

Chapter 1 Objectives

Some of these objectives will not be specifically covered in class but you are responsible for being able to answer all of them.

1. Define **homeostasis** and explain how this concept is used in physiology and medicine.
2. Describe the nature of **negative feedback loops** and explain how these mechanisms act to maintain homeostasis.
3. Draw and describe what is happening in a negative feedback loop.
4. Explain how antagonistic effectors help to maintain homeostasis.
5. Describe the nature of **positive feedback loops** and explain how these mechanisms function in the body.
6. Distinguish between intrinsic and extrinsic regulation and describe, in a general way, the roles of the nervous and endocrine systems in body regulation.
7. Explain how negative feedback inhibition helps to regulate the secretion of hormones, using insulin as an example.
8. List the four primary tissues and their subtypes and describe the distinguishing features of each primary tissue.
9. Compare and contrast the three types of muscle tissue.
10. Describe the different types of epithelial membranes and state their locations in the body.
11. Be able to identify and/or draw squamous, cuboidal, and columnar epithelium, both simple and complex.
12. Define **simple, pseudostratified, stratified** and **transitional** as they relate to epithelial membranes.
13. Define **squamous, cuboidal, columnar**, and **ciliated columnar** as they relate to epithelial membranes.
14. Explain why exocrine and endocrine glands are considered epithelial tissues and distinguish between these two types of glands.

15. Describe the different types of connective tissues and explain how they differ from one another in their content of extracellular material.
16. Relate the structure of each primary tissue to its function.
17. Describe the nature of the extracellular and intracellular compartments of the body and explain the significance of this compartmentalization.
18. Know Table 1.4 on Organ Systems of the Body.