

HANDOUT:

AFTER-TRAINING/-COMPETITION NUTRITION AND HYDRATION

THE BASICS

During recovery you realize the gains from your hard work and prepare for your next session. You're ready to start the recovery process just as soon as you finish your workout or competition, but you need to provide the nutritional components. These include carbohydrates to restore depleted fuel stores, protein to help repair damaged muscle tissue and develop new muscle tissue, and fluids and sodium to rehydrate. The benefits of a full and rapid recovery are more energy and better hydration leading into your next workout or event. And that means better performances and less chance of injury.

START REPLENISHING DEPLETED FUEL STORES ASAP

Speed the reloading of depleted muscle glycogen fuel stores by consuming a carbohydrate-rich snack or meal as soon as possible after exercise.

- Take in 0.5–0.7 grams of carbohydrates for every 1 lb (about 1.0–1.5 grams per kg) body weight within 30 minutes of finishing exercise. For a 150-lb (68-kg) athlete, that equates to about 75–105 grams of carbs immediately after exercise.
- Repeat at 2-hour intervals for up to 6 hours, or transition to carbohydrate-rich snacks and meals, if you plan on another intense training session within 24 hours. Consume smaller amounts of carbohydrates more frequently if that leaves you feeling more comfortable.
- Total daily carbohydrate intake depends on training level:

| Type of Exercise | Carbohydrate Needs | Example of the Daily Carbohydrate Requirement for a 150-lb (68-kg) Athlete |
|----------------------------|--|--|
| Low intensity | 2.3–3.2 grams per lb (5–7 grams per kg) | 345–480 grams |
| Moderate to high intensity | 3.2–5.5 grams per lb (7–12 grams per kg) | 480–825 grams |
| Extremely high intensity | 4.5–5.5 grams per lb (10–12 grams per kg) | 675–825 grams |

POUND SOME PROTEIN TOO

Muscle tissue repair and building is another important facet of recovery.

- Whether you're an endurance athlete or you strength train, taking in protein after a workout provides the amino acid building blocks needed to repair muscle fibers that get damaged during exercise and to promote the development of new muscle tissue. Although protein requirements vary between individuals, consume 15–25 grams of protein within an hour after exercise in order to maximize the muscle rebuilding and repair process.

REHYDRATE EFFECTIVELY WITH FLUIDS AND SODIUM

Virtually all weight lost during exercise is fluid, so weigh yourself before and after exercise in order to gauge your net loss of fluids.

- Replace lost fluids by gradually drinking 16–24 fl oz of a recovery beverage, sports drink, or water for every lb of weight lost. (1000–1500 ml/kg weight lost)
- Consume sodium sources such as crackers and pretzels along with your fluids. Rehydration will be more effective when sodium is included with the fluid and food you consume as you recover.

POST-EXERCISE FOODS AND FLUIDS

A good way to start recovery is to consume a carbohydrate-rich, moderate-protein snack plus fluids and sodium within 15–30 minutes after exercise. No appetite after exercise? Try a recovery beverage.

WITHIN 30 MINUTES AFTER EXERCISE: SNACK EXAMPLES

- Fruit smoothie made with mango/banana/berries and low-fat or nonfat milk or yogurt
- Small roll or sandwich + low-fat chocolate milk + banana
- Fruit juice or vegetable juice + PowerBar ProteinPlus® protein bar
- Low-fat or nonfat yogurt, or fat-free frozen yogurt, gelato or sorbet, + Ironman Perform™ sports drink or water
- Ironman Restore™ sports drink mix
- PowerBar® Recovery bar + Ironman Perform sports drink or water
- PowerBar ProteinPlus® Bites + Ironman Perform sports drink or water
- PowerBar ProteinPlus® 30g protein bar + Ironman Perform sports drink or water
- PowerBar ProteinPlus protein bar + Ironman Perform sports drink or water
- PowerBar ProteinPlus® protein powder drink mix

MEAL EXAMPLES

- Bagel or English muffin with jelly and/or peanut butter, banana, and fruit juice
- Pasta or cheese ravioli with low-fat, tomato-based sauce; French bread or low-fat breadsticks; steamed vegetables; low-fat/nonfat milk; pudding; and fruit
- Grilled chicken sandwich, frozen low-fat yogurt, and baked potato with low-fat sour cream or salsa
- Turkey sub sandwich with tomato, lettuce, and mustard; baked chips; fruit juice; and low-fat frozen yogurt
- Thick-crust cheese pizza, low-fat gelato, and fruit
- Baked or grilled lean beef, chicken, turkey, or fish; steamed rice; dinner roll; cooked green beans; low-fat frozen yogurt; and fruit juice

TAKE-HOME TIPS

- Recovery starts as soon as you finish exercise if you provide the nutritional components: carbohydrates, protein, fluids, and sodium.
- Begin recovery by consuming a snack or meal within 30 minutes after exercise. If you have no appetite, try a recovery beverage.
- Rapid recovery is a must during periods of heavy training and anytime you have two or more training sessions within 12 hours.