Performance-Enhancing Sports Supplements: Information for Parents

Young athletes can improve their sports performance by focusing on the basics: fluids, calories, training, conditioning, and rest. Shortcuts, such as the use of performance-enhancing substances and supplements (/English/healthy-living/nutrition/Pages/Nutrition-and-Supplement-Use.aspx), are of little benefit and can be dangerous.



Learn more about performance-enhancing substances and supplements for athletes and healthier ways to boost athletic performance.

Performance-enhancing supplements

Parents and athletes need to be aware that dietary supplements are not regulated by the U.S. Food and Drug Administration (FDA). Studies looking at the purity of supplements find high rates of contamination with possibly harmful substances. Also, many products do not contain the ingredients listed on the label.

Protein and creatine

Young athletes sometimes take protein supplements or nucleic acid supplements (creatine) to help their sports performance. However, studies have not shown these supplements help improve sports performance in younger athletes.

During puberty athletes grow and become stronger and their performance often improves very quickly. Creatine does not appear to offer any additional benefit in this age group. Most young athletes who eat a healthy, well-balanced diet do not need and would not benefit from protein supplements. However, vegetarians may be at risk of not eating enough protein and may benefit from meal planning with a registered dietitian. *See Effects of Puberty on Sports Performance: What Parents Need to Know* (/English/healthy-living/sports/Pages/Teens-and-Sports.aspx) *for more information.*

Energy drinks, caffeine and other stimulants

Caffeine (/English/ages-stages/teen/nutrition/Pages/Hidden-Caffeine.aspx) is found in a variety of foods and drinks. About 3 out of 4 children consume caffeine on any given day.

The FDA regulates the amount of caffeine in items sold as foods and drinks; however, it does not have control over items sold as supplements, such as energy drinks. It is very difficult to know how much caffeine is in many of these products. Consuming too much caffeine, such as that found in powders, pills, and multiple energy drinks, can be dangerous.

gh caffeine appears to improve some parts of sports performance in adults, the effects vary a lot. The effects of e are not as well studied in children.

Young athletes who take medicine for attention-deficit/hyperactivity disorder (/English/health-issues/conditions/adhd/Pages/Determining-ADHD-Medication-Treatments.aspx) need to be very careful when using energy drinks that contain stimulants. They also need to keep track of their fluid intake and how they respond to severe heat and humid conditions when exercising or competing.

Vitamins and minerals

Athletes do not need vitamins and mineral supplements if they are eating healthy, well-balanced meals. Low iron (/English/health-issues/conditions/chronic/Pages/Anemia-and-Your-Child.aspx)levels are associated with decreases in athletic performance. However, high doses of iron, or of any other vitamin or mineral, have not been shown to improve sports performance in otherwise healthy athletes.

Anabolic steroids

Anabolic steroids (/English/ages-stages/teen/substance-abuse/Pages/Anabolic-Steroids.aspx) are drugs that are illegal without a doctor's prescription. Athletes sometimes use anabolic steroids to enhance muscle strength and size. Nonathletes may use anabolic steroids because they want to look more muscular. However, there are side effects. Anabolic steroids stop growth in children and teens who are still gaining height (/English/health-issues/conditions/Glands-Growth-Disorders/Pages/Predicting-a-Childs-Adult-Height.aspx). They may also cause long-term problems with the heart, skin and other organs that can be severe and may be irreversible.

Note: Anti-inflammatory steroids, such as prednisone, that are used for asthma and other conditions are safe and often needed for young athletes when prescribed by a doctor.

Nutrition basics for sports performance

Athletes can help boost their athletic performance with these healthy nutrition basics:

- **Start with breakfast.** Breakfast (/English/healthy-living/nutrition/Pages/Breakfast-for-Learning.aspx)is especially important before events.
- **Eat carbohydrates.** Athletes should consume carbohydrate-rich foods every several hours on the day of competition. Carbohydrates are an important source of fuel during exercise.
- **Stay hydrated.** Sports performance can be enhanced when athletes get the right amount of fluid and electrolytes. Proper hydration (/English/healthy-living/nutrition/Pages/Choose-Water-for-Healthy-Hydration.aspx) is especially important during practices or games that last more than 60 minutes. Here are a few guidelines to keep the body hydrated and performing at its best level.
    - 2 hours prior to the event: Drink about 16 ounces of water or sports drinks.
    - 30 minutes prior to the event: Drink at least 8 ounces of water or sports drinks.
    - During practice and competition: Drink 4 to 8 ounces of water or sports drinks every 15 minutes throughout the practice or competition.
- **Reload.** Athletes should reload their bodies with fluids and food as soon as possible after a practice or game. Reloading is especially important when athletes are playing in multiple games in a short time frame, such as during a basketball or soccer tournament.
- **Eat well.** A well-balanced meal with the right kinds of proteins and carbohydrates will help the muscles recover between practices and games. Well-balanced meals are especially important if athletes are recovering from an injury and want to return to practice and competition.

More information

- Safe Weight Loss and Weight Gain for Young Athletes (/English/healthy-living/sports/Pages/Safe-Weight-Loss-and-Weight-Gain-for-Young-Athletes.aspx)

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- Vitamin Supplements and Children (/English/ages-stages/gradeschool/nutrition/Pages/Vitamin-Supplements-and-Children.aspx)
- Sports Nutrition for Busy Families and Busy Lifestyles (/English/healthy-living/nutrition/Pages/Sports-Nutrition-for-Busy-Families-and-Busy-Lifestyles.aspx)
- Eating for Exercise and Sports (https://www.nutrition.gov/topics/basic-nutrition/eating-exercise-and-sports) (USDA)

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