

# High Performance Nutrition for Track Athletes

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To reach your highest potential as a track athlete, all of your body systems must be perfectly tuned. Nothing is more important to your well-being and ability to perform than good nutrition. The best training in the world will not help you perform at a high level if you do not eat right. Eating the right foods helps you maintain desirable body weight, stay physically fit, and establish optimum nerve-muscle reflexes. Without the right foods, even physical conditioning and expert coaching aren't enough to push you to your best. Good nutrition must be a key part of your training program if you are to succeed.

There is no one "miracle food" or supplement that can supply all of your nutritional needs. Certain foods supply mainly proteins, other foods contain vitamins and minerals, and so on. The key to balancing your diet is to combine different foods so that nutrient deficiencies in some foods are made up by nutrient surpluses in others. **Eating a variety of foods is the secret.**

The nutrients--the proteins, carbohydrates, fats, vitamins, minerals, and water--are teammates that work together to provide good nutrition. Just as each team member carries out different tasks during a game, each nutrient performs specific functions in your body. A lack of just one nutrient is a disadvantage to your body. Your body needs all these nutrients all of the time, so the foods you eat should supply them every day.

Just because you are not hungry does not necessarily mean that your body has all the nutrients it needs. Y

ou can fill up on foods that contain mostly carbohydrates and fats, but your body still has basic needs for proteins, minerals, and vitamins.

**Listed below are the 5 main food groups. As a track athlete you should eat a balanced selection from all five groups. Recommended minimum servings per day are given for each group:**

**Milk, Yogurt, and Cheese Group (3-5 servings daily)** 1 serving is an 8 ounce glass of milk, 8 ounces of yogurt or 1 1/2 ounces of natural, unprocessed cheese.

**Meat, Poultry, Fish, Beans, Eggs, and Nuts Group (3 to 4 servings daily)** 1 serving is 3 ounces of lean, cooked meat, 2 eggs, 1 cup of cooked dry beans, peas, or lentils or 4 tablespoons of peanut butter.

**Vegetable Group (3 to 5 servings daily).** 1 serving is 1/2 cup of cooked vegetables, 1/2 cup of chopped raw vegetables, 1 cup of leafy raw vegetables such as lettuce or spinach, or 1 glass (6 ounces) of juice.

**Fruit Group (3 to 5 servings daily).** 1 serving is 1 whole fruit such as a medium apple, banana, or orange, 1/2 grapefruit, 1 glass (6 ounces) of juice, 1/2 cup (4 ounces) of berries, 1/2 cup (4 ounces) of cooked or canned fruit or 1/4 cup of dried fruit

**Bread, Cereal, Rice, and Pasta (6 to 11 servings daily).** 1 serving is 1 slice of bread, 1/2 hamburger bun or English muffin, one small roll, biscuit, or muffin, 3 to 4 small or 2 large crackers, 1/2 cup cooked cereal, rice, or pasta or 1 ounce ready-to-eat breakfast cereal.

Because of their rapid growth and development and higher levels of physical activity, teen athletes should eat the higher levels of servings recommended from each food group. An active track athlete could easily eat eleven servings of breads/cereals and four to five servings of the other food groups each day. Some athletes may even need more than the maximum servings recommended. Eating the maximum number of servings recommended from all five-food groups provides about 3,000 calories.

**In no instance should you eat less than the minimum servings for any food group.** You need the minimum servings to supply a base level of essential nutrients and calories required for good health. Consuming the minimum servings listed above will supply about 1,600 calories, which is the minimum a teen girl should take in. Teen boys need at least 2,000 calories a day and thus need more than the minimums given.

Athletes need plenty of starchy foods because, along with proper training, these foods cause muscle and liver cells to store glycogen. Glycogen is a vital energy source for most sports. When muscle cells run out of glycogen, muscle fatigue sets in and performance suffers. Foods high in starch include: pastas, spaghetti, noodles, ravioli, beans, rice, potatoes, carrots, peas, corn, sweet potatoes, bread, bagels, muffins, pancakes, waffles and cereals.

Unfortunately, many girl athletes think of starchy foods as "fattening" and cut out breads, cereals, and starchy vegetables. The results are predictable: low glycogen, low energy, and poor performance. The girl athlete who wants top performance must eat starchy food so that she goes into an event with glycogen reserves. Starchy foods are not fattening in themselves. Eating more than the body needs and not exercising is the main cause of obesity. America is currently experiencing an epidemic of overweight kids who eat too much junk food and do not exercise. However, the girl athlete who is training properly shouldn't worry about extra weight from starchy foods.

