



Thornton High School Track & Field

Nutrition & Health

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## 7<sup>th</sup> Rule of thumb: Controllable and Uncontrollable

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- You can control how much muscle and fat you lose, maintain, and or gain. You can also control your energy levels, performance level, ability to heal and rebuild. Allow your body to work as effectively and efficiently as possible by putting forth effort to be 100% in all of the following 7 controllable categories. The uncontrollable areas are those we cannot control and have no reason to feed those areas any energy.

### **Controllable**

- 1). Water - Drink at least 1 gallon of water per day, 1oz per lb of body weight per day, 128oz in a gallon.
- 2). Nutrition - Eat 5-6 meals per day.
- 3). Sleep - Sleep at least 7 hours per night
- 4). Cardio - at least 4x per week
- 5). Weight & Resistance Training – in season 4x per week, in season 2-3x per week
- 6). Recovery - Stretch, ice and heat and strains, massage, foam roll & lacrosse ball work is a must!
- 7). Neck Up - Mental, Emotional, Stress. Keep all of these in check. Stay positive, stay focused, and stay stress free.

### **Uncontrollable**

- 1). Genetics – You are what you are, your body is the only one you have, so appreciate it and love it for all that it is.
- 2). Past History – You can't go back and change the past. You can only focus on the present, so that your future will be amazing.

## Optimal Dietary Intake Guide

This write up provides general guidelines to help optimize dietary intake for sports competitors. Dietary intake requirements can vary depending upon an individual's energy expenditure, metabolism, state of health, etc.

Now more than ever, athletes need accurate sports nutrition information. Optimal nutrition is an integral part of peak performance while an inadequate diet and lack of fuel can limit an athlete's potential for maximum performance.

Unfortunately, there is much misinformation available regarding a proper diet for athletes. In the quest for success, many athletes will try any dietary regimen or nutritional supplementation promising a new level of physical performance. However, most often an evaluation and modification of current dietary intake is needed to help maximize peak performance.

The human body must be supplied continuously with energy to perform its many complex functions. As an athlete's training and competition level increases, the body's energy demands also increase. Several energy systems in the body can provide athletes with fuel as long as they are consuming the proper foods. One energy system relies totally on carbohydrates while another uses carbohydrates as well as fats. When an athlete works near or at maximal intensities, carbohydrates are the prime fuel the body can use. During prolonged exercise such as cycling, triathlons, and long-distance swimming, the amounts of fat and carbohydrate used may rise and fall depending upon:

- Duration and intensity of the exercise
- An individual's fitness level
- Food and drink consumed prior to and during the exercise

## Carbohydrates – The Master Fuel

A diet rich in carbohydrates increases endurance performance because of the extra store of carbohydrates in the muscles and liver called glycogen. Work completed in the early 1980's by David Costill at Ball State University showed that if athletes did not consume a diet high in carbohydrates on a daily basis, they would experience chronic fatigue and poor performance. It is well documented that endurance athletes need to replenish carbohydrate stores in the body, especially during periods of intense training. Consuming carbohydrates during workouts lasting over one hour can also benefit performance and delay onset of fatigue. Several recent studies have shown that athletes who participate in stop-and-go sports, such as basketball and soccer, may also need to focus on consuming more carbohydrates. This is not surprising since it is well-known that carbohydrates, when compared to protein and dietary fat, are the most efficiently broken-down and metabolized form of energy for the body. Athletes doing stop-and-go activities were



found to have better speeds and to delay fatigue when consuming a higher carbohydrate diet.

### **Recommended Intake of Carbohydrates**

*Depending upon* the training routine, athletes need to consume at least 50 percent, but ideally 60-70 percent of their total calories from carbohydrates. This percentage is only a guideline for estimating carbohydrate needs. Depending upon the length of training sessions, an athlete's carbohydrate intake should be between 2.5-6.0 grams per pound of body weight, with longer training times requiring the higher number of grams.

## **Carbohydrate Intake Before, During, and After Exercise**

### **Before exercise:**

The pre-exercise or pre-training meal serves two purposes:

- It keeps the athlete from feeling hungry before and during exercise
- It maintains optimal levels of energy for the exercising muscles.

