KEY CONCEPT
The endocrine system produces hormones that affect growth, development, and homeostasis.
Hormones influence a cell’s activities by entering the cell or binding to its membrane.

- Glands are organs of the endocrine system.
Hormones are chemical signals that influence cell’s activities.
– produced by glands
– travel through the circulatory system
– affects cells with matching receptors
29.6 The Endocrine System and Hormones

- There are steroid hormones and nonsteroid hormones.
  - Steroid hormones enter the cell.
  - Nonsteroid hormones do not enter the cell.
Endocrine glands secrete hormones that act throughout the body.

- There are many glands located throughout the body.

- Hormones travel through the bloodstream to cells with matching receptors.
The hypothalamus interacts with the nervous and endocrine systems.

• The hypothalamus is a gland found in the brain.
  – a structure of both the nervous and endocrine systems
  – produces releasing hormones, sent to pituitary gland

• The pituitary gland is found below the hypothalamus in the brain.
  – controls growth and water levels in blood
  – produces releasing hormones sent throughout the body
• Releasing hormones stimulate other glands to produce hormones.
  – allow glands to communicate with one another
  – are used in temperature regulation
Hormonal imbalances can cause severe illness.

- Abnormal hormone levels affect homeostasis.
- Hormonal imbalances might be treated with surgery or medicine.
- Steroids, a pituitary tumor, or some prescription drugs can make the pituitary overactive and indirectly cause problems.