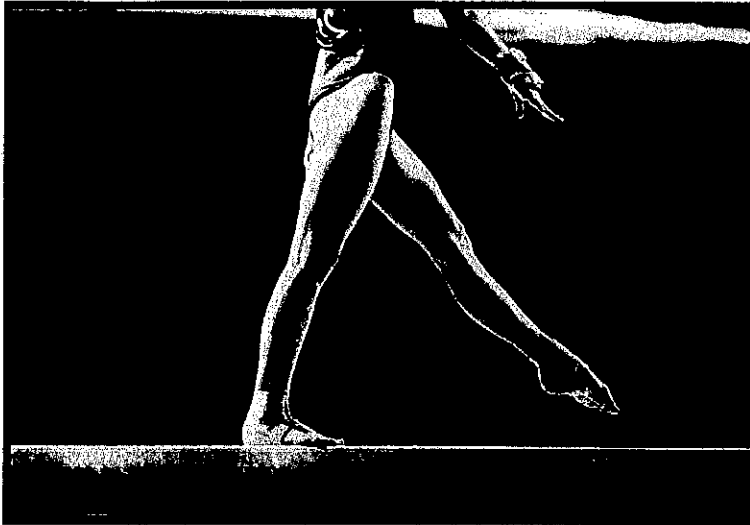


Nutrition for Gymnastics



Individual nutrition consultations are available by appointment

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Daily Nutrition Needs

To perform their best, gymnasts need to be well fueled for practices and meets. An important challenge facing gymnasts is having enough energy available to support not only their intense training, but also recovery, daily activities, and other body functions. Gymnasts may be unaware of the need to boost their intake with increased activity, such as during camps, competition season, or when playing other sports or doing additional physical activity. Also, gymnasts may intentionally or unintentionally decrease the amount of food consumed because of stress or weight concerns. In either situation, an energy deficiency can contribute to fatigue and increased injuries and can affect other physiological functions such as metabolic rate, bone mass and hormonal functioning for both male and female gymnasts.

A gymnast's daily nutrition needs are based on meeting these demands while being able to adjust his/her intake as needed. Consuming nutrient dense foods and plenty of water or fluids at 3 meals and 2-3 snacks will meet the daily energy needs for most gymnasts.

Carbohydrate

The amount of carbohydrate in the gymnast's diet is especially important because carbohydrate is the major energy source for the muscle. About half of a gymnast's daily energy needs come from carbohydrate-containing foods, such as fruit, yogurt, bread, pasta, cereal, and rice. Carbohydrate from foods is broken down into glucose in the digestive tract and then stored in the form of glycogen in muscle so that it is ready to be used as fuel for energy. Gymnasts who do not have enough carbohydrate in their diet often feel more fatigued during practices and compromise their ability to advance their skills because of low muscle glycogen levels.

Protein

It is essential for gymnasts to eat enough protein. Protein is needed for muscle growth and to repair muscle fibers that are stressed by constant use. The estimated protein a gymnast needs per day is about 0.5 to 0.8 grams per pound of body weight. Most individuals can meet their protein needs by including protein-containing foods (i.e. meat, fish, poultry, legumes, nuts and

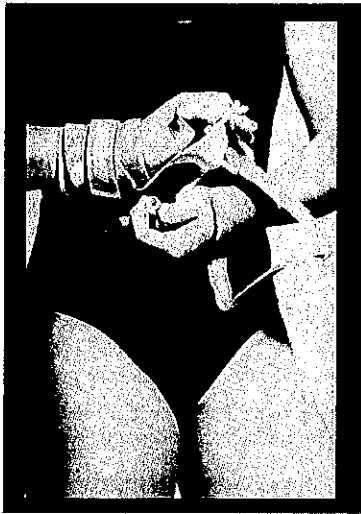
and dairy products) at each of their meals and snacks during the day.

Fat

A gymnast's body needs fat to function properly. In addition to providing a source of energy, fat provides structure for every cell membrane in your body. It is essential for making hormones that help you grow and develop; for making nerve cells; for the absorption of fat-soluble vitamins; and is an important fuel for muscles.

A diet too low in fat can have serious health consequences and can ultimately impair a gymnast's performance. To achieve the proper balance of fat in your diet, it is important to consume a variety of foods every day in moderation.





What to Eat and When

Following are some tips to help you plan your day and get in the 3 meals and 2-3 snacks recommended for gymnasts.

Before practice or competition

- *3-4 hours before:* Plan to have a moderate-sized meal. Include a balance of wholesome carbohydrates, lean protein and healthy fat (such as oatmeal, Greek yogurt, berries and walnuts; or a wrap with turkey, cheese, veggies and a piece of fruit).
- *30 to 60 minutes before:* Enjoy a small, easily digestible snack rich in carbohydrates. Fresh or dried fruit, dry cereal, granola, crackers, pretzels are easy to pack in your bag and have ready to eat.
- *Before a meet:* Plan to have a balanced meal with plenty of water 3-4 hours before warm-up. Familiar foods are best while limiting spicy, high fiber and high fat foods. Chicken with rice and veggies is a simple example. As the gymnast gets closer to the event, depend on smaller, easily digestible snacks or liquids, i.e. smoothie, for energy.

During Long Periods of Practice:

- *For practices longer than two hours:* try to eat small, frequent bites of carbohydrate-containing food with water. Dried cherries, an orange, crackers or yogurt are a few examples.
- *If unable to eat solid food:* sipping on fluids containing electrolytes and carbohydrates (such as sports drinks formulated with 4 to 8% carbohydrate) are a good source of fuel and re-hydration to help replace energy lost and prevent mental and muscular fatigue during periods of intense training or competition. Artificially sweetened drinks or fluids containing other ingredients, such as caffeine, are not effective forms of fuel or hydration.

