



The Swimmer & Diver's Sports Nutrition Guidebook

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Step 1: Know Your Macros... Ready, Set, Fuel

Imagine your body as a racecar... Your training as the engine... Your training room rehab as the tune-ups... Your diet as the fuel... And you are the driver.

Carbohydrates = Fuel

- 40-65% of total energy
- Carbohydrates (carbs) help you:¹
 - Provide the main source of energy for an athlete's brain and body
 - Maintain intensity, prevent muscle breakdown, and assist in maintaining hydration status
 - Prevent low energy, strength, stamina, and decision-making during workouts.
- Complex carbs = Long-lasting energy → Ideal for meals
 - Ex: Oatmeal, brown rice, sweet potato, whole-wheat bread, pasta
- Simple carbs = Quick energy → Ideal for snacks and pre/post-workout meals
 - Ex: Gatorade, fruit, white bread

Protein = Repair & Recover

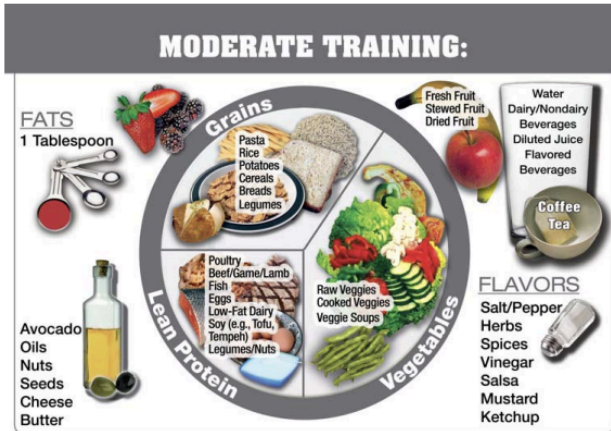
- 20-35% of total energy
- Protein helps you:¹
 - Build up tissues (muscles), enzymes, hormones, antibodies, and much more!
 - Provide building blocks for athletic recovery and muscle building
 - Feel fuller for longer because it takes longer to digest than carbs
- Animal sources:
 - Ex: Poultry, beef, fish, eggs, dairy products, etc.
- Plant-based:
 - Ex: Whole grains, beans, legumes, nuts, seeds, soy products, etc.

Fat = Endurance

- 20-35% of total energy
- Fat helps you:¹
 - Provide secondary source of energy during exercise (especially long-term, low intensity exercise)
 - Maintain body temperature, support immune function, cushion and protect organs, facilitate nerve transmission, assist in vitamin absorption
 - Provide fullness and satiety
- Unsaturated = heart healthy
 - Ex: Avocado, nuts, olive oil, salmon, peanut butter
- Saturated = just tastes good ☺
 - Ex: Butter, packaged goods, processed foods (chips), processed meats (hot dog)

Step 2: Build Your Athlete's Training Plate

Start thinking about what you eat as an essential part of your training regimen. Your daily meals or training plates play a significant role in your energy level, hydration status, and recovery potential. You go to practice, you go to weights, and you eat.



MODERATE: A moderate day may be where you train twice but focus on technical skill in one workout and endurance in the other. The moderate day should be your baseline from where you adjust your plate down (easy) or up (hard/race).²

- 1/3 plate carbohydrates
- 1/3 plate vegetables
- 1/4 plate protein
- 1 piece fruit



EASY: An easy day may contain just an easy workout or tapering without the need to load up for competition with energy and nutrients. Easy day meals also apply to athletes trying to lose weight and athletes in sports requiring less energy (calories) due to the nature of their sport.²

- 1/4 plate carbohydrates
- 1/2 plate vegetables & fruits
- 1/4 - 1/3 plate protein



HARD: A hard day contains at least 2 workouts that are relatively hard or competition. If your competitions require extra fuel from carbohydrates, use this plate to load up in the days before, throughout, and after the event day.²

- 1/2 plate carbohydrates
- 1/4 plate vegetables
- 1/4 plate protein
- 1 piece fruit



Step 3: Fuel & Re-Fuel Your Body

Pre-Workout

The purpose of pre-workout nutrition is to fuel your muscles with muscle glycogen (the storage form of carbohydrate) for energy to use! The closer you get to the workout, the less protein, fat, and fiber you will want to eat, as these take longer to break down and digest, and the more simple carbohydrates you'll want.

Before practice, aim to have a balanced meal 3-4 hours before and a snack 30-60 minutes before of easy-to-digest carbs. If you work out early and can't do a pre-workout meal, you can just do a snack.

2- 3 hours before practice (about 300-400 calories | 45-60 g carbs)

- 2 slices whole grain bread + 2 slices of turkey + 1 slice of cheese
- Small bagel + 1Tbs low fat cream cheese and jelly
- English muffin + 1Tbs PB + banana
- 2 eggs + 2 slices of whole grain toast
- Greek yogurt + granola + fruit
- 2 waffles + 2Tbs syrup or jam
- Granola bar + 8oz of milk
- Breakfast sandwich
- 10oz yogurt or protein smoothie
- Turkey + cheese+ lettuce+ tomato roll-up

1-2 Hours before practice (about 200 calories | 30-45 g carbs)

