

Introduction to Endocrine

What is endocrine?

- >Secrete messenger molecules (mostly hormones)
- >Slower than neurotransmitters, but last longer

Catabolic: Break

Anabolic: Build

Subspecialties:

- >Neuroendocrinology:
 - >Hypothalamus
 - >Thalamus
 - >Pituitary Gland

Chemical messengers vs. Neurotransmitters

C: Blood (Epi)

N: Neurons (Norepi)

What are hormones?

- >Chemical messengers synthesized and released by endocrine glands

Classes of hormones:

- >Polypeptide
- >Steroid
- >Eicosanoids

Glands/Organs

| Who | What/Why/How |
|--------------|--|
| Pineal | Melatonin (Sleep) |
| Pituitary | Prolactin (Milk) Growth Hormone ACTH (Stress) LH FSH (Sperm and egg) ADH (Vasopressin, BP regulation) Oxytocin (Labor) |
| Thyroid | T3 T4 Calcitonin |
| Adrenal | Epinephrine Aldosterone (Blood pressure) Cortisol (Blood glucose) |
| Pancreas | Insulin (Glucose, anabolic) Glucagon (Blood sugar) |
| Hypothalamus | CEO; Primary regulator |

| | |
|-------------|---------------|
| Parathyroid | PTH (Calcium) |
| Kidney | Renin |