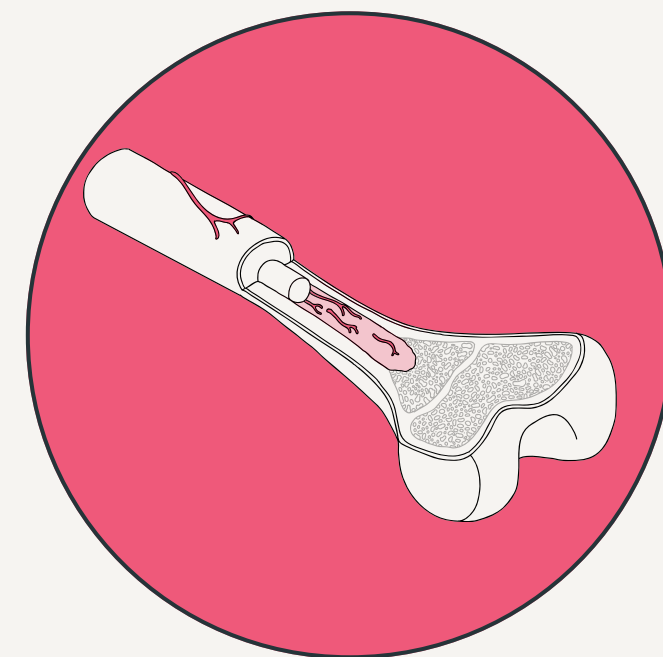


THE BODY SYSTEMS

THE HUMAN SKELETAL SYSTEM



LET'S DISCUSS

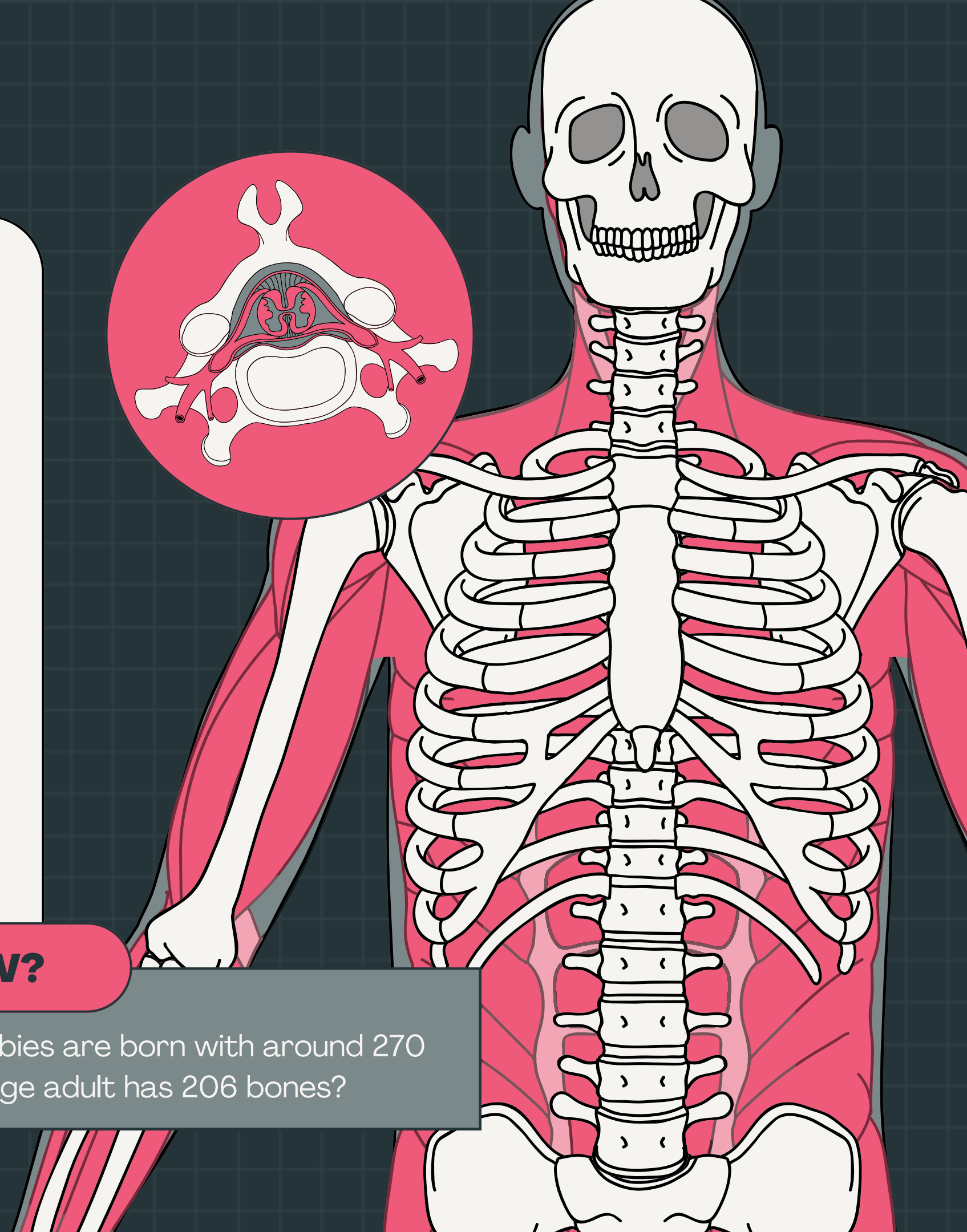
SKELETAL SYSTEM

The skeletal system provides support and protection for the body's internal organs while also serving as an attachment point for muscles. In humans, it consists of bones, joints, and associated cartilage.

This system shapes our bodies, enables movement, produces blood cells, and stores minerals.

DID YOU KNOW?

Did you know that babies are born with around 270 bones, while an average adult has 206 bones?



LET'S EXPLORE!

PRINCIPAL TYPES OF BONES



Long Bones

These bones are longer than they are wide and provide leverage for movement. Examples include the femur, humerus, and clavicles.

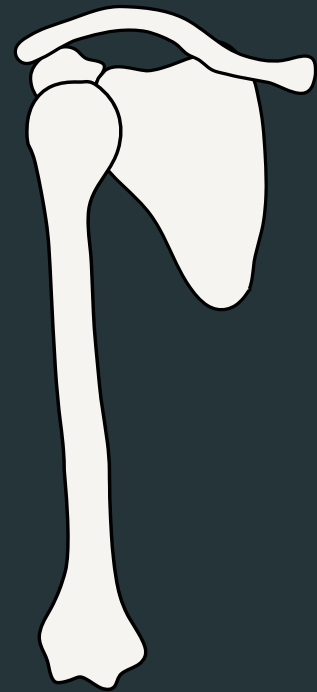


Short Bones

Short bones have a squat, cubed shape and are approximately equal in length, width, and thickness. Examples include the tarsals (ankle bones).

LET'S EXPLORE!

PRINCIPAL TYPES OF BONES



Flat Bones

These bones are thin and often curved. They serve as protective shields and provide attachment points for muscles. Examples include the ribs and scapula.



Irregular Bones

These bones do not conform to the shapes of the other 3 types. They have unique forms and functions. Examples include the bones of the face and vertebrae.

An anatomical illustration of the human skeletal system. The skull is shown in a frontal view, with a callout circle highlighting the internal structures of the head. The rest of the skeleton, including the spine, ribs, and arms, is shown in a stylized, semi-transparent manner. The background is dark blue with a grid pattern.

SKELETAL SYSTEM

THE SKULL

The skull serves several crucial functions. It surrounds and shields the brain, brainstem, and eyes from external forces. This protective role is vital for maintaining the integrity of our central nervous system.

Muscles, blood vessels, and connective tissues attach to its bony framework, allowing essential functions like swallowing, breathing, and vision.

An anatomical illustration of the human skeletal system, showing the skull, spine, and ribcage. The shoulder girdle is highlighted with a red overlay. A circular inset shows a close-up of the shoulder girdle bones (clavicle and scapula) in a blue and purple color scheme.

SKELETAL SYSTEM

SHOULDER GIRDLE

The shoulder girdle connects the upper limbs to the axial skeleton. It consists of the clavicle and scapula bones on each side of the body. The shoulder girdle provides structural support and allows a wide range of motion, especially at the highly mobile scapulothoracic and sternoclavicular joints.

