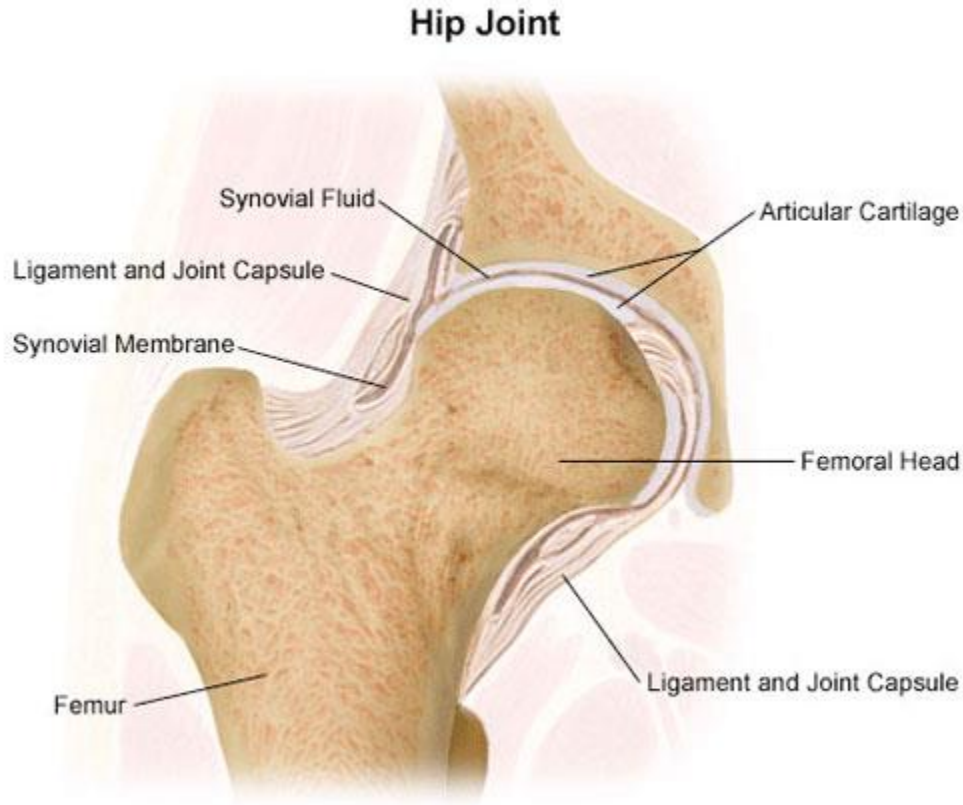


# Ball and Socket Joint

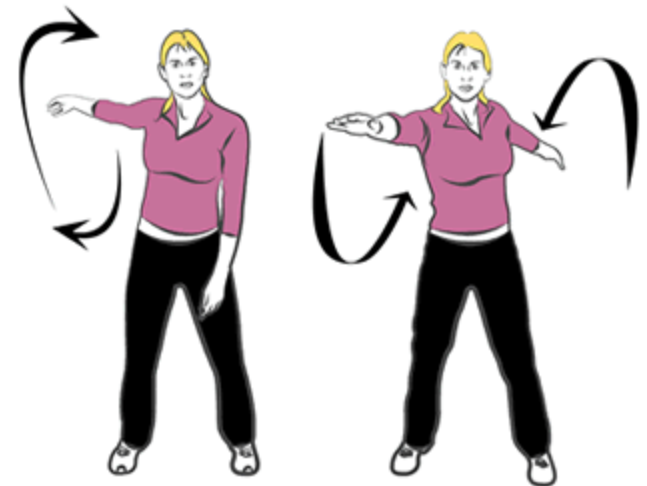


- Ball and socket joints allow the joint to rotate in 360° allowing a lot of flexibility.
- A rounded head of a bone fits into a cup shaped cavity of another.
- Both the ball and the socket are covered by a layer of **cartilage**.
- Between the bones of the joint is a fluid called **synovial fluid**.
- Examples include the hip and shoulder joint

