**PROTEINS**

Proteins have multiple functions:

1. Build and repair body tissues
2. Maintain cell growth in the formation of new body tissues. This is especially important if the body is growing rapidly, injured or under stress.
3. Aid in the formation of enzymes, some hormones and antibodies
4. Provide as energy if sufficient carbohydrates and fats are not supplied by the diet.

Individuals must supply themselves with fresh protein daily, since proteins are constantly needed to replace the wear and tear of the tissues and keep up the protein concentration in the blood serum. Protein can take the place of some fat and carbohydrates because it can be broken down and used an energy. However, fats and carbohydrates cannot serve in place of the body’s need for protein because they do not build and repair body tissue. That is why the minimum amount of protein, from a good source, must be consumed daily.

The best animal sources of protein for optimum health are milk, eggs, cheese, and meat. It is NOT necessary, however, to devour pounds of steak, dozens of eggs or gallons of milk daily for that purpose. In fact, excessive amounts of these foods may be stored as fat and do more harm than good.

Grains containing the germ, like Quinoa, are also good sources of completed protein. Plant sources proteins, such as soybeans, which makes tofu, and certain nuts are complete proteins as well.

AMINO ACIDS are the chemical building blocks that make up proteins. There are 22 different kinds of amino acids; 9 of them are essential to human health and nutrition, they are called Essential Amino Acids. These essential amino acids cannot be produced by the body.
A food that has all of the essential amino acids an individual needs is called a COMPLETE PROTEIN. Complete proteins support growth and normal maintenance of body tissues. All animal products are classified as complete proteins.

Proteins from plants that do not have all the essential amino acids. They are called INCOMPLETE PROTEINS. Incomplete proteins lack one or more of the essential amino acids and will neither support growth nor provide normal maintenance of body tissues. Good sources include grains/cereals, dried beans, nuts, seeds, peas, and rice.

It is important to have a variety of foods to make certain the body gets all of the essential amino acids. There are various ways to make proteins complete. By combining incomplete proteins we form complimentary proteins. Some examples include:

1. Combining grains with beans/legumes. Example: Bean burrito with rice
2. Combine grains with nuts. Example: Peanut butter and Jelly Sandwich



VEGETARIANS are people who have chosen to not eat all, or some of their proteins from animal sources. All vegetarians eat plant proteins, including Vegans. Those who are Lacto-vegetarians will consume or eat proteins that come from milk, as lacto means milk. This includes foods such as cheese, yogurt, chocolate milk, etc. Ovo-vegetarians will eat foods that contain eggs, as ovo means egg. Lacto-Ovo vegetarians will consume foods that contain both milk, and egg products. Vegans, however, will only eat proteins that come from plant sources. Because they do not consume animal proteins of any kind, it vitally important that they be careful in what they eat so they can get the complete proteins their bodies need to build and repair cells.