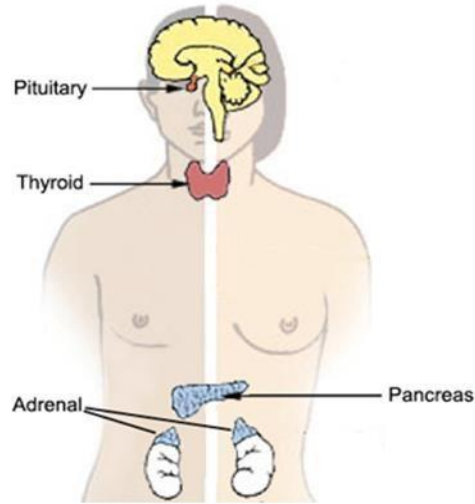


ENDOCRINE SYSTEM



- Hormones are chemical messengers
- Produced by ductless glands
- Sent directly into blood stream to reach target organ
- Specific in action and function

**JOHNNY JOHNNY YES PAPA
SUGAR IN YOUR BLOOD? YES PAPA
CHECK YOUR INSULIN YES PAPA**