After Practice or a Competition/Meet:

- *After a period of long and/or intense activity:* eat a snack with carbohydrate along with some protein within 30 to 60 minutes. Examples include lowfat chocolate milk; almonds + dried fruit; nut butter + apple; string cheese + crackers. This is especially important for gymnasts who will practice or compete again within 24 hours of their previous activity.

Smart Snacking

Quick Digesting Carbohydrates (for < 1 hour before activity)

Fruit (bananas, applesauce, grapes – whatever is well-tolerated)
Fruit smoothie
Pretzels or crackers
Low-sugar cereal
Granola bar

Slow Digesting Fuel (for sustained energy, i.e. mid-morning snack)

Fruit and nut bars
Oatmeal and banana and/or peanut butter
Trail mix: dried fruit, nuts and granola or whole grain cereal
Whole grain crackers and string cheese
Fresh Fruit—apple slices, bananas, clementine's, and grapes are easy to tote with peanut butter, string cheese or a handful of almonds
Baby carrots or other cut veggies and hummus

Protein + Carbohydrate (for post-workout refueling)

Greek yogurt and granola/fruit
Deli meat and string cheese roll-up with crackers
Hard-boiled eggs and dry cereal
Cottage cheese and fresh or canned peaches
Peanut butter and jelly or banana sandwich
Dry-roasted edamame with dried fruit
Tuna/chicken pouch with crackers
Almonds and dried tart cherries
Peanut butter (or nut butter) and banana or apple
Chocolate milk or protein shake

Additional Key Nutrients

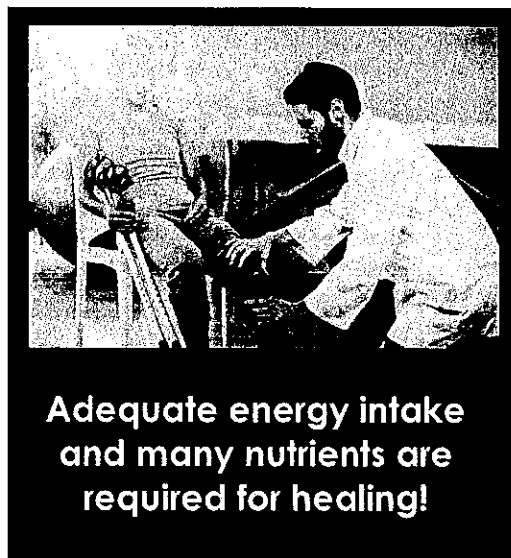
Eating a variety of foods will ensure an adequate intake of key vitamins and minerals that have an important role in energy production, muscle repair, and bone health. Wholesome fruits and vegetables, for example, are an indispensable part of the gymnast's diet. These foods contain important chemicals called antioxidants that have anti-inflammatory properties to help with repair and recovery. Other key nutrients for the gymnast include calcium (yogurt, milk, cheese, collard greens, broccoli, and almonds), iron (red meat, poultry, fish, beans, spinach and iron-fortified cereals) and vitamin D (milk, yogurt, salmon, tuna, and eggs).

Nutrition for Injury & Healing

1) Energy intake is a top priority! A gymnast's energy (calorie) needs are less than during periods of heavy training but still more than when he or she is sedentary. The type of injury and amount of activity allowed will determine how much a gymnast needs but consuming too little will likely slow the healing process.

2) Managing Inflammation. The initial pain, swelling, and redness that occur following an injury are hallmark signs that inflammation is occurring in the body. Some inflammation is normal and critical for triggering the repair process, but too much can be a problem. Therefore, including foods that help control inflammation can be very helpful.

3) Repair and Rebuilding. Even after swelling and redness has decreased, it's important for the gymnast to remember the body is still in the active process of making healthy, new tissues. Eating foods that provide the following nutrients, along with plenty of fluids, in his or her daily food plan can help ensure optimal recovery.



Nutrient	Why It's Important	Good Sources
Protein	An essential ingredient for healing and making healthy, new tissue in your body.	Lean meat, fish, chicken, turkey, milk, yogurt, nuts, nut butters, seeds, eggs, beans, and soy-containing foods (tofu, tempeh, edamame)
Fat	A variety of healthy fats assist with wound healing, joint health and the immune system.	Salmon, herring, tuna, walnuts, ground flax, avocado, flax and olive oil
Carbohydrates	Gymnasts will likely need fewer carbs during this time than during times of intense training, but these foods are still important for the healing process.	Nutrient dense carbohydrates including fiber-rich whole grains, such as oatmeal, whole grain bread, brown rice, and quinoa; potatoes, beans; fruit; and dairy products such as milk and yogurt
Fruits and Vegetables	The rich colors found in these foods are sources of important chemicals called antioxidants, as well as other vitamins and minerals that help repair tissues.	Green leafy veggies, such as spinach and kale; strawberries, blackberries, blueberries and raspberries, oranges, tomatoes; and, bell peppers, broccoli, and carrots
Vitamin D and Calcium	Both are critical nutrients needed for healing stress fractures or other injuries to bone.	Vitamin D is found in fortified milk, some fish, and eggs. Calcium is also found in dairy products, calcium-fortified orange juice, salmon, tofu (<i>when prepared with calcium sulfate</i>), and collard greens



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