



Nutrition for Student-Athletes

Proper nutrition and hydration are essential for meeting the athletes' high energy needs and for achieving optimal performance. Athletes need enough fuel to power their bodies (both muscles and mind) for an entire practice or game. Eating the right foods helps to minimize muscle fatigue, which will in turn help increase performance levels and decrease athletes' risk of injury. In addition, proper nutrition allows the body to recover and heal.

Energy Sources

Caloric needs vary depending upon the individual and the intensity and duration of competition. Calories come from 3 main food sources, including Carbohydrates, Fats and Proteins. The ratio of calories per gram of food for carbohydrates, protein and fat is 4:4:9, respectively.

Carbohydrates are the primary source of energy for any athlete. Once consumed, carbohydrates can either be readily available in the blood as glucose, or stored as glycogen. Simple carbohydrates provide immediate energy, while complex carbohydrates are used throughout the day.

Approximately **60-65%** of an athlete's diet should come from carbohydrates. Good sources of carbohydrates include breads and grains, starchy vegetables, whole grain and bran cereals, fruits, low-fat dairy products and snacks including popcorn, newtons, pretzels and sports medicine approved sports or energy bars (depending on NCAA restrictions).

Proteins are important to the body structurally (such as in building muscle), but are inefficiently used as a source of energy. Protein is essential to helping the body build and repair new tissue.

Approximately **12-15 %** of an athlete's diet should come from protein. Good sources of Protein include white meat, fish, chicken, turkey, low-fat dairy (including cheese and milk), low-fat yogurt, trimmed steak, nuts, eggs and soy products.

	Athlete	Athlete
Weight	140 pounds	160 pounds
Protein Need	76 grams of protein	98 grams of protein
Sources of Protein	7 oz piece of meat	9 oz piece of meat
	2 – 8oz glasses of milk	2 – 8 oz glasses of milk
	Grains	Grains
	2 cups of veggies	2 cups of veggies

*These 4 sources of PROTEIN will allow you to reach your protein requirements for the day.

Fats are used as a long term energy source. Fats are essential to maintaining many body functions. There are healthy fats (unsaturated fats = polyunsaturated and monounsaturated fats) and “unhealthy” fats (saturated fats or hydrogenised fats). “Unhealthy” fats usually come from animal sources including prime rib, wings, ribs, as well as cheese.

Approximately **20-30 %** of an athlete's diet should come from fat sources. Healthy fats include unsaturated fats (plant sources) such as fats from canola oil, olive oil, nuts, as well as animal sources such as fish.



Fueling the Student-Athlete for Activity

Pre-Activity Meals:

Pre-activity meals should be eaten approximately 4 hours prior to activity. This allows plenty of time for the food to digest. Meals will vary by individual as well as by size and content of meal.

Night Before: High carbohydrate snack

Ex: Apples, oranges, apple juice, pineapple juice, non-fat yogurt, High-fiber breakfast cereal, low-fat ice-cream, oatmeal bars, newtons, pretzels, cereal multigrain bars.

Breakfast: Large breakfast of mostly whole grain carbohydrates. oatmeal, toast, cereal, bagels. Stay away from high fat foods such as ham and bacon. Include healthy sources of protein, such as peanut butter, or egg whites.

Ex: Pancakes, waffles (w/ syrup), wheat toast and peanut butter, fruit, low-fat milk, Bran cereals, low-fat yogurt, eggs, oatmeal, toast, cereal, bagels.

Lunch: Hearty, high carbohydrate lunch. Include a good source of lean protein.

Ex: Pasta (Spaghetti, Linguine, Macaroni), Veggies (Beans, Green peas, Lentils), Chicken, turkey, or fish.

Snack if Needed: Light meal/high carbohydrate snack about 2 hours before activity

Ex: half of a bagel, bagel chips, fruit bars, power bars, bananas, fruit roll up, cheerios, pretzels, flat breads, wheat thins, graham crackers, soft pretzels, wheat thins, granola with fruit, sports drinks.

After Activity: **Eat high glycemic foods (high starch/sugar) to replace energy**, within 1-2 hours of activity. Post activity meal should include a **good source of carbohydrates to replace energy** stores and a good source of lean protein to help repair muscle breakdown from activity.

Salty foods to replace sodium lost in sweat (pickles/olives/canned food items).

Replace sweat loss by drinking sports drinks and water.

16 oz of low fat chocolate milk drink is a great jump start with carbohydrates and hydration in your system.

Hydration: Replace 1 pound of loss with 16-20 oz of fluids (water/sports drinks)

Drink 6-10oz of fluid every 15-20 minutes during activity.

DO NOT WAIT until you get thirsty to drink – you are already dehydrated.

Foods to Avoid: Before: “New” foods, spicy, “greasy,” fried, caffeine

After: High protein, high fat foods

Please refer to our nutrition website on www.lehighsports.com (Username = *Lehigh*, Password = *mountainhawk*)