Carbohydrate intake before exercise can help to restore sub-optimal glycogen stores, which is critical for prolonged periods of exercise. While allowing for personal preferences and psychological factors, the pre-event meal should be high in carbohydrates, non-greasy, and readily digestible. Fatty foods should be limited as they delay the emptying time of the stomach and take longer to digest. The following are guidelines for the pre-event meal:

- It should be eaten 3-4 hours before an event.
- The meal should provide 150-350 grams of carbohydrates (1.5 grams per pound of body weight).
- To avoid stomach upset, the carbohydrate content of meals should be reduced the closer the meals are to the event.
- Adding small amounts of protein can aid in regulating energy levels by slowing down carbohydrate absorption, delivering the carbohydrates to the working muscles at a more consistent rate over time.
- Pay attention to salty cravings. If competing in hot/humid climates make sure to replace electrolyte losses with salty snack foods, such as pretzels or sport drinks with added sodium.

### **Eating at all-day events:**

It is important that athletes eat after competing to make sure that they will have enough energy in the muscles for the next race or competition, whether it be in the same day or the following days. The same dietary intake principles used to plan the pre-exercise meal can also apply to foods eaten at all-day events. If an athlete races at 10:00 a.m. and again after two hours, foods that are high in protein and fat will more than likely still be in the stomach potentially causing stomach or gastrointestinal (GI) distress. The following guidelines have been recommended to help athletes make wise food choices at all-day events.

### **One hour or less between events or heats:**

- Stick with carbohydrates that are in liquid form, such as juice.
- If something solid needs to be eaten, try fruits like oranges, watermelon, cantaloupe, peaches, pears or bananas.

These foods consist of mostly carbohydrates and water. They are digested very fast and therefore, will not cause as much of a problem with stomach cramping or GI distress. Another key point to making food choices with limited time between events is limiting the quantity of the food eaten. The more an athlete eats, the longer it will take to digest, especially with any pre-competition nerves or stress.

### **Two to three hours between events or heats:**

- Solid foods in the form of carbohydrates can be eaten, as there is enough time to digest them before competition.
- Try eating bagels, hot or cold cereal with nonfat milk, or english muffins along with fruit like bananas, apples, oranges, peaches, or pears.
- Be sure to drink plenty of fluids, like a fluid replacement drink, for hydration, electrolyte replacement, and restoration of glycogen stores.

### **Four or more hours between events or heats:**

- With four or more hours between heats or events, an athlete may want a meal, which should be composed primarily of carbohydrates. The following meal examples for this situation are appropriate:
- A turkey sandwich on two slices of whole wheat bread, low-fat yogurt with fruit, and a fluid replacement drink; or
- Spaghetti with lean meatballs, bread, salad with low-fat dressing, and a fluid replacement drink.
- If there is a certain meal pattern before competition that an athlete thinks is a winning combination, then they should stick to it. Athletes who make food choices at concession stands need to know how to make the best choices.
- Most concession stands are filled with high-fat, high-calorie foods that are not designed to maximize performance. It is always wiser for athletes to pack a cooler from home with winning combination than to rely on the food at a concession stand.

### **During exercise:**

Consuming carbohydrates during exercise lasting longer than 45 minutes ensures that the muscles require adequate amounts of energy, especially during the later stages of the competition or workout. This has also been found to improve performance. The form of carbohydrates consumed does matter. Some athletes prefer to use a fluid replacement drink, whereas others prefer to eat solid or gel forms of carbohydrates. Use the following guidelines when consuming fluid replacement drinks with carbohydrates:



- Choose drinks that have a carbohydrate concentration between 6-8 percent (g/ml) these should be consumed in 7-10 fl. oz. amounts every 15-20 minutes Try drinking in gulps not sips.
- It is unlikely that a carbohydrate concentration of less than 5 percent is enough to help performance.
- Water is needed to aid in absorption of the carbohydrate. Drinks with a concentration greater than 10 percent are often associated with abdominal cramps, nausea, and diarrhea

Note: Fluid replacement drinks should not be confused with “energy” drinks. Energy drinks typically contain one or more stimulants.

### **After Exercise:**

Delaying carbohydrate intake after exercise will hinder muscle glycogen restoration and impair the ability of the muscles to recover. There are several research studies that show that consuming carbohydrates immediately after exercise is beneficial. Other points about post-exercise carbohydrate consumption are that:

- Exogenous (ingested) carbohydrate intake promotes the muscles to take up more glycogen, thus refueling the athlete faster. This is important to minimize fatigue associated with repeated days of heavy training, tournament play, or in competition in which several races or games are played over one or more days.
- The recommendation is 0.65 grams of carbohydrates per pound of body weight consumed within 30 minutes after exercise. This should be followed by an additional carbohydrate meal two hours later.
- The first feeding can be a high carbohydrate beverage, followed by eating a high carbohydrate meal.

