

## Nutrition Basics

There are 3 nutrients that are calorie yielding: Protein, 4 cal/gram; carbohydrate, 4 cal/gram; and fat, 9 cal/gram. The body burns 20-25% of the calories from protein and carbohydrate in the breakdown process and only 3% from fat, so you can see that fat not only has twice as many calories per gram, but uses very little to convert to use. Common sense tells us that fat is more “fattening”, and should be kept to a minimum. This gets a bit tricky as there are hidden fats in many foods.

An excess of all 3 nutrients can be stored by the body as fat, but it's a one way street. The body cannot take fat and make protein, for example. Humans are programmed to store fat easily, but once it's in storage it's hard to lose it.

**Protein** can't be stored as protein, but excess will be stored as fat. Approximately 35g can be broken down at a time, which is about 3 ½ ounces, or the size of a deck of cards. Protein helps keep blood sugar level, which slows the breakdown of carbohydrate, thus limiting insulin surges. Good sources are lean meats, poultry, eggs, lowfat dairy.

**Carbohydrates** consist of a variety of foods – fruits, vegetables, starches and sugars. The body prioritizes keeping the storage tank full. When the tank is full and you take in more, the excess goes into fat storage, so portion size is **extremely** important. Type of carbohydrate is also important, you want to keep sugars and refined foods to a minimum and focus more on fruits, vegetables and whole grains.

**Fat** is necessary and has several functions, but we don't need much. There are different types of fats, but they are all equal in calories/gram. Many foods that you wouldn't expect are loaded with fat, read labels to check fat content. Obvious fats are oil, butter, margarine, most gravies, regular fat dairy products, salad dressings. Cheese, nuts, many snack foods and meats have fat in them.

There should be no forbidden foods, and no mandatory foods. Remember – this is for life, it has to be realistic. Everything in moderation, with a daily intake of about 50-55% carb., 25% protein, and 20% fat.