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### **Protein – The Kingpin in the Triad of Foods**

The most common problem to resolve initially is eating regular meals with balanced proteins, fats and carbohydrates. This article will focus on protein because, after water, the body is mostly protein.

Trillions of cells die every day which must be replaced to maintain normal body functions. For example, the entire inner mucosal cell lining of the intestine is replaced every 3-4 days in a healthy GI tract. The body does not recycle the proteins from degenerating cells. It is common to see animals with degenerative diseases lose muscle mass when fed insufficient or low quality protein diets

There are over 50,000 different proteins in the body. Enzymes are proteins and every cell has many enzymatic reactions going on at all times. Collagen protein makes up 40 % of bone. Proteins carry nutrients in the blood such as the apoproteins which transport cholesterol. So blood cholesterol levels are lowest if the required essential amino acids are eaten in the correct amounts. The body uses protein for energy needs when fats and carbohydrates are insufficient. Balance is very important.

Protein manufacture requires the consumption of eight essential amino acids which the body cannot manufacture. Over 50% of most proteins are made of these essential amino acids. A COMPLETE protein contains ALL of these amino acids – found in animal meats, fish, eggs and cheese.

ALL of the essential amino acids must be present at each meal so the body can create utilizable proteins. Protein cannot be stored like fat so we need adequate protein every day of the week for optimum nutrition. Meats, fish, eggs and cheese are not made solely of protein. For example, 30 grams of a meat may only have 10 grams of protein.

What about protein powders? Any process using temperatures above 160 degrees F denatures proteins. Whey protein comes from the cheese making industry which means the milk was pasteurized (heated to above 160 degrees) and is then subjected to structurally-disrupting processing methods.

Vitamin A is required to utilize protein. Protein consumed in the absence of fat (which contains vitamin A) depletes vitamin A stores in the liver. So this is just one reason home prepared diets need whole food vitamins added to each meal. An important fact to remember: the protein in each meal needs to be balanced with fats and carbohydrates or the protein will be used for energy needs instead of for cell replacement, enzymatic processes and other protein requirements of the body.

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