The Endocrine System

The Endocrine System is the collection of glands that produce hormones that regulate:

metabolism

growth

development

tissue function

sexual function

reproduction

sleep

mood

and more…

The Endocrine System is made up of:

Pituitary Gland

Thyroid Gland

Parathyroid Gland

Pancreas

Adrenal Glands

Ovaries

Testicles

 Endocrine System Vocabulary

**Androgen-** a group of hormones that play a role in male reproductive activity

**Estrogen-** responsible for development and regulation of female reproductive system and secondary sex characteristics like pubic hair, enlarged breasts, widened hips, facial hair

**Gamete-** is a haploid cell that fuses with another haploid cell during fertilization. Female= ovum; Male= sperm

**Genesis-** Production

**Innervate-** to furnish with nerves; grow nerves into; stimulate through nerves

**Medulla-** Most inner part of an organ; the marrow of bones

**Neurotransmitters-** brain chemicals that communicate information by relaying signals between nerve cells (neurons). For example these chemicals tell your heart to beat, your lungs to breathe, stomach to digest, etc.

**Nociception-** sensory nervous system’s response to contain harmful stimuli. Subjectively alerting by pain:

 chemical

 mechanical

 thermal

**Parasympathetic Nervous System-**  responsible for stimulation of “rest and digest”, “feed and breed”; activities that occur when the body is at rest like sexual arousal, salivation, lacrimation, urination, digestion, defecation.

**Pathway-** chemical reaction within a cell

**Precursor-** compound that participates in a chemical reaction with another and produces another compound

**Sympathetic Nervous System-** its primary process is to stimulate the fight or flight response, raising the heart beat, dialating pupils, constricting vessels, etc.

 **Neurotransmitters and Hormones**

**Neurotransmitters Hormones**

nervous system endocrine system

transmit messages transmit messages

across the synaptic through the blood by

cleft hormonal release

produced by neurons produced by endocrine

 glands

target specific adjacent can travel some dis-

neurons or other cells tance from the

 releasing gland

action is extremely fast action and effect of

(milliseconds) hormone is slower

 and lasts longer

can stimulate postsynaptic can regulate target

membranes organ

examples: actylcholine, examples: ADH, GH

dopamine, noradrenaline PHH, Oxytocin,

 Insulin, Glucogen

 **Prefixes and Suffixes**

**-gen =** substance that produces = angiotensinogen

**-kinin** = substance that moves = choleystokinin

**-poietin =** substance that forms = erythropoietin

**-stat (in)=** substance that keeps stationary= somatostatin

**somato- =** of the body

**thrombo- =** clot = thrombopoietin

**-trol** = substance that sorts out = calcitrol

**-lysis =** decomposition = electrolysis

**Exceptions:**

Like in any language there are “exceptions to the rule”. Apparently not all medical terms consist of prefix-root-word-suffix or even, root word-suffix. Some are acronyms like the hunger hormone **Ghrelin** which stands for **G**rowth **H**ormone **R**eleasing hormone, and like the hormone **Relaxin** which actually relaxes muscles in the pelvis and softens the cervix in preparation for childbirth.