Determining Calorie Needs

Calorie Keys

→ CALORIES = ENERGY

→ As a competitive athlete, you need to eat the right amount of energy (calories) for peak performance and to and maintain optimal fitness for your sport

→ Calorie needs are directly related to the amount of muscle you carry on your body, so the stronger you are, the more calories you need to eat

→ The intensity and duration of workouts also affect your total energy needs

→ Your body uses energy most efficiently when you eat on a schedule, fueling your body several times a day

WARNING Some athletes compromise performance by eating too few calories on a consistent basis. These athletes are unable to make the gains in lean muscle mass and/or muscle power needed to succeed. As you get stronger, your body requires even more calories to support your muscle, so many athletes find they need to increase their food intake as they get stronger and in better shape. Make sure you understand how many calories you require and eat accordingly to build and maintain lean muscle mass.

What you need to know

Energy in an athlete's diet should come primarily from carbohydrate-rich foods (whole grains, cereals, pasta, rice, potatoes, fruits, fruit juices, vegetables, milk products, and desserts). Lean proteins (lean meats, eggs, fish, poultry, skim and lowfat milk products, nuts, seeds, and beans) and quality fats (olive oil, avocado, nuts, seeds, and nut butters) should comprise the other half of the diet.

Determining your energy needs

Use the following graph to estimate your daily energy (calorie) needs for your body and your training. Calorie needs are based on your body weight and amount and intensity of training. Calorie needs on the following page are are designed for competitive athletes.

ESTIMATED DAILY ENERGY (CALORIE) NEEDS FOR COMPETITIVE ATHLETES

Training/ workout intensity	Calories per pound of body weight	Example: 120 pounds	Example: 160 pounds	Example: 220 pounds	Example: 280 pounds
Low (injured or minimal exercise)	13 to 15	1,560–1,800	2,080–2,400	2,860–3,300	3,640–4,200
Limited (training 30–60 minutes, 5–6 times/week)	16 to 18	1,920–2,160	2,560–2,880	3,520–3,960	4,480–5,040
Moderate (training 1–1 ½ hours, 5–6 times/week)	19 to 21	2,280–2,520	3,040–3,360	4,180–4,620	5,320–5,880
High (training 1 ½–2 hours, 5–6 times/week)	22 to 24	2,640–2,880	3,520–3,840	4,840–5,280	6,160–6,720
Very High (training 2–3 hours, 5–6 times/week+)	25 to 30 or more	3,000–3,600	4,000–4,800	5,500–6,600	7,000–8,400

For *weight loss,* subtract 500 calories per day. For *gradual weight gain,* add at least 500–1,000 calories per day.

CALORIE NEEDS EXAMPLE 1

180-pound athlete training 2 hours per day, 6 days per week

<u>Energy needs:</u>

24 to 25 calories per pound (180) per day = **4,320 to 4,500 calories per day**

CALORIE NEEDS EXAMPLE 2:

140-pound athlete training 1 ½ hours per day, 6 days per week (and wants to lose 5 pounds)

<u>Energy needs:</u>

21 to 22 calories per pound (140) per day = 2,940 to 3,080

(-500 calories per day for weight loss) = **2,490 to 2,580 calories per day**

Calorie Q and A:

How low in calories can an athlete go and still train well?

Most athletes need a *minimum* of 1,800–2,000 calories per day, even when their goal is decreasing weight. Chronically undereating can lead to many undesirable problems, including loss of lean tissue and muscle mass, slowed metabolic rate, possible disruption of menstrual cycle and reproductive function, and increased risk of illness.

Will I gain bodyfat if I eat some of my calories late at night?

As an athlete, your body is in constant recovery and repair. So, it won't hurt you to eat a snack when you're studying late at night or even right before you sleep if you are hungry or haven't met your calorie needs for the day. Spreading out your calories as much as possible throughout the day (and night) is recommended. The most important thing is *what* you eat. Select a small, balanced meal. For example, a peanut butter and jelly sandwich on whole wheat bread with an apple may be a good bet.

If I'm trying to gain weight but feel I'm already eating as much as possible, how do I add more calories to my diet?

First, take a close look at your daily schedule and food intake and determine if there are any "eating opportunities" you are missing out on. Many athletes require fuel every 2-3 hours. Can you grab a container of chocolate milk and drink it on the way to class? Can you pack a bag of trail mix to eat before practice? Can you substitute 100% juice for water with meals or between classes to boost high-energy carbohydrates? Second, make sure you are eating as much as possible at meals. You may find you can eat just a few more bites at each meal.

Is it true that there are "good calories" and "bad calories?"

There certainly are foods that you want to eat more frequently as your primary calorie sources. Whole grains, fruits, vegetables, skim or lowfat milk products, and lean meats and proteins are all in that category. Cookies, cakes, ice cream, soda, and fried foods should be eaten in smaller amounts. They have calories, but they are not high-quality calories for your training body. But remember that all foods can work in your sports diet. Consider choosing 80% of what you eat from foods you know are high-quality energy boosters, and 20% of what you eat from foods you just like to eat. That's a good mix.

How many times should I eat during the day?

Some research indicates that athletes stay leaner and more fit when they eat 6 times a day instead of 3 times a day. Fueling more frequently may help you stay stronger, leaner, and in better shape by providing energy and key nutrients throughout the day. Try eating 3 meals and 2-3 snacks throughout the day to boost your body's ability to maximize training and overall fitness.

This handout was designed by Sports Dietitians Michelle Rockwell, MS, RD, CSSD and Susan Kundrat, MS, RD, CSSD to provide general education. For specific concerns, refer to your sports medicine team.

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