

Study Guide Chapter 6 / Tortora & Derrickson  
Bone Tissue

1. What are the functions of the skeleton system?
2. What are the two divisions of the skeletal system?
3. How do we classify bones?
4. What is the structure of a long bone? (Fig 6-1):
5. What is the structure and function of an osteon? (Fig 6.3)
  - a. What is an osteogenic cell?
  - b. What is an osteoblast? Location?
  - c. What is an osteoclast? Location?
  - d. What is an osteocyte?
  - e. How is circumferential lamellae different from concentric lamellae? What is interstitial lamellae?
  - f. What is the function of a lacunae?
  - g. What is located inside the central canals?
  - h. What is the function of perforating (Volkmann) canals?
  - i. What is the function and structure of a canaliculli?
  - j. What is the relationship between perforating fibers, periosteum, and tendons?
6. Bone is classified as a composite. What does this mean? Significance?
7. Is “spongy” bone hard or soft? Why do we have spongy bone (also called cancellous bone)?
8. How are the trabeculae arranged in a bone?
9. What is a diploe? How does it provide protection?
10. Where is bone marrow?
11. What is the difference between red and yellow marrow?
12. How is the distribution of red and yellow bone marrow different in a children and an adults?
13. The formation of new bone is called osteogenesis. What two type of osteogenesis occur in a fetus?
14. What two type of osteogenesis occur after birth?
15. In an adult, do the two type of bone growth continue throughout adult life? Explain
16. What is the difference between the epiphyseal plate and epiphyseal line?
17. What is achrodroplastic dwarfism? What is pituitary dwarfism?
18. How does the lack of growth hormone effect a child’s skeletal system?
19. What is Wolf’s Law of Bone? What two cells remodel bone? Relate this law to the greater trochanter of the femur.
20. Outline the hormonal control of calcium balance Study Figure 6.10
  - a. Where is the source for previtamin D3? How is vitamin D3 created and where does it go?
  - b. What is calcitriol? Calcidiol?
  - c. How does calcitriol increase the calcium concentration of blood?
  - d. Role of vitamin C and Vitamin A
21. Outline the four steps of bone healing (Study Figure 6.9)
22. How do we describe the spinal curvature of a fetus?
23. How do we describe the spinal curivture of an adult?

Hot List Questions

1-4-5-6-10-11-12-13-14-16-20-21-22-23