## **High Energy Foods For Athletes**

**These are some of the best foods you can eat as an athlete, the ones that improve athletic performance. They are of particular importance in your diet. Make sure you include them.**

**Bananas:** The perfect snack-One of the highest sources of potassium.

**Beef:** Great source of zinc, high quality protein, iron and creatine.

**Beans-Legumes:** High in protein and B Vitamins, important for building protein

**Broccoli:** One of the best nutritional foods around. High in Vitamin C, folic acid, calcium, magnesium and iron.

**Brown Rice:** Better for you than white rice.

**Carrots and Carrot Juice:** Most concentrated source of beta-carotene

**Cheese:** Great source of calcium

**Chicken:** Another high quality protein source

**Corn:** High carbohydrate source

**Dried Fruit:** Concentrated sources of energy and good sources of iron

**Fig Bars:** Strong carbohydrate punch and easy to eat

**Grapes:** Good source of boron, important in building strong muscles and bones

**Kiwi:** High in vitamin C

**Lentils:** Good source of protein, complex carbohydrates, and iron.

**Milk:** Absolutely essential for athletes. Great source of vitamin D and calcium. The drink of choice for Marion Jones.

**Oatmeal:** Great source of fiber and carbohydrates.

**Orange Juice:** Vitamin C, potassium and more

**Papaya:** A treasure trove of nutrients

**Pasta:** Loaded with complex carbohydrates

**Potato:** Powerhouse of complex carbohydrates, potassium, Vitamin C and iron

**Salmon:** High protein and rich source of important omega-3 fatty acids

**Strawberries:** Vitamin C and fiber

**Water:** 2 liters a day for athletes is a must!

**Whole Grain Cereals.** Complex carbohydrates. Choose whole grain bread rather than white.

**Yogurt:** Another great source of all-important calcium.

## **Special Nutrient Needs of Athletes:**

**Increased physical activity increases some of your food needs. You require more energy, water, and possibly salt (sodium chloride).** An athletic teenage boy may need 5,000 calories a day, compared to the 3,000 calories required daily by his non-athletic friends. By taking extra servings of foods from all food groups (particularly breads, cereals, vegetables, and fruits), you can fill this increased energy need.

Salt needs can be met by increased use of salt on foods. The use of salt tablets is not recommended. Salt tablets can cause stomach cramps. The tablets hold water in the stomach longer and can actually cause water to be pulled back into the intestinal tract and away from body tissues where the water is needed most.

### **What To Eat Before A Meet:**

Before a meet, your digestive processes may be slowed down by your keyed-up emotional state. To allow for this condition, you should eat an easily digestible, balanced meal no later than three hours before the contest. Avoid foods that contain substantial amounts of fats or oils. Fats are more slowly digested than other nutrients. Trying to compete with a high-fat meal still in your stomach is a losing proposition. Meals high in starches are better because they are digested more rapidly than fats or oils. Make sure that your pre-meet meal is a balanced one containing all food groups.

Some athletes like poached eggs, toast, and juice as a light pre-meet meal. Some prefer breakfast cereal with milk, yogurt, a bagel or toast, and juice. All-day events such as track meets present special problems. Consuming several high-starch mini-meals or snacks, accompanied by ample fluids, is a winning strategy for these situations. Snacks you might consider bringing to the all-day meet include Fig Bars (Allen Johnson's favorite meet snack is Fig Newtons), Powerbars, dried fruit, Granola Bars, bananas, apples, oranges, grapes and other fruit, carrots, peanut butter sandwiches. For the meet, stay away from candy, chips and most of the junk food sold in convenience stores or in the concession stand at the track! Bring your own high-energy snacks! At all costs avoid sugary foods such as candy or honey before a meet. Sweets can cause rapid swings in blood-sugar levels and result in low blood sugar and less energy.

## Keeping Energy Levels Up

Keeping your energy levels up for peak performance isn't easy. It doesn't just happen. High energy levels are the result of good eating and exercise habits. If you don't pay attention to either of these factors, your performance can suffer.

One of the least-recognized nutrition problems of the young athlete is simply not eating enough. Extracurricular activities may make life so busy that you simply don't take the time to eat. After-school practice sessions may be so exhausting that you feel too tired to eat. But you must take the time to eat the right foods. Don't let fatigue caused by poor eating hurt your performance. Another problem of the young athlete is not eating the right kinds of foods--particularly foods high in starch. **Eating a balanced diet that has plenty of starch keeps muscle energy up.**

Participating in sports can drastically increase your food energy needs. Increased physical activity calls for more food calories. Also, when you train, you increase muscle tissue relative to fat tissue, and muscle tissue requires more calories than fat tissue. Going out for sports can easily increase the daily calorie needs of a teen athlete by 2,000 or more. A teenage athlete on a track team may consume 5,000 or more calories daily.

