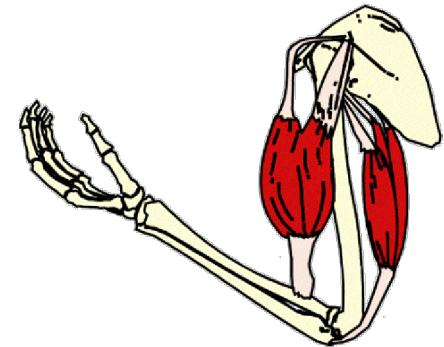


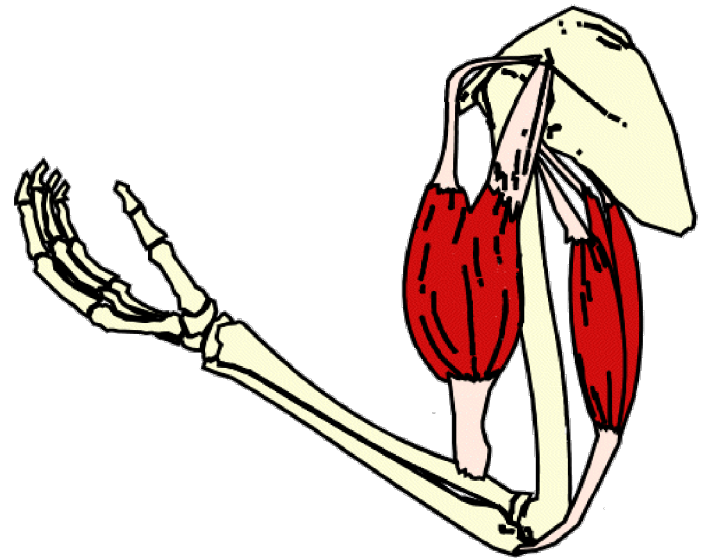
# **TYPES OF JOINTS**

*BY*  
*DR. AVIJEET MONDAL*



# **Joints**

**A joint is where the two or more bones meet and muscles act on them to cause movement.**



## Classification of Joints

- **FIBROUS JOINTS**

- **Dense connective tissues connect bones.**
- **Between bones in close contact.**

- **CARTILAGINOUS JOINTS**

- **Hyaline cartilage or fibrocartilage connect bones.**

- **SYNOVIAL JOINTS**

- **Most complex.**
- **Allow free movement.**

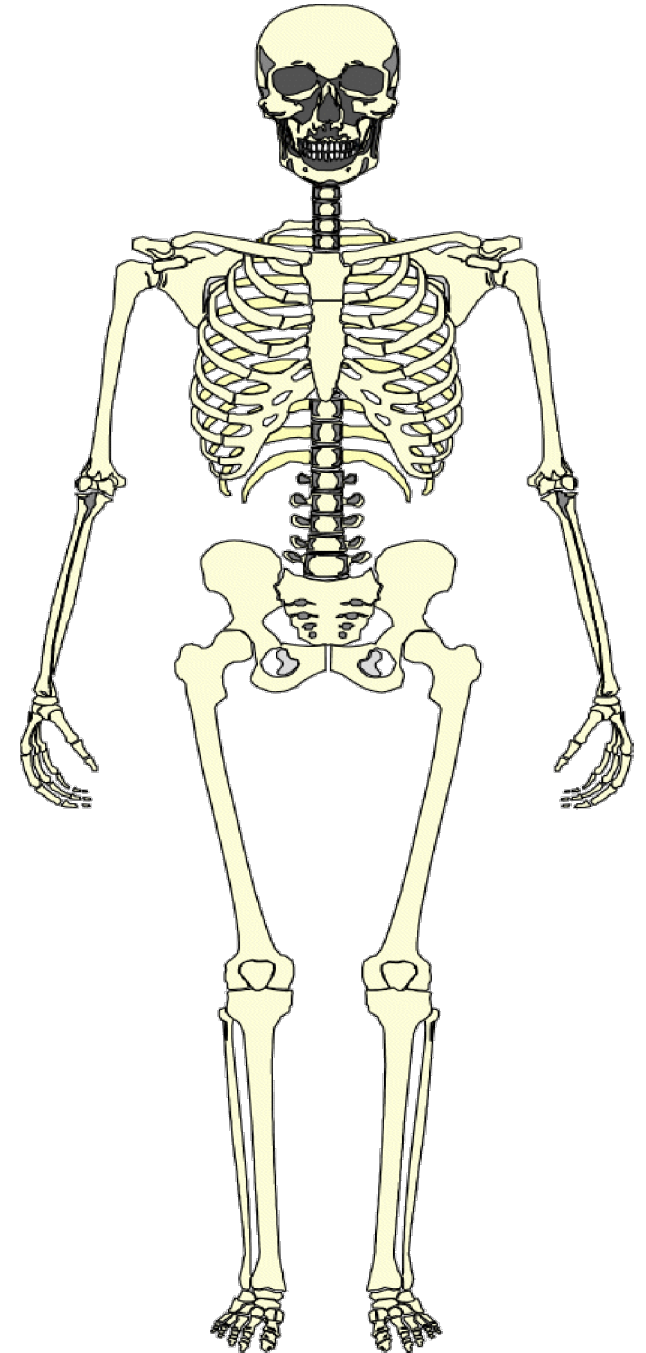
- **Synarthrotic**
  - **immovable**
- **Amphiarthrotic**
  - **slightly movable**
- **Diarthrotic**
  - **freely movable**

