

CHAPTER 3

PHYSICAL ACTIVITY AND WEIGHT LOSS

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The Metabolic Syndrome: Sign of the Times

About one of every four Americans have the *metabolic syndrome*, a cluster of abnormalities increasing their risk of developing diabetes and cardiovascular disease, or dying from any cause.¹ People with the metabolic syndrome have three or more of the following risk factors: abdominal obesity, a high triglyceride level, hypertension, a low HDL cholesterol level, and an elevated glucose level.² The Adult Treatment Panel guidelines (ATP III)³ list diet and physical activity as important parts of any program to reduce a person's risk by managing this syndrome. Doctors will play an important role in instructing patients how to develop a healthy lifestyle incorporating these elements, and encouraging patients to stick to it. Doctors may offer advice on a diet for weight loss, or may refer patients to a nutritionist, particularly if the individual has special needs. The physical activity component may present a problem, since unfortunately there is no exercise

equivalent to a nutritionist. Personal trainers are expensive and may not have enough medical training to tailor the exercise to a patient's medical needs. There are doctors who specialize in physical medicine (physiatrists); they are particularly well qualified to advise patients how to lose weight, and can also refer patients to physical therapists for detailed instruction. It is not certain that insurance companies will reimburse for weight loss therapy if the diagnosis is listed as obesity. The Internal Revenue Service does list obesity as an illness, and therapies to treat it (such as a health club and trainer) are usually tax deductible as medical expenses. Generally, though, doctor and patient together will develop a physical activity program to lose weight; patients do their part by becoming informed, by realizing the seriousness of the situation and the importance of losing weight, and by resolving to *follow the physical activity program*.

The complete ATP III guidelines, available

on the web at <http://www.nhlbi.nih.gov/guidelines/cholesterol/atp3full.pdf>, provide helpful tables. These include *Examples of Moderate Physical Activity for Healthy Adults* and *Ways to Incorporate More Physical Activity into the Day*. This chapter will describe the goals of physical activity and provide suggestions on how to achieve these goals.

Physical Activity vs. Exercise

To begin with, we use the words *physical activity* instead of *exercise*. When it comes to weight loss, there is a tremendous difference between the two. The “no pain, no gain” concept of exercise *does not apply* to weight loss. To improve cardiovascular health, a person needs to sweat and raise the heart rate; weight loss involves simply burning up calories, and *any* form of physical activity burns up calories. You burn the same number of calories if you walk a leisurely mile in 30 minutes, or sprint that mile in six minutes. It’s a lot easier, too. Many people are discouraged from becoming more active because they think they need to join a health club, take the time to change into sneakers and shorts, or give up a block of time to exercise. Not at all. Gaining or losing weight is simply a matter of “calories in/calories out.” Burn more calories than you eat, and you will lose weight. It’s that simple.

Worry Yourself Thin?

Anything you can do to be more physically active will contribute to weight loss. In fact, people who are unconsciously more active than others, such as people who fidget, burn up as many as 350 calories per day more than people who tend to be relatively still throughout their day. Researchers at the Mayo Clinic⁴ have coined the phrase non-exercise activity thermogenesis (NEAT) to describe this increased number of calories burned by people who are more active during their “inactive” times. Their research shows that lean people tend to do things such as fidget, pace, and chew gum (burns up 11 calories per hour) that burn up calories, in contrast to overweight people, who by their nature tend to be more still and sedentary. Don’t count on gum chewing to help shed those pounds.

Playing the Numbers

Every 3,500 calories equals about one pound of weight.⁵ In other words, if someone eats 3,500 calories more than they burn, they will gain one pound, and vice versa. If we divide 3,500 calories into seven days of the week, that means someone interested in losing one pound per week would need to have a deficit of 500 calories per day. This 500-calorie deficit could be achieved by eating 500 fewer calories per day, burning up 500

more calories per day, or any combination of the two. For most overweight patients, losing two pounds per month would significantly improve their lipid levels and blood glucose levels, and improve other cardiovascular risk factors. That would require a daily deficit of 250 calories. Losing weight is only half the battle; most people regain the weight they lose. Those who successfully keep the weight off have changed their lifestyle to include increased physical activity.

Furthermore, one study showed that, in postmenopausal women with type 2 diabetes, weight loss without physical activity did not reduce abdominal fat, while physical activity, even without weight loss, did reduce abdominal fat. Since abdominal fat is associated with the metabolic syndrome and insulin resistance, in at least this group of patients it is obvious that physical activity is very beneficial.⁶

Ways to Increase Physical Activity

Certainly, exercising on a regular basis is one way. It is best to get regular physical activity for 30–45 minutes at least three times per week. (Recommendations vary. Please consult with your physician.) When weight loss is the goal, any physical activity will do. Aerobic, non-aerobic, swimming, walk-

ing, weight lifting, using various machines at a gym or health club, or doing home exercise using a video are all good ideas. There is a chart available at <http://www.netfit.co.uk/calchart.pdf> that outlines the number of calories burned for some common forms of physical activity. Of course, anyone starting any routine of physical activity should start slow and build up their tolerance to avoid undue stress on their muscles and heart. Many insurance companies at least partially reimburse people who join a gym or other exercise facility if their doctor recommends it to help reverse the health problems associated with being overweight.

Many people simply will not get regular physical activity, whether because of time or financial constraints, limitations due to arthritis, or simple laziness. These people need to get the message that nothing is more important than life and good health, and that physical activity is the key to both. Fortunately, most people can be encouraged to increase their physical activity level, once they understand that they do *not* need to “exercise” but to become more physically active, and that the total of all increased physical activity achieved throughout the day adds up. Individuals can find creative new ways to become more physically active, and can even

keep track of how many calories they can burn. Some patients, especially those with arthritis, will benefit from a more structured and personalized program, such as can be given by a physical therapist.

Examples of simple ways to increase physical activity include taking the stairs instead of the elevator, walking instead of driving (for example, getting off the train one stop earlier, parking at the far end of the parking lot at work or at the mall, or walking a few blocks before hailing a taxi), pacing while waiting for a train or bus instead of just standing in one place, pacing while talking on the telephone, or doing chores around the house. One way to see whether you are, in fact, achieving your goal is to wear an inexpensive pedometer before and after beginning your new lifestyle. Generally, 2000 steps is the equivalent of walking one mile. To find your baseline physical activity level, measure any 3 days of the week and average them.⁷

Get Active!

Those of us over 40 realize how technological advances have reduced the level of physical activity in our daily lives. For example, we now email or fax rather than walk to the nearest mailbox; we order online rather than

travel to the department store; we answer the ringing cell phone rather than get up to answer the desk phone; and couch potatoes don't even have to get up to change the channel anymore, thanks to the remote control. Our children's playground has shifted from the sandlot to the video arcade; looking on the bright side, at least their thumb muscles will be in good shape.

If we understand some of the causes of the progressive weight gain in society and take action, we may still be able to reverse the trend, not just for ourselves, but also for our families.

Further Reading

Table of Calories Burned for Some Common Activities:

<http://www.netfit.co.uk/calchart.pdf>

Nutrition and Your Health: Dietary Guidelines for Americans:

<http://www.health.gov/ietaryguidelines/dga2000/document/contents.htm>

ATP III Guidelines, National Cholesterol Education Program:

<http://www.nhlbi.nih.gov/guidelines/cholesterol/atp3full.pdf>

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