

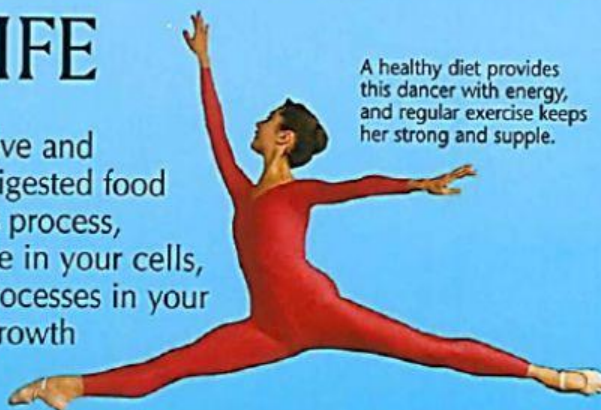
This mark will
not be accurate –
your mark will be
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EDMODO

Anatomy

Read this passage or listen to it

ENERGY FOR LIFE

Your body needs energy to keep alive and working. It releases energy from digested food in a series of chemical reactions. This process, called **internal respiration**, takes place in your cells, particularly in your muscles. All the processes in your body involved in producing energy, growth and waste are called **metabolism**.



A healthy diet provides this dancer with energy, and regular exercise keeps her strong and supple.

1

Fill in the missing words (spelling counts):

Your body needs _____ to keep alive. The process, _____ is a series of chemical reactions that takes place in your muscles. All processes involved in producing energy, growth and waste are called _____.

2

ENERGY VALUE

The amount of energy that can be released from food is called its **energy value**. This is usually measured in **kilojoules (kJ)**. Energy value is sometimes given in **kilocalories**, also known as **Calories**. A kilojoule equals 0.238 kilocalories. Most pre-packed foods have labels showing the energy value both in kilojoules and kilocalories.

Choose the correct option:
Energy value is measured in:

kilometers

kilojoules

kilograms

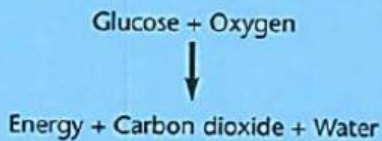
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AEROBIC RESPIRATION

Internal respiration which uses oxygen is called **aerobic respiration**. Food, usually in the form of glucose*, is combined with oxygen breathed in from the air. The reaction releases energy, and its waste products are water and carbon dioxide. Chemicals called **enzymes** help to speed up the reaction.

Summary of aerobic respiration



Some of the energy is set free as heat in a process called **thermogenesis**. The rest is stored as a chemical called **ATP** (adenosine triphosphate). When energy is needed, ATP breaks down into **ADP** (adenosine diphosphate), releasing its stored energy.

What do these words mean?

(1 mark for copied words – 2 marks for your OWN words)

1. **aerobic respiration:**

2. **enzymes:**

3. **thermogenesis:**

4. **ATP:**

5. **ADP:**

5

6

METABOLIC RATE

The overall rate at which your body converts food into energy is called your **metabolic rate**. It varies from person to person.

People with a slow metabolic rate convert food into energy slowly. They may gain fat easily and often appear to have little energy. People with a fast metabolic rate often appear to have plenty of energy. They convert food to energy quickly and little is stored as fat.

Finish the sentences

(1 mark for copied words – 2 marks for your OWN words)

1. **Your metabolic rate is**

2. **People with a slow metabolic rate**

3. **People with a fast metabolic rate**

7

8

Watch the video

Write about what you remember: (See if you can remember FIVE or more)

Draw a picture and submit it on EDMODO

Click here:

