

RECOVERY NUTRITION

What to eat:

Carbohydrate is the preferred fuel for the muscles both during and after hard exercise. The body uses carbohydrate during intense training and competition. Eat meals and snacks that contain all the macronutrients (carbohydrate, protein and fat) after exercise, but with carbohydrates in the highest percentage. Be sure to keep the fluids flowing. Exercisers commonly lose 1-3 pounds of fluid from sweat per hour. This easily leads to a loss of more than 2% of body weight in fluids. This small amount of fluid loss will diminish both mental and physical capacity. And if muscle cells are not well-hydrated, protein synthesis is slowed, reducing the recovery and growth of muscle tissue. Monitor your hydration status by checking the color of your urine. Drink enough fluid so that your urine is pale yellow. Dark urine indicates dehydration.

When to eat:

Intense exercise can deplete your body's stored carbohydrate (called glycogen). Your muscles are most receptive to replenishing lost glycogen stores within the first 30 minutes to two hours after exercise. Getting carbohydrates into your system within the first hour after exercise will help you refuel your muscles, getting them ready to exercise again within hours. Some athletes don't feel hungry right after heavy exercise. Try some juice that is high in carbohydrates to replenish carbohydrates and lost fluids. When you are hungry, have a meal that is high in carbohydrates and also includes protein and fat.

How much to eat:

Sports nutrition books recommend consuming $\frac{3}{4}$ to 1 gram of carbohydrates per pound of body mass within two hours after hard exercise. Some research has indicated that consuming protein in addition to carbohydrates immediately following exercise may aid recovery (4:1 ratio). Choose foods that are higher in carbohydrates along with some protein.

Some examples of high carbohydrate foods:

- Rice
- Pancakes
- Dried Fruits
- Pasta
- Tortillas
- Low fat crackers
- Bread
- Milk
- Juices
- Fresh Fruits
- Potatoes
- Lentils
- Yogurt
- Fig bars

A target recovery plan:

Your recovery meal should focus on the following (in this order)

- **Fluids** (sports drinks may contain the next two in this list)
- **Carbohydrates**
- **Protein**

To keep it simple, let's plan a recovery meal with a simple formula. The table below provides examples, but you will need to read your nutrition labels as you plan your meal. Keep in mind that whatever you choose should follow these simple guidelines

1. Choose foods that are high in carbohydrates, but not necessarily sugar. For example, fruit punch and candy may contain carbohydrates, but it is in the form of refined sugar. Juices and natural sources of carbohydrates such as fruits and grains are better sources for recovery
2. Avoid foods that contain large amounts of fat. Fat is difficult to digest and may slow the body's ability to digest other foods that were consumed at the same time (like those very important carbohydrates)
3. The body not only loses water, but electrolytes (sometimes referred to as salts). It is important to replace these. Sports drinks often contain potassium and sodium for this reason. Most fruits and vegetables contain natural sources of these important substances.

Planning a Recovery Meal

Working with your parents (and maybe some teammates or friends) plan a recovery meal that fits the following formula.

1. Choose a fluid replacement (water or sports drink)
2. Shoot for 1 gram of carbohydrate per pound of body weight
3. Include protein in your meal and shoot for a ration of 4: 1 for carbohydrates to protein.

Example:

If you weigh 100 lbs, you would want a recovery meal that contained fluid and food that contains 100 grams of carbohydrates and 25 grams of protein.

Food	Cals	Carbs (g)	Prot (g)	Fat (g)
Glass orange juice	170	38	2.6	0.8
1 cup fruit (strawberries)	51	10.5	0.9	0.6
1 bowl of muesli (50 gms - oatmeal)	190.5	32	5.5	4.5
1 cup low fat milk	96	9.4	6.6	3.6
1 egg (poached)	82	1.0	6.0	6.0
2 slices bread	160	32	6.0	1.0
1 tsp low fat margarine	34	0.0	0.0	3.8
1 medium banana	116	26	1.0	0.6
1 yoghurt with handful of grapes (10) and tablespoon of peanuts	244.5	29.6	8.5	10.0
Tuna in sunflower oil	141.2	0	25.1	7.0
1 medium baked potato	298	67.2	6.2	0.4
1 cup Peas (steamed)	64	11	5.0	0.0

cooked)				
1 peach	45	10	1.0	0.1
1 medium apple	85	21	0.3	0.0
1/4 cup Cashew nuts	212	12	5.3	15.2
1 nectarine	77	16	0.9	1.0
1 smoothie (200 mls LFmilk + 1 cup raspberries)	165	23.2	7.6	4.2
1 Pear	133	30	1.0	0.6
1 tbsp Italian dressing for salad	70	1.5	0.1	7.1
1.5 cup tossed salad	37	6.7	2.6	0
1 breast chicken - roasted (2 oz, 56 gr)	90	0	17	1
2 potatoes	296	67	6.2	0.4
2 carrots (steamed microwave)	64	14	2.1	0
1 broccoli spear (steamed - mw)	69	10	5.0	0
2 cups apple juice	240	60	0	0

2 ozs (56 gm) cheddar cheese	112.7	0.4	7.0	9.3
2 square crackers	109	21	2.3	2.5

Sports Drinks – Read Labels

Gatorade

Propel

PowerAde

Vitamin Water

AVOID:

Soda or any caffeinated drink

Fried foods

Candy

Chips

Meats high in fat (ex. Burger or hot dog)