## Carbohydrates

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- **Carbs to Focus On:**
  - Potatoes, sweet, white, red
  - Brown rice
  - Quinoa
  - Oatmeal
  - Cream of rice
  - Rice cakes
  - Whole wheat pasta
  - Amaranth
  - Barley
  - Whole grain breads, bagels, muffins
  - Legums
  - Lentils
  - Breakfast cereals

# Fruits

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- **Fruits to Focus On:**
- Grapefruit
- Bananas
- Apples & oranges
- Rasins & grapes
- Berries, blue, black and straw
- Apricots, peaches

# Greens

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- **Greens to Focus On:**
- Broccoli
- Spinach
- Asparagus
- Arugula
- Cauliflower
- Mushrooms
- Swiss Chard
- Sprouts –Brussel or Alfalfa
- Garlic
- Kale
- Zucchini
- Onion
- Bell Peppers
- Cucumber

- **Side Note For Greens:**

- Measure by the cup usually... a handful of spinach is roughly a cup...6-8 asparagus spears would be about a cup...
- Have variety to your greens
- Include fresh vegetables in your diet as they add fiber and vitamins to your diet. Vegetables retain more vitamins if eaten raw, blanched or steamed.
- If you are still hungry after a meal, add an additional ½ cup of greens to your meal to help you feel fuller.
- Greens keep the digestive system flowing smoothly & effectively.
- If you are holding extra water, eat more asparagus.
- If you are having trouble staying digestively regularly with going poo, then add more spinach.



- Add variety to your greens, try new things and use them to add life to your meals. **YOU MUST EAT GREENS AND LOTS OF THEM.**

## **Protein's Role as a Team Player**

Protein has always been a particularly popular nutrient with athletes because of its role in building and maintaining muscles. Indeed, athletes need to consume a wide variety of high quality protein foods in their diets. However, while protein is necessary, it is not the primary fuel for working muscles and more protein than the body can use is not going to give athletes larger and stronger muscles. While research shows that protein requirements are higher for athletes to aid in muscle repair and growth, most athletes are already consuming more protein than the body can process. Use the following formulas as guidelines to ensure proper amounts of protein are included in your dietary intake.

### **Building Body Mass**

Many athletes want to add more bulk to their bodies in the form of lean muscle. Many supplement products claim to build muscles. Athletes should take special caution when considering supplementation. Due to the limited regulations of the dietary supplement industry, there is risk of products being contaminated with prohibited substances with or without the manufacturer knowing. Athletes should take special caution when considering supplementation. There is no guarantee that the product contents match with those listed on the label. Taking a lot of extra protein either from supplements or food does not guarantee bigger muscles. If it did, athletes could spend time lounging instead of lifting to build muscles.

A healthier regimen for building muscles would include:

- Following a strength training program that challenges muscles.
- Adding 500 to 1,000 more calories each day to current dietary intake, to allow the body to use protein already present in the diet for muscle growth and not be broken down to fuel activity.
- Eating foods that are both high in carbohydrates and proteins like grilled chicken sandwiches, peanut butter sandwiches, cheese, and crackers.
- Choosing low-fat sources of both carbohydrates and protein.
- Eating several small meals throughout the day to support training and muscle-building.

### **Protein After Exercise**

The body's ability to recover from games, practices, or intense workouts requires adequate rest and proper nutrition. An important component of the recovery process is consuming carbohydrates shortly after exercise, which facilitates the restoration of muscle glycogen (stored carbohydrate energy). Some believe that a mixture of carbohydrates and protein will speed up this process, but that contention is still under debate, with research available to support both theories.

Keep in mind that food is fuel and athletes should not come to practice or games without having had enough food to support the energy requirements for their sport. To keep athletes properly fueled and have protein needs met, use the EAT guidelines: EAT BREAKFAST. It is the best way to start the day well fueled. Include foods that contain carbohydrates and protein such as nonfat milk, yogurt, or an egg. ADD CARBOHYDRATES AND PROTEIN TO POST-EXERCISE MEALS. Some energy bars provide carbohydrates to replenish the muscle glycogen stores and protein to help build and repair muscles. TOSS THE SUPPLEMENTS. Athletes should rely on protein from food sources first, instead of supplements. This helps ensure that diets are balanced for health and performance. In addition to meat sources of protein, dairy products, nuts, and seeds are all rich sources of protein and can easily be added to any meal or snack.

