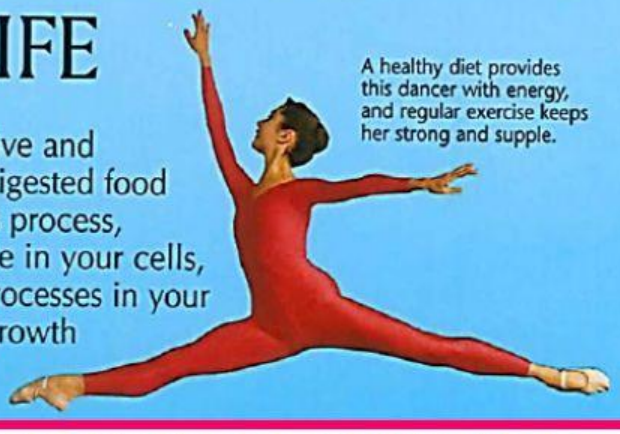
This mark will not be accurate – your mark will be given to you on EDMODO

Anatomy

Read this passage or listen to it

ENERGY FOR LIFE



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

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**.

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:

3

kilometers

4

kilojoules

kilograms

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

Glucose + Oxygen

↓

Energy + Carbon dioxide + Water

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:** 5

2. **enzymes:** 6

3. **thermogenesis:**

4. **ATP:**

5. **ADP:**

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** 7

2. **People with a slow metabolic rate** 8

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

Watch the video

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

Draw a picture and submit it on EDMODO

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