



Calorie Need Estimates

The energy content of food is measured in calories. The number of calories, or energy, an athlete needs to maintain weight depends upon: age, body weight, gender, Resting Energy Expenditure (REE) and physical Activity Energy Expenditure (AEE) levels. Calorie needs are based upon Total Energy Expenditure (TEE), which includes two major parts:

1. Resting Energy Expenditure (REE): the amount of calories needed to maintain basic body systems and body temperature at rest.
2. Activity Energy Expenditure (AEE): the amount of calories used during activity.

Maintenance or change in body weight is summarized in the formulas below:

- **Weight maintenance** Calorie intake = TEE
- **Weight gain** Calorie intake > TEE
- **Weight loss** Calorie intake < TEE.

Alert! For weight loss, total calorie intake should not be less than REE, unless a physician is supervising weight loss.

Calculating Total Daily Calorie Needs

The number of calories needed to maintain a certain body weight can be estimated by multiplying a person's REE times an appropriate Activity Factor (AF). Choose one of the formulas in Table 1 to calculate REE and then use the information from Table 2 to choose an appropriate AF. Formula 2 gives a slightly more accurate estimate of your calorie needs than Formula 1.

Table 1: Formulas for Estimating Calorie Needs for Resting Energy Expenditure (REE)†

Formula 1:

Males: REE Calories = 11 x body weight in pounds

Females: REE Calories = 10 x body weight in pounds

Formula 2:

Males: REE Calories = 66.47 + 13.75 (weight, kg) + 5 (height, cm) – 6.76 (age, yr)

Females: REE Calories = 655.1 + 9.65 (weight, kg) + 1.84 (height, cm) – 4.68 (age, yr)

Key: kg = kilograms (pound/ 2.2), cm = centimeters (inches x 2.54), age = age (years),
†Equations are for healthy people.

Table 2: Activity Factors (AF) for Different Levels of Activity

Activity Level	Activity Factor	
	Male	Female
Resting: Sleeping, reclining	1.0	1.0
Sedentary: Minimal movement, mainly sitting/lying down, Activities include: watching television, reading, etc.	1.3	1.3
Light: Office work, sitting, day consists of sleeping 8 hrs with 16 hrs of walking or standing Activities include: walking, laundry, golf, ping pong, walking on level ground at 2.5-3 mph *Usually includes 1 hr of moderate activity	1.6	1.5
Moderate: Light manual labor Activities include: walking 3.5-4 mph, carrying a load, cycling, tennis, dancing, weeding and hoeing	1.7	1.6
Very Active: Full-time athletes, agricultural laborers, active military duty, hard laborers (mine and steel workers) Activities include: walking with a load uphill, team sports, climbing	2.1	1.9
Extremely Active: Lumberjacks, construction workers, coal miners, Some full-time athletes with daily strenuous training	2.4	2.2

Total Daily Calorie Needs

$\frac{\text{_____}}{\text{Your REE}} \times \frac{\text{_____}}{\text{Your AF}} = \frac{\text{_____}}{\text{Your TEE calories}}$ <p>To maintain weight you need _____ calories per day <small>Enter your TEE calories</small></p>
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