

# Bone and Joint

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# Bone

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**Bone** is made of **collagen** fibres filled with minerals, mainly **calcium** salts.

## **Collagen**

A fibrous protein with great strength that is the main component of bone.

## **Calcium**

The mineral stored in bone that keeps it hard and strong. 99% of the body's calcium is stored in Bone.

# Diaphysis

The shaft or middle part of a long bone

# Epiphysis

The end portion of a long bone

# Bone marrow

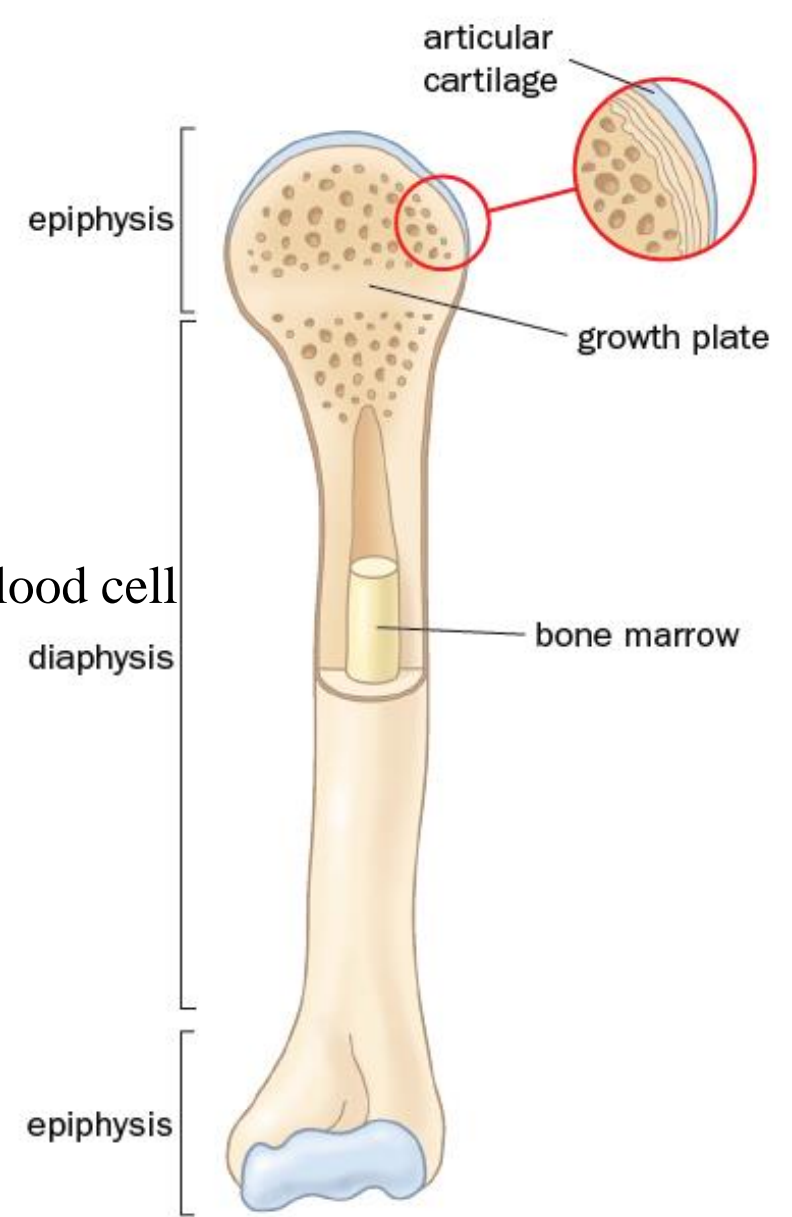
Connective tissue found in the spaces inside bone that is the site of blood cell production and fat storage