The amount of food you need depends on your age, sex, weight, and activity level. A larger athlete requires more calories than a smaller one because more energy is needed to move more mass over the same distance. You usually burn more calories in a practice session than in actual competition because more total work is usually done during practice. However, the rate at which calories are burned for short periods of time may be greater from short bursts of intense activity during competition. Activity levels vary among sports as well as with the position played in a sport.

The glycogen stores you have available right before an event are the result of how you've eaten and exercised for the past several days. Glycogen stores in the body are increased by rest or light levels of exercise and high levels of carbohydrates (particularly starch) in the diet. Glycogen stores in the body are lowered by high levels of exercise and low levels of starch in the diet. Once glycogen stores are exhausted, it takes at least two days to fully restore them. **Although the pre-meet meal can stabilize blood sugar levels and provide some energy, don't look to the pre-meet meal to provide the bulk of your energy for the meet.** You should eat a nutritious, varied diet containing plenty of starchy foods every day. Give starches particular emphasis two days before the event.

Here are some tips to help you keep your glycogen reserves up--particularly before a track meet:

- Start each day with a good breakfast. Cold cereal, milk, toast, fruit, and/or fruit juice make an easy-to-fix, quick meal that provides plenty of starch.
- Select meals that contain foods from all five-food groups. Our bodies use nutrients more efficiently when they are consumed together. Model your noon meal on one of the Main Meals shown above.
- Use high-energy healthy snacks as another opportunity to power up with starch--and don't forget that snack at bedtime. Cold cereal with milk serves as a quick snack at any time. It can be more than the "breakfast" of champions! And you don't have to stop at one bowlful.
- Give starchy foods particular emphasis the days right before the event by building the main meal around a high-starch entree like spaghetti and meatballs. Make sure the other food groups are also represented.
- Decrease physical activity the day before and the day of the event. Light practices directed by your coach are enough. The day before or the day of the event is not the time to organize a pickup game with your friends. Rest up!
- Drink plenty of fluids--even at mealtimes--to guard against dehydration.

## **AFTER THE MEET**

After the game or practice session, much of the glycogen in your muscle and liver tissue has been used up, and synthesis, or creation, of new muscle protein slows. To promote glycogen recovery, consume nutritious foods and drinks that are high in carbohydrates and protein. When you eat the right foods, your body can replace lost glycogen rapidly, and normal synthesis of new proteins can resume.

Whole foods like cereals, breads, and pastas with a glass of milk are better for total recovery than pure carbohydrate supplements. A mix of whole foods contains proteins, minerals, and vitamins in addition to carbohydrates. You need these other nutrients along with high levels of carbohydrates for a complete, rapid recovery. . Remember, whole foods, such as breads and cereals, when eaten with beverages like milk promote more rapid recovery than pure carbohydrates alone.

To assist in total, rapid recovery, you should consume nutritious foods and drinks as soon as you can tolerate them after an event or workout. Ideally, you should eat food within two hours afterward. However, if you can't tolerate eating that soon, choose what's comfortable for you.

Young athletes often have questions about foods high in fat and sugar, such as candy, soda, and desserts. These foods are called "empty calorie" foods because they're usually high in calories but contain few nutrients. Don't eat many of these foods but they are ok in moderation. Stay away from these foods on meet day. Get your energy from foods that supply ample proteins, vitamins, and minerals as well as calories.

Many athletes mistakenly believe that high-sugar foods will give them quick energy before a game or an event. High-sugar foods, such as candy or honey, should be avoided before a game or an event. Sweets can cause rapid swings in blood sugar, make you feel tired, and decrease performance.

## Hydration For Top Performance

Water lost through sweating is not easily replaced. Low water-intake during strenuous exercise leads to dehydration, which can lead to fatigue, heatstroke, and death. **Replacement water should never be restricted during exercise.** However, if you drink too much water too quickly during increased physical activity, you may become "waterlogged," an unpleasant condition that you may already have experienced. Moderate amounts of cool water taken frequently before, during, and after activity prevent this problem. Six to eight ounces of fluid taken every fifteen to twenty minutes during strenuous activity is about right for most athletes.