## Protein Foods

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- **Red Meat Options:**
  - Filet, Skirt Steak, Strip Steak, Sirloin, Tenderloin, Tip Steak
  
- **Fish Types to Focus On:**
  - Halibut, Trout, Salmon, Cod, Flounder, Orange Roughy, Tilapia
  
- **Poultry Types to Focus On:**
  - Chicken (grilled, white breast, no fat, no skin)
  - Turkey (grilled breast, or lean ground turkey)
  - Eggs, egg whites
  
- **Vegan & Vegetarian Protein Types to Focus On:**
  - Seitan
    - 3oz of seitan is about 21g of protein
    - Wheat gluten protein
  - Tempeh
    - 1 cup of tempeh is about 31g of protein
    - Fermented soy, soy bean protein

## Dietary Fat

Fat is the primary fuel for light to moderate intensity exercise. Although fat is a valuable metabolic fuel for muscles during endurance exercise and performs many important functions in the body, no attempt should be made to consume more fat. With that said, some studies have shown, athletes that consume high-fat diets typically consume fewer calories from carbohydrates.



The more efficient an athlete becomes in their respective sport, the easier it is for them to operate at a lower intensity while maintaining the same level of work or maintaining the same speed (metabolic efficiency). At this lower intensity, stored fat in the muscle can be used as a fuel source. The average 150lbs athlete carries 1,500-2,000 calories in the form of carbohydrates but up to 80,000 calories in the form of fat. The old saying, "Fat burns in a carbohydrate flame" holds true, as fat cannot be used without the presence of carbohydrates. Thus, for efficient endurance and ultra-endurance athletes, carbohydrates are still important, but stored fats help them reach the finish line as well.

A recent study looked at muscle biopsies of elite rowers who consumed either 40 percent of their calories from fat or 20 percent of their calories from fat, and also compared the power output and speed of the rowers. The following is a summary of the results:

- The rowers who consumed the low-fat, high-carbohydrate diet had more muscle glycogen.
- The rowers on the high-fat, low-carbohydrate diet had moderate levels of muscle glycogen but were still able to complete the workout sets.
- When it came to power output and faster speeds, those rowers who consumed the low-fat, high-carbohydrate diets had significantly higher power and speed.

This has significant implications for athletes in muscular endurance sports that require a burst of power, such as rowing, swimming, gymnastics, figure skating, judo, boxing, baseball, basketball, or soccer, to have energy generated aerobically.

It is important to recognize that there are many sources of hidden fat in foods. Fat is present, but not separately visible, in:

- Dairy products such as cheese, whole milk, sour cream, and ice cream
- Processed foods such as chips, crackers, granola bars, and french fries
- Other food sources like nuts or avocados

Other more obvious sources of fat are in products like margarine, butter, mayonnaise, salad dressing, oils and meats with marbling or visible fat.

Athletes should consume 20 percent to 30 percent of their calories from fat. Aside from decreasing overall calories, limiting consumption of dietary saturated fat is the first step toward losing excess body fat. Doing so eliminates excess calories, but not nutrients.

Following a low-fat, high-carbohydrate diet is also important for health reasons, because diets high in saturated fat have been associated with cardiovascular disease, obesity, diabetes, and some types of cancer.

## Fats

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- Avocado
- Olive Oil, & olives
- Nuts
  - Almonds, Walnuts, Pecans, Sunflower seeds, Peanuts
- Nut Butters -



Almond, Peanut, Cashew, and Walnut butter

## **Vitamins and Minerals**

Many athletes may turn to vitamin and mineral supplementation due to confusion over the Recommended Daily Allowance (RDA) and the Dietary Reference Intakes (DRI). The RDAs are recommendations suited for 97-98 percent of the population, based on extensive research. DRIs include RDA recommendations but also include Adequate Intakes (AIs) for nutrients that need more research.

Dietary supplements are defined as products containing “dietary ingredients” intended to supplement the diet. These include vitamins, minerals, amino acids, botanicals, herbs, and substances such as enzymes, organ tissues and glandulars, metabolites, and other dietary supplements.