# THREE MAIN TYPES OF JOINTS

◆ **FIBROUS / IMMOVABLE JOINTS**

◆ **CARTILAGINOUS / SLIGHTLY MOVABLE JOINTS**

◆ **SYNOVIAL / FREELY MOVEABLE JOINTS**

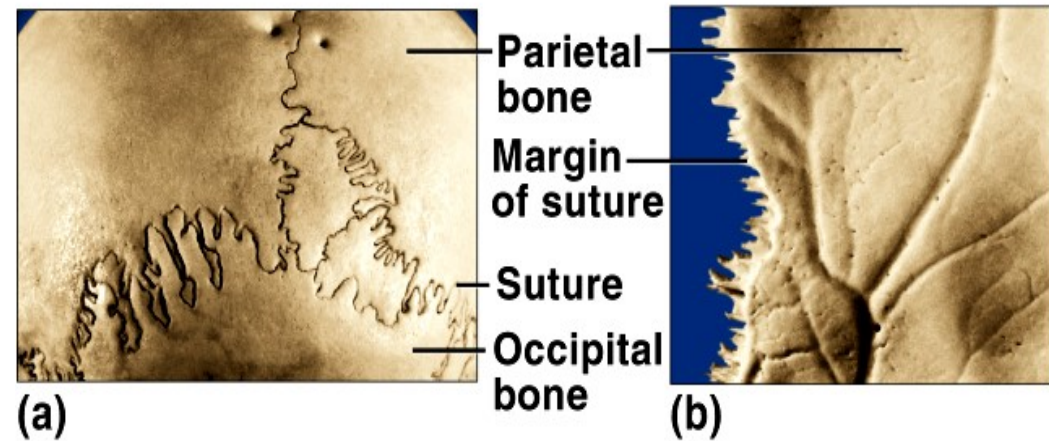


# Fibrous/Immovable Joints

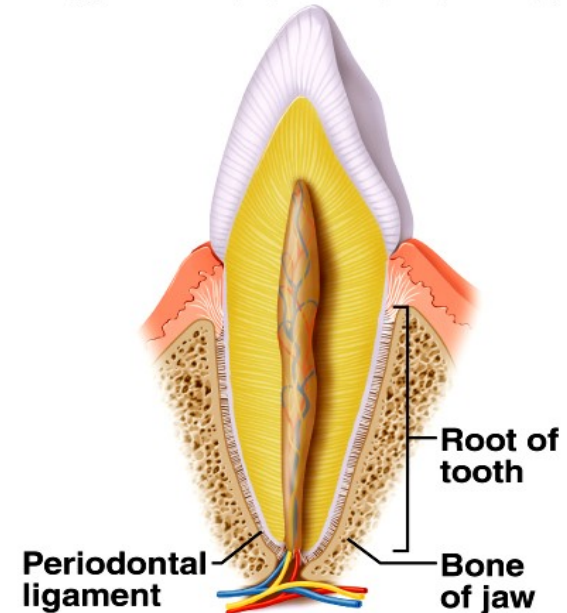
❖ In this, the bones **cannot** move.

❖ they **overlap** or **interlock**, and are held together by a tough **fibre**.

e.g. the **skull**.



