The Protein Myth

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The Building Blocks of Life

Protein is an important nutrient required for the building, maintenance, and repair of tissues in the body. Amino acids, the building blocks of protein, can be synthesized by the body or ingested from food. There are 20 different amino acids in the food we eat, but our body can only make 11 of them. The 9 essential amino acids which cannot be produced by the body must be obtained from the diet. A variety of grains, legumes, and vegetables can provide all of the essential amino acids our bodies require. It was once thought that various plant foods had to be eaten together to get their full protein value, otherwise known as protein combining or protein complementing. Intentional combining is not necessary to obtain all of the essential amino acids.[1] As long as the diet contains a variety of grains, legumes, and vegetables, protein needs are easily met.

Protein Requirements

With the traditional Western diet, the average American consumes about double the protein her or his body needs. Additionally, the main sources of protein consumed tend to be animal products which are also high in fat and saturated fat. Most individuals are surprised to learn that protein needs are actually much less than what they have been consuming. The Recommended Dietary Allowance (RDA) for protein for the average, sedentary adult is only 0.8 grams per kilogram of body weight.[2] To find out your average individual need, simply perform the following calculation:

Body weight (in pounds) X 0.36 = recommended protein intake

However, even this value has a large margin of safety, and the body's true need is even lower. Protein needs are increased for women who are pregnant or breastfeeding. In addition, needs are also higher for active persons. As these groups require additional calories, increased protein needs can easily be met through larger intake of food consumed daily. Extra serving of legumes, tofu, meat substitutes, or other high protein sources can help meet needs that go beyond the current RDA.

The Problems with High-Protein Diets

High protein diets for weight loss, disease prevention, and enhanced athletic performance have been greatly publicized over recent years. However, these diets are supported by little scientific research. Studies show that the healthiest diet is one that is high-carbohydrate, low-fat, and moderate in protein. Increased intake of whole grains, fruits, and vegetables are recommended for weight control[3] and preventing diseases such as cancer[4] and heart disease.[5] High-carbohydrate, low-fat, moderate-protein diets are also recommended for optimal athletic performance.[6] Contrary to the fad diets currently promoted by some popular books, a diet that is high in protein can actually contribute to disease and other health problems.

- Osteoporosis. Diets that are rich in protein, especially animal protein,[7] are known to cause people to excrete more calcium than normal through their urine and increase the risk of osteoporosis. Plant-based diets, which provide adequate protein in addition to calcium through the consumption of leafy green vegetables, beans, and fortified fruit juices, can help protect against osteoporosis.

- Cancer. Although fat is the dietary substance most often singled out for increasing one's risk for cancer, animal protein also plays a role. Specifically, certain proteins present in meat, fish, and poultry, cooked at high temperatures, especially grilling and frying, have been found to produce compounds called heterocyclic amines. These substances have been linked to various cancers including those of the colon and breast.[8-10] A diet rich in whole grains, fruits, and vegetables is important in decreasing cancer risk,[4] not to mention adding more healthful sources of protein in the diet.

- Kidney Disease. When people eat too much protein, it releases nitrogen into the blood or is digested and metabolized. This places a strain on the kidneys which must expel the waste through the urine. Kidney problems may result in individuals who are susceptible to disease.

- Cardiovascular Disease. Diets high in fat and saturated fat can increase one's risk of heart disease. High-protein diets often encourage consumption of meat, eggs, and dairy products, which are all high in cholesterol, fat, and saturated fat. The most popular of the high-protein diets have been described as containing excessive amounts of these artery-clogging products.[11] Adequate protein can be consumed through a variety of plant products which are cholesterol-free and contain only small amounts of fat.

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- Weight Loss Sabotage. Many individuals see almost immediate weight loss as a result of following a high-protein diet. In fact, the weight loss is not a result of consuming more protein, but by simply consuming less calories. Over the long run, consumption of this type of diet is not practical as it can result in the aforementioned health problems. As with any temporary diet, weight gain is often seen when previous eating habits are resumed. To achieve permanent weight loss while promoting optimal health, the best strategy involves lifestyle changes including a low-fat diet of grains, legumes, fruits, and vegetables combined with regular physical activity.

Protein Checklist

High protein diets are unhealthy. However, adequate but not excess amounts of protein to maintain body tissues, including muscle, are still important and can be easily achieved on a vegetarian diet. If you are uncertain about the adequacy of protein in your diet, take inventory. Although all protein needs are individual, the following guidelines can help you to meet, but not exceed, your needs.

- Aim for 5 or more servings of grains each day. This may include ½ cup of hot cereal, 1 oz. of dry cereal, or 1 slice of bread. Each serving contains roughly 3 grams of protein.
- Aim for 3 or more servings of vegetables each day. This may include 1 cup of raw vegetables, ½ cup of cooked vegetables, or ½ cup of vegetable juice. Each serving contains about 2 grams of protein.
- Aim for 2 to 3 servings of legumes each day. This may include ½ cup of cooked beans, 4 oz. of tofu or tempeh, 8 oz. of soymilk, and 1 oz. of nuts. Protein content can vary significantly, particularly with soy and rice milks, so be sure to check labels. Each serving may contain about 4 grams to 10 grams of protein. Meat analogues and substitutes are also great sources of protein that can be added to your daily diet.

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