There are more than 200 bones in the human body. Each one is different and unique. Bone landmarks help us describe individual bone with all of its bumps, ridges, and holes. In this eBook, we will look at common bone landmark terminology.
Gross anatomy of a bone

There are two main parts of the bone: the diaphysis and epiphysis.

**Diaphysis**: The walls of the diaphysis are composed of dense and hard compact bone. It contains a hollow region called the **medullary cavity**, which is filled with yellow marrow. The cavity is lined with **endosteum** where bone growth, repair, and remodeling occur.

**Epiphysis**: The wider section at each end of the bones, filled with spongy bone.
Between the diaphysis and the epiphysis is the **epiphyseal growth plate**, which contains hyaline cartilage in a growing bone. Once the bone stops growing, the cartilage is replaced by osseous tissue and the plate becomes a line.

The outside of the bone is covered in a fibrous membrane called the **periosteum**. This contains blood vessels, nerves, and lymphatic vessels. Tendons and ligaments attach to the bone here. When bones meet to form a joint, the epiphysis of each bone is covered with **articular cartilage**, which reduces friction and acts as a shock absorber.
Three general bone markings

**Articulation**
An area where two bones meet.

**Projection**
An area that projects above the surface of the bone.

**Hole**
Opening or groove in the bone that allows blood vessels and nerves to enter.

- **Right humerus/Scapula**
- **Left temporal bone**
- **Sacrum**
**Process:** A outgrowth of bone from a larger body that allows articulation with other bones to form joints.

**Head**
Round surface of a bone that helps form a joint.

**Facet**
A smooth and flat surface that helps form a gliding joint.

**Condyle**
Provides structural support and absorbs most of the force exerted by the joint.
**Neck:** Narrowing of the bone where the shaft of the long bone (diaphysis) meets the end of the long bone.

**Body:** The largest and main segment of the bone.
**Epicondyle:** A rounded projection that sits on top of the condyle and allows connective tissues to connect to the bone.

**Crest:** A raised ridge projection that is part of the edge of a bone and allows connective tissues to connect to the bone.
Spine (spinous process): A more pronounced raised, sharp elevation of bone that allows connective tissues and muscles to connect to the bone.

Tuberosity: A large projection on the side of the bone that allows connective tissues to connect to the bone.
**Tubercle**: A small round projection that allows connective tissues to connect to the bone.

**Tuberosity**: A moderate projection that allows connective tissues to connect to the bone.
**Foramen:** A round hole where blood vessels, nerves, or ligaments pass through.

**Meatus:** A tube-like channel that provides passage and protection to nerves and vessels within the bone.
**Fissure:** A slit in the bone that usually houses nerves and blood vessels.

**Sulcus:** A groove that accommodates a nerve, blood vessel, or tendon.
**Fossa**: A shallow depression in a bone’s surface that allows other bones to articulate with it.

**Sinus**: A cavity within an organ or tissue.
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