Your notes

GCSE PE: revision notes

The skeleton

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Functions of the skeleton

- Support: the **skeleton** holds the body up and gives it a framework.
- Protection: bones protect vital organs, such as the cranium protecting the brain and the ribs protecting the heart and lungs.
- Movement: muscles pull on bones to move them at joints.
- Structural shape and points for attachment: bones give the body its shape, and tendons attach muscles to them.
- **Mineral storage**: bones store calcium and phosphorus, which keep bones and teeth strong.
- Blood cell production: red and white blood cells are made in the **bone marrow** of some bones, such as the femur and sternum.

Types of bone

- **Long bones** (such as the femur, humerus and tibia) act as levers for large, powerful movements.
- **Short bones** (such as the carpals and tarsals) are about as wide as they are long, and give support and fine movement.
- **Flat bones** (such as the cranium, sternum, ribs, scapula and pelvis) protect organs and give a large area for muscles to attach.
- **Irregular bones** (such as the vertebrae) have unusual shapes that protect the spinal cord and give attachment points.

Bones you need to know

- Head and trunk: cranium, vertebrae, ribs and sternum.
- Arm and shoulder: clavicle, scapula, humerus, radius, ulna, carpals, metacarpals and phalanges.

- Leg and hip: pelvis, femur, patella, tibia, fibula, tarsals (including the talus), metatarsals and phalanges.

Using the skeleton in sport

- A rugby player relies on the ribs protecting the heart and lungs in a tackle.
- A sprinter uses **long bones** in the legs as levers to produce speed.
- Regular weight-bearing exercise, such as running, makes bones denser and stronger.

Key terms

Skeleton	The framework of bones that supports and protects the body and allows movement.
Long bone	A bone longer than it is wide, such as the femur, used for large movements.
Flat bone	A thin, broad bone, such as the cranium, that protects organs.
Short bone	A small bone about as wide as it is long, such as the carpals.
Irregular bone	A bone with a complex shape, such as a vertebra.
Bone marrow	The soft tissue inside some bones where blood cells are made.
Mineral storage	The skeleton's job of storing calcium and phosphorus.

Quick questions

Cover the answers and test yourself: remembering is what makes it stick.

1. Which function of the skeleton is shown by the cranium surrounding the brain?
2. Which two minerals does the skeleton store?
3. Where are red and white blood cells made?
4. What type of bone is the femur?
5. What type of bone are the carpals?
6. What type of bone are the vertebrae?
7. Which bone is also called the breastbone?
8. Which bone is the kneecap?

Answers

1. Protection
2. Calcium and phosphorus
3. In the bone marrow
4. Long bone
5. Short bone
6. Irregular bone

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7. Sternum
8. Patella

What to do next

Practise 12 questions on this topic

Try 5 exam questions, with mark schemes

Read the lesson, one step at a time

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