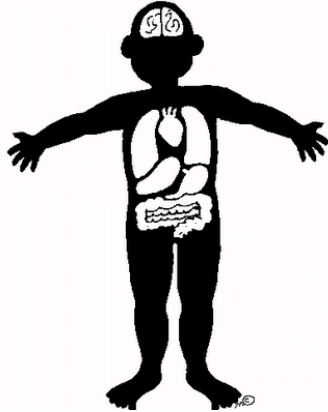


Metabolism & Eating Disorders

What is Metabolism?

Metabolism is a process where the food we eat is converted into a specific type of fuel for the cells in our bodies to use. When food is processed the end result is the creation of building blocks called fatty acids, amino acids and glucose. These building blocks are used to provide energy (or fuel) for each cell to do its job as part of your essential bodily functions.



Your body requires energy for four main functions:

1. For your organs (such as lungs, heart, brain) to function. This component of metabolism is also known as *basal metabolic rate*. In fact, your brain alone uses about one third of your daily supply of building blocks, especially glucose.
2. For growth and repair of body tissues, including fighting infection and when the body is under stress.
3. For energy used when you move your muscles, such as during physical activity.
4. To digest and break down food into its building blocks, also called the *thermic effect of food*.

What Affects Metabolic Rate?

There are several factors that increase or decrease your metabolic rate, which is the amount of energy your body uses each day:

- **Body size and the amount of muscle mass:** A larger body will require more energy, and muscle in particular requires a lot of energy to be maintained. A reduction in body or muscle mass will result in a reduced metabolic rate.

- **Dieting:** Dieting, fasting and food restriction trigger your body to conserve energy for another time. It is a survival mechanism of your body, and is sometimes called the '*famine response*' (see our handout on *Starvation Syndrome*). Your body is very effective in recognising an energy shortage and will reduce your metabolic rate to save energy.
- **Weight loss:** Any weight loss, especially when it is rapid, reduces metabolic rate.
- **Regularity of eating:** Eating regularly increases your metabolic rate whereas having long periods without food will decrease it. This is due to the thermic effect of food. It is helpful to eat at regular intervals; roughly every 3-4 hours (see our handout *Regular Eating for Recovery*)
- **Genes:** Genes influence your resting metabolic rate, however they are not something that can be altered.
- **Sex:** Generally males have more muscle tissue than women, meaning they usually have a higher metabolic rate and require more energy.
- **Movement:** This includes all structured and planned activities as well as things you might not think about in day-to-day activity, such as cleaning or gardening.
- **Life stage:** Metabolic rate is higher during significant periods of growth and development such as puberty and pregnancy.
- **Infection and illness:** When you are unwell, your body has a higher metabolic rate and energy needs in order to fight the infection or illness.