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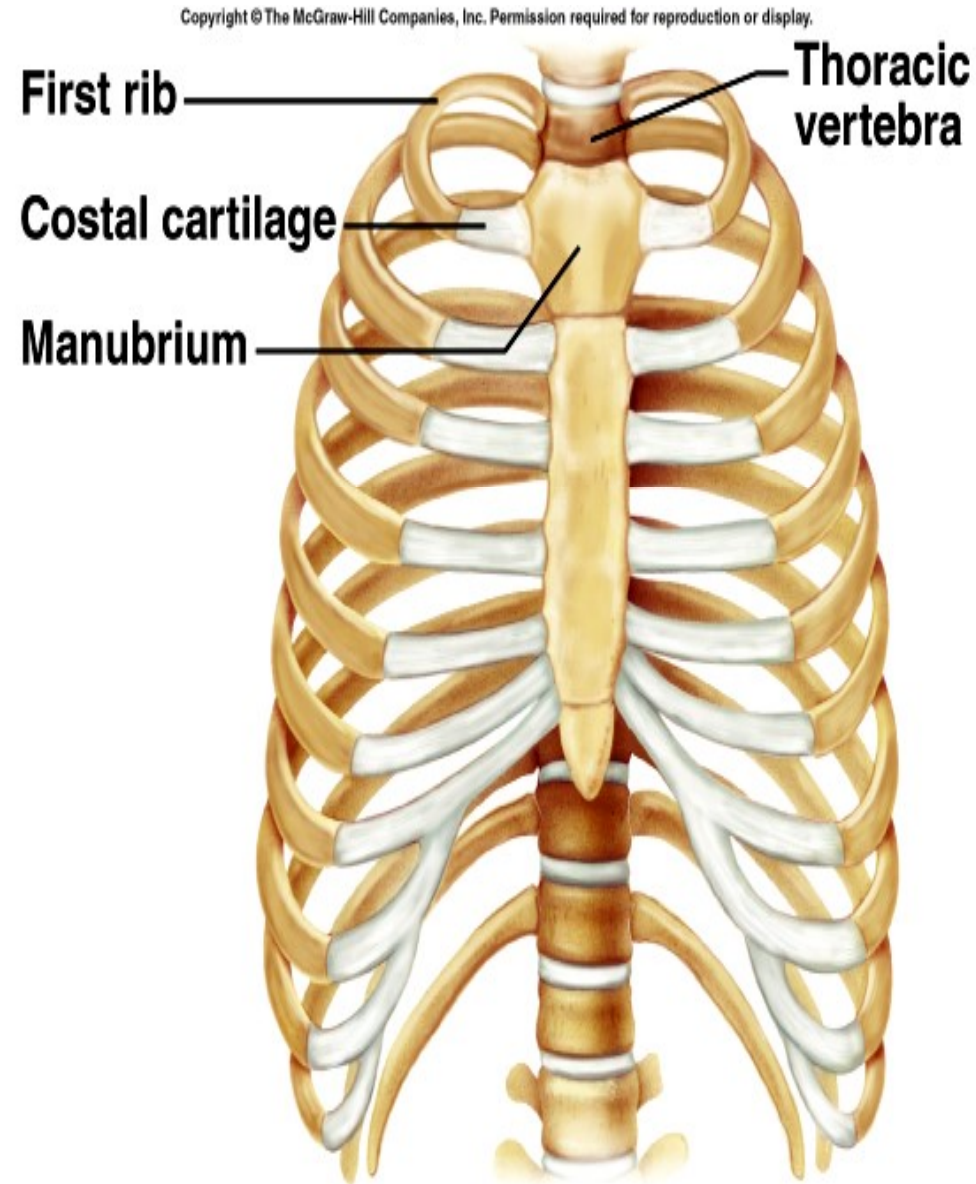
# Cartilaginous/Slightly Movable Joints

In this, the bones can only move a **little**.

