TRIATHLON SPORTS NUTRITION

Triathlon combines swimming, cycling and running. Events range from sprint and Olympic distances to 70.3 (half-Ironman), Ironman and ultra, taking less than an hour to several days. Nutrition planning must accommodate both three distinct sports and this wide range of distances.

Sports Dietitians should design nutrition plans that support every phase of a triathlete's year-round training.

TRAINING CYCLES

Triathlon training typically stresses both aerobic and anaerobic energy systems. Athletes often train 2-3 times daily throughout the week, making a structured nutrition periodization plan essential for meeting energy, nutrient and hydration needs.

The year's three main training phases, or mesocycles, are base, competition and off-season. Each places different demands on the body and produces different adaptations. Match nutrition to energy expenditure in each cycle. With 2-3 daily sessions across different sports, energy use can vary widely, so daily intake may need to change with the training mode.

Coaches may use different approaches to physical periodization. The guidance below follows the more common traditional model and progression.

NUTRITION CYCLES

Periodized nutrition matters for all athletes and should be as routine for triathletes as their training plan. Many, however, do not adjust nutrients to daily workouts within each cycle. Teaching food choices by training phase fits the way they already approach training.

The following strategies address the base, competition and off-season mesocycles.

Information provided by ASPDA member Bob Seebohar, MS, RD, CSSD, CSCS, METS II.
Copyright © 2026 American Sports and Performance Dietitians Association, All rights reserved.

A·S·P·D·A
FUELING VICTORY®

TRIATHLON SPORTS NUTRITION

BASE-PHASE FUELING

Base training usually has two blocks. The first generally includes lower-volume aerobic exercise and strength work. Emphasize these nutrition strategies:

"Pop the hood." This is an ideal time to establish baseline biomarker and physiological measures. Among the available tests, comprehensive bloodwork, hormone testing and metabolic-efficiency testing help tailor nutrition to the individual triathlete.

Eat to train. Nutrition periodization means matching food intake to training mode, duration and intensity. Teach athletes to support physical and mental energy needs while optimizing digestive function.

Emphasize foods that help limit oxidation and inflammation and supply prebiotic fiber. Digestive concerns often increase as training grows and competition begins. Use this phase to teach how fruit, vegetables and whole grains can be timed and adjusted for gut health and carbohydrate needs. Some athletes also pursue weight loss in this cycle, making carbohydrate periodization especially important.

Training Phase	Carbohydrates	Protein	Fat
Base	2 - 8 g/kg	1.6 - 2.0 g/kg	0.9 - 1.5 g/kg
Competition	6 - 10 g/kg	1.8 - 2.2 g/kg	1 - 1.5 g/kg
Off-season	1 - 5 g/kg	2.0 - 2.5 g/kg	0.8 - 1.0 g/kg
g/kg: grams per kilogram of body weight			

Information provided by ASPDA member Bob Seebohar, MS, RD, CSSD, CSCS, METS II.
Copyright © 2026 American Sports and Performance Dietitians Association, All rights reserved.

TRIATHLON SPORTS NUTRITION

Optimize blood sugar. Daily eating plans should support blood-sugar regulation while adapting to energy needs and expenditure. In this phase, combine suitable amounts of protein, fiber and fat to stabilize blood sugar and energy. Plates matched to easy, moderate or hard training offer a simple qualitative guide; the macronutrient chart at the end of this document is another option.

Introduce nutrient timing. Plans change through the year, but begin with a simplified approach early. This helps athletes build a routine and test fueling and hydration strategies for energy, recovery and gut tolerance. See the Periodization and Timing of Macronutrients resource at sportsrd.org for more information.

