

## **Exercise: The Pre-Workout Meal**

Everyone seems to have an opinion about what to eat before exercise. Information abounds. Personal trainers, magazines, news media, coaches, and every person in the gym have a philosophy about this topic.

Some say protein is essential to build muscle; others tout the importance of carbohydrate for immediate energy. Everyone agrees that water is important, but when and how to consume it varies, depending on whom you ask. Much research is performed with financial support from industry, with sometimes questionable credibility. The following guidelines are based on current nutrition research and strong empirical data.

For the majority of exercisers, those who perform cardiovascular or light strength training as physical activity for an average of 35-40 minutes, a few days a week, the most important thing is overall good nutrition. A strong foundation of a healthful diet is enough to provide sufficient energy, prevent fatigue, and aid in cardiovascular and muscle work.

A simple pre-exercise snack with plenty of water should fuel the body sufficiently. The best pre-workout meal is one that works best for the individual and is not digested too rapidly.

Try these ideas:

- A banana with 1 tablespoon of peanut butter
- Low-fat yogurt and a piece of fruit
- Oatmeal made with skim milk and fruit
- Trail mix with nuts and fruit
- Granola with low-fat milk and fruit
- A smoothie made with low-fat yogurt, fresh fruit, and wheat germ or flax meal

Sip water throughout the activity and after exercise is completed.

Exercisers or athletes in training may require a more substantial meal or snack to optimize performance. The best pre-workout meal for athletes is one that is full of nutritious and wholesome foods, but, most importantly, it is one that is tried and true for them. Factors that may contribute to how well a pre-workout meal is tolerated include:

- Age
- Gender
- Gastric motility and emptying time
- Allergies and intolerances
- Type of training
- Overall diet
- Dietary intake during exercise
- Genetic factors

### **Pre-workout meal tips**

The following are some ideas that you may want to try:

- Choose high-carbohydrate, low-fat foods—whole-grain, high-fiber foods, consumed 1 hour prior to exercise, are ideal; some examples include:

- Breads
- Cereals
- Muffins
- Yogurt
- Oatmeal
- Beans
- Crackers
- Pasta
- Avoid high-fat protein sources, such as fried meats, cheese, and hamburgers, because they take longer to empty from the stomach and may contribute to a sluggish or nauseated feeling
- Take time to digest your pre-workout meal—the blood used to digest foods in the stomach is required in the muscles for exercise; so, food will remain in the digestive tract longer if improper time for digestion is allowed
- Eat familiar foods prior to competitions and intense practices
- Use energy bars and protein shakes as alternatives to whole foods, but realize that the needed calories come primarily from sugars
  - The energy boost does not come from consuming the ingredients in these products, but from consuming the 200-300 calories needed in a pre-workout meal
  - These products are not more digestible than whole foods
  - Adequate water consumption is essential for complete digestion

### **Reference**

Clark N. *Sports Nutrition Guidebook*. 3rd ed. Brookline, MA: Human Kinetics; 2003.

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## Eating Before Exercise

Why: To keep you energized through your practice or meet.

What: The ideal is high in carbohydrate, contains small amount of protein, is low in fiber and fat and well-tolerated. Try different foods to determine what works best for you.

Protein will help to build and repair muscle tissue. Adequate protein before exercise may help reduce soreness in the muscles after exercise.

When:

The following foods are suitable to eat **3-4 hours** before exercise:

- turkey breast sandwich with milk
- baked potato with low-fat cheese
- nut butter on toast
- breakfast cereal with milk
- minestrone soup with roll
- fruit with yogurt
- pasta or rice with a sauce based on low-fat ingredients (e.g. tomato, vegetables, lean meat)

The following snacks are suitable to eat **1-2 hours** before exercise:

- liquid meal supplement
- milk shake or fruit smoothie
- sports bars (check labels for carbohydrate and protein content)
- breakfast cereal with milk
- cereal bars
- yogurt
- fruit

The following foods are suitable to eat if there is **less than 1 hour** before exercise:

- sports drink
- carbohydrate gel
- sports bars

## Recovery Nutrition

### Why It Is Important?

- Refuels your muscle and liver energy stores (glycogen)
- Repairs muscle damage
- Rehydrates the body
- Replaces electrolytes that are lost in sweat
- Keeps the immune system strong

### A carbohydrate and protein snack immediately after exercise will:

- Decrease core temperature
- Rehydrate
- Restore energy and fuel
- Rebuild muscle
- Reduce muscle damage
- Speed muscle repair
- Improve performance

### When:

- Within 30-60 minutes of finishing exercise

### What?

- Combination of carbohydrate and protein

### Sample Meals

- Whole wheat pita sandwich with turkey and veggies + pretzels + low-fat milk
- Rice bowl with beans, cheese, salsa, avocado + whole grain tortilla chips or whole wheat tortilla
- Stir fry with lean steak, broccoli, bell peppers, carrots + brown rice
- 1 cup vegetable soup and ½ turkey sandwich on whole wheat tortilla
- 1 egg plus 1 oz cheese, ¼ avocado on whole wheat English muffin

### Sample Snacks

- Smoothie made with yogurt and frozen berries
- Sports drink (carbohydrate, electrolyte, fluid) + sport bar (carbohydrate, protein)
- Graham crackers with peanut butter + low-fat chocolate milk + banana
- 1 cup low fat chocolate milk
- Medium baked potato with ½ cup low fat cottage cheese or 1 oz low fat cheese
- 1 cup oatmeal with side of 3 egg whites
- Nutrition bar with 30 g carbohydrate and 10-15 g protein

## Exercise Hydration Worksheet

I need about \_\_\_\_\_ ounces (oz) of fluid each day.

To calculate range: Weight in pounds  $\times$  0.5= \_\_\_\_\_ oz/day

to

weight in pounds  $\times$  1.0= \_\_\_\_\_ oz/day

### Best fluid choices

Rest Day	What Kind	When
1.		
2.		
3.		

Practice/Training Day	What Kind	When
1.		
2.		
3.		

Meet Day	What Kind	When
1.		
2.		
3.		

### Practice and Meets

Timing	Amount
Pre-exercise	16-24 ounces in the 2 hours before
During	Sips of fluids every 10-15 minutes
Post-exercise	2-3 ounces for every pound lost

### Plan your day

Do not let dehydration stand in your way. Know what you will need and when.

Time of Practice	I Will Drink
2 hours before practice or meets	
During practice or meets	
After practice or meets	