

Necessary Nutrition

Recovering properly after an endurance event is imperative for you to be able to best continue improvement in training while ramp-starting your preparation for the next session. The three R's of recovery nutrition include **Replenish**, **Repair**, and **Rehydrate**.

Replenish: Carbohydrates are the body's preferred and most efficient form of fuel. With only enough storage to fuel for a few hours of activity, athletes must replenish carbohydrate stores after intense activity.

Repair: During activity, muscle is broken down. Consuming high-quality protein (e.g., meat, fish, egg or dairy) can initiate repair and growth of muscle. Protein should be consumed following activity, as well as with each meal.

Rehydrate: Fluid is lost in the form of sweat, especially during intense activity or in warm climates. Refueling along with fluids and electrolytes can restore fluid balance, allowing the body to maintain an appropriate temperature and the function of its best muscle. Electrolytes consumed until weight loss initial sweat loss returns to normal, or until urine returns to being clear or pale, similar to lemonade.

Consuming whole foods with water or using a sports drink can help replenish electrolytes (e.g., sodium, chloride and potassium) that may be lost.

Supplements

While food is the preferred source of nutrients, it may be challenging at times to meet all of your needs — especially protein — which can be found in numerous food sources, as well as in supplements such as protein powder. When time is limited, or if consuming whole foods is unrealistic, consuming 20-30g of an **NSF** certified whey protein shake can be a convenient and effective strategy. Many protein powders will provide little to no carbohydrates, so carbohydrate sources such as fruit, grain, or a sports drink may need to be paired with the protein based supplement.

Endurance Training (24 hours or more to recover)

Replenish	Repair	Rehydrate	Example (200 lbs)
0.5 grams carbohydrate/ lb body weight	20-40 grams protein	20 (16 oz [2.5-3 cups]) / lb body weight lost (lower)	1 cup oatmeal + 2 tbsp cranio + large banana + 1 container Greek yogurt + fruit