

Anatomy Tip

Joints

In an effort to aid Health Information Management Coding Professionals for ICD-10, the following anatomy tip is provided with an educational intent.

Three Types of Joints - The human body has three types of joints:

- 1. Fibrous.** These joints are fixed and immovable and are connected by interlocking fibrous tissue. These joints connect the bones of the skull.
- 2. Cartilaginous.** These joints are only slightly moveable with pads of cartilage surrounding the joint to create their stability. These joints connect your ribs to your sternum, providing flexibility so that you can breathe, but without a wide range of motion.
- 3. Synovial.** These joints allow for the largest range of motion. The synovial membrane is composed of loose connective tissue with a smooth surface that lines the joint cavity. It secretes the synovial fluid to provide free movement of the joint. There are 6 types of synovial joints.
 - 1) Pivotal** - Made up of two or more bones, one of which turns within the ring-shaped socket of another bone. The top two cervical vertebra (the atlas and axis) are pivotal joints, enabling us to shake our heads and allowing for partial rotation.
 - 2) Hinge** - The convex shape of one bone fits into the concave shape of another bone. They allow for one plane of motion, like that of a door opening and closing. The knee is a hinge joint, allowing us to bend our leg back and forth.
 - 3) Ball and Socket** - When the rounded head of one bone fits into the cup-like shape of another bone. It allows for the greatest range of motion of all of the joints. The shoulder is such a joint formed by humerus and the scapula.
 - 4) Ellipsoidal** - Is formed when an egg shaped bone end is held within an elliptical cavity. Ellipsoidal joints allow for extension and flexion, side to side movement, and some limited rotation. Wrists and ankles contain this type of joint.
 - 5) Saddle** - Each bone has a concave and convex area so that the bones can rock back and forth and side to side, forming limited rotation. The only saddle joint in the body is the base of the thumb.
 - 6) Gliding or Plane** - Is formed when two nearly flat bones slide over one another. They allow for a very limited gliding movement. Some joints in the foot and hand move this way.

References

Dorland's Dictionary, 2012

Clayman, Charles B. The Human Body: an Illustrated Guide to Its Structure, Function, and Disorders. London: Dorling Kindersley Pub., 1995. Print.

Walker, Richard. Guide to the Human Body. Buffalo, NY: Firefly Books, 2004. Print.

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