

16 Bones

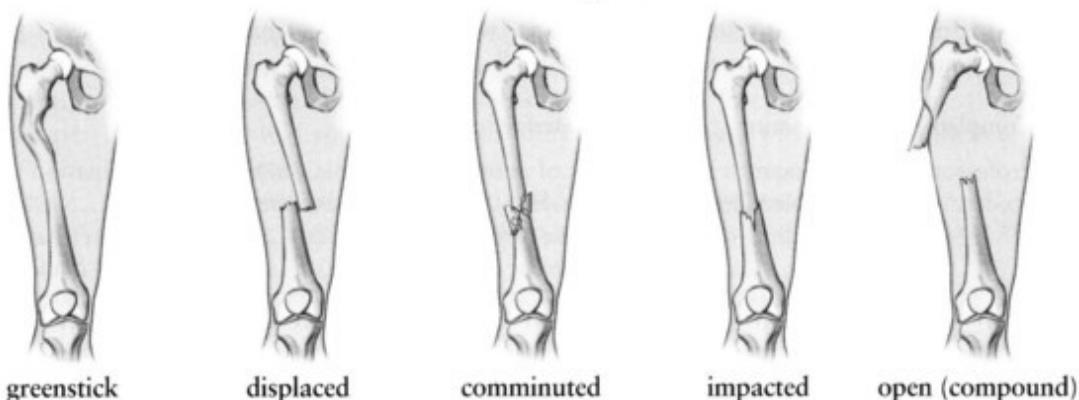
A Bones

Some common English names for bones:

English name	Anatomical name
skull	cranium
jaw bone	mandible
spine	vertebral column
breastbone	sternum
rib	costa
collarbone	clavicle
shoulder blade	scapula
thigh bone	femur
kneecap	patella
shinbone	tibia

B Fractures

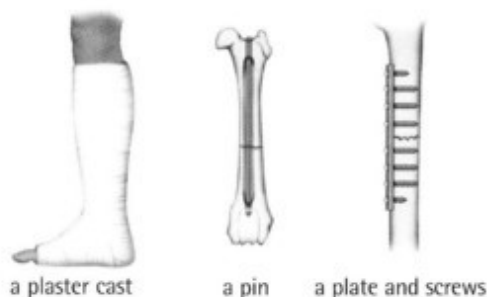
A **fracture** is a break in a bone. Some of the different types of fracture:



A **pathological fracture** is fracture in a diseased bone. A **fatigue** or **stress fracture** is due to repeated minor trauma, for example long-distance marching or running.

C Treatment of fractures

When the fragments of a broken bone heal and join together, they **unite**. **Union** may be **promoted**, or helped, by **reducing** the fracture – replacing the fragments in their anatomical position if they are displaced. After **reduction**, excessive movement of the broken bone is prevented by **fixation** – either external, for example a **splint** or **plaster of Paris cast**, or internal, for example a **pin** or a **plate and screws**. A displaced fracture which is not reduced may result in **malunion** – incomplete or incorrect union.

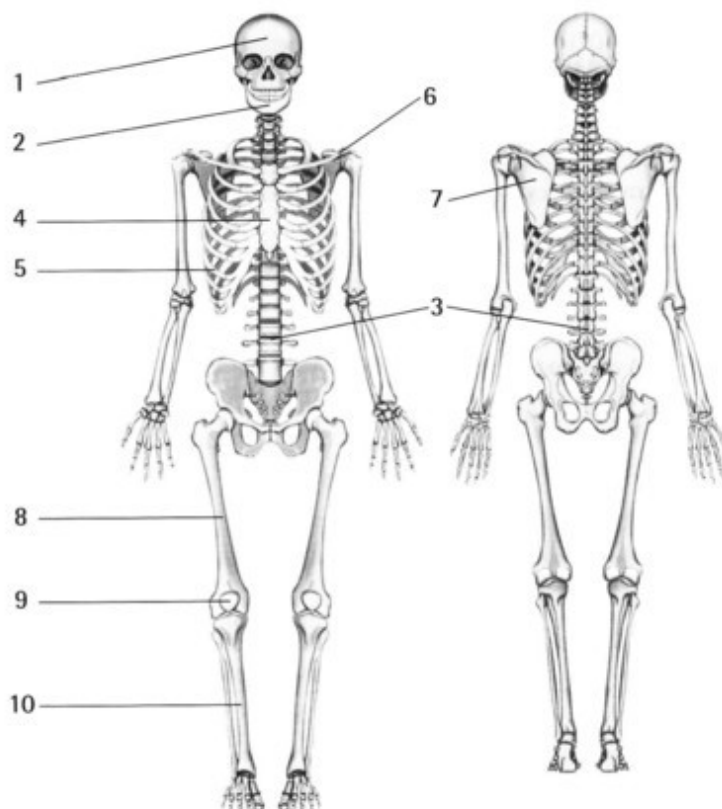


Note: The verb **reduce** has several meanings in medicine:

- to make smaller – *I think we'd better reduce the dose of your tablets.*
- (in surgery) to return to anatomical position – *A hernia can normally be reduced by manipulation.*
- (in chemistry) to remove oxygen or add hydrogen – *Nitric acid is a reducing agent.*

16.1 Label the diagram using words from the box. Look at A opposite to help you.

breastbone
collarbone
jaw bone
kneecap
rib
shinbone
shoulder blade
skull
spine
thigh bone



16.2 Match the types of fracture (1–5) with the descriptions (a–e). Look at B opposite to help you.

- 1 open
- 2 comminuted
- 3 displaced
- 4 greenstick
- 5 impacted

- a There is a break in the skin.
- b The bone is bent. It occurs mainly in children.
- c The bone is broken into several pieces.
- d The broken pieces are separated.
- e The broken pieces are pushed together.

16.3 Complete the textbook extract. Look at C opposite to help you.

(1) a fracture involves trying to return the bones to as near to their original position as possible. If a fracture is allowed to heal in a displaced position the fracture will (2) but it may go on to (3)

Over to you



You have diagnosed a stress fracture of the tibia in a young female dancer. How would you explain to her the cause and management of this condition?