

PROTEIN AND PERFORMANCE IN YOUNG ATHLETES

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Why protein?

Nutrition is a key contributor to optimized sports performance, and adequate protein is a main component to building a balanced plate. For youth athletes in particular, dietary protein is needed to lay the foundation for muscle mass and support healthy growth and development.

How much protein is enough?

Protein needs vary by age, sex, activity level, and body weight, but most can get adequate protein from diet alone. The Recommended Daily Allowance is 52 grams per day for boys aged 13-18 years, and 46 grams per day for girls in the same age group. Young athletes may need slightly more protein than their peers who are not athletes. It is important to note that more protein is not always better; excess protein can present some risks.

How do I get enough protein?

Most athletes are able to meet their needs by eating a **variety of high-protein foods**, such as meat, seafood, dairy, eggs, beans, and soy foods. Those following a vegan or vegetarian diet may need to do a bit of extra planning and/or meet with a registered dietitian to make sure intake of key nutrients, including protein, is sufficient to meet their needs.

When it comes to building and repairing muscle, it is important to consider timing of protein intake in addition to overall quantity. Aim to **distribute protein evenly across the day**, including a food source at every meal and snack. Be sure to re-fuel with a combination of both protein and carbohydrates after practice or a game.

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Examples of high-protein snacks/meals:

SNACK	TOTAL PROTEIN
<ul style="list-style-type: none"> · 3 slices deli turkey (18 g) · ¼ cup hummus (4 g) · 1 cup carrots (0.5 g) 	22.5 g
<ul style="list-style-type: none"> · 1 slice whole grain toast (4 g) · 2 tbsp peanut butter (8 g) · 1 tsp honey (0 g) 	12 g
<ul style="list-style-type: none"> · 1 large hardboiled egg (6 g) · ½ cup grapes (1 g) 	7 g
<ul style="list-style-type: none"> · 5 oz low-fat or fat-free Greek yogurt (12 g) · ½ cup berries (1 g) 	12 g
<ul style="list-style-type: none"> · ½ cup low-fat or fat free cottage cheese (12 g) · ½ cup fruit (0 g) 	12 g
<ul style="list-style-type: none"> · 1 low-fat string cheese (8 g) · ½ cup cherry tomatoes (1 g) 	9 g
<ul style="list-style-type: none"> · ½ cup edamame seasoned with olive oil and sprinkle sea salt (9 g) 	9 g
<ul style="list-style-type: none"> · ¼ cup almonds (6 g) · ½ cup fruit (0 g) 	6 g
<ul style="list-style-type: none"> · 1 whole grain tortilla (4 g) · 3 slices deli meat (18 g) · 2 tbsp hummus (2 g) · Sliced bell peppers (1 g) 	25 g
<ul style="list-style-type: none"> · Smoothie with protein powder (20-25 g) or ½ cup Greek yogurt (12 g) · 1 handful spinach (0 g) · ½ cup fruit (0 g) · 1-2 tbsp nut butter (4-8 g) OR ¼ cup nuts (8 g) 	16 – 33 g
<ul style="list-style-type: none"> · 1 oz beef jerky (11 g) · ½ cup fruit (0 g) 	11 g

MEAL	AMOUNT OF PROTEIN
<ul style="list-style-type: none"> · 2 boiled or scrambled eggs (13 g) · 1 oz cheese (7 g) · 1 whole grain English muffin (6 g) · 1 cup grapes (1 g) 	27 g
<ul style="list-style-type: none"> · 5 oz Greek yogurt (12 g) · ½ cup berries (1 g) · 2 tbsp chopped walnuts (4g) · ½ cup Cheerios or other low-sugar cereal (1 g) 	18 g
<ul style="list-style-type: none"> · 4 oz salmon (23 g) · 1 cup green beans (2.5 g) · ½ cup brown rice (2.5 g) 	28 g
<ul style="list-style-type: none"> · 3 oz lean hamburger patty, cooked (24 g) · 1 cup broccoli (3.5 g) · ½ cup roasted red potatoes (3.5 g) 	31 g
<ul style="list-style-type: none"> · 2 oz chickpea or lentil pasta, cooked (11 g) · 3 oz lean ground beef, cooked (24 g) · ½ cup marinara (2 g) 	37 g
<ul style="list-style-type: none"> · 4 oz firm tofu prepared with sauce of choice (11 g) · 1 cup mushrooms, snow peas, and/or carrots (2.5 g) · ½ cup brown rice (2.5 g) 	16 g
<ul style="list-style-type: none"> · ½ cup low-fat refried pinto or black beans (8 g) · 2 whole grain tortillas (8 g) · ¼ cup shredded cheese (7 g) · 1 cup cooked bell peppers and onions (1 g) 	24 g
<ul style="list-style-type: none"> · 3 oz turkey burger patty with feta and spinach, cooked (24 g) · Whole grain bun (6 g) · Side salad (2 g) 	32 g
<ul style="list-style-type: none"> · 3 oz grilled chicken breast, cooked (24 g) · 1 cup asparagus · ½ cup mashed sweet potatoes (5 g) 	24 g

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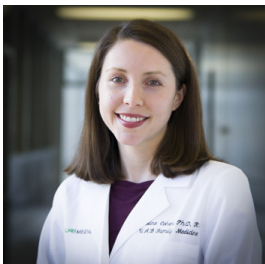
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Should I take a protein supplement?

Whenever possible, protein should come from real food instead of supplements. Protein supplements are largely unregulated by the FDA and as a result may contain additional, unnecessary or even unsafe ingredients. However, a protein supplement may be indicated in some situations, such as when you have trouble meeting your needs with food or when access to food is limited (e.g., when traveling or do not have access to perishable foods). A few example brands that are NSF certified for sport include:

- Muscle Milk
- Garden of Life
- Vega Sport
- Vital Proteins (collagen peptides)

A registered dietitian can help you identify a safe supplement brand that is right for you.



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Caroline Cohen, Ph.D., RD, LD, is a dietitian and researcher whose focus is weight control for the prevention and management of chronic disease. She has a passion for nutrition counseling and enjoys helping people understand the important role of food in achieving their health goals.