

CARTILAGE

PRESENCE / CONNECTIVE TISSUE

- Cartilage is a connective tissue found in many areas of the body including:
1. Joints b.w bones e.g elbows, knees and ankles
 2. ends of the ribs
 3. b.w the vertebrae in the spine
 4. ears and nose
 5. bronchial tubes or airways.

CHONDROCYTES

Cartilage is made up of specialized cells called chondrocytes. These chondrocytes produce large amounts of extracellular matrix composed of collagen fibres, proteoglycan, and elastin fibres.

LACK OF BLOOD VESSELS

There are no blood vessels in cartilage to supply the chondrocytes with nutrients.

Instead, nutrients diffuse through a dense connective tissue surrounding the cartilage (called the perichondrium) and into the core of the cartilage.

TYPES OF CARTILAGE

1. Hyaline Cartilage
2. Elastic Cartilage
3. Fibrocartilage

1. HYALINE CARTILAGE

This is a low-friction, wear-resistant tissue present within joints that is designed to bear and distribute weight.

It is a strong, rubbery, flexible tissue but has poor regenerative capacity.

Hyaline cartilage exists on the ventral ends of ribs, in the larynx, trachea, bronchi and on the articulating surfaces of bones.

2. ELASTIC CARTILAGE

Elastic cartilage is more flexible than hyaline cartilage. It provides both strength and elasticity to certain parts of body, such as the ears. Elastic cartilage is also found in the epiglottis.

3. FIBRO CARTILAGE

Fibrocartilage is a tough and inflexible form of cartilage found in the knee and between vertebrae. Fibrocartilage is found in the soft tissue-to-bone attachments.