# Growth plate

The area of growing tissue

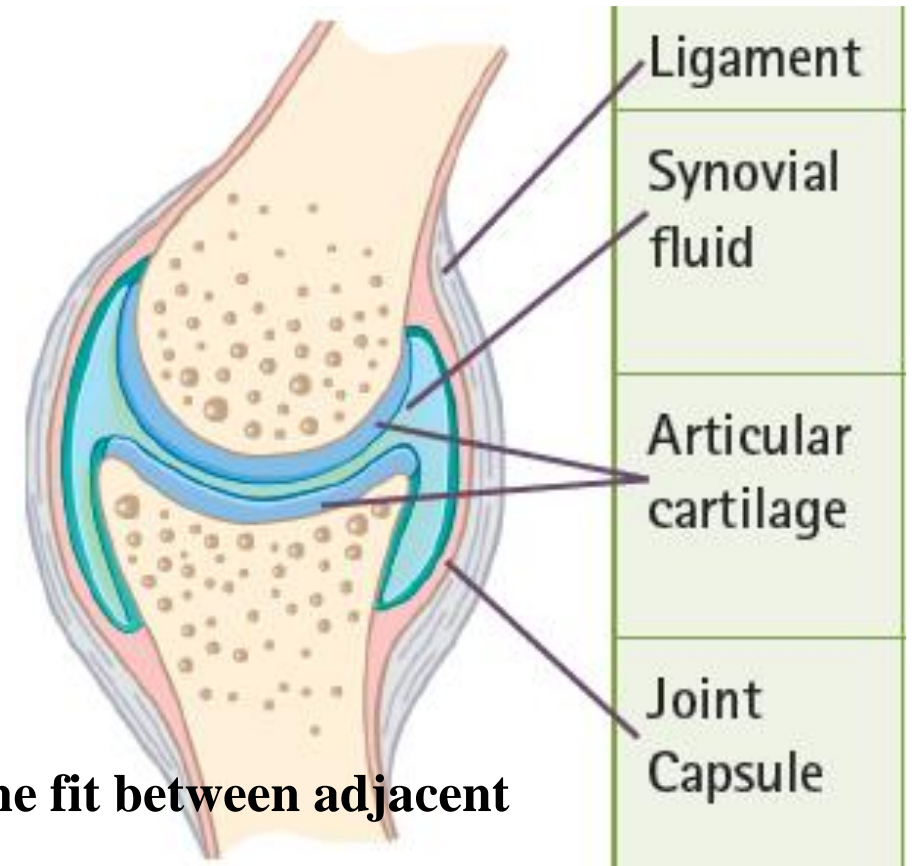
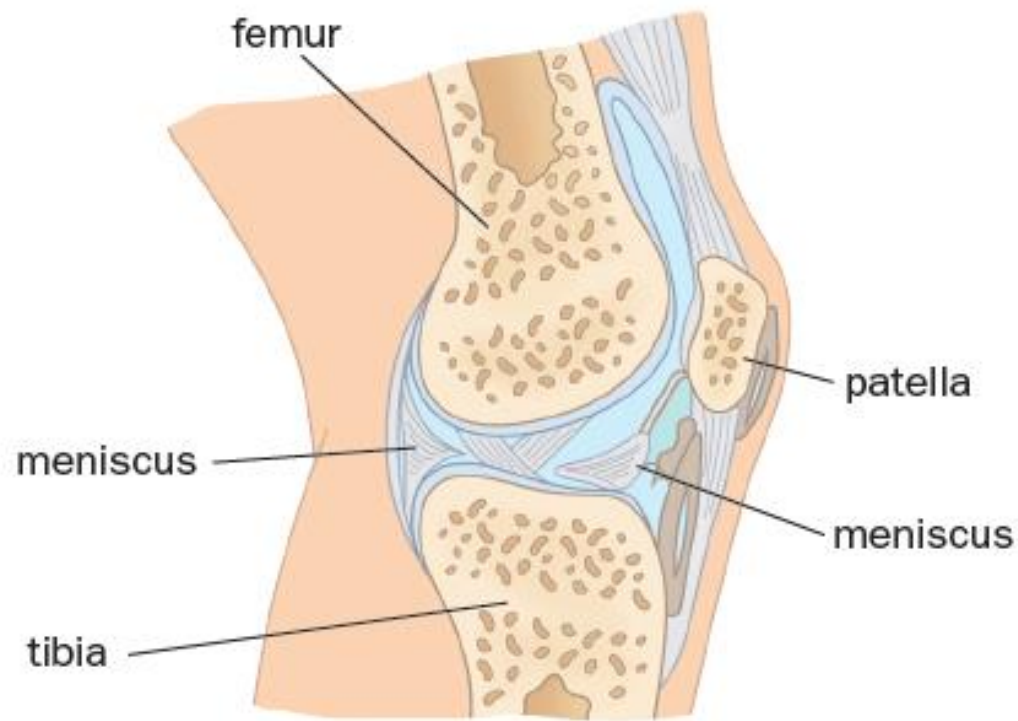
# Articular cartilage

A thin layer of glassy-smooth cartilage.



# Knee Joint

**Joints: are links between the bones of the skeleton.**



**Meniscus: wedge of white fibrocartilage that improves the fit between adjacent bone ends, making the joint more stable**

<b>Feature</b>	<b>Structure</b>	<b>Function</b>
<b>Ligament</b>	A band of strong fibrous tissue	To connect bone to bone
<b>Synovial Fluid</b>	A slippery fluid the consistency of egg-whites.	To reduce contact between the articular cartilage in the joint
<b>Articular cartilage</b>	Glassy-smooth cartilage that is spongy and covers the ends of the bones in the joint	To absorb shock and to prevent contact between the ends of the bones in the joint
<b>Joint Capsule</b>	A tough fibrous tissue that has two layers, with the fibrous capsule lying outside the synovial membrane.	The fibrous capsule helps to strengthen the joint.

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<https://www.youtube.com/watch?v=vrHilOEfzgM>