The question that arises is “do most athletes need to take dietary supplements?” The answer to that question generally is no. Athletes have increased energy needs, which allows them more opportunities to obtain the nutrients they need through a balanced diet composed of a variety of natural foods. Most sports medicine professionals agree that unless an individual has a nutrient deficiency, supplementation may not improve athletic performance. The athlete who takes a simple one-a-day type of vitamin or mineral that does not exceed the nutrient levels of the RDA/DRI is probably not doing any harm. An athlete should consult with his or her physician, or other health care professional, to determine whether vitamin and mineral supplementation is needed to maintain optimal health.

An athlete who replaces food with supplements can put his or her health at risk. A handful of supplements for breakfast, followed by several tablespoons of assorted products containing trace minerals or powdered protein supplements and herbs throughout the day, will not provide the health benefits and needs found in food.

Natural foods contain a matrix of various nutrients that researchers are continuing to discover and learn more about. Often individual nutrients don't work as effectively when isolated in a pill or supplement form.

Self-prescribed supplement users should heed overdose warnings, and look for symptoms of toxic levels of supplementation, such as diarrhea, skin rashes that do not fade, and unexplained joint pain. Fat soluble vitamins (A, D, E, and K) can be toxic when misused. Unlike water soluble vitamins in which excess amounts are excreted in the urine, fat soluble vitamins are metabolized in body fat and remain in the body.

Remember that more is not always better. The established recommended RDA and DRI for vitamins and minerals are to be used as a guide in determining nutritional needs. These allowances have a large margin of safety built into the recommendations. Even though it has been shown that a severely inadequate intake of certain vitamins and/or minerals can impair performance, it is unusual for an athlete to have such severe nutritional deficiencies. Even marginal deficiencies do not appear to markedly affect the ability to exercise efficiently.

Athletes searching for a competitive edge often look to a supplement or special combination of nutrients to find it. Research has shown, however, that there are no quick-fix supplements for improving sports performance. Consuming a wide variety of foods and staying well hydrated are the basic cornerstones to reaching athletic potential.

## **Fluids and Hydration**

**Fluid replacement** is one of the most important nutritional concerns for an athlete. Approximately 60 percent of body weight is water. As an athlete trains or competes, fluid is lost through the skin through sweat and through the lungs while breathing. If this fluid is not replaced at regular intervals during practice or competition, it can lead to dehydration. A dehydrated athlete has a decreased volume of blood circulating through the body, and consequently:

- The amount of blood pumped with each heart beat decreases
- Exercising muscles do not receive enough oxygen
- Exhaustion sets in and the athlete's performance suffers

Research has repeatedly shown that dehydration, affecting as little as 2 percent of total body weight, can adversely affect athletic performance. For example, if a 150-pound athlete loses 3 pounds during a workout or competition, their ability to perform at peak performance due to dehydration is reduced. Proper fluid replenishment is the key to preventing dehydration and reducing the risk of heat-injury in athletes engaged in training and competition.

### **Preventing Dehydration**

The best way to prevent dehydration is to maintain body fluid levels ("euhydration") by consuming plenty of fluids before, during, and after a workout or competition. Often, athletes do not realize that they are losing body fluids or that they are impacting their performance through dehydration. Athletes who are not sure how much fluid to drink can monitor hydration using two helpful techniques:

- Weighing before and after practice. For every pound lost during the workout, drink three cups of fluid in order to rehydrate the body.
- Checking urine color. Urine that is dark gold in color indicates dehydration. Urine similar in color to pale lemonade or weak tea is a sign of a hydrated athlete.

Many times athletes wait to drink until they are thirsty. Thirst is not an accurate indicator of how much fluid an athlete has lost. Athletes who wait to replenish body fluids until feeling thirsty are already dehydrated. As a matter of fact, most individuals do not become thirsty until more than 2 percent of body weight is lost. Waiting until you are thirsty can affect your performance. When athletes only drink enough to quench their thirst, they may still be dehydrated. For best results, keep a bottle of fluid available when working out and drink as often as desired, ideally every 15-20 minutes.

### **What About Fluid Replacement Drinks?**



It is now believed that fluid replacement drinks containing between 6 and 8 percent glucose or sucrose are absorbed into the body more rapidly than water, but unlike water, can provide energy to the working muscle that water cannot. A growing body of evidence suggests that consumption of a fluid replacement drink containing carbohydrates can delay fatigue and possibly improve performance. It appears that athletes who consume a fluid replacement drink can maintain blood glucose levels at a time when muscle glycogen stores are diminished. This allows carbohydrate utilization and energy production to continue at high rates. Beverages containing more than one kind of sugar (i.e. glucose and fructose) can increase carbohydrate absorption rates because each sugar is absorbed via different channels.

