POST-WORKOUT

WHAT YOU NEED TO KNOW TO:

- Maximize your ability to refuel, rehydrate and recover.
- Optimize your rate of recovery between repeated bouts of exercise.
- Meet your macronutrient needs: fat, protein and carbohydrates.

Post-workout recovery is an essential component of an athlete's training, and nutrition plays a crucial role in this process. Optimal recovery will enhance adaptations to training and help prepare for the next workout. In competitions involving a series of games or races, recovery is critically important for sustaining athletic performance.

RESTORING FLUID BALANCE

Rehydration is priority #1. After a workout or competition, you can expect to be at least mildly dehydrated and should be diligent about immediately rehydrating.

Ideally, the fluids lost during a workout should be fully replaced before you start exercising again.

To fully rehydrate, approximately 16 to 24 ounces of fluid (approx 1 to 1.5 pounds) needs to be consumed for every pound of weight lost during exercise.[1]

Athletes involved in vigorous training with exercise sessions that are less than 24 hours apart need more structured fluid

replacement strategies than athletes with more than 24 hours between sessions.

CHOOSING YOUR FLUID

- Chilled, flavored beverages have been shown to increase voluntary fluid intake.
- Carbohydrate-containing drinks rehydrate and replenish depleted glycogen stores.
- A sports drink designed specifically for recovery should contain an optimal balance of carbohydrate, sodium, and protein to help restore glycogen stores, promote rehydration, and repair muscles.
- Sodium in beverages enhances rehydration by reducing urine output, and increases voluntary fluid intake by stimulating the thirst impulse.
- For modest fluid losses, sports drinks are adequate.
- For large fluid losses, salty snacks along with a sports drink can help restore fluid levels by stimulating thirst.

POST-WORKOUT REFUELING

When muscle glycogen stores are fully depleted by a long or intense workout, it may take up to 24 hours for levels to be fully restored.

Several strategies have been investigated to speed up glycogen replenishment, such as:

- Altering the timing of fuel ingestion
- Increasing the frequency of ingestion
- Combining carbohydrate with protein

These strategies may have merit in fine-tuning the rate of glycogen storage. However, the most important factor in speeding glycogen replenishment is **the amount of carbohydrate consumed.**

MANAGING A BRIEF RECOVERY TIME BETWEEN WORKOUTS

Aggressive refueling is needed when you have less than 24 hours between workouts; such as having more than one training session in a day, competing in a multiple-round tournament, or engaging in consecutive days of lengthy and/or intense training or events.

In such instances, starting the ingestion of carbohydrates and protein as soon as possible after exercise helps ensure adequate glycogen stores for the next engagement.

Similar to intakes during exercise, 30 to 60 grams of carbs per hour are recommended over the first several hours after exercise when rapid refueling is necessary.[1] Higher carb intake levels have been shown to provide even faster glycogen storage for extreme training or competition needs, such as when there is less than eight hours between exercise sessions. There is also evidence that including some protein with the carbohydrate speeds up glycogen storage.[1,3]

Those consuming lower-calorie diets can incorporate recovery eating into their normal meal pattern to avoid over-consuming calories.

REFUELING TECHNIQUES

- Schedule frequent, small meals. Small meals and snacks after exercise can help meet energy requirements without leaving you feeling too full.
- Always plan ahead. To ensure that your favorite recovery snacks are available post-workout/competition, pack your own supply of well-chosen foods and drinks.
- Convenient and portable POWERBAR® products are an excellent option for promoting post-exercise recovery.

Post-Workout

PROTEIN FOR MUSCLE REPAIR AND REGENERATION

Consuming protein post-workout is vital to supporting protein synthesis in the repair and rebuilding of muscle tissue.

It is as important for muscle repair and adaptations following endurance exercise, as it is following resistance training. Protein-rich foods help support the increase in muscle mass and strength.

Also, consuming some protein along with carbohydrate shortly after endurance training, may further speed muscle glycogen recovery.[1,3]

GOOD CARB/PROTEIN SNACK CHOICES

Smart recovery snacks should provide optimal amounts of both carbohydrate and protein (approximately 60 grams of carbohydrate and 10 grams of protein). Here are some choices for putting together an appropriate post-exercise snack:

SNACKS	KCAL	CARB	PROTEIN	FAT
24 OZ POWERBAR® RECOVERY SPORT DRINK	270	60 g	9 g	0 g
1 CUP LOW-FAT FRUIT YOGURT	250	47 g	11 g	2.6 g
1 BOX ANIMAL CRACKERS/ COOKIES	298	50 g	4 g	9 g
½ CUP GRANOLA	255	37 g	6 g	10 g
½ CUP RAISINS	217	57 g	2 g	<1 g
1 BEAN AND CHEESE BURRITO	189	27 g	7.5 g	6 g
NATURAL PB&J ON WHOLE WHEAT	434	60 g	13.3 g	18 g
1 OZ PRETZELS	108	22 g	2.6 g	<1 g
1 WHOLE WHEAT BAGEL (SMALL)	145	31 g	6 g	<1 g
1 CUP FRESH ORANGE JUICE	112	26 g	1.7 g	<1 g
½ CUP 2% FAT COTTAGE CHEESE	101	4.1 g	15.5 g	2 g
1 CUP SEEDLESS GRAPES	114	28 g	1 g	0 g
1 STRING CHEESE	72	<1 g	7 g	4.5 g
6 100% WHEAT CRACKERS	106	16 g	2 g	4 g

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