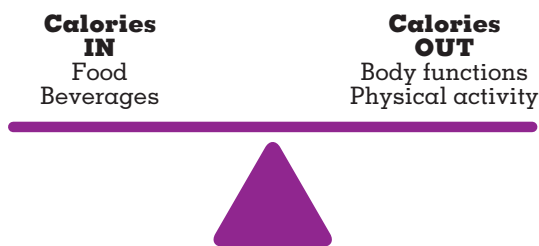


Calculating energy balance

Even though we do not have complete information on the total food intake, total daily expenditure (daily activities) or health status of Henry, Irene and Marie, we have enough information to make an approximate assessment of their energy balance and make some reasonable observations and recommendations for each of them.



BMI Weight Status Categories

BMI	Weight status
Below 18.5	Underweight
18.5 – 24.9	Normal
25.0 – 29.9	Overweight
30.0 and Above	Obese

Henry has a BMI of 24.6, which puts him in the normal weight range. He is also in energy balance, because the calories he takes in are equal to the calories he uses for his normal body processes (BMR) and for daily movement and activities. If he continues his current pattern of eating and activity, he is likely to maintain his healthy body weight and BMI. However, Henry may need to be careful, because he is at the top of the normal weight range for his height and it will not take much for him to slip into the overweight category. If he eats only a little bit more each day or moves a little bit less, over time his weight and BMI will increase.



Use this Answer Work sheet to check your answers on the Ask yourself Work sheet **Calculating Energy Balance**

Calculating energy balance (cont.)

Irene has a BMI of 27.4, which means that she is overweight. She is also in positive energy balance, because she is consuming more calories than she burns for her body processes (BMR) and for daily movement and activity. If she continues her current eating pattern and lack of physical activity, she will continue to gain weight. Irene has a job that requires many hours of sitting and she does not seem to be very physically active outside of work. To lose weight, Irene will need to reduce the amount of calories she consumes and find ways to increase her physical activity, such as walking part way or all the way to and from work, taking a short walk during her lunch break and doing some more vigorous activities after work or on the weekends. Being more physically active will also have many other health benefits for Irene.

Marie has a BMI of 17.7, which means that she is underweight. She is also in negative energy balance, because she is consuming fewer calories than she needs to cover her body processes (BMR) and her daily movement and activity. If she continues her current pattern of under eating and heavy physical labour and activity, she will continue to lose weight. Marie's health is at risk; as she continues to lose weight, she will become more underweight, she will be less able to fight infections and will become ill more easily and more seriously. She needs to immediately increase her food consumption. It would be good for her to see a health care professional and try to reduce her physical work load, if possible.

★ You can read more about the importance of physical activity for good health in Lesson 10 *Keeping fit and active*

★ You can read more about the health problems related to underweight and undernutrition in Lesson 3 *Understanding problems of poor nutrition*

★ You can read more about the health problems related to overweight and obesity in Lesson 3 *Understanding problems of poor nutrition*

