



METABOLISM

Everybody talks about metabolism but not a lot of people really know what it means. Do you have a fast, normal or slow metabolism? Are you getting slower as you get older? Can you speed up your metabolism? Are you eating the right foods to help you achieve your goals? Let's visit these questions and come up with some answers to satisfy them.

WHAT'S METABOLISM?

First of all, metabolism is the sum total of all of the chemical reactions that happen in your body during a given time period. Most of these chemical reactions require energy to perform and that energy is usually supplied by a substance called ATP (adenosine triphosphate). In order to perform any kind of work the body must "break" one of these ATP molecules into an ADP (adenosine diphosphate) and an inorganic phosphate. This "break" produces heat measured in calories which is what everyone uses to measure how much exercise we do.

WHAT'S A CALORIE?

Technically, a calorie is the amount of heat required to raise the temperature of a gram of water one degree Celsius. One thousand of these calories equals a Kilocalorie or Kcal. I mention this because this is the unit of measure on all the nutrition labels. All of the calories listed on food and all the calories listed on fitness equipment are measured in Kcals (the amount of energy required to raise the temp. of one Kilogram of water one degree Celsius). Everything that can be burned has calories...but not everything that can be burned is digestible! One gram of carbohydrates, if burned, will yield about 4 Kcals, one gram of protein will yield about 5 Kcals, one gram of fat will yield about 9 Kcals and one gram of alcohol will yield about 7 Kcals. This is what you are trying to burn if you're trying to lose weight and this is useful information if you're trying to maintain or gain weight. This is where your metabolism comes into the picture.

IS MY METABOLISM FAST OR SLOW OR AM I NORMAL?

Most people have normal metabolism, barring any medical condition that would change that. Some people have a slightly fast metabolism, but unless you are a world-class athlete you are probably pretty close to normal. Slower metabolic rates can be brought on by several things including age and hormonal imbalance. The latter can be reigned in with proper medication from a qualified physician, the former can be held at bay with cardiovascular exercise, strength training and overall diet modification.

CAN I SPEED UP MY METABOLISM?

The short answer is yes. No matter what your age, no matter what your physical condition you can increase your metabolic rate by increasing your fat-free mass; in other words, build muscle. People have fat on their body to store excess energy and just about every other part of your body burns energy. If muscle requires energy (remember the ATP thing?) and you increase your muscle mass, then you require more ATP which gives off heat when broken down (Kcals!). Many women are concerned about lifting weights because they don't want to become very muscular and frankly, it is impossible for most women to become very muscular due to the hormonal difference between men and women. Most women don't produce enough testosterone to dramatically increase muscle mass so their muscles will only slightly increase in size (hypertrophy) and the result is just a better toned look and not Terminator-sized biceps. The same physiology holds true for men except, given the same type of weightlifting program, men's muscles will hypertrophy more than women's. For many men this is a desirable side-effect. In either case, this will increase the resting metabolic rate (RMR).

AM I EATING THE RIGHT FOOD TO HELP ME ACHIEVE MY GOALS?

When it comes right down to it, what you need to concentrate on in your overall diet is "How many Kcals am I producing per day and how many Kcals is the food I'm eating capable of producing?". What that means is "How many calories am I burning and how many am I eating?". If there is an imbalance in this formula you will either gain weight or lose weight. It would defy the basic laws of thermodynamic physics if this is not true. As you know, there are high calorie foods and low calorie foods. If your diet consists of high calorie foods (usually high in fat) then the net result will be a weight gain. If your diet consists of primarily low calorie foods the net result will be a weight loss...for a while. If you consistently deprive your body of the necessary nutrition it requires, your metabolism will slow down to adjust to the new calorie level. When you begin eating "normally" again your body's metabolism will return to normal and you will gain weight back because of the slowed metabolism from the excessively low-calorie diet (ever had that yo-yo effect in your weight?).

HOW CAN I FIND OUT MY METABOLIC RATE?

Here at G.O. Fitness we have a machine that can actually measure how many calories you burn in a day by using a method called indirect calorimetry. We measure how much oxygen your body uses during a fifteen minute test and determine your Resting Metabolic Rate (RMR). We can tell you how many calories you burn in a day at rest, add to that your daily activity level (including your exercise!) and come up with the number of calories you burn in a day. As long as you eat less calories in a day than you burn you will lose weight. You can't break the laws of physics! If you shoot for a calorie deficit of 350-500 Kcals per day, you will lose 1 pound of fat every 7-10 days. That is 3-4 pounds per month. That's 18-24 pounds in 6 months. That's 36-48 pounds in a year. This method WILL NOT re-set your metabolic rate so it is weight that will stay off as long as you abide by the law of thermodynamics. By the way, we can also teach you how to gain weight, too. But you may already know how to do that. Email us or ask at the front desk about metabolic testing here at G.O. Fitness and let us know if there are any health subjects you would like to know more about.

Maybe we'll address your subject in the next *Body TALK* with