Types of Synovial Joints

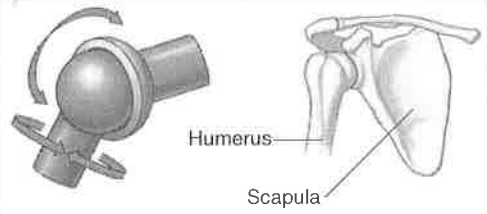
Not all synovial joints are configured the same. In fact, the body contains six types of synovial joints, with each joint type offering a specific movement.

Pivot Joint

In this joint, a projection from one bone articulates with a ring-shaped socket of another bone, allowing the bones to rotate, or pivot. For example, the dens of the second cervical vertebra turns within a ring-shaped portion of the first vertebra, allowing the head to rotate. Another example is the radioulnar joint, in which the head of the radius rotates within a groove of the ulna.

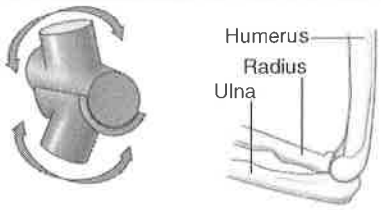
Ball-and-Socket Joint

The ball-shaped head of one bone fits into a cup-like socket of another bone to form this joint to offer the widest range of motion of all joints. The shoulder and hip joints are both ball-and-socket joints.



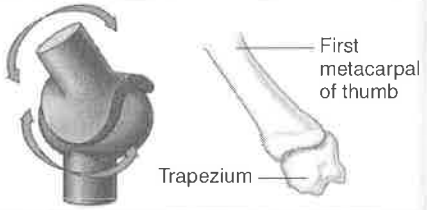
Saddle Joint

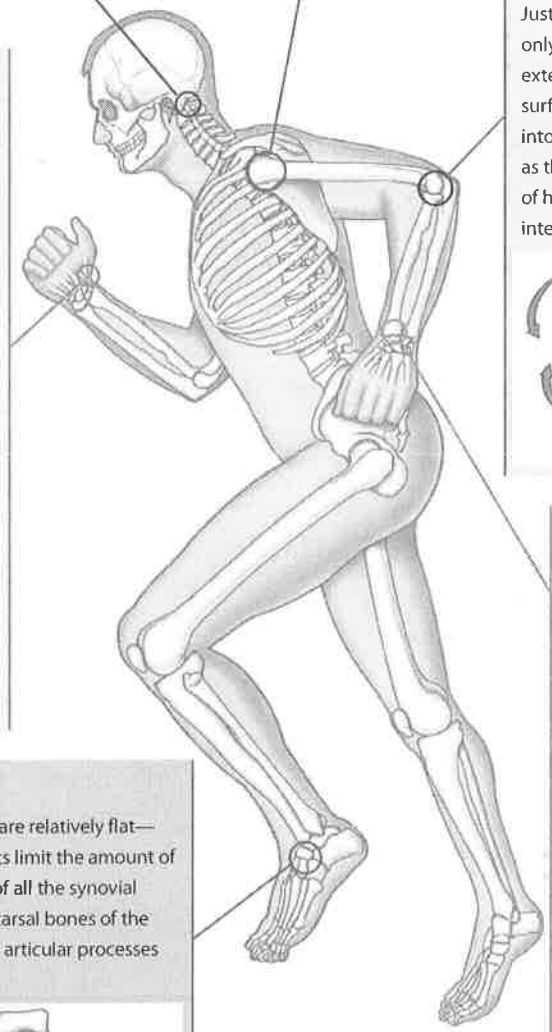
The surfaces of both bones in this joint are shaped like the surface of a saddle: concave in one direction (like the front to rear curvature of a horse's saddle) and convex in the other (like the right to left curvature of a saddle). When perched on top of each other, this shape allows the bones to move back and forth and from side to side, although the side-to-side motion is limited. Found only in the thumbs, this joint's unique shape allows the thumb to move over to touch the tips of the fingers, which gives us the ability to grasp small objects.



Hinge Joint

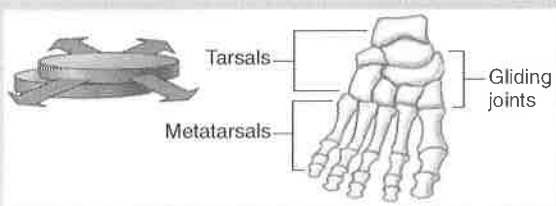
Just like the hinge on a door, these joints allow only back-and-forth movements (flexion and extension). To form a hinge joint, the convex surface of one bone (such as the humerus) fits into a concave depression on another bone (such as the ulna). Besides the elbow, other examples of hinge joints include the knee and the interphalangeal joints of the fingers and toes.





Gliding Joint

In this joint, the two bone surfaces—which are relatively flat—slide over each other. Surrounding ligaments limit the amount of movement, making these the least mobile of all the synovial joints. Examples of these joints include the tarsal bones of the ankle, the carpal bones of the wrist, and the articular processes of the vertebrae.



Condyloid Joint

Here, an oval convex surface on one bone fits into a similarly shaped depression on another. Examples include the articulation of the distal end of the radius with the carpal bones of the wrist as well as the joints at the base of the fingers. Condyloid joints allow flexion and extension as well as side-to-side movement.