

Summary Guidelines for Macronutrient Intake

Carbohydrate

- The typical recommended carbohydrate intake for athletes is approximately 6 to 8 g/kg/day. The recommended range is 3 to 12 g/kg/day, with lower levels for athletes performing lower-intensity activities and higher levels for athletes performing extremely high-intensity activity lasting more than 4 hours per day.
- Glycogen depletion is a concern that should encourage athletes to eat in a pattern that optimizes glycogen storage before exercise, avoids depletion during exercise, and recovers glycogen after exercise:
 - Preexercise: 1 to 4 g/kg approximately 1 to 4 hours prior to exercise
 - During exercise: 30 to 90 g/hr, depending on exercise duration
 - Postexercise: 12 to 16 oz of carbohydrate, protein, fluid, and electrolyte mix, as provided in chocolate milk and other recovery beverages
- Because blood sugar may go from normal to low in as little as 3 hours when not physically active, athletes should have a strategy for consuming a small amount of carbohydrate frequently throughout the day even when not exercising (sports beverage, piece of fruit, etc.).

Protein

- The typical recommended protein intake for athletes is 1.2 to 2.0 g/kg/day. Athletes wishing to lose body fat while sustaining lean mass should consume 1.6 to 2.4 g/kg/day.
- The optimal per-meal protein distribution is 0.3 to 0.4 g/kg/meal. For example, a 100 kg athlete consuming 2 g/kg/day would require 200 grams of protein per day. At 0.4 g/kg/meal, this 100 kg athlete requires five meals of 40 grams each to satisfy this requirement (i.e., breakfast, midmorning snack, lunch, midafternoon snack, and dinner).

Fat

- Fat intake is essential for the delivery of fat-soluble vitamins (A, D, E, and K) and essential fatty acids. Athletes should focus on obtaining recommended intakes of carbohydrate and protein, with the remainder coming from fat to satisfy total energy requirements. The typical recommended intake of fat for athletes is approximately 25 to 30 percent of total calories.
- Trans fatty acids (typically butter and margarines hydrogenated from oils, as well as fried foods commonly cooked in shortening), and high levels of omega-6 fatty acids (typically corn oil, safflower oil, sunflower oil, red meat, and poultry) are inflammatory and should be avoided.
- Omega-3 fatty acids (typically cold-water fish, eggs, flaxseed, walnuts, and canola oil) are anti-inflammatory and promote immune health.