

Eat To Compete: Sports Nutrition

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Nutrition is fundamental to fitness. An eating plan that is balanced, which supplies the right amount of nutrients and energy is essential for achieving and maintaining strength, flexibility, and endurance.

Our bodies are like cars that cannot run on empty and which will perform at their best when properly fueled. So how will you fuel your body so that you can ask it to swim and run like the well-oiled engine it is? Read on...

What is a balanced eating plan to fuel up for fitness?

- **Doesn't differ much from a regular, balanced diet**
- **Includes adequate fluids, low-fat, high-carbohydrate foods, that provide energy and replenish the fuel & fluids lost during physical activity**
- **Meets your nutrition needs before, during & after exercise or competition**

Carbohydrates & Muscle Glycogen

- **The body's preferred fuel for swimming (or any endurance sport) is muscle glycogen**
- **Glycogen is the body's storage form of carbohydrates**
- **If muscle glycogen breakdown exceeds its replacement, glycogen stores become depleted**
- **This will result in fatigue and difficulty in maintaining training and competition intensity**
- **In order to replenish & maintain glycogen stores, your diet needs to be carbohydrate-rich.**

How much carbohydrate should I eat?

- **About 60% of the total calories in your diet should be made up of carbs**
- **Multiply your weight in pounds by 3.2 – to give you the number of grams per day you should consume**
- **(one carbohydrate choice = approximately 15 grams)**

Pre-Competition Meal: Why?

- Avoid hunger before & during the event
- Helps you stay physically comfortable and mentally alert
- This meal can raise blood glucose (sugar) levels and liver glycogen (stored sugar)
- Should be eaten one to four hours before the event, don't eat in that one hour before the event. Cool fluids only one hour before the event.

What to include in the pre-competition meal?

- Several high-carbohydrate foods
- They take the least time to pass through your stomach
- Most foods from the fruit, vegetable and grain group are excellent sources
- **High protein foods like low-fat dairy & lean meats (tuna, baked ham, broiled, skinless chicken) may be safely included in your pre-competition meal, however, eat them in moderate amounts

High-Carbohydrate Foods:

GRAIN GROUP:

Bagel, cornflakes, English muffin, hard roll, oatmeal, pasta, pita bread, raisin bran, rice, whole wheat bread

FRUIT GROUP:

Apples, bananas, grapes, oranges, pears, raisins

VEGETABLE GROUP:

Corn, peas, sweet potatoes, potatoes (baked, broiled or mashed)

MEAT GROUP:

Navy beans, black eyed peas, pinto beans, refried beans

MILK GROUP:

Low fat chocolate milk, low fat frozen yogurt, low fat milk, ice milk, skim milk, low fat yogurt

Before competition—avoid:

- Higher fat foods like hamburger, sausage, lunch meats & peanut butter
- Fried foods like doughnuts, chips, French fries, and fried fish or chicken
- Fats like mayonnaise and salad dressings

- *****because these foods are higher in fat, they take the longest to pass through the stomach. Foods that remain in the stomach during competition may cause indigestion, nausea, and even vomiting. If you include any of these foods in your pre-competition meal, eat them in small amounts.**

Some examples of pre-competition meals:

1. Orange juice, cornflakes with a sliced banana, whole wheat toast with jelly, and skim milk
2. vegetable soup, chicken sandwich on whole wheat bread, and low fat strawberry yogurt
3. julienne salad (lettuce and other fresh vegetables with thin strips of cheese and turkey), a hard roll, frozen yogurt and grape juice

Post-Competition Fuel:

- **Muscles replenish stored carbohydrates most efficiently during the first 2 hours after exercise.**
- **Eat or drink 200-400 carbohydrate calories as soon as tolerable after exercise, and then again 2 hours later.**

Suggestions:

1. 2 pieces of fruit such as a banana and orange or apple
2. 12 oz. fruit juice cocktail, like cranberry, or fruit juice like grapefruit or orange
3. 1 cup non-fat frozen or regular yogurt topped with 1 cup blueberries or raspberries
4. 1 cup of grapes and a bagel
5. 1 oz of cereal with $\frac{1}{2}$ cup skim milk and $\frac{1}{2}$ sliced banana
6. 1 cup low fat vegetable soup with 1 pita pocket
7. 1 bran, blueberry, or cranberry low fat muffin with a cup of skim milk

Hydration

- **Body requires extra fluid for sweating**
- **150-lb. athlete can lose as much as 6 cups of fluid in one hour of exercise**
- **Dehydration hurts performance by reducing endurance**

Fluids before and during exercise:

- Workouts 90 minutes or less – water
- Workouts over 90 minutes –dilute fruit juices and juice or sports drinks to half strength with water.

Fluids after exercise:

- Drink 2 cups of fluids for each pound lost
- Juices, juice drinks, low fat chocolate milk are good choices because they replenish fluids and carbohydrates.

Basic timing recommendations for fluid replacement:

- Temperature: cool, not ice-cold, fluids are preferred
- Volume: 2 hours before activity: 16 oz. (2 cups fluid)
10-15 minutes before activity 20 oz. (2.5 cups fluid)
Every 15 min. during: $\frac{1}{2}$ to $\frac{3}{4}$ cup fluids
After activity: 2 cups of fluid for every pound lost

Eating on the go:

See Handouts

References:

- *National Center for Nutrition and Dietetics (of the American Dietetic Association)
Nutrition Fact Sheet
- *National Dairy Council
- *USDA Food Guide Pyramid