There are many different commercial sports drinks available. They contain varying kinds and amounts of sugars and electrolytes. Whether they offer advantages over plain water depends on the situation. Many times, plain water is all that an athlete needs. When activities last an hour or more, however, some sport drinks may offer advantages both for carbohydrate and electrolyte replacement.

Water is a basic necessity for all life. Without it, life can't exist. Even when water is limited, living organisms suffer. You are no exception. For young athletes like yourself, not enough water means you can't do your best. It can even cause serious health problems. Our blood circulates like an ocean within us. The water in blood helps carry nutrients and energy to our body cells. It also carries waste products away from our cells for excretion from our body. Water helps regulate our body temperature, too--an important factor for all of us.

As a young athlete, you have a special need for water. **Remember to drink plenty of fluids, even if you aren't thirsty.** A track athlete in training needs at least 2 liters of water a day!! Keep your fluid levels up! When you participate in a sport like track, you burn a lot of food energy (called calories). Some of that unleashed energy powers muscles. But some of that energy is released as heat. Water keeps you from overheating. Sweating and evaporation from the skin cools you down. However, water is lost in the cooling process. That can be dangerous if the water is not replenished. If you run low on water, your body can overheat, like a car that is low on cooling fluid. Losing just two percent of the body's water can hurt performance. A five percent loss can cause heat exhaustion. A seven percent to ten percent loss can result in heat stroke and death. Dehydration can kill.

Young athletes have a lot of growing to do. New muscle tissue must be made. Bones need to grow rapidly. And with all of the physical activity, some tissues need to be repaired. All of this metabolic activity requires an abundance of nutrients and energy carried to body tissues and waste products carried away. Water allows all of this to happen. Water is vital for your body's growth, repair, and physical activity.

## **Just satisfying thirst is not enough!!**

Thirst is your body's signal that you need to drink water. By the time you feel thirsty, you may have already lost one percent to two percent of your water--and that's enough to hurt performance. But just drinking enough to satisfy your thirst may not supply your body's needs. If you drink only enough to satisfy your thirst, your body may take up to 24 hours to fully rehydrate its cells and regain maximum performance.

When you participate in a sporting event or practice session, follow these guidelines:

- **Don't wait until you are thirsty before drinking water.**
- **Drink more than enough to satisfy your thirst.**
- **Drink more than you think you need before an event or practice to make sure you are fully rehydrated.**

**Conditioned athletes need more water--not less.** The conditioned athlete is able to store and burn more energy in a shorter time. That means your body releases more heat, requires more cooling, loses more water, and needs more water to replenish its stores. Also, you may have increased your sweating response, which means you lose even more water. As an in-shape athlete, you need more water than other people.

When you feel exhausted and hot during a workout or game, drinking large amounts of water very rapidly may cause discomfort or stomach cramps. But that is not a good reason to restrict water. Drinking moderate amounts at frequent intervals is the best strategy during competition or practice. **About one cup (six to eight ounces) of cool water every 15 to 20 minutes during an activity is about right for most athletes.** Some athletes can drink a bit more than this at each interval. Cool water is best and helps absorb body heat. And it empties from the stomach into the intestine at a fast rate, which allows it to be absorbed rapidly into the body.

Most of the weight you lose during an event or training session is water lost through sweat. Of course, you lose some weight when your body burns materials for energy. For example, the glycogen stored in liver and muscle cells is used for energy, which results in some weight loss. Some fat and protein is burned for energy, too, and that results in additional weight loss. However, most of the weight you lose during strenuous physical activity is water lost through perspiration.

**SOURCES:**

**Student Athlete Educational Foundation** [www.chap.com/diet](http://www.chap.com/diet)

**Ultimate Sports Nutrition**, Frederick C. Hatfield, Contemporary Books

**University of Illinois: Sports and Nutrition For Teenage Athletes—A Winning Combination.** <http://www.urbanext.uiuc.edu/hsnut/>

**The Science of Hurdling and Speed** Brent McFarlane, Athletics Candada

About Coach Pantas

A USATF Level 1 hurdles and hurdles coach with the Asheville Lightning since 1993, Coach Pantas is also a sprints/hurdles coach for A.C. Reynolds High School and has had over 90 Conference and State Champions in the hurdles (see his website [Great Hurdlers I Have Coached](#)). His recent success with All-Americans Cade Liverman (photo) and Kris Fant is highlighted on [Hurdles First](#).



“Anybody who’s into coaching to fill their own egocentric needs is in it for the wrong reasons.”  
-Lee Pantas, Coach at Asheville-Reynolds High School in Asheville, NC