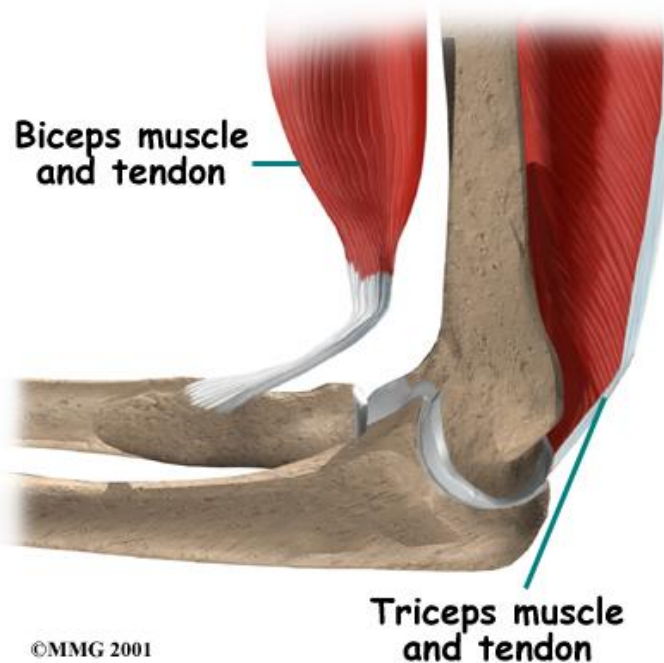
**Challenge;**

How many complete opposite windmills/arm circles can you complete in one minute?

Enter the best score for your bench onto the score sheet



# Hinge Joint



A Typical hinge joint in the elbow

Challenge;

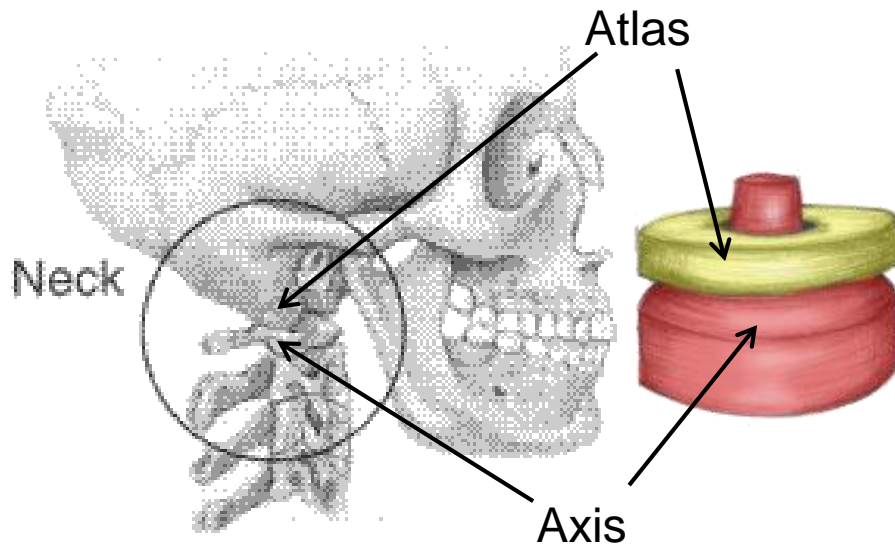
How many standing squats can you complete in one minute?

Enter the best score for your bench onto the score sheet

- Hinge joints work like a lever and allow movement of  $180^\circ$  in one plane only i.e. Up and down
- The ends of the bones in a hinge joint are covered by **cartilage**.
- Between the bones of the joint is a fluid called **synovial fluid**.
- Muscles work in pairs to **contract and relax** to move the joint
- Examples include the elbow and knee joint



# Pivot Joint

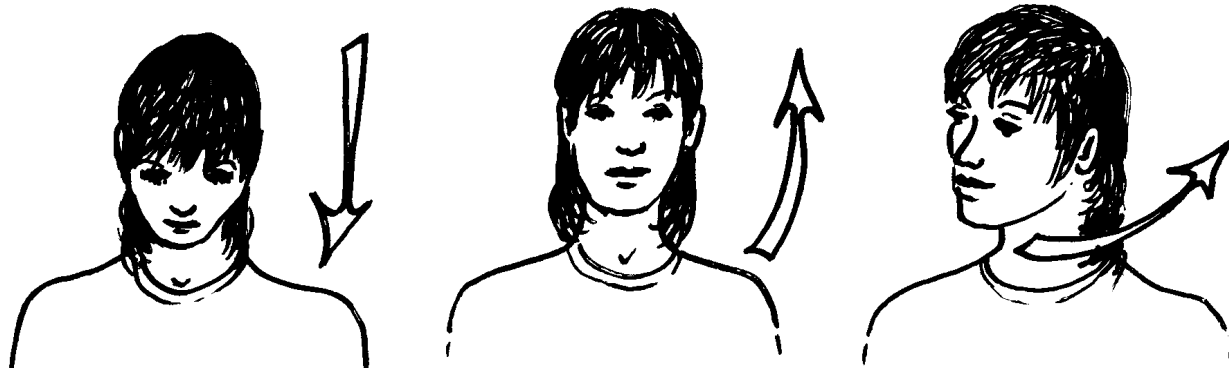


- Pivot joints allow bones to rotate around each other by  $360^\circ$
- Main pivot joint is that of the cervical vertebrae in the neck where the axis rotates on the atlas
- The reason our neck does not rotate  $360^\circ$  fully is because muscles limit how far it will rotate.
- The ends of the bones in a pivot joint are covered by **cartilage**
- The joint contains **synovial fluid** between the bones

