencing fatigue from micro tears in the muscles from an intense workout the day before.

When you workout and your body is not recovered you set yourself up for injury or illness. What's a few days off to come back strong than to go into a workout when you shouldn't and lose 7-10 days due to illness or a strain? This guideline can keep you out of overtraining responses which often occur in individuals who train consistently day after day at high intensities.

This is different than the active resting pulse which is the one you take during the day while sitting quietly on a break. The minute you stand up and start to move your true resting pulse will rise about 3-5 beats, so to tell whether you are rested using the active resting pulse, you need to allow 5-7 beats on your true resting (supine position) average.

If you are normally at 72 beats per minute and feel a little off one day, check your pulse in the afternoon if you were going to workout that night. If it is 77-80 then you are OK, as that allows for the adjustment for getting out of bed. But if it is 81-86 it would be advisable to take the day off from exercise and rest, then recheck it in the morning to assure you have recovered.

Now figuring out your target heart rate should be a pretty quick calculation. This is the long Karvonen's formula which is specific for your present age and conditioning level. It does not use average norms for calculating so it takes into account the fact that you are working out and your body is benefitting health-wise from it.

Subtract your age, to account for the decrease of one base beat for each year of age. As your heart ages, the chambers and values experience "mileage" wear like the working parts of a car. The key is exercise keeps the heart younger, as it is a working muscle. The resultant number is your maximum heart rate. This number is one you do not want to exceed as it puts too much stress on the body. During intervals you may go up above it for a few seconds but you are not maintaining it there for the whole workout. If you have been stress-tested on a treadmill in a lab, the value of your maximum heart rate found would be the figure to use here as it is a true value of conditioning level and not just age-adjusted.

This number is the one you subtract the true resting heart rate from to keep the formula specific to you (age and conditioning)

The percent of exercise expenditure is 60-70 percent to burn fat and 85 percent is truly a CHO-depleting level. This might be the level at which you race at and do intervals at but you should not be training at this level all the time, as you set yourself up for break down and injury. It is not like we can turn on a light switch and have all fat or all CHO being utilized, as there is some overlap.

The key, though, is if you want to burn fat you'll want to stay at the lower intensity for a longer duration of time. Fat needs more oxygen in the blood to go through the break down process and therefore high intensity exercise may only allow 5-15 percent fat burn.

Once you deplete the glycogen of the muscles your body's natural defense is to slow you down and allow some of the fat to be oxidized. We have about 1-1 1/2 hours of stored glycogen and I don't know about you but if I want to burn fat I do not want to exercise for 1-1 1/2 hours first just to get there.

You now need to bring the formula back to you specifically on your present conditioning level and add back your resting heart rate.

This bottom line number is the heartbeats for a minute cycle. When you take your pulse for 10 seconds you multiply by 6 so to make it easier divide the bottom numbers by 6. This will give you the bottom numbers you need to remember when you are exercising and taking a heart rate check. If you are using a heart rate monitor, then the bottom line numbers would be what you would use for setting the zones on the watch.

These numbers are good for this year and this level of conditioning. As you age and change your conditioning you need to re-calculate your resting heart rate and then recalculate the formula for that year.

Good luck and train smart. Quality, not quantity, pays off in a multitude of ways.

KARVONEN'S FORMULA

220 beats per minute for men, women are:

226 — Age
= Maximum heart rate
— Resting heart rate
(average is 72 bpm)
=

This number is used to multiply by the respective percents:

X % of exercise
(60%, 70%, or 85%)
=
+ Add back your
resting heart rate to
make formula specific for you
= Target heart rate