

The high-protein, low-carb diet: an analysis



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High-Protein, Low-Carb Counterattack

Carbohydrate-restrictive or ketogenic diets that are rich in animal products can help some people to lose weight because they offer some short-term improvement in glucose control. But because these diets are too rich in animal products, they incur significant risks such as cancer, heart disease, and kidney disease. They are especially dangerous for diabetics because a meat-based diet increases the risks of atherosclerosis and accelerates kidney failure in people with diabetes. In a recent study, researchers found that every 5 percent increase in calories consumed from animal protein increases the risk of diabetes by 30 percent. But vegetable protein was not associated with the increased diabetes risk.

How Much and What Type of Animal Products Are Permitted?

A maximum of only one or two (two- to three-ounce) servings of animal products a week is recommended:

- One or two servings of fish per week; or
- One or two servings of fish plus one small serving of white meat fowl, totaling less than six ounces per week.

Studies show that people eating more than two servings of fish per week have higher incidence of type 2 diabetes. There is no significant benefit from using fish in your diet; you can get omega-3 fats from supplements.

No other animal products are recommended. Red meats are to be avoided completely. Studies show diabetics with high red meat intake have 50

percent higher incidence of heart disease, probably because higher level of the heme iron in red meat.

Facts About Eggs and Diabetes

Studies show that people eating five eggs a week or more have an increased risk of developing type 2 diabetes. Diabetics who eat more than one egg a day double their heart disease or death risk.

Get Protein from Your Vegetables

Human protein requirement studies in the 1950s showed that adults require 20 to 35 grams of protein per day. People who eat a vegetable-based diet have been found to consume 60 to 80 grams of protein a day, well above the minimum requirement.

Protein Content from Selected Plant Foods

FOOD	GRAMS OF PROTEIN
Almonds (3 ounces)	10
Collars (2 cups)	8
Banana	1.2
Broccoli (2 cups)	10
Brown Rice (1 cup)	5
Chick Peas (1 cup)	15

Corn (1 cup)	4.2
Lentils (2 cup)	18
Peas, frozen (1 cup)	9
Spinach, frozen (1 cup)	7
Kidney Beans (1 cup)	13
Soybeans (1 cup)	29
Sunflower seeds (1/2 cup)	13
Sesame seeds (1/2 cup)	12
Tofu (4 ounces)	11
Whole Wheat Bread (2 slices)	5

Green vegetables, legumes, and beans have more protein per calorie than meat does. They are also rich in micronutrients. Animal protein is low-nutrient food because it does not contain antioxidants or phytochemicals. So eating more plant protein is the key to increasing our micronutrient intake.

The Dangers of IGF-1

Insulin-like growth factor-1 (IGF-1) is produced by the liver in response to the pituitary-derived growth hormone. It is one of the body's important growth promoters during fetal and childhood growth. However, in adults, higher levels of IGF-1 promote cellular replication that can accelerate the aging process and promote cancer. Elevated IGF-1 levels are associated with increased risk of all major cancers, including breast cancer, colon cancer, and prostate cancer. Lower levels of IGF-1 are associated with enhanced insulin sensitivity and enhanced life span.

Protein Intake Promotes IGF-1

The composition of protein and the amount consumed also affect IGF-1 levels. Animal protein causes a larger increase in IGF-1 compared to plant protein because animal protein is more biologically complete. For people with diabetes, a relative low amount of animal protein could raise their IGF-1 level. This is the main reason why we restrict animal intakes to only six ounces per week.

Plant proteins are less biologically complete. The body has to combine the amino acids for biological completeness, so they do not raise the IGF-1 level like animal proteins do.

Refined Carbohydrates Promote IGF-1

Excess intake of refined carbohydrates can also have an effect on IGF-1. Insulin regulates energy metabolism and affects IGF-1 signaling by increasing the production of IGF-1 and decreasing the IGF-1-binding proteins.