

Nutrition Basics

Nutrition influences performance. Athletes need these nutrients in their diets:

Carbohydrates - The primary energy source. 50-60 percent of a daily diet should consist of bread, cereal, rice, pasta, potatoes, etc. Simple carbohydrates are high in calories but empty in nutritional value - sugar, candy, syrup, etc. Avoid these.

Fats - The secondary energy source. 20-30 percent of the daily diet should come from primarily polyunsaturated (vegetable) sources.

Protein - Repairs and replaces cells and helps in regulating blood fluids 10-20 percent of the daily diet should come from lean meat, fish, poultry, eggs, and dairy products.

Vitamins - Regulate growth and development and should come from a well-balanced diet. Vitamins do not give you energy; they help the body change carbohydrates, fat and protein into energy and healthy tissue.

Minerals - Do the same thing as vitamins by regulating fluid exchange and should come from a well-balanced diet.

Water - Moves things around in the body. Water is used in digestion, removes waste and transports nutrients, and is the best sports drink. Athletes need eight glasses of fluid a day, at least four of them being water.

An ample supply each day of these nutrients along with adequate rest is essential to becoming a better athlete.

Water needs to be available before, during and after training and competition.

Hydration

During exercise the body loses water primarily through sweat, even in the cold weather or in water. The body has several mechanisms to protect itself from the negative effects of dehydration, but thirst does not occur until the person is already dehydrated! As minimal a loss as 4% of body weight (4 lbs in a 100 lb. Person) can seriously affect performance.

The GOAL is to keep the athlete hydrated, and not allow him/her to become dehydrated. The easiest way is to create a routine, simple system that all your athletes follow:

Night before practice or event	DRINK A GLASS OF WATER (8oz)
4 hours before event	DRINK A GLASS OF WATER (8oz)
15 minutes before event	DRINK ½ GLASS OF WATER
During event < 1 hour	ONE WATER BREAK
During event > 1 hour	DRINK ½ GLASS EVERY 20 MINS.
After event	DRINK A GLASS OF WATER EVERY 3 HOURS UNTIL THE NEXT DAY

- ✓ Another simple method of monitoring fluid loss is the BEFORE and AFTER WEIGH IN. Weigh each athlete before and after practice to determine how much fluid loss occurred. Record on a wall chart. The athlete must be within 1 lb. of the previous days' weight in order to have successfully replaced all the loss of fluids from sweat.

- ✓ Athletes should not be instructed to 'drink as much water as they want'. Several serious medical conditions can occur from too much water.
- ✓ If you are practicing in warm environments, you may need to increase the frequency of water breaks.

The athlete can hydrate with several types of liquids: water, carbohydrate drinks, Or a mixture of 1/3 fruit juice and 2/3 water. The best replacement for MOST EVENTS is plain water. A carbohydrate drink like PowerAde, or a mixture of Fruit juice and water is best used when the activity is of LONGER DURATION THAN ONE HOUR. Fluids should be available at the event in a cooler with paper cups. Cool water is more rapidly absorbed by the body.

Pre-game Meal

The goal of the pre-game meal is to provide the fuel needed for the activity. This meal should be digested before the activity occurs so there is no competition for circulation between the gut and the muscles.

The pre-game meal should be composed of readily digestible foods that are high in carbohydrate, preferably complex carbohydrates (pasta, bread, jam) that release energy over a longer period of time. This meal should also be low in fats (peanut butter, butter/margarine, >1% milk), as fat takes a longer period to break down. The pre-game meal should be eaten 2-3 hours before an event. If this time is not available, several smaller meals can be eaten or the athlete can take their meal in a liquid form like low-fat Ensure or Accel.

During event Supplementation

Besides hydration, supplementation is not needed for events that last less than 1 hour. For events that have a duration of more than 1 hour of continuous activity, carbohydrate drinks or fruit will supply the needed energy for continued effort.

Post-game Meal

Food with readily available carbohydrates (fruit, carbo drink, granola bars) should be eaten in small amounts immediately following exercise to replenish energy. Throughout the remainder of the day meals should contain 65% complex carbohydrates to replenish the muscle stores of glycogen.