



# NASM HYDRATION AND MACRONUTRIENT GUIDELINES



## **HYDRATION:**

The human body is 40% - 70% water, most of which (~70%) is found in muscle tissues. Because men have more muscle tissue than women do, the male body has a greater percentage of water by weight. The Dietary Reference Intake (DRI) for water is a general recommendation. For women, it is approximately 2.7 liters (91 ounces) of total water from all beverages and foods each day. For men, the recommendation is approximately 3.7 liters (125 ounces) per day (Institute of Medicine, 2004).

### **Before Exercise:**

- o Consume 14 - 20 ounces of fluid 2 hours before exercise.
- o Consume 16 ounces of fluid about 15 minutes before exercise, if tolerated.
- o Consume water or sports drink rather than soda or juice.
- o Fluid absorption is accelerated with a 6% carbohydrate drink (any popular sports drink).
- o Cold water or fluid is more rapidly absorbed.

### **During Exercise:**

- o Drink 4 - 8 ounces every 15 - 20 minutes (or 16 - 32 ounces every hour).
- o If the weather is very hot, more fluid may be required.
- o Consuming fluids with 500 - 700 grams of sodium per 33 ounces of water enhances fluid replacement.
- o Drink sports drinks containing 6% - 8% glucose for exercise lasting longer than 60 minutes.
- o Sodas, teas, and juices are not ideal, and may result in the reverse of the desired effect.
- o Drinking plain water without electrolytes can also be a problem.

### **After Exercise:**

- o Consume 50 ounces of fluid for every kilogram (2.2 pounds) of body weight lost during exercise.
- o For exercise longer than 1 hour in duration, consuming a drink containing sodium and glucose will promote rapid rehydration.

*Data from American College of Sports Medicine (2009).*

## **MACRONUTRIENTS:**

Macronutrients are nutrients that provide calories and include carbohydrates, proteins, and fats.

### **Macronutrient Intake Recommendations:**

<u>Macronutrient</u>	<u>Recommended Intake</u>
<i>Carbohydrate</i>	<i>1 gram of carbohydrates = 4 calories</i>
General population	45% - 65% of total daily calories 3 grams per kilogram of body weight per day
Exercising for > 1 hour per day	4 - 5 grams per kilogram of body weight per day
Athletes or high-intensity exercisers	8 - 12 grams per kilogram of body weight per day
Fiber	Men: 38 grams per day, Women: 25 grams per day
<i>Protein</i>	<i>1 gram of protein = 4 calories</i>
General population	10% - 35% of total daily calories 0.8 grams per kilogram of body weight per day
Endurance athletes	1.2 - 1.4 grams per kilogram of body weight per day
Strength athletes	1.6 - 1.7 grams per kilogram of body weight per day
<i>Fat</i>	<i>1 gram of fat = 9 calories</i>
Total consumption	20% - 35% of total daily calories
Saturated fat	Less than 10% of total daily calories

*Data from Food and Nutrition Board of the Institute of Medicine (2005).*