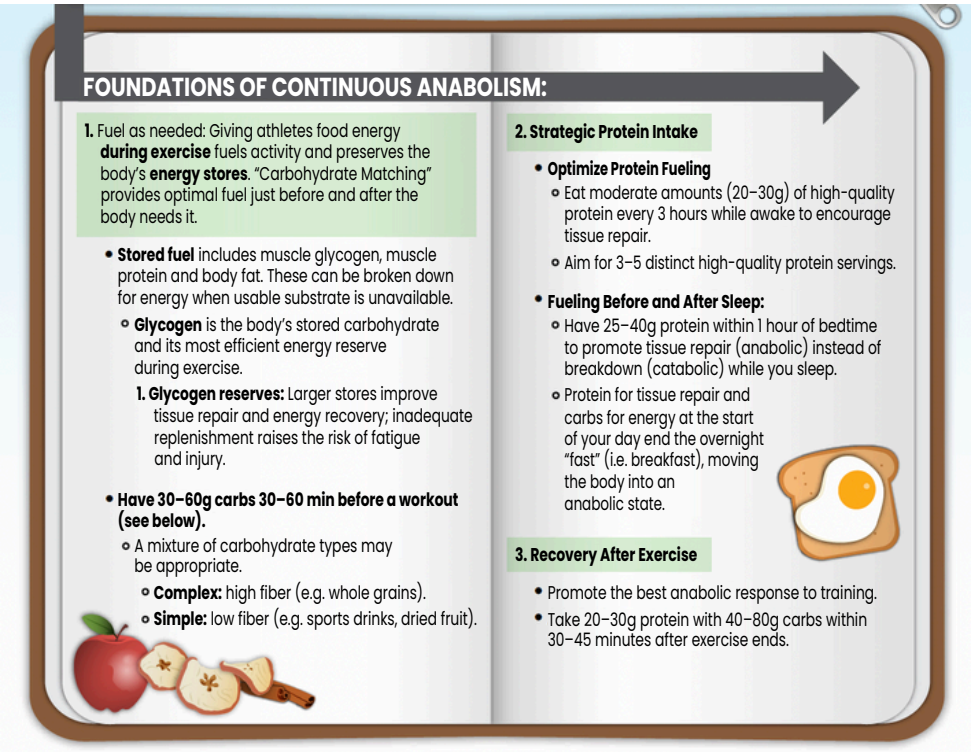


Image from Periodization and Timing of Macronutrients downloadable resource.

In the second half of base training, intensity and sometimes volume increase to prepare for racing. Rising energy use calls for corresponding changes to macronutrient periodization.

Nutrient timing should also move toward the competition plan. Aim to have it about 90% ready by the end of base training. Minor adjustments, mostly for environmental demands, may remain. Practice the plan daily whenever the training warrants it.

Information provided by ASPDA member Bob Seebohar, MS, RD, CSSD, CSCS, METS II.
Copyright © 2026 American Sports and Performance Dietitians Association, All rights reserved.

TRIATHLON SPORTS NUTRITION

RACE-PHASE FUELING

Watch for energy shortfalls. As expenditure rises, help triathletes adjust macronutrients. This generally involves more carbohydrate and less protein and fat.

Refine nutrient timing. With roughly 90% of the plan established by the end of base training, tailor the remaining 10% to heat, humidity, altitude and other environmental demands. Whenever possible, train in those conditions to learn how fuel and hydration needs change.

Keep anti-inflammatory and antioxidant-rich foods frequent. This can be difficult when athletes need more easily digested carbs. Those prone to GI distress often favor low-fiber carbohydrate foods, which may reduce prebiotic fiber and opportunities to limit oxidation and inflammation during heavy training. Adjust carb choices to combine lower fiber with useful antioxidant and anti-inflammatory benefits.

LOWER-FIBER CARBOHYDRATE FOODS:

White rice
Cream of rice
White bread/sourdough bread
English muffins
Bagels
Rice cereal
Grits
White pasta
Corn flakes
Rice noodles
Rice cakes

White potatoes
Mashed white potatoes
Ripe bananas
Mango
Papaya
Pineapple
Applesauce without skin
Canned fruit in juice
Pretzels
Instant oatmeal



Information provided by ASPDA member Bob Seebohar, MS, RD, CSSD, CSCS, METS II.

Copyright © 2026 American Sports and Performance Dietitians Association, All rights reserved.

A·S·P·D·A
FUELING VICTORY®

TRIATHLON SPORTS NUTRITION

OFF-SEASON FUELING

The offseason involves stepping away from structured training. Complete rest is optional; the defining change is the absence of periodized workouts aimed at improving fitness. Energy expenditure is therefore much lower, increasing the chance of weight and body-fat gain.

Notice the emotional role of food during the offseason. This is a useful time to learn intuitive eating, recognize hunger and appetite signals, and distinguish biological, habitual and emotional hunger.

Biological Hunger

Biological hunger signals the body's need for energy and nutrients. Signs can include:

- An empty feeling in the stomach
- Gnawing stomach discomfort
- Stomach rumbling
- Physical weakness
- Headaches

Habitual Hunger

Habitual hunger comes from routines. You may feel hungry at your usual mealtime even after recently eating or without physical hunger. It often has no physical symptoms.

Emotional Hunger

Emotional hunger means eating to soothe or suppress difficult feelings such as stress, anger, fear, boredom, sadness or loneliness. Major events, and more often daily hassles, can prompt emotional eating that interferes with weight-loss efforts.

Adjust macronutrients for blood-sugar control. With lower energy use, reduce daily carbohydrates and increase protein and fat. Favor lower-carbohydrate, higher-fiber fruits and vegetables and limit processed or refined carbohydrate sources.

Adjust supplement use. Sports products such as energy bars, gels, waffles, gummies or chews, and sports drinks are not needed in this cycle. Aim to eat real food whenever possible.

Effective triathlon nutrition starts by identifying the physical goals of each yearly training cycle. Then match macronutrient periodization to support health and performance.

Information provided by ASPDA member Bob Seebohar, MS, RD, CSSD, CSCS, METS II.
Copyright © 2026 American Sports and Performance Dietitians Association, All rights reserved.