They are held together by strong straps called **ligaments**, and,

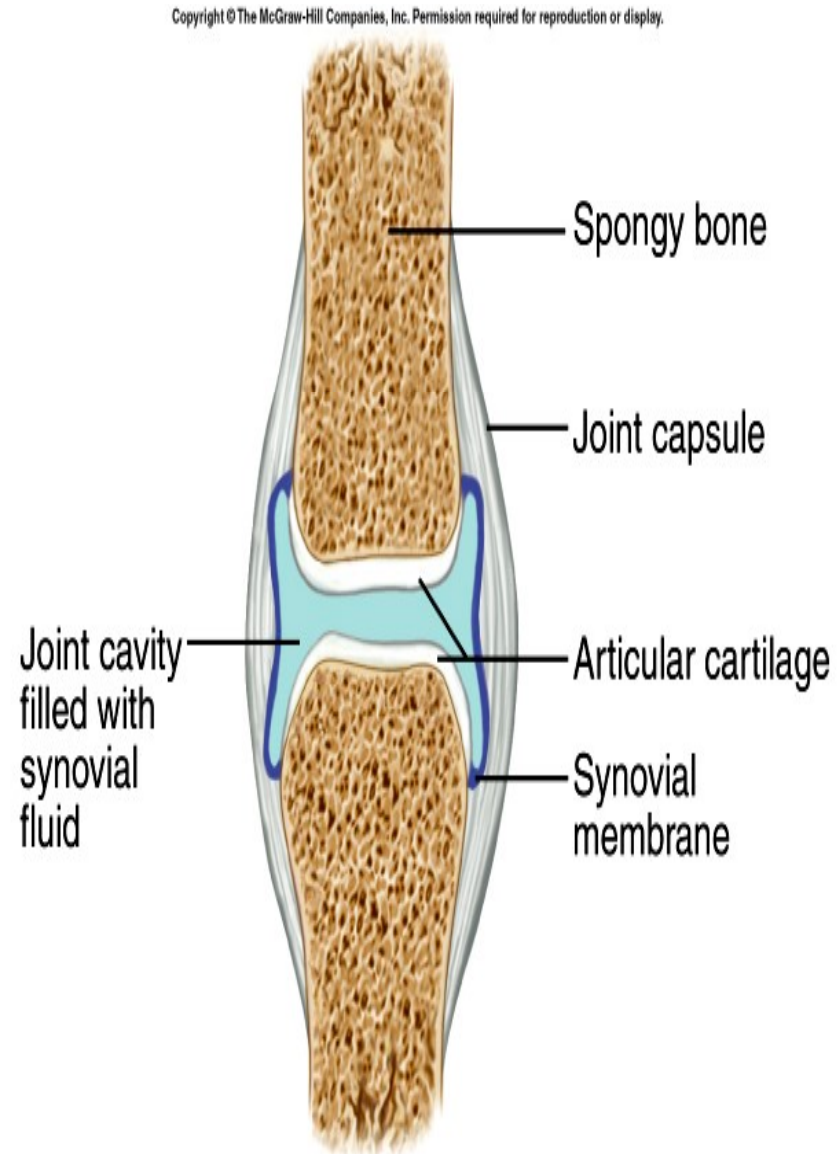
Are joined by protective pads known as **cartilage**.

