

- Hormones are a communication system for your cells
- Only cells with right receptors for specific hormone will respond
- Hormone secreting cells secretes hormones which travel through bloodstream and when it hits the target cell it connects with the receptor and the target cell reacts
- Some stay local
 - Paracrine
 - Either affects cell nearby or
 - the cell that secreted it (negative feedback)
 - Not a target cell (no receptors)
 - Autocrine
 - Doesn't go through bloodstream
- Endocrine releases into fluid
- Exocrine releases into space (lumen) through a duct (tube)
- You can have endocrine cells or glands (group of cells)
 - Glands can produce different kinds of hormones
 - Chemicals released directly into extracellular fluid
- Exocrine secretes into empty space or external environment via ducts
- How does this relate to evolution??
 - As we become more complex we need to be able to communicate throughout the body
 - Highly conserved hormones are found in a huge range of taxonomic groups
 - Same hormone but does all these different things in different organisms because it's the same receptors but on different types of cells
- Flight or fight
 - Brain detects danger and signals legs muscles to jump back and signals adrenal gland to release epinephrine into the blood → heart beats faster and stronger and BP rises → fat cells release fatty acids for energy → blood vessels constrict to stomach and shunt blood to the muscles → liver breaks down glycogen to produce glucose energy to blood

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