Exercise = Weight Loss, Except When It Doesn’t

People who exercise regularly give many reasons for why they do what they do regardless of life’s demands. They say exercise can improve their health, mood, strength and stamina.

But for many, whether they say so or not, a desire to lose or control weight is a major motivation. Deciding if exercise is an effective method, though, can be a challenge.

On one hand, you may have heard that exercise is not very useful for knocking off extra pounds, though it helps to maintain weight. Or you may have heard that only weight-bearing exercise — like jogging or brisk walking — can help you lose those unwanted pounds, while activities like swimming and cycling are not helpful as far as weight goes.

At other times you may have wondered why, after you took up activities that were supposed to burn 500 calories a day, you failed to lose that pound a week.

What is the truth about exercise and weight, and how can you accurately calculate the caloric value of various activities?

In the August/September issue of ACE Certified News (published by the American Council on Exercise), Ralph La Forge, managing director of the Duke Lipid and Disease Management Preceptorship Program at Duke University Medical Center, compiled a detailed analysis of the various factors that influence the effect of exercise on weight loss.

Mr. La Forge started by refuting the prevailing belief that since a pound of fat (when burned) gives off 3,500 calories and since running or walking a mile burns 100 calories, a person should lose a pound for every 35 miles. In other words, if a previously inactive person starts running or walking five miles a day, that person should lose a pound a week, all other things being equal.
Some Calories Have to Be Subtracted

Not so, says Mr. La Forge, because this estimate fails to subtract the number of calories that person’s body would have used had it just sat still for those hours. Rather, for a 154-pound person, the net caloric cost would be 54 calories per mile when walking up to 3.5 miles per hour, 97 calories speed-walking at 3.5 to 5 m.p.h., and 107 calories jogging or running.

In other words, running uses nearly twice the calories used when walking at a moderate pace over the same distance. Your starting weight is also a factor: if you weigh less than 154 pounds, the caloric burn is proportionately less; if you weigh more than 154, it is higher.

Furthermore, if you walk or run on a treadmill, the aid of the machine diminishes the number of calories your body uses by about 10 to 15 percent of what the machine says you are burning. But, Mr. La Forge noted, there is a positive side: “The mechanical advantage of some machines enhances exercise comfort and reduces impact and musculoskeletal stress.”

In addition, if the weather is bad and you are unable or reluctant to work out outdoors, being able to exercise indoors may mean that you use more calories a week than you would otherwise.

Duration and intensity of physical activity are important factors in how much fat the body burns for energy, which, after all, is what you want to lose. The harder and longer you work out, the more fat you will shed.

When you diet without exercising, you lose both muscle and fat, which is counterproductive because muscle loss significantly lowers your basic metabolic rate, the number of calories your body uses at rest.

Type of Activity Matters

Weight-bearing activities that work against gravity — aerobic activities like walking, running, cross-country skiing, dancing, skating and stair-climbing — use proportionately more calories at a given level of effort than swimming, cycling or water aerobics.

The more muscle groups involved in your activities, the more calories you are likely to burn. That is why working out against gravity uses more calories than non-weight-bearing activities. On the other hand, because activities like swimming put less stress on weight-bearing joints, many people can do them for longer periods, making up for the lower caloric burn.

If your workout includes hills (real ones or on exercise equipment), you will use more calories per minute than doing the same activity on level ground. But if you engage in resistance exercises — working out with weights or on machines that strengthen various muscle groups — you may gain several pounds of muscle that partly offset the loss of body fat.

In other words, you may lose fewer pounds than if you expended the same number of calories on an aerobic activity like brisk walking or swimming, but you will be stronger and better toned. With greater muscle mass, your basic metabolic rate will rise and you will burn more calories all day and night. And since muscle holds less water and takes up less room than the equivalent weight of fat, by shedding fat and gaining muscle you can lose inches and sizes without losing actual pounds on the scale.

Keep in mind, though, that the time spent doing resistance exercise burns fewer calories than if the same time were spent on aerobic activities.

Mr. La Forge pointed out that how skilled you are at your chosen activity also influences the calories burned. Those less skilled make unnecessary movements or have to work harder at the activity, using more calories an hour than those who perform it efficiently.
That may sound like it is an advantage to be unskilled, but there is a significant downside: Those with less skill tend to tire faster and thus spend less time at the activity. They are also more prone to overuse injuries.

Another factor in caloric burn is the increased number of calories the body uses after a workout. Both aerobic and resistance exercises raise energy expenditure over the next 12 to 24 hours, but the range is great — from 10 to 150 calories, depending on the type of activity and how long and vigorously it was done. Though it does not sound like much, it can add up over the long run.

**Your Body Counts, Too**

People who are overweight or obese burn more calories proportionately doing the same activity, for the same duration and at the same intensity, than those of normal weight.

But some people compensate for the calories burned by eating more or doing less. If you exhaust yourself by overexercising, you may do less routine activity for the rest of the day, reducing the caloric benefit of your workout.

Or if you know you expended 300 extra calories in your morning workout, you may — consciously or otherwise — make up for them by eating more that day. On the other hand, many people find that a vigorous workout before lunch or dinner diminishes their appetite and reduces their overall caloric intake, adding to the weight loss resulting from the exercise itself.

Some factors are out of your control. People are born with metabolic differences. Some have a higher resting metabolic rate or produce more fat-burning enzymes than others. People with a low percentage of slow-twitch muscle fibers seem less able to burn fat in skeletal muscles and thus may have a harder time losing weight through exercise, Mr. La Forge wrote.

Finally, gender counts. Women tend to burn more fat under the skin but have a harder time getting rid of abdominal fat than men do.
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