e.g The ribs.



# Synovial/Freely Movable Joints

- ❖ In this, the bones move **freely**.
- ❖ Bones surfaces are covered with **Articular Cartilage**.
- ❖ There is a **joint cavity**.
- ❖ Joint is surrounded by **Articular Cartilage**.
- ❖ Interior of the joint is lined by **Synovial Membrane** except the cartilage covered ends of the bone.
- ❖ Movements are **always** possible.



# **Types of Synovial Joints**

**SYNOVIAL JOINTS ARE CLASSIFIED ACCORDING TO THE SHAPE OF THE ARTICULATING SURFACE.**

- **Ball & Socket Joint**

- **Hinge Joint**

- **Pivot Joint**

- **Gliding Joint**

- **Saddle Joint**

- **Condylloid Joint**

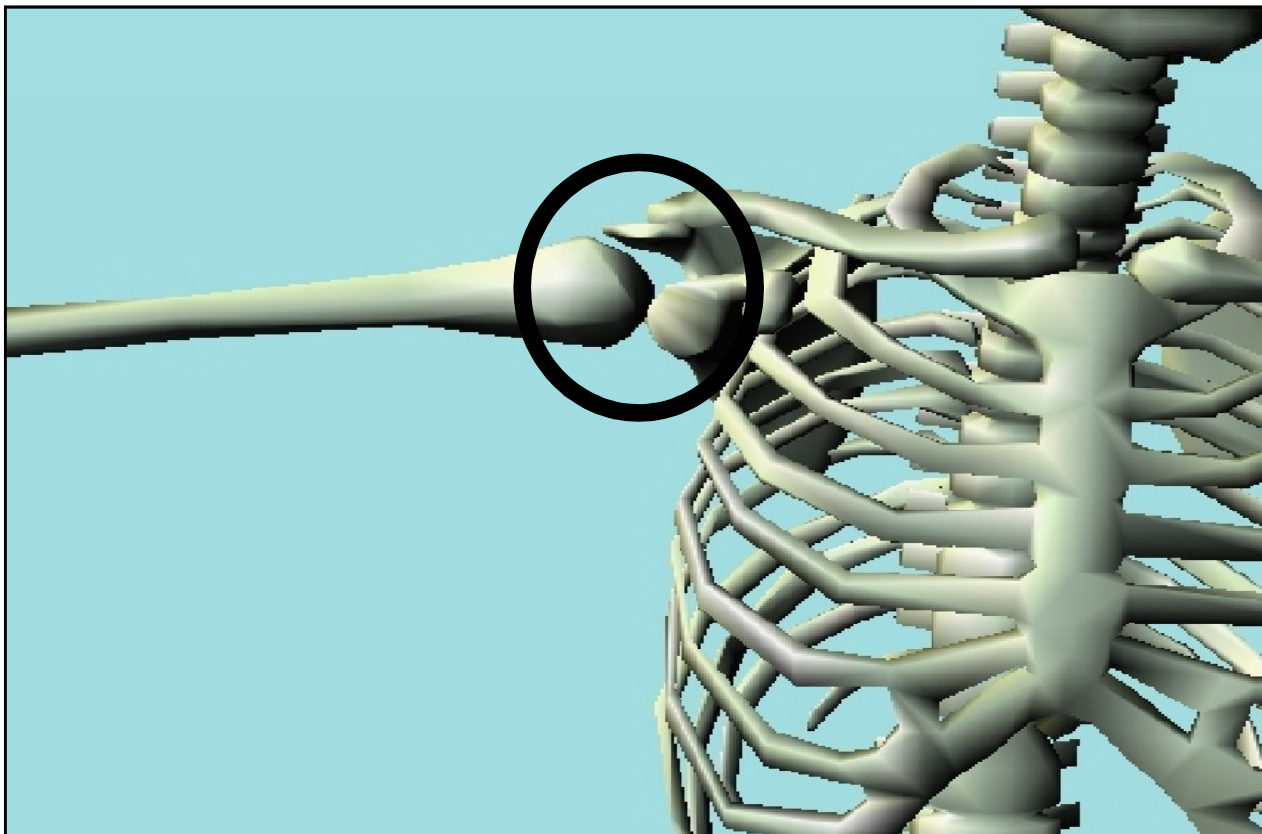


# **1. Ball and Socket Joints**

The ball has a head shaped of one bone which articulates with a cuplike socket.

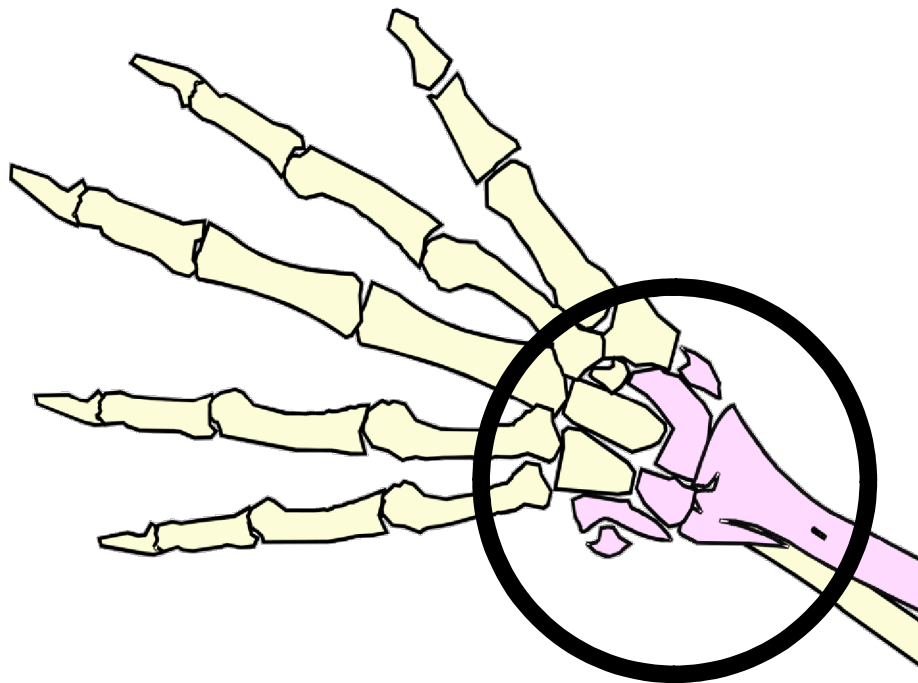
Allows the greatest range of movement

Examples - HIP , SHOULDER



## 2. Condyloid Joints

The surfaces are flatter and oval forming a shallow joint  
It allows the second greatest range of movement.



