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Health Options
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Effective weight loss takes more than cutting calories

As spring heads into summer, thoughts often turn to losing weight to fit into that swimsuit again. Setting a reasonable weight loss goal, however, is more complex than most people realize.

Question: Will cutting calorie intake by 3,500 calories per week (500 calories a day) result in a pound of fat loss per week?

Answer: This approximation of what it takes to lose a pound of body fat has multiple problems. It is based on the fact that a pound of adipose tissue contains about 3,500 calories.

But weight loss is usually not just from adipose tissue. Most weight loss comprises a mixture of fat, protein, carbohydrate and water.

Consequently, initial weight loss, especially when it is rapid, can include the loss of a fair amount of body muscle along with the carbohydrate reserves called glycogen. Plenty of water associated with these body components also is lost, so an initial deficit of 3,500 calories for a week can stimulate much more than a pound of weight loss. This weight loss may be exciting for the scale watcher, but it does not represent healthful fat loss.

Q: Does the 3,500-calorie deficit per pound of weight loss rule hold true for long-term weight loss?

A: No. Researchers studying weight loss in people have developed human weight loss simulators that are based on complex formulas that take into account how the body changes as it loses weight. You could say it is all a moving target.

In an American Society for Nutrition consensus statement, researchers explained it this way: If a person cuts calorie intake by 40 calories per day, the 3,500 calories per pound rule would predict a 20-pound weight loss over a five-year period. In reality, however, the weight loss would be more like four pounds. This is because the body's daily calorie needs drop by about 40 calories after losing four pounds, and the body weight levels out at a new balance point.

As weight is lost, the body expends fewer calories at rest. Also, the body requires fewer calories to accomplish most physical activities as body weight goes down. For example, a weight loss of 10 pounds will reduce the calories required to walk a mile by about five calories. It seems like a small difference, but it all adds up over time.

Q: How can a dieter lose mostly body fat?

A: To lose primarily body fat, weight loss cannot be too rapid. Gradual weight loss helps to conserve muscle and pull calories primarily out of adipose tissue.

Preserving muscle tissue during weight loss helps to maintain calorie needs, but it can be difficult. The things that help are consuming enough protein and including strength-building exercise. When calorie intake is reduced, protein needs go up. Research conducted by Donald Layman at the University of Illinois indicated that individuals on a low-calorie diet needed to consume almost twice the protein RDA to prevent muscle loss.

Q: What is the best way to set a realistic weight-loss goal?

A: There are a couple of scientific weight loss predictors online that provide a good reality check. Go to www.pbrc.edu and find the "Weight Loss Predictor" in the research tools menu. Another approach is available at bwsimulator.niddk.nih.gov. Remember, even these scientific simulators are not perfect and cannot account for individual variability and do not adjust for the effects of muscle-building exercise and protein intake.

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