



### Here's the skinny on cutting fat, carbs

The biggest question in the weight-loss world is whether to cut the fat or cut the carbs. The most popular weight-loss diets demonize one or the other.

In the world of biology, fat cells are just doing what they have been genetically programmed to do. Fat cells store fat and they are good at it when supplied with plenty of the two necessary building blocks -- glucose and fatty acids.

Glucose mainly comes from starchy or sweet high-carbohydrate foods. Fatty acids are primarily derived from high-fat foods. Since glucose and fatty acids are both needed to lock fat molecules into fat cells, both diets (low-carb and low-fat) tend to result in fat loss over time.

**Question:** Is fat loss that simple?

**Answer:** No. There are major health concerns for both dietary extremes. Low-carbohydrate diets are high in fat and protein. If someone can tolerate a low-carbohydrate diet long enough to lose significant amounts of fat, many health risks need to be considered.

Too much fat in a single meal increases the risk of heart attack or stroke. In a number of experiments with healthy young people, cardiologist Robert Vogel and colleagues from the University of

Maryland found that consuming 50 grams or more of most types of fat at a single meal causes blood vessels to constrict blood flow abnormally. The constriction occurred even when the fat was olive oil, but not with canola and fish oils, which contain omega-3 fatty acids.

These researchers feel that the blood vessel constriction puts a person at seriously increased risk of a heart attack. We speculate that this also could increase the risk of having a stroke. This increased risk is temporary -- about two to six hours following the meal.

Too much protein in a low-carb diet, over time, can take a toll on the bones and kidneys. A high-protein diet must be balanced by a high-calcium intake, or calcium is gradually pulled out of the bones. Over time, this gradual loss can lead to osteoporosis.

Dr. Paul Crawford, chairman of Medical Affairs for the American Kidney Fund, also warns about high-protein diets. They can place a strain on the kidneys and thereby damage kidney tissues and predispose people to chronic and irreversible kidney disease.

**Q:** What are the major health concerns for the low-fat diets?

**A:** Low-fat diets are high in carbohydrate with low-to-moderate

amounts of protein. With low-fat/high-carb diets, people often experience an initial weight loss but gain the weight back easily if they don't control their calorie intake.

For people with low calorie needs, the low-fat/high-carb diet can provide too little protein. And this can result in a decline in muscle mass that lowers overall calorie needs. However, people who eat excess calories from carbohydrate, along with a very low fat intake, get better at converting glucose into fat.

Low-fat diets also can be too low in omega-3 fatty acids which increases cardiovascular risk factors.

**Q:** Is the Food Guide Pyramid the best option for everyone?

**A:** No single diet fits all people at all ages under all conditions. More sedentary people with lower calorie needs may need to eat less from the starch base of the pyramid and more fruits and vegetables along with adequate high-protein foods. Extremely active endurance athletes may need to emphasize the carbohydrate base of the pyramid.

Next week's column will describe what qualifies as a low-fat or low-carbohydrate diet.

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