Endocrine System

Regulates overall body
metabolism, *homeostasis,* growth and reproduction.

Hormones

Chemical messengers released from endocrine glands

Endocrine Glands

Release hormones directly into the blood(Adrenals, Pituitary)

Exocrine Glands

Release hormones into ducts (Tear, Sweat)

Endocrine & Nervous Systems

Long term control versus quick reactions to changes in the environment

Homeostasis

Balance

Equilibrium

The tendency toward a relatively stable equilibrium

Steroid Hormones

Bind with receptor molecules and travel to the dna causing a substance to be produced

Protein Hormones

Bind with the cell membrane and initiate a reaction which results in a substance being produced

Feedback Systems

Designed to prevent chemical imbalances within the body

Pituitary Gland

Stores many hormones that regulate different parts of the body

Pituitary Posterior Lobe

Stores ADH and Oxytocin which are produced by the hypothalamus

Pituitary Anterior

Lobe

Master endocrine gland affecting all hormonal functions in the body

GH-Growth Hormone (Somatotropin)

Prolactin

Anterior Pituitary

Most Cells

Stimulates Growth

ACTH Adrenocorticotropic

Anterior Pituitary

Adrenal Cortex

Release of cortisol

Progesterone

Corpus Luteum

Within the ovary

Uterus

Maintains uterus and prevents uterine contractions

Glucagon

Pancreas (Alpha Cells)

Liver

Conversion of glycogen into glucose

TSH-Thyroid Stimulating Hormone

Anterior Pituitary

Thyroid gland

Releases Thyroxine

Testosterone

Interstitial cells of the testes

Many cells including muscles

Sperm production, secondary sex characteristics

Adrenaline

Adrenal Medulla

Muscles/liver

Fight/flight response

Oxytocin

Posterior Pituitary

Uterus

Uterine contractions

Cortisol

Adrenal Cortex

Most Cells

Aids Metabolism, Increases Blood sugar levels

Thyroxine

Thyroid

Most Cells

Controls Metabolism

Estrogen

Follicle-within the ovary

Uterus, and some body cells

Thickens uterus, secondary sex characteristics

ADH-Antidiuretic

Posterior pituitary

Kidneys

Water reabsorption in the kidneys

Insulin

Pancreas (Beta cells)

Muscles/liver

Reduce blood sugar levels

Progesterone

Corpus Luteum

Within the ovary

Uterus

Maintains uterus and prevents uterine contractions