

The following article was written for the 24/7 X-Press Fitness Center in Des Moines, IA

## **Weight Loss and Management – It's all about *Metabolism***

How many times have you heard someone in their 30's or 40's say that their metabolism has slowed down and they can no longer maintain their weight the way they used to when they were younger? Although this person probably didn't get their metabolic rate tested in a lab, they are probably correct, although it's probably not due to aging per se. There are a lot of factors influencing metabolism. Mostly, a decrease in metabolism is due to reduced activity and muscle mass as we age. Both of these can be altered by your behavior.

Understanding metabolism can help you develop better lifestyle choices to help you lose, gain and maintain your body weight. Let's begin with some definitions: **Metabolism** is the set of chemical reactions in your body required to maintain life. Your **metabolic rate** is the amount of energy expended during your daily activities. Metabolic rate is typically broken into two parts. One is the **Basal (BMR) or Resting Metabolic Rate (RMR)** which is the amount of energy your body expends while at rest. On top of your BMR, your body also uses energy for physical activities such as walking, sitting, exercising and even digesting food. **Lean body mass** is the amount of non-fat body tissue you have, such as bones, organs and muscle. Lean tissue is metabolically more active than fat tissue.

This BMR allows us to estimate the amount of energy you can expect to use during a day just to maintain your body. You require energy just to maintain and repair your tissues, pump blood and other necessary processes. It's the amount of energy you would require if you laid in bed all day, and it may be more than you think it is. It is estimated that you burn 16 calories per day for every pound of lean tissue you have. Add on top of that your energy expenditure due to activity and you can come up with an estimate of your daily caloric needs. There are many websites that give you estimates of energy expenditure from various activities and exercise. One I recommend is [www.MyPyramid.gov](http://www.MyPyramid.gov). The more active you are, the more calories you will burn off per hour. For example, if you walk at 4 miles per hour, you will burn about 400 calories per hour due to the walking. If you run 8 miles an hour, you will burn close to 800 calories per hour. If you add up all the calories burned due to exercise and activity and add that your to BMR calories, you can estimate your daily caloric need to maintain your current body weight.

If you want to lose weight, then you need to eat less calories than you burn off each day. There are three ways to do this: 1) eat less than you are currently eating while maintaining the same activity level, 2), eat the same but increase your activity level, or 3) eat less and increase your activity level. #3 is the preferred method. By increasing your activity level, you increase your metabolism and burn more calories.

### **Ways to increase your metabolism:**

- 1) Increase your activity level. This doesn't just have to be through formal exercise. There can be many ways to increase your activity during daily activities such as walking more, taking the stairs instead of elevators, riding your bike instead of driving a car, etc. Every time you move you are burning calories and they all add up.
- 2) Increase your lean body mass. As mentioned above, lean body mass is metabolically active. By increasing the amount that you have, you will increase your BMR 24 hours a day, even when sleeping. The way you increase lean body mass is to increase the amount of muscle you have. You do this through a strength training program (e.g. lifting weights). Muscle burns about 6 times more energy than fat does. Yes, adding muscle will increase your weight, but it will increase your muscle mass, your metabolic rate will increase and over time should help to reduce your body fat which is what really matters.
- 3) Increase the intensity of your exercise. If you do intervals on the elliptical machine or treadmill instead of going a steady, moderate pace, you not only burn more calories during your workout but you also elevate your metabolism after your exercise session is finished. This is called **Postexercise Metabolic Rate (PeMR)** and can last several hours after your workout. Think of this as bonus calories! Ever notice you are still sweating after your workout is over? This is why.

- 4) Eating patterns also affect metabolism. The process of eating and digesting food actually increases your metabolism. It's called the **thermic effect of food (TEF)**. Foods consume up to 10% of their caloric value just to be digested by your body. Ever notice on a hot day that you begin to sweat after you eat? The more often you eat, the more often your digestive process kicks in and bumps up your metabolism. Also, the types of food you eat affects metabolism. Protein requires more energy to digest and increases metabolism more than other foods. So eat smaller meals more frequently and be sure to include some protein with each meal to increase your metabolism.

You don't need to measure your metabolism or calculate the number of calories you eat or burn off. If you are interested in losing weight (fat really), or keeping it off, incorporate some of the four points above into your daily regime. These will all help to boost your metabolism and maintain it as you age. This will help keep your body fat from creeping upwards as you age. Your metabolism doesn't automatically have to decrease with age.

**Quick Fit Tip of the Month:** Research has shown that for every hour you spend exercising, you extend the length of your life by about the same amount. However, it isn't so much the **quantity** of life you are after as the **quality** of the life you have remaining. In other words, how long you live isn't as important as how well you live. Who wants to live longer if you are in poor health? Maintaining a regular exercise program will help you live a better quality life especially as you get older.

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