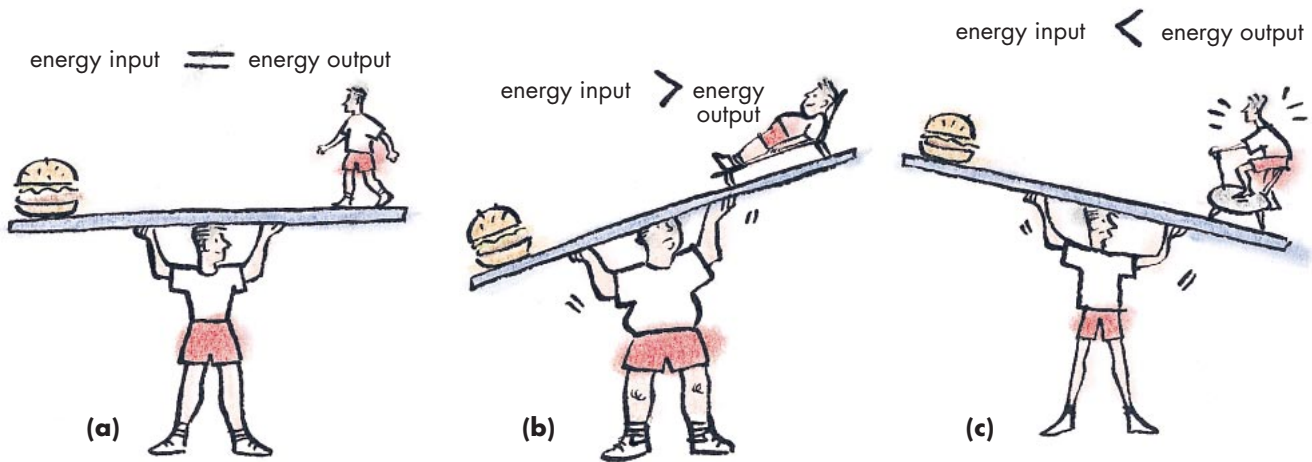


**EXTENSION**

■ The amount of energy you need for activities affects how much you should eat. What other things might affect a person’s eating habits? What reasons might a person give for “overeating,” or “undereating”? Do you think these are good reasons? Think about your answers to these questions and discuss them with a group of friends or classmates.

**FIGURE 10.7**  
*To maintain a suitable body mass for your height, you need to balance energy input with energy output.*



**CONTROLLING YOUR BODY MASS**

If you are close to your ideal body mass for your age and height, you will want to keep this mass. You do this by balancing energy input (the amount of energy taken in from food) with energy output (the amount used in basic life processes and other activities), as shown in Figure 10.7a. If you eat three meals a day and have an active lifestyle, you are probably balancing your energy input and output quite well.

People can upset their energy balance. People who are not physically active, or who often snack between meals, may have more energy input than output (Figure 10.7b). The extra energy is stored as fat in the body. In this case, a person can reach a better balance by reducing energy input or increasing output. If the person wants to lower his or her body mass, it is best to do a little bit of both. It is very important not to reduce energy input too much or to suddenly raise energy output too high. A loss of about 1 kg a week is a good average, although the amount may vary from week to week. If a person does not eat enough to supply the body’s needs, he or she may feel ill or tired all the time (Figure 10.7c). If there is not enough food energy to run all the basic life processes, the person may become quite ill.

**ACTIVITY 10C / SNACK FOOD TRADE-OFF**



Some snacks do not contain many nutrients but do contain many kilojoules of energy. Table 10.3 lists the energy in various snack foods. Examine the data given in the table, then answer the questions that follow.

**DISCUSSION**

1. You want a snack when you arrive home from school. You have a jelly doughnut and a cola drink.
  - (a) How much energy is contained in your after-school snack?
  - (b) How long would you have to jog in order to use up the energy provided by this snack?