Endocrinology

• The study of hormones, the endocrine system, and their role in the physiology of the body

• The body’s slow chemical communication system; a set of glands that secrete hormones into the blood stream.
Endocrine and nervous systems

- Many common aspects:
  - small quantities
  - regulate other cells & tissues
  - act through receptors
  - functional overlap between some hormones & neurotransmitters
  - excitability
  - both can secrete into blood
**Paracrine hormones** (and other paracrine transmitters) only act on cells in the immediate vicinity of the cells from which they are released.

Hormones that act on the cells that produced the messenger substance are referred to as **autocrine hormones**.
Transport of hormones

• Freely in blood:
  – Catecholamines
  – Most peptides

• Specific transport globulins (from liver):
  – Steroids
  – Thyroid hormones