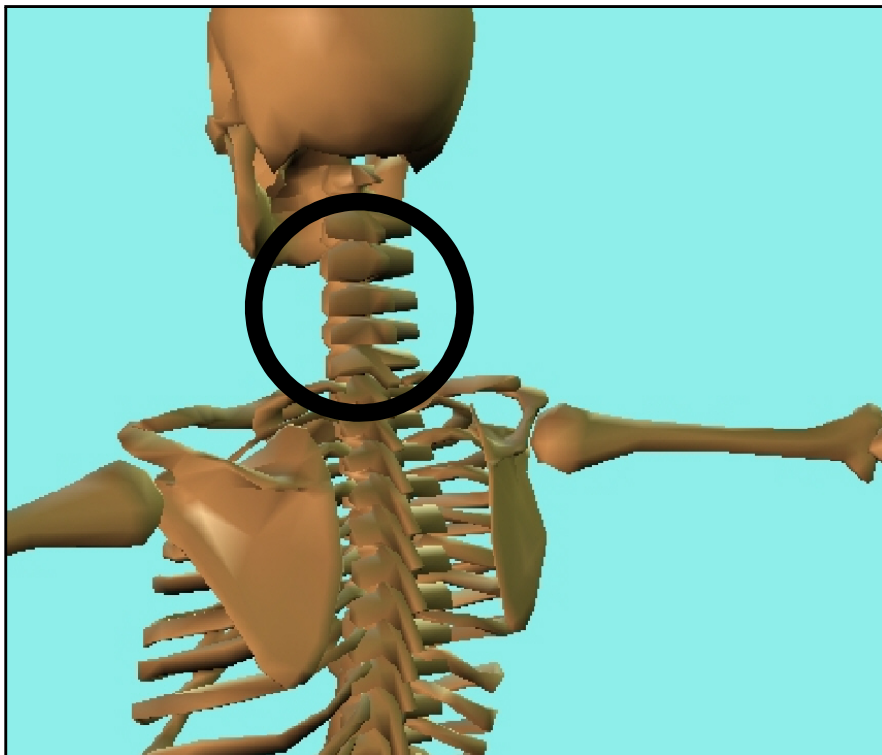
EXAMPLE

WRIST JOINT

### 3. Pivot Joints

These are rounded, pointed or concave of one bone which articulates with a ring shaped bone.

Movement is restricted to 1 bone rotating around the longitudinal axis.

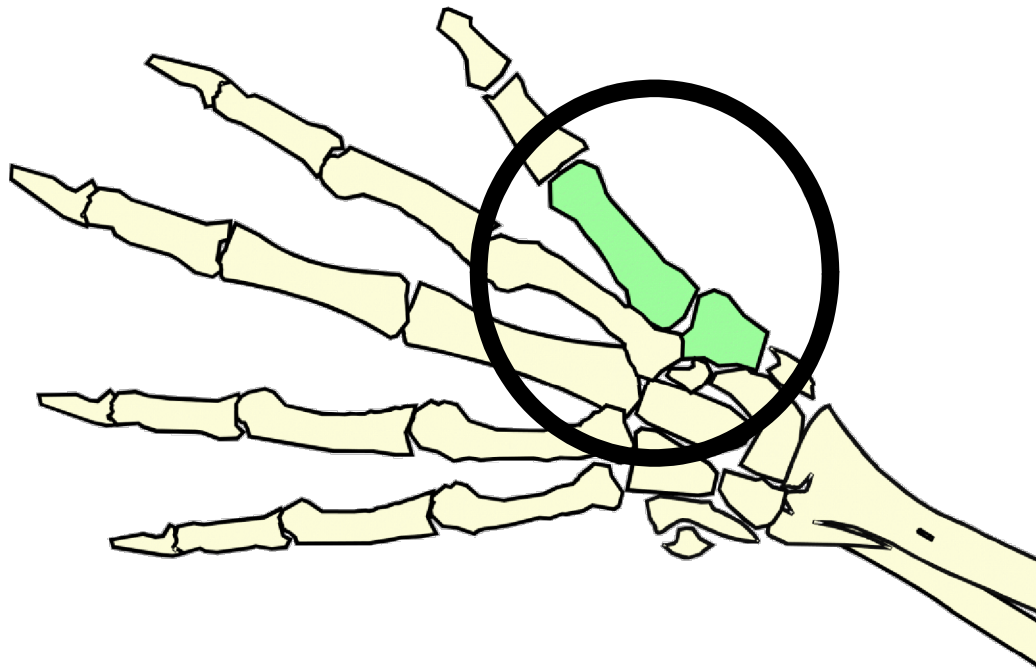


EXAMPLE

VERTEBRAE OF  
THE NECK

## 4. Saddle Joints

The articulating surfaces are shaped like a saddle  
It allows very limited movement



