

Nutrition

Carbohydrates, fat, protein, vitamins, minerals and water are the six major classes of nutrients. These nutrients are chemical substances obtained from foods during digestion. They work together to supply swimmers with energy, help build and maintain body cells, and regulate body processes. Energy is measured in calories and is supplied by carbohydrates (carbo's), fat and protein. They are the energy or fuel source for your body.

Carbohydrates

Swimmers get most of the energy for their workouts and performance from carbo's. Certain foods such as bread, cereals, pasta, fruits and vegetables are excellent sources of carbo's. These foods are the primary source of energy used in swimmers.

Fat

Fat is also an energy source for swimmers. But it takes at least 20 minutes from the time athletes start to exercise until enough fat is available to be of much help during exercise. Cakes, pies, French fries, and pastries are foods that are high in fat. Swimmers have no problems in consuming fatty foods. As a matter of fact, they usually consume too much fat and as result don't eat enough carbo's. A gram of Fat has 9 calories in it so watch your fat intake!

Protein

Protein, found through out the body, is necessary to build all body cells. Without protein your body won't be able to build muscle or maintain those that you have. It is possible to use protein to energy; however, it is one of its least important functions in the body. Chicken, fish, beef and pork as well as some dairy products and beans and nuts supply the majority of the protein in many swimmer's diet. Only during starvation or extreme malnutrition does the body use protein as a source of fuel.

How much carbohydrates, fat and protein so swimmers need?

It has been clearly shown that swimmers in training need more calories and these extra calories should be coming from foods that are high in carbohydrates. A swimmer's diet should contain an energy nutrient balance that includes:

15% Protein	10%-15% Fat	70%-75% Carbs	for sprinters
15% Protein	15%-25% Fat	60%-70% Carbs	for distance

Vitamins

Vitamins help control the growth of all body tissue. They are essential for the release of energy in the body. The body cannot make most vitamins, therefore, you must supply these vitamins to your body in what you eat and drink. Vitamins are widely distributed in the foods that make up the typical diet. Most swimmers can obtain all essential vitamins they need by eating a wide variety of foods that include meat, dairy products, vegetables and grain products.

Minerals

Like vitamins, minerals are involved in an endless number of jobs in the body. The major functions of minerals are building cells and controlling body processes. Important minerals include Calcium, iodine, iron and phosphorous.

Calories

A calorie is a unit used to express the heat or energy value of food. Energy or the fuel for work comes from conversion of the body energy stores. The caloric level of the swimmer's diet needs to be adjusted to energy demand or undesirable weight gain or loss occurs. For every gram of Protein and Carbohydrates your body gets 4 calories and a gram of Fat equals 9 calories.

Below is the Food Guide Pyramid. If a swimmer follows the guide, they will gain all the vitamins, minerals, carbohydrates, protein and fat needed. There may be a need to increase the basic food group allowances depending on the amount of activities the swimmer is involved in.

