



## **POST-WORKOUT AND COMPETITION FUELING**

Post-workout nutrition is focused on recovery. Think of recovery as having 3 R's: **Replenish, Rebuild, Rehydrate** 

#### REPLENLISH means you need carbohydrate to replace what was burned off in exercise and replenish glycogen stores (stored carbohydrate)

- Glycogen synthesis rates are highest after exercise when muscles are depleted.
- 90% of the carbohydrate consumed postexercise goes to help replenish glycogen stores (stored carbohydrate).
- Consume 1.0-1.2 gm carbohydrate/kg body weight immediately following exercise. If you train multiple times a day, this should be repeated each hour for the next 4-6 hours.

### REBUILD means you need protein. Exercise causes muscle breakdown and requires high-quality protein to help rebuild and repair muscle fibers.

- The general recommendation is to consume 15-25 gm of high-quality protein post-workout.
- Protein needs can be fine tuned by calculating 0.25-0.3 gm protein/kg body weight in the immediate post-workout window.
- The goal is to consume 10 gm of essential amino acids as a part of protein intake.
- For optimal protein synthesis, follow up immediate post-workout protein with 0.8 gm protein/kg body weight/hr for the next 4 hours.





# **REHYDRATE means you need to drink fluid to replace the fluid and electrolytes lost in sweat.**

- The goal is to consume 16-24 ounces per pound of fluid lost during exercise or continue to consume fluid until your urine is pale yellow to clear in color.
- If you train twice a day, 24 ounces per pound lost is most appropriate for rehydration.

Thomas, Travis D et al. (2016). Med Sci Sports Exerc. 48(3):543-568. Nutrition and Athletic Performance Position Stand Journal of Athletic Training 2017;52(9):877–895. National Athletic Trainers' Association Position Statement: Fluid Replacement for the Physically Active







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#### When and what to eat post-workout:

#### • 0 to 45 minutes post-workout:

- » The goal is to eat as quickly as you can, but ideally eat a snack within 45 minutes.
- » Simple carbohydrate is ideal immediately post-workout because it breaks down quickly and promotes recovery at a faster rate.
- » High-quality protein is also essential immediately post-workout because it provides the amino acids necessary to promote repairing muscle fibers. While all proteins can fit in the post-workout snack, whey protein is the quickest digesting protein and naturally contains the highest content of leucine, a branched chain amino acid that has been shown to stimulate muscle protein synthesis after a workout.

#### • 45 minutes to 2 hours post-workout:

- » Follow your post-workout snack with another large snack or meal within 1-2 hours.
- » This meal should contain complex carbohydrates, lean protein, good fat, veggies, fruit if possible, and fluid.



### 0 TO 45 MINUTES POST-WORKOUT SNACK IDEAS

- Low-fat chocolate milk
- Protein bar with carbohydrate and protein
- Smoothie made with protein powder and water paired with a banana
- High-protein energy bar and a sports drink
- Smoothie made with milk, yogurt, and fruit
- Greek yogurt with fruit, honey, and granola
- Beef jerky, milk, and fruit
- Low-fat milk and a granola bar or fruit



#### 45 MINUTES TO 2 HOURS POST-WORKOUT MEAL IDEAS

- Scrambled eggs, bagel with 100% fruit jam, sausage, and fruit
- Whole grain sandwich with deli meat, cheese and veggies, whole grain crackers, and fruit
- Beef and veggie kabobs, roasted potatoes, salad, and fruit
- Peanut butter and banana sandwich on whole grain bread with string cheese and pita chips
- Fish, sweet potato, salad with vinaigrette dressing, and fruit
- Ground beef tacos on whole grain tortillas with veggies, cheese, and avocado paired with rice and salad
- Chicken, pasta with marinara sauce, veggies, and whole grain roll

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