

What Are the Types of Cartilage?

Worksheet

There are three types of cartilage - hyaline (smooth and supportive), elastic (flexible and resilient), and fibrocartilage (tough and shock-absorbing) - each built from a different mix of collagen and elastic fibers.

Questions

1. Which cartilage covers the articular surfaces of synovial joints?
 - A) Elastic
 - B) Fibrocartilage
 - C) Hyaline
 - D) Periosteal
2. Which cartilage type contains elastic fibers?
 - A) Hyaline
 - B) Elastic cartilage
 - C) Fibrocartilage
 - D) Compact bone
3. The intervertebral discs are made of which cartilage?
 - A) Hyaline
 - B) Elastic
 - C) Fibrocartilage
 - D) Reticular
4. Which collagen type dominates hyaline cartilage's matrix?
 - A) Type I
 - B) Type II
 - C) Type III
 - D) Type IV
5. Which cartilage type lines the ends of long bones at synovial joints, and why?
6. The external ear (pinna) needs to bend and spring back to shape. Which cartilage is present?
7. The intervertebral discs and knee menisci must resist heavy compression. Which cartilage type is this?
8. Define: What are the 3 types of cartilage?
9. Define: Which cartilage type is most abundant in the body?
10. Define: What gives elastic cartilage its flexibility?

Answer Key

1. C) Hyaline - Hyaline (articular) cartilage provides a smooth, low-friction surface at joints.
2. B) Elastic cartilage - Elastic cartilage's matrix has elastic fibers as well as collagen.
3. C) Fibrocartilage - Fibrocartilage resists heavy compressive loads, ideal for discs.
4. B) Type II - Type II collagen gives hyaline cartilage its smooth, glassy matrix.
5. Articular surfaces need a smooth, low-friction, compressible covering hyaline cartilage is present as articular cartilage It has abundant type II collagen and high water content for cushioning and gliding.
6. Elastic cartilage contains elastic fibers alongside collagen this gives it flexibility and recoil it is found in the pinna and the epiglottis.
7. Fibrocartilage has thick bundles of type I collagen it withstands high compressive and tensile loads it is found in intervertebral discs, menisci, and the pubic symphysis.
8. Hyaline, elastic, and fibrocartilage.
9. Hyaline cartilage - found in articular surfaces, the trachea, and costal cartilage.
10. Elastic fibers embedded in the matrix, in addition to collagen.

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