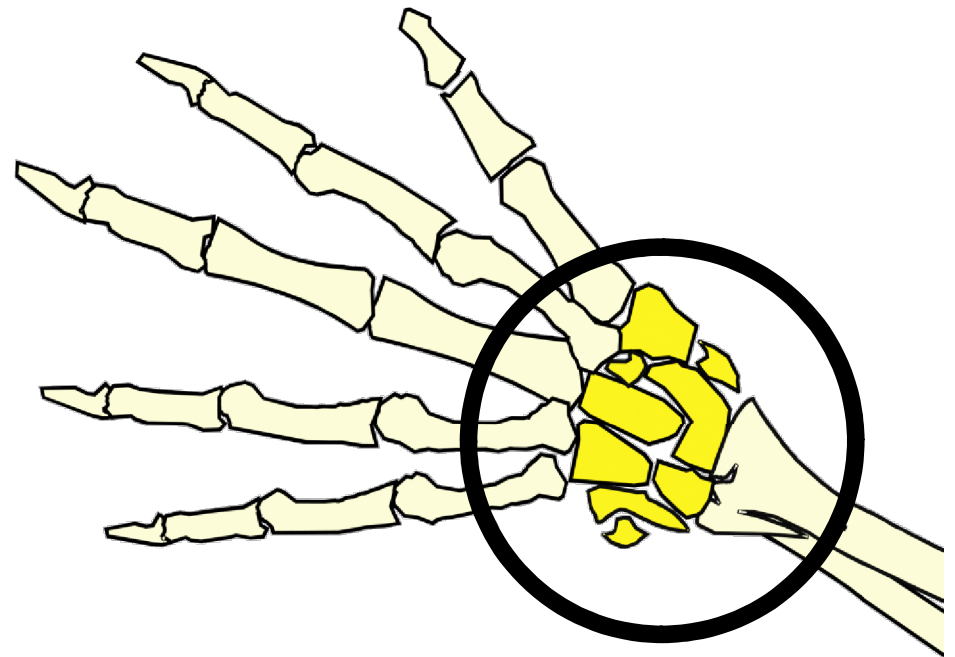
EXAMPLE

THUMB JOINT

## 5. Gliding Joints

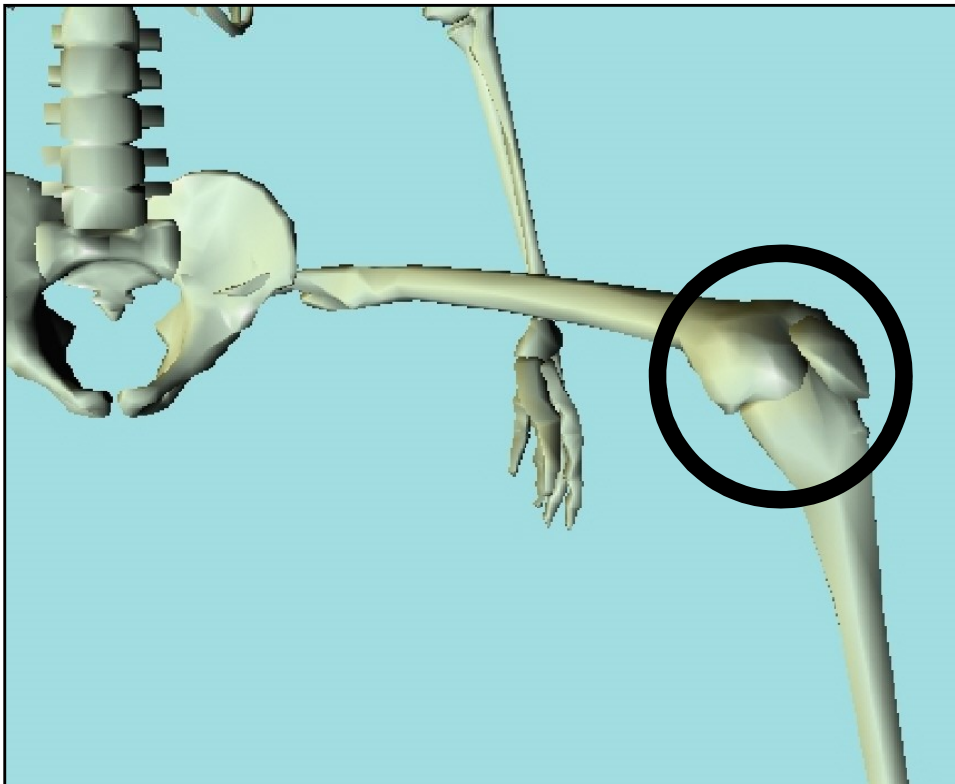
The articulating surfaces are flat.  
It allows limited movement

EXAMPLES  
HAND BETWEEN THE  
CARPELS



# 6. Hinge Joints

They are cylindrical shaped of 1 bone articulates with a depression of an adjacent bone  
Movement is restricted to bending and straightening