An anatomical illustration of the human arm bones and torso. The main image shows a white line drawing of the skeleton with red muscles. Two circular insets show X-ray views: the top one highlights the humerus, radius, and ulna in pink, and the bottom one highlights the radius and ulna in blue. A pink banner at the top right contains the text 'SKELETAL SYSTEM'.

SKELETAL SYSTEM

ARM BONES

Arm bones consist of the humerus, radius, and ulna. These bones serve essential roles in supporting the upper limb and providing attachment points for the muscles responsible for arm movement.

These bones form joints that allow a wide range of motion and flexibility, enabling precise manipulation of objects with the arm and hand.

An anatomical illustration of the human skeletal system, showing the spine, ribcage, and arm bones. A circular inset provides a close-up view of the hand bones, which are highlighted in a vibrant blue and purple color. A grey cone of light emanates from the hand, pointing towards the text box on the right.

SKELETAL SYSTEM

THE HAND

Hand bones consist of the carpals, metacarpals, and phalanges. The hand bones provide support and stability and enable intricate movements for tasks like gripping, writing, and playing musical instruments.

They consist of carpal bones (wrist), metacarpals (palm), and phalanges (fingers). Together, they form the foundation for hand function.



SKELETAL SYSTEM

THE CHEST

The sternum and ribs protect vital organs and facilitate breathing. The sternum shields the heart, lungs, and stomach while also serving as an attachment point for tendons.

The ribs form a protective cage around the thoracic cavity and move during breathing, aiding lung function. Together, they safeguard organs and enable respiratory movements!

An anatomical illustration of the human skeletal system, showing the skull, ribcage, spine, and pelvis. The bones are white, and the surrounding muscles are shown in a reddish-pink color. A circular callout with a blue background and a grey pointer highlights the spine, showing a full-body view of the spine in a glowing pink color.

SKELETAL SYSTEM

THE SPINE

The spine provides structural support for the entire body, allowing us to stand upright. It surrounds and protects the spinal cord and nerves, which are essential for transmitting signals between the brain and the rest of the body.

Also, the spine enables flexibility and movement, allowing us to walk, twist, bend, and perform various activities.



SKELETAL SYSTEM

THE PELVIS

The pelvis consists of three fused bones: the ilium, ischium, and pubic bone. These bones serve several crucial functions in the human body.

First, they bear the weight of the upper body, stabilize it, and transmit this weight to the lower. Second, the pelvis protects the organs within the abdominal and pelvic cavities. In females, the pelvis provides a comfortable environment for the fetus.



SKELETAL SYSTEM

UPPER LEG

The upper leg bones include the femur (thigh bone), which is the longest and strongest bone in the body. It forms a ball-and-socket joint with the hip bone and the knee joint with the lower leg bones.

The patella (kneecap) connects with the upper and lower leg bones through muscles and ligaments, contributing to knee movement.



SKELETAL SYSTEM

LOWER LEG

In the lower leg bones, we have the tibia, which is longer and thicker. It bears weight and articulates with the femur at its superior end and the tarsals at its inferior end.

The fibula, located laterally, doesn't bear direct weight but serves as an attachment point for leg muscles. It articulates with the tibia and tarsal bones.



SKELETAL SYSTEM

THE FOOT

The foot bones include the tarsals (7 bones allowing minor adjustments to foot position), the metatarsals (forming the forefoot), and the tiny phalanges (toe bones) that articulate with metatarsals and allow flexible toe movements.

In summary, leg bones provide structural support, facilitate movement, and distribute weight during activities like walking and running.

**CHECK OUT THIS
AWESOME VIDEO**



The background features a series of five anatomical diagrams of the human skeleton and muscles, arranged horizontally. From left to right, the diagrams show: 1) A full skeleton with a pink skull. 2) A full skeleton with a pink skull and neck. 3) A full skeleton with a pink skull, neck, and upper torso. 4) A full skeleton with a pink skull, neck, upper torso, and arms. 5) A full skeleton with a pink skull, neck, upper torso, arms, and legs. The diagrams are drawn in a simple, clean style with black outlines and pink highlights on the skull, neck, and muscles.

Any Questions?

