

## Skeletal System

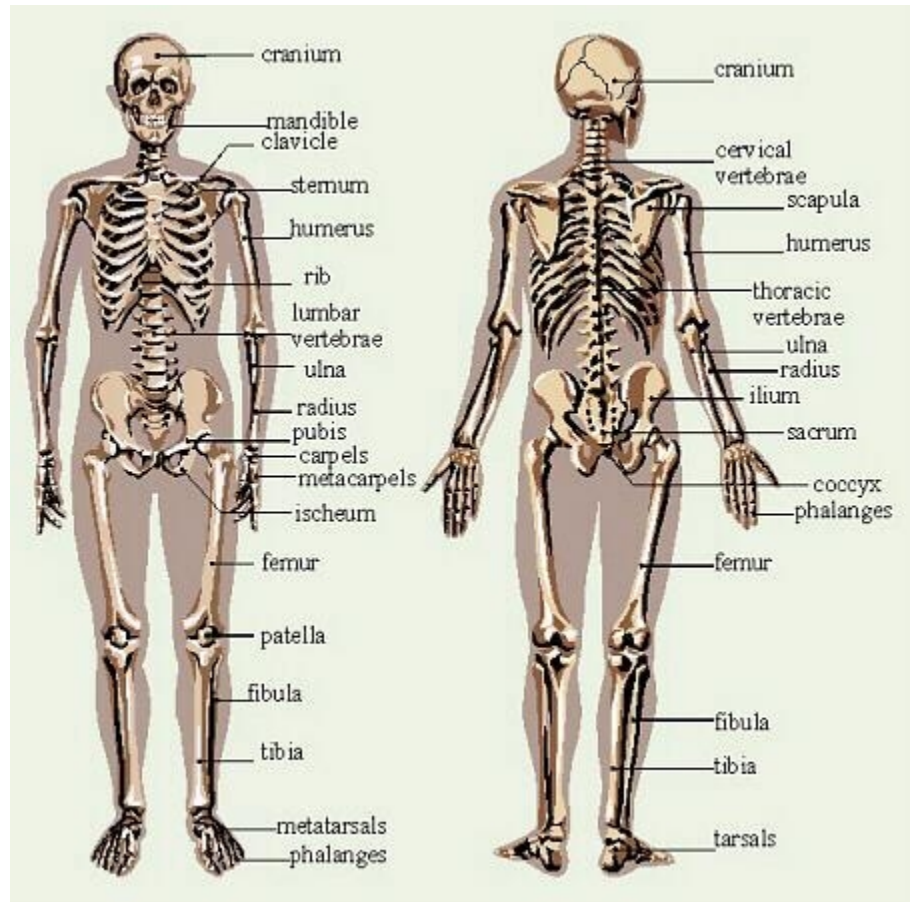
Skeletal system provides support, protection, movement and a site for blood cell formation.

206 bones in adult human body.

Bones are a solid network of living cells and protein fibers that are surrounded by deposits of calcium salts.

Bone marrow: soft tissue found in bone.

Two types: yellow (made of fat cells) and red (made of red blood cells).



## Development of Bones

Skeleton of baby is composed of cartilage.

Cartilage is replaced by bone during ossification.

Bone formation also occurs when bone is broken.

## Types of Joints

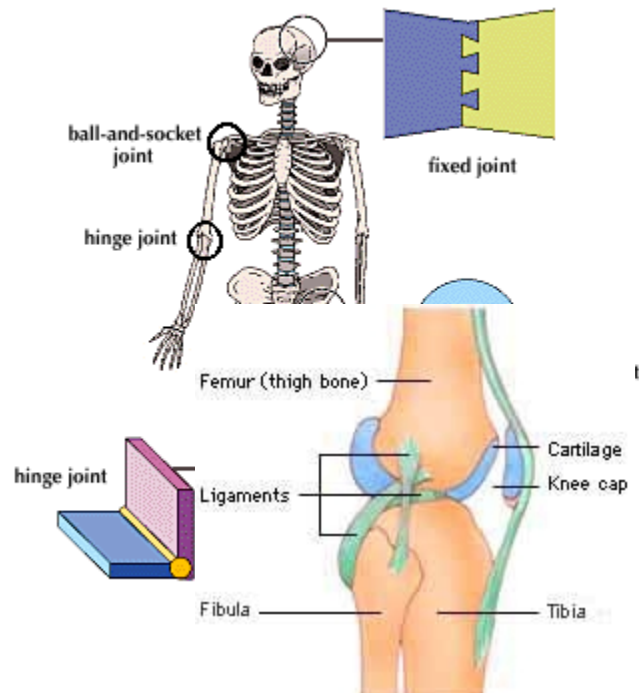
Place where one bone attaches to another is called a joint.

Joints permit bones to move w/o damaging each other.

In movable joints, bones are covered with cartilage to protect them.

Ligaments are tough connective tissue.

**LIGAMENTS CONNECT BONE TO BONE!**



## Muscular System

Three types of muscles

1) skeletal 2) smooth 3) cardiac

Skeletal: attached to bones and responsible for voluntary movement.

Smooth: non voluntary, found in hollow structures (e.g.: stomach, blood vessels).

Cardiac: involuntary muscle found only in the heart.

## Muscle Contraction

Muscle contracts when thin filaments in the muscle fiber slid over the thick filaments.

ATP = energy for muscle contraction.

## Muscle and Bone Interaction

Skeletal muscles are joined to bones by tendons.

**TENDONS ATTACH  
MUSCLE TO BONE!**

Most skeletal muscles work in pairs (one contracts, other relaxes).