### **How Important are the Electrolytes Provided by the Fluid Replacement Drinks?**

The ingestion of sodium during exercise may help with maintenance or restoration of plasma volume during exercise and recovery. The consumption of fluid replacement drinks containing sodium helps retain water in the body and aids in hydration by increasing the absorption of fluid from the intestines into the muscles. Recent research has suggested that a 6-8 percent carbohydrate sport drink with about 110 mg of sodium per 8 oz. serving empties from the stomach just as fast as plain water.

There has been concern by parents, coaches, and athletes that sports drinks may contain too much sodium. In fact many fluid replacement drinks are low in sodium (refer to Table 5 for examples). An 8 oz. serving of a fluid replacement drink can have a sodium content similar to that of a cup of 2 percent milk. Most Americans consume too much sodium through processed and convenience foods, not through fluid replacement drinks.

### **The Ideal Fluid Replacement**

The ideal fluid replacement beverage is one that tastes good, does not cause GI discomfort or distress when consumed in large volumes, promotes rapid fluid absorption and maintenance of body fluid, and provides energy to working muscles during intense training and competition.

### **Guidelines for Fluid Replacement**

The following guidelines for maintaining body fluid balance, improving performance in the heat, and preventing heat-related illness appear to be prudent based on current scientific knowledge.

- For intense training and long workouts, a fluid replacement drink containing carbohydrates may provide an important source of energy. A 6-8 percent carbohydrate beverage is typically most effective in maintaining fluid balance while supplying the muscles with fuel.
- The fluid consumed during activity should contain a small amount of sodium and electrolytes. The sodium may be beneficial for quicker absorption.
- The beverage should be palatable and taste good.
- The athlete should drink 10-16 ounces of cold fluid about 15-30 minutes before workouts. If the workout is prolonged, add carbohydrates to the beverage at a 6-8 percent concentration.
- Drink 4-8 ounces of cold fluid during exercise at 15-20 minute intervals.
- Start drinking early in the workout because thirst does not develop until 2 percent of body weight has been lost, by which time performance may have begun to decline.



- **Avoid carbonated drinks**, which can cause GI distress and may decrease the volume of fluid consumed.
- **Avoid beverages containing caffeine, alcohol, and those promoted as “energy drinks.”**

If you have never used a fluid replacement drink, don't use it for the first time during a game or on race day. Practice consuming fluids while you train. Use a trial and error approach until you discover the fluids that work well for you.

## **Bottom Line**

**Nutrition** plays a critical role in athletic performance, and athletes, coaches, and parents need to realize that making wise food choices can increase the chances of optimal athletic performance. It is easy for athletes to fall prey to nutrition misinformation and fad diets in the search for a quick fix to improve performance. It is imperative that athletes stay current on accurate nutrition issues as they are ever-changing. By making informed food choices, athletes will have an advantage over those who choose to ignore the role that food plays in human performance.

## **Resources**

[www.acsm.org](http://www.acsm.org) American College of Sports Medicine

[www.eatright.org](http://www.eatright.org) American Dietetic Association

[www.cfsan.fda.gov](http://www.cfsan.fda.gov) Center for Food Safety and Applied Nutrition - U.S. Food and Drug Administration

[www.usda.gov/cnpp](http://www.usda.gov/cnpp) Center for Nutrition Policy and Promotion

[www.healthierus.gov/dietaryguidelines](http://www.healthierus.gov/dietaryguidelines) Dietary Guidelines for Americans, 2005

[www.nutrition.gov](http://www.nutrition.gov) National Agricultural Library, U.S. Department of Agriculture

[www.drugfreesport.com/choices](http://www.drugfreesport.com/choices) National Center for Drug-Free Sport

[www.healthfinder.gov](http://www.healthfinder.gov) National Health Information Center - U.S. Department of Health and Human Services

[www.win.niddk.nih.gov](http://www.win.niddk.nih.gov) National Institutes of Health

[www.nata.org](http://www.nata.org) National Athletic Trainers' Association

[www.usada.org](http://www.usada.org) United States Anti Doping Agency