



Exercise program can result in quick weight gain

This time of year, many people get serious about fitness and vigorously jump into various types of exercise programs. Typically, their immediate expectation is weight loss. However, a new exercise program can cause immediate weight gain, even if done right. This experience has probably curtailed the best fitness intentions for millions of people every year.

Take the case of a person starting up a new strength-training program with weight lifting. Their muscles are not accustomed to this type of exercise and they can become very sore during the days following the workout. Exercise physiologists call this phenomenon delayed-onset muscle soreness, or DOMS.

This type of soreness is thought to be caused by a variety of factors, including physical damage or minute tears in muscle tissue. In addition, the muscle tissue becomes inflamed and slightly swollen by fluid retention. This temporary retention of fluid can result in a 3- to 4-pound weight gain within a few days of the workout.

Most people are motivated enough to put up with muscle soreness, but if they are watching the scale go up, they can grow discouraged. Understanding that this

is a normal and temporary phenomenon can help to maintain motivation. This is one reason many fitness experts recommend starting up an exercise program gradually, allowing your body to adapt to the new stresses. If you experience a significant amount of soreness, you are starting your exercise program with too much intensity.

After a couple weeks of strength training, some increase in muscle size will typically take place. Of course, this can show up as weight gain even though body fat is being lost. Muscle is heavier than fat, so a pound of muscle takes up less space than a pound of fat.

Consequently, muscle development can mask fat loss if you are watching the scale. Yet, your waist, hips and thighs can be shrinking in size and your clothes will fit better. Also, an increase in muscle tissue results in increased calorie needs, even at rest.

A quick start-up to an aerobic exercise program can also result in immediate weight gain, partly related to the fluid retention of delayed-onset muscle soreness. But another natural phenomenon can increase the water content (and weight) of muscles even more.

As a person adapts to an aerobic exercise program, their muscles get

better at storing carbohydrate in a form called glycogen. To muscles, glycogen is the storage form of high-octane fuel. During exercise, muscles break down glycogen to a high-energy source called glucose. A steady supply of glucose is essential for maintaining moderate-to high-intensity exercise.

So far, so good. But here's the rub: Along with each additional gram of glycogen stored in the muscles, about 3 grams of water are stored, resulting in a weight gain of as much as 2 to 4 pounds.

The increased storage of glycogen is important to the training program. It means extra carbohydrate calories from the diet are more likely to be stored as glycogen instead of fat. In the long run, this immediate weight gain will prove advantageous for the loss of body fat and maintenance of the loss. Increased glycogen storage also provides more of the high-octane fuel needed to maintain a quality training program that enhances overall health.

If you start up a new exercise regimen, ignore the scale for at least a month and rest assured that you are doing the right thing for your body.

Alan Titchenal, Ph.D, CNS and Joannie Dobbs, Ph.D, CNS
are nutritionists in the Department of Human Nutrition, Food and Animal Sciences,
College of Tropical Agriculture and Human Resources, UH-Manoa.
Dr. Dobbs also works with the University Health Service.