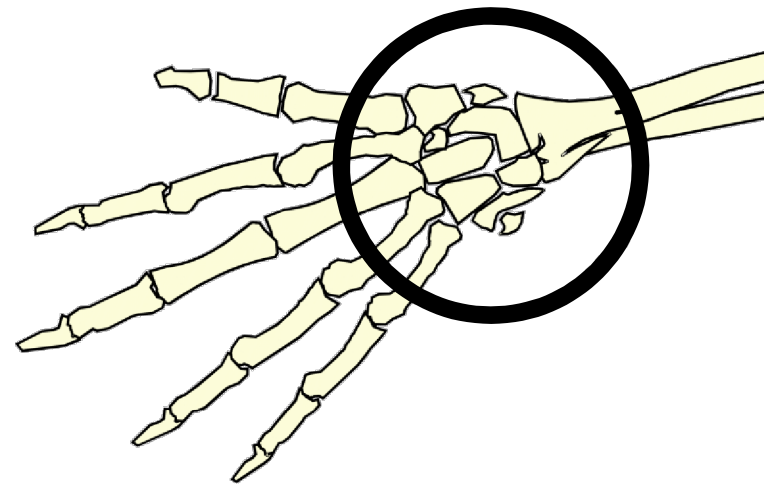
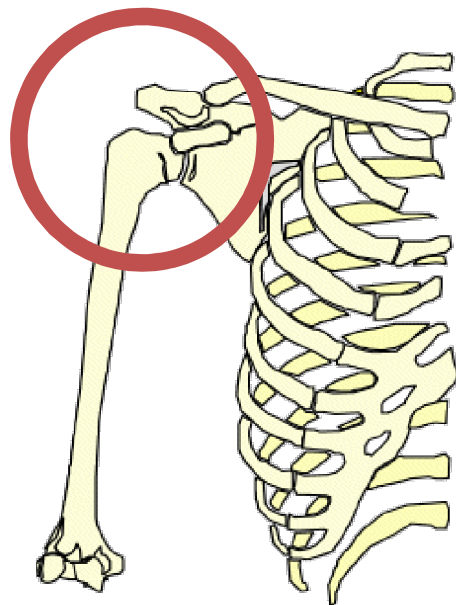
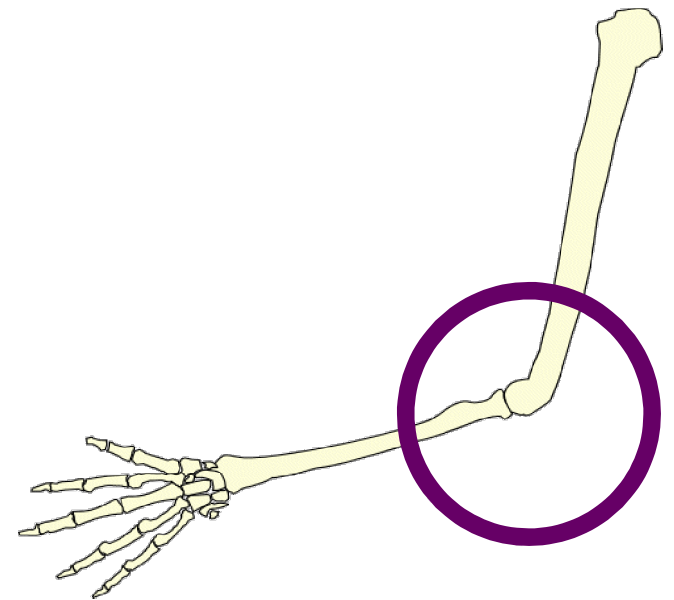
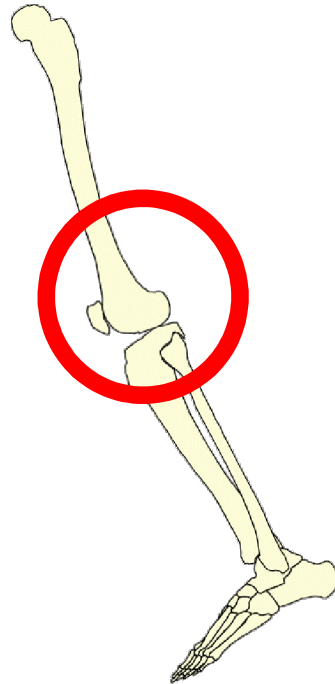
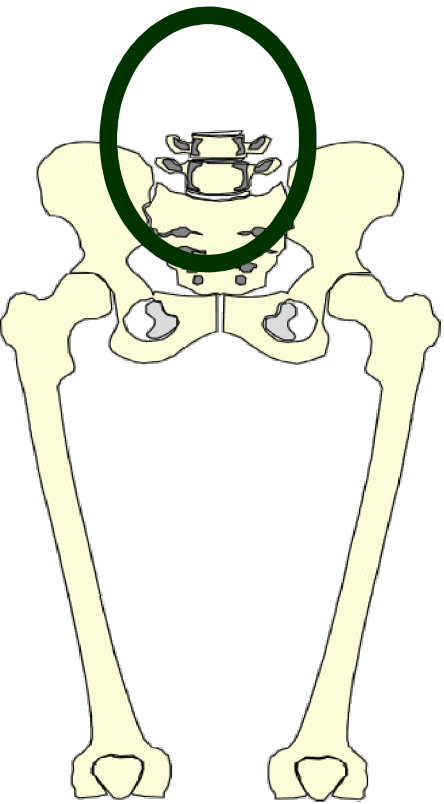


## EXAMPLES

ELBOW

KNEE

# NAME THE JOINTS SHOWN BY CIRCLE



**THANK**  
**YOU**