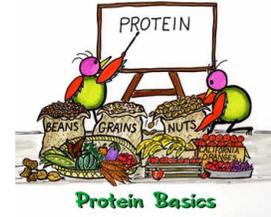


## OPTIONS CENTER NUTRITION TOPIC



### Proteins

Protein is an essential component in a balanced diet for several reasons. The first is that, like dietary fat it has a stabilizing effect on blood sugar, thereby giving you long-term, steady energy. Secondly, protein is important because one of its most specific functions is to stimulate the production of the pancreatic hormone glucagon. Glucagon's role is opposite to that of insulin in that it helps to mobilize stored fat for use as a fuel source.

#### What Are Some Sources of Protein?

What this basically means is that by eating lean, complete protein in the form of eggs, fish, turkey, beef, eggs, whey, and perhaps soy, we will lose weight through the burning of body fat for energy.

Vegetarians could select whey, eggs, and soy protein powder as primary protein sources. It is noteworthy that other sources of vegetable-based proteins like beans and legumes are also high sources of carbohydrate, *which in excess can offset the proper nutrient balance of protein and carbohydrate.*

#### What Are the Functions of Protein?

Of the three kinds of nutrients, both carbohydrates and fats are involved in the energy process. Proteins have an entirely different function. In the form of their building blocks (amino acids) they are used to maintain and replace muscles, body organs, blood, connective tissue, and skin.

Protein is composed of 22 different types of amino acids. Nine of these are considered essential and must be supplied by the diet because the body cannot manufacture them on its own. We need a lot of protein to develop as infants and children. The manufacture of hormones and enzymes, healing of wounds, growth of hair and nails, and countless other biological processes are dependent on protein. The antibodies in our immune systems are protein. Nutrients and minerals are transported in and out of cells by amino acids. Because proteins are too large to pass through the walls of blood vessels, they can create osmotic pressure, drawing water toward them and thereby maintaining the water balance of the body.

Proteins provide four calories per gram. They can even be burned for energy, but this is not the most desirable or most effective way to generate energy. Except for pure fat and simple sugars, all foods contain some proteins. However, it is the complete proteins with high biological value (eggs, for example) that provide all of the essential amino acids.

Source: *The 40-30-30 Phenomenon*  
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