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wl9. The Protein-Carb War

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Listen for a few minutes, and you'll feel like you're witnessing a nutrition holy war. On one side of the battle line are advocates of the ever-controversial high-protein diet, popularized by Robert Atkins, M.D., in the early 1970s. On the other side are those who believe in conventional low-calorie but high-carbohydrate diets, arguing that a calorie is a calorie, regardless of its source.

If you're thin today, odds are you won't be in a few years. One-fourth of adult Americans are now obese, more than 30 pounds above their ideal weight, and almost two-thirds are overweight by at least a few pounds. Extra body fat raises your risk of diabetes and heart disease, and it may also increase your risk of Alzheimer's disease and some types of cancer. That's aside from what those unflattering extra pounds will do to your looks.

Slimming down and staying trim is not just a matter of eating in moderation, as people often rationalize. Several studies published over the past two years support the benefits of higher protein diets, though not necessarily a strict high-protein regimen, for losing weight and reducing the risk of coronary heart disease.

The Carbohydrate Conundrum

There's little argument that Americans have gotten fat from eating too much - particularly, too many foods packed with "empty" calories. Most of those empty calories come in the form of highly processed carbs, such as pastas, pizzas, breads, muffins, white rice, and sugars (including high-fructose corn syrup). In contrast, lean meats, fish, and many vegetables and fruits, calorie for calorie, supply far more nutrients.

Part of the problem lies in how the body responds to refined carbohydrates and very starchy vegetables, such as potatoes. After eating such carbs, blood sugar levels skyrocket, triggering a surge in insulin secretion. Insulin, a hormone, helps the body burn blood sugar for energy or convert it to fat. But a sudden release of insulin frequently lowers blood sugar too far, leading to hunger pangs and over-eating. In contrast, animal protein, as well as nonstarchy or low-starch vegetables and fruit (broccoli, lettuce, berries), have little effect on blood sugar and insulin levels, so they prevent the rollercoaster effect of many carbohydrates.

Eating more protein and vegetables and fewer carbs also makes sense for other reasons. The human race evolved eating an extremely nutrient-dense diet, consisting of lean meat, fish, and a lot of vegetables. Some researchers, such as Loren Cordain, Ph.D., of Colorado State University, Ft. Collins, believe that people are genetically best suited to such foods. It wasn't until relatively recently, about 10,000 years ago that grains - that is, almost pure carbohydrates - became part of the diet. Today, two-thirds of the sugary and grain-based carbohydrates consumed by Americans provide few nutrients besides starches and sugars.

In addition, protein plays more crucial roles in our health. It is a structural component of the body's 60 trillion cells and the dietary source of amino acids, peptides, enzymes, hormones, antibodies, and even genetic material. In contrast, carbohydrates provide little more than a source of energy, for which the body can also use fat and protein. Some researchers, such as Eric C. Westman, M.D., of the Duke University Medical Center, Durham, N.C., have noted that there is actually little scientific evidence supporting a nutritional need for carbohydrates.

High-Protein Diets

In a small study, Donald K. Layman, Ph.D., a professor of nutritional sciences at the University of Illinois, Urbana, asked 24 middle-age overweight women to follow one of two types of low calorie diets. One was a conventional high-carb diet, and the other was a moderately high protein diet.

After 10 weeks, women in both groups lost about the same amount of weight, approximately 15 pounds. Significantly, women on the high-protein diet lost more fat and less muscle. In contrast, those on the high-carb diet lost almost twice as much muscle, compared with women following the high-protein diet. In addition, women on the high-protein diet developed higher levels of thyroid hormones and a faster metabolic rate, which would help them burn more calories.

Critics of high-protein diets have argued that their high-fat levels increase the risk of heart disease. But recent studies show just the opposite. Duke University's Westman tracked 41 overweight or obese men and women on a low-carb diet, in which neither portion sizes nor calories were restricted. Thirty-nine of the subjects lost weight during the six-month trial, with more than half of the subjects losing more than 10 percent of body weight.

In addition, the subjects' lipid profiles - cholesterol and triglyceride levels - improved significantly. Total cholesterol and the "bad" low-density lipoprotein (LDL) cholesterol declined by at least 10 percent, and the "good" high-density lipoprotein (HDL) cholesterol increased by 10 percent. Levels of triglyceride, another blood fat, decreased significantly.

Jeff S. Volek, Ph.D., and his colleagues at the University of Connecticut, Storrs, found a similar reduction in cardiovascular risk factors. Volek asked 20 healthy young men to either continue eating their regular high-carb diet or to adopt a low-carb, high-protein diet for six weeks. On average, triglyceride and insulin levels dropped by a third among men following the high protein, low-carb diet. Amazingly, the amount of fat in their blood declined by almost a third after eating a high-protein, high-fat meal, compared with men eating a high-carb meal.

Some Guidelines

Still, dieters do not consistently benefit from any single type of diet, but Naji Torbay, M.D., and other researchers at the American University, Beirut, may have figured out why. Torbay asked 27 obese men to follow one of two diets for four weeks: a reduced-calorie, moderately high protein diet (including meat, fish, vegetables, and a small amount of carbs); or a reduced calorie, high-carb diet.

Although all of the subjects had normal blood sugar levels, about half had elevated insulin levels, a prediabetic sign. These subjects achieved more significant weight loss on the high protein diet - most lost 15 or more pounds - and they also benefited from significant decreases in insulin levels. In contrast, patients with normal insulin levels - those who were not prediabetic - fared better on the low-calorie, high-carb diet.

Several lessons can be learned from these studies. First, people with prediabetic signs (such as elevated insulin or blood sugar levels) are more likely to benefit from a high-protein diet than a high-carb diet. Two, high-protein, low-carb diets decrease rather than increase the risk of heart disease.

Finally, whatever approach you take in dieting, it only makes sense to eat for maximum nutrient density - that is, getting the most nutritional value possible in each calorie of food. Such an approach might be called protein rich, though not necessarily high protein. A nutrient-dense diet would favor fish, lean meats, and nonstarchy vegetables and fruits over carb-rich grains and sugars.

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