

Unit 1 Homework Video

C7 Bone and Cartilage

Bones: Structure and Types (12 min)

1. What are some of the features of skeletal cartilage?
2. What are the three types of cartilage? Features?
5. What is the structure of the diaphysis?
7. What is the difference between the epiphyseal plate and epiphyseal line? What occurs at the epiphyseal plate?
8. What is the outer connective tissue layer surrounding the bone?
10. What is the function of osteoblast? Secrete what?
11. What do osteoblast turn into after they are surrounded by matrix?
12. What are osteocytes?
13. What is the structural unit of compact bone?
14. What are the lamellae? Made up of?
15. What are the spaces between the lamellae called? What is inside these spaces?
16. What is the difference between circumferential lamellae and interstitial lamellae?
17. What term describes the inorganic components of bone?
18. What are the organic components of bone?

Interstitial and Appositional Bone Growth (3)

1. What is interstitial growth? Occurs where?
12. What is appositional growth? Where does this occur?
3. How is a new central canal formed?

Types of Cartilage (5 min)

1. What three things make connective tissue?
2. What are the three components specific to cartilage?
3. What is the water content of cartilage? Why?
4. What is the fiber type in cartilage?
5. What is the fetal skeletal system “modeled” from?
6. What are the three forms of cartilage?

Bone Remodeling and Repair (6:30 min)

1. What is bone remodeling?
2. Where is the periosteum not located?
3. What are the two surfaces of the periosteum? Functions?
4. What makes up the cortical bone layer of long bones?
5. What makes up the lamellae?
6. What type of bone is found in the epiphysis?
7. What are trabeculae? Function?
8. Where is bone marrow found?
9. What do hematopoietic stem cells produce?
10. Monocytes is a common white blood cell. What do osteoblasts secrete to stimulate a monocyte to become an osteoclast? What do osteoclast do?
11. What is the function of an osteoclast?
12. How do osteoclast reabsorb bone?
13. What role do thyroid glands play in bone?
14. What is Wolff’s Law?
15. What is the function of vitamin D?

Osteoporosis (5 min)

1. Where is trabeculae of spongy bone found?
2. What are the two advantages of trabeculae?
3. How often do you replace your bones?
4. What starts to happen around age 30?
15. What is osteoporosis? Is this a rapid or slow development? Affect on bone structure?
16. Who is more likely to experience osteoporosis?
17. What nutrients are required for healthy bone?
18. What may young women do to reduce risk of osteoporosis?
19. How may post menopausal women reduce risk of osteoporosis?