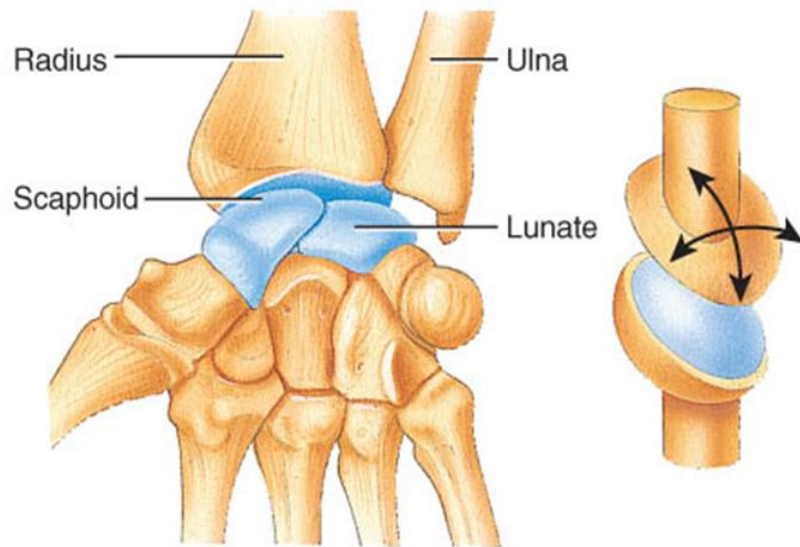
Challenge;

How many complete sequences of the following movement can you complete in one minute? Lift head up, down, left and right (this counts as 1) - Do not roll your head or neck

Enter the best score for your bench onto the score sheet



# Condylloid Joint



(d) Condyloid joint between radius and scaphoid and lunate bones of the carpus (wrist)

- Condyloid joints allow movements in 2 planes i.e. Up, down, left and right and right – it does not allow rotation
- Main example is found in the wrist joint
- The joint contains oval rounded shape of the bones
- The ends of the bone are covered in cartilage
- The joint contains synovial fluid between the bones

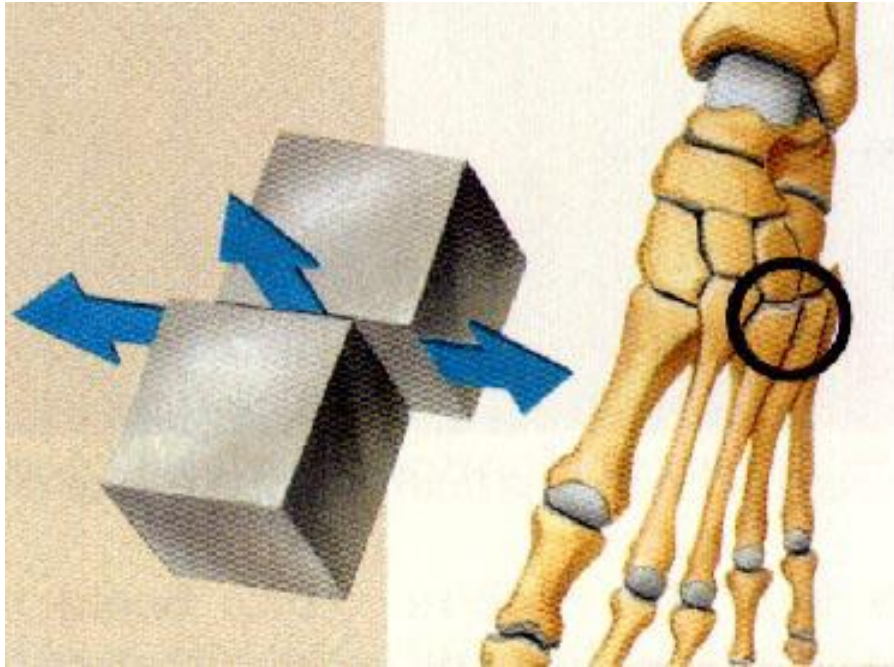
Challenge;

How many sweets can you transfer from one bowl to another using chopsticks?

Enter the best score for your bench onto the score sheet



# Gliding Joint



- This occurs where the flat surface of one bone glides or slips over the other.
- It allows only a limited range of movement in two planes – left, right, up and down
- Examples include the small carpal bones in the hand and tarsals bones in the foot
- The small bones are covered by a thin layer of **cartilage**.
- A very small amount of synovial fluid is found between the bones.

Challenge;

Complete the grip test 3 times and take your maximum score – make sure you hold the meter by your side as you do this.

Enter the best score for your bench onto the score sheet

