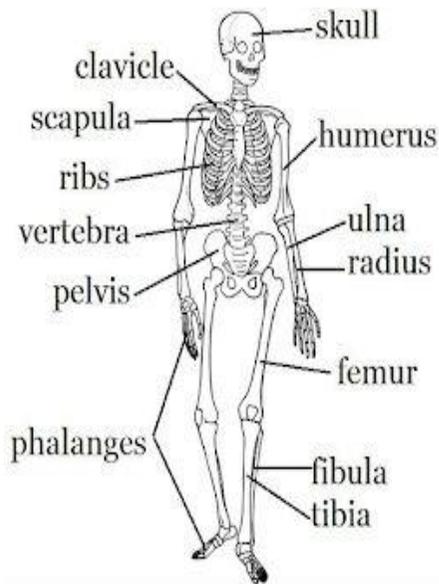


Key word	Definition
Balanced Diet	Contains the correct proportion of the 7 food groups (Carbohydrates, fats, proteins, water, fibre, vitamins and minerals)
Digestion	The breakdown of large insoluble food molecules into small soluble ones
Absorption	Digested food moves from the small intestine into the blood
Enzymes	Chemicals that speed up the digestion of food
Alveoli	Air sacs in the lungs where gas exchange takes place
Antagonistic pair of muscles	When one muscle contracts while the other is relaxed

### The skeleton



### Functions of the skeleton

- Support
- Protection
- Movement
- Making blood cells

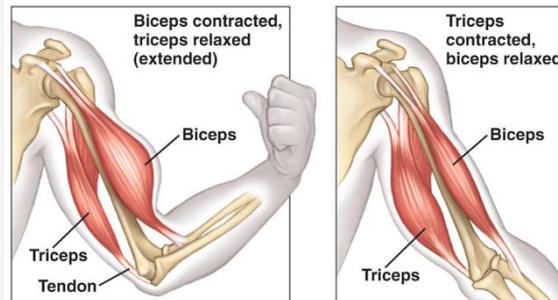
### Muscles

Muscles work in **Antagonistic Pairs**

Muscles **contract** to shorten

Muscles are joined to bones by tendons

Bones are joined to bones by ligaments

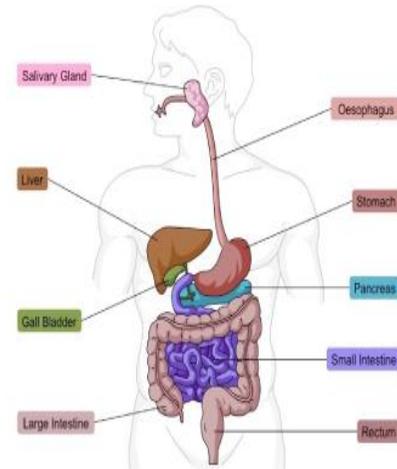


### Drugs

Drugs are any substance that affects how the body works. They can be medicines or recreational drugs

**Addiction** –when a person struggles to stop taking a drug because they get

### Digestive System



Food is broken down into smaller pieces by chemicals called **Enzymes**.

**Amylase** enzyme breaks down **starch** into **sugar**

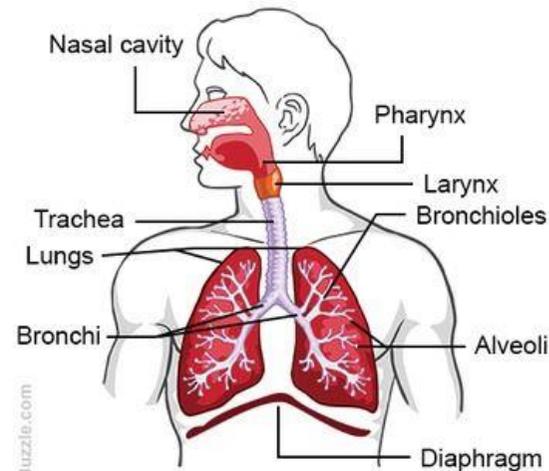
What are different foods needed for?

- Carbohydrates for Energy
- Protein for growth & repair
- Fat for insulation
- Fibre for gut motility

Food Tests

- Starch = Iodine
- Sugar = Benedict's
- Protein = Biuret

### Respiratory System



### Deficiency Diseases

- Scurvy-lack of vitamin C
- Anaemia –lack of iron
- Kwashiorkor- lack of protein
- Rickets - lack of calcium or vitamin D

**Gas exchange** –diffusion of oxygen from the alveoli into the blood and the diffusion of carbon dioxide from the blood into the alveoli

**Breathing gets faster and deeper when we exercise** to get more oxygen to the muscles

### **Key Questions**

1. Why does the body need protein?
2. Why does the body need carbohydrates?
3. Why does food need to be digested?
4. Where is food absorbed?
5. Who required the most food energy, an office worker or a footballer?
6. What is deficient if someone has scurvy?
7. What is starch digested into?
8. Which enzyme digests starch?
9. What are the jobs of the skeleton?
10. What structures connect muscles to bones?
11. Which muscle contracts to bend the arm?
12. Which muscle contracts to straighten the arm?
13. How does oxygen get from the alveoli into the blood?

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### Answers

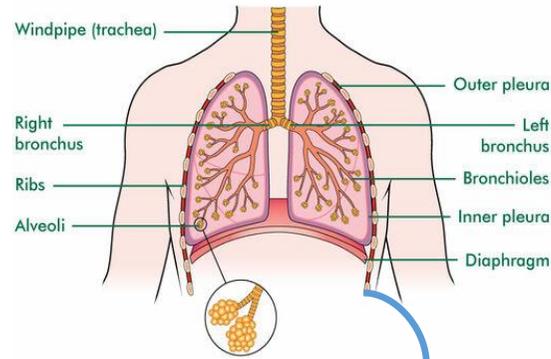
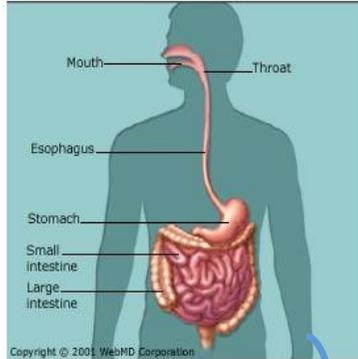
- For growth and repair
- For energy
- To make it small enough to be absorbed into the blood
- Small intestine
- Footballer because they are more active
- Vitamin C
- Sugar
- Amylase
- Movement, protection, support, making blood cells
- Tendons
- Biceps
- Triceps
- By diffusion

## What I know from Yr7 science:

The structure of an animal cell

The characteristics of a living organism including digestion and respiration

Digestive System



Describe the food nutrients found in the food.

Describe the role that they play in the body

Understand the effect of a lack of these nutrients

Describe the structure of the digestive system

Understand the purpose of Digestion i.e. breaking down large food molecules into smaller ones

Appreciate that this is so they can be absorbed into the blood

Understand the role of muscle in bringing about movement

Appreciate that this is because skeletal muscle is attached via tendons to bone

Describe the simple structure of the lungs

Appreciate that this is where oxygen diffuses into the blood and carbon dioxide out of the blood.

Find out the effect of exercise on breathing rate

Describe the structure of a leaf.

Explain how the structure is adapted for gaseous exchange i.e. uptake of carbon dioxide for photosynthesis

### Future learning

Digestion of other molecules e.g. Protein and Lipid

Adaptations of alveoli and leaves for gaseous exchange

Vocabulary: Digestion Absorption Enzymes

Starch Amylase

Gaseous exchange Alveoli Stomata