- Cliff bar, Lara bar, Zone bar, or granola bar
- Low-fiber cereal + skim milk (Corn Flakes, Corn Chex, Rice Krispies)
- 1 string cheese + pretzels
- 6 oz. of low-fat fruit yogurt
- Fruit + Greek yogurt smoothie
- Apple + 1 Tsp of peanut butter
- Oatmeal + ½ banana
- Pita + hummus

15-30 minutes before practice (about 100 calories | 15-30 g carbs)

- ½ cup applesauce
- 1 slice of toast + 2 tsp jam
- 1 cup of dry cereal (Cheerios, Corn Chex, Cinnamon Life)
- 1 Banana
- 1 cup Grapes
- 1 Nutri-Grain Bar
- Gatorade Prime 01
- 1 sports gel or 16oz sports drink
- 2 fig bars
- 1 serving of animal crackers, pretzels, or Goldfish

Immediately before practice (about 60 calories | 15 g carbs)

- ½ banana
- ½ serving of pretzels, animal crackers, or Goldfish
- 1 fig bar
- 1 cup grapes
- ½ sports gel
- 8 oz. sports drink



Intra-Workout

Fueling during a workout may be necessary depending on the length and intensity of the workout. Below are the best guidelines to follow:³

- **< 45-minutes** = brief exercise → no fuel needed, focus on water for hydration
- **45-75 minutes** = sustained high-energy exercise → small amounts of carbs throughout activity (i.e., 2-3 gulps of sports drink or ½ serving of applesauce every 15-20 minutes)
- **1-2.5 hours** = endurance exercise → 30-60 g of carb per hour after 60 minutes (i.e., 1-2 handfuls of raisins or 1-2 medium bananas)

Easy to digest intra-workout carb sources:³

- 12 oz sports drink (21 g)
- Sports chews/fruit snacks (20-40 g)
- 2 rice cakes (14 g)
- 1 oz pretzel (23 g)
- Go-Go Squeeze packet (16 g)
- Honey Stinger waffle (19 g)
- Chewy granola bar (17 g)
- 1 packet honey (12 g)
- 1 pack sports gel (22 g)
- 1 banana (30 g)

Post-Workout

Post-workout nutrition is an essential part of your overall training routine. Eating the right type and amounts of foods can help your body refuel and recover after a run. When you refuel properly, you have the ability to rehydrate the fluids and electrolytes you lost through sweat, replenish muscle glycogen stores, and repair muscle tissue.

The foundation of post-workout nutrition is:⁴

- **Refuel** your muscles with carbohydrates so they can recover properly within 30-60 minutes of finishing your workout (your body weight / 2 = grams of carbs)
- **Rebuild** your muscles with 20-30 g of high-quality protein
- **Rehydrate** your body with fluids and electrolytes lost during workouts

Recovery snack ideas (15-60 minutes after training):

- Chocolate milk
- Greek yogurt
- Trail mix + sports drink
- PB & J
- Turkey & cheese sandwich
- Yogurt + granola
- Protein bar + fruit



- PB toast with banana slices + yogurt
- Cottage cheese + fruit
- Rice cakes + PB + honey
- Smoothie with protein powder
- String cheese + pretzels + fruit
- Hard-boiled egg + crackers + small orange
- ... Or any food combination that is 3:1 (anaerobic) or 4:1 (aerobic) of carbs to protein

Recovery meal ideas (3-4 hours after training):

- Eggs + turkey bacon + whole-wheat toast
- Pasta with marinara sauce + lean ground beef + side salad
- Steak + potato + broccoli
- Stir fry with shrimp
- ... Or any balanced meal that includes 20-40 g of protein with carbs and fruit/veggies

Step 4: Hydrate!

Dehydration can negatively impact performance and cause early fatigue. Follow these tips to stay hydrated and replenish fluids and electrolytes lost from sweat:

- Focus on fluid intake all day, every day, not just around workouts.
- Always carry a water bottle.
- Weigh yourself before and after exercise to know how much fluid to replace.
- Track hydration by checking urine color - the lighter, the better hydrated.

BEFORE:

- Begin exercise well-hydrated
- Drink 16-20 oz. of water or sports beverage at least four hours before exercise
- Drink 8-12 oz. of water 10-15 min. before exercise

DURING:

- Drink water or sports beverage every 15-20 min. during exercise
 - 3-8 oz. of water (2-3 large gulps) for exercise 60 min.
 - 3-8 oz. of sports beverage (i.e., include electrolytes and carbs) for exercise >60 min.

AFTER: Replace every lb lost during exercise with 16-24 oz of fluid within 2 hrs

- Rehydrate
- 16-24 oz. of fluid for every pound lost within 2 hours of exercise ‘
 - Chocolate milk is a great option to help rehydrate and refuel after a workout



Resources

1. Collegiate & Professional Sports Dietitians Association. (n.d.). *Fueling for recovery* [Fact sheet]. [Macronutrient Foundations](#)
2. United States Olympic Committee Sport Dietitians & University of Colorado Colorado Springs Sport Nutrition Graduate Program. (n.d.). *The athlete's plates* [Infographic series].
3. Collegiate & Professional Sports Dietitians Association. (n.d.). *Fueling during exercise* [Fact sheet]. [Fueling During Exercise](#)
4. Collegiate & Professional Sports Dietitians Association. (n.d.). *Fueling for recovery* [Fact sheet]. [Fueling for Recovery](#)
5. Collegiate & Professional Sports Dietitians Association. (n.d.). *Hydrate early and often* [Fact sheet]. [Hydration](#)