

Week 3 Homeostasis

Learning Goal: Understand how homeostatic systems function to maintain a constant internal environment

After finishing the pre-class assignments, students will be able to...

- Identify the components of a homeostatic negative feedback system.
- Explain how each component of a homeostatic negative feedback system contributes to maintaining physiological stability.
- Differentiate between negative feedback and positive feedback, providing examples of each.

After this class meeting, students will be able to...

- Predict how components of a homeostatic system will change when part of the system is perturbed.
- Apply the concept of negative feedback to the process of thermoregulation.
- Relate changes in environmental conditions to changes in physiological or behavioral responses to temperature regulation.
- Relate endocrine function to homeostatic regulation

Week 3 Endocrine System

Learning Goal: Relate the action of hormones to the maintenance of homeostasis.

After finishing the pre-class assignments, students will be able to...

- Explain when and why hormones are released
- Define the different types of hormones
- Discuss the role that hormones play in the maintenance of homeostasis
- Provide examples of organisms that rely on different modes of reproduction
- Explain the relationship between the hypothalamus and pituitary

After this class meeting, students will be able to...

- Determine whether a particular hormone will interact with a cytosolic or membrane-bound receptor
- Predict which hormones have been released from the pituitary to elicit a specific tissue response
- Evaluate the consequences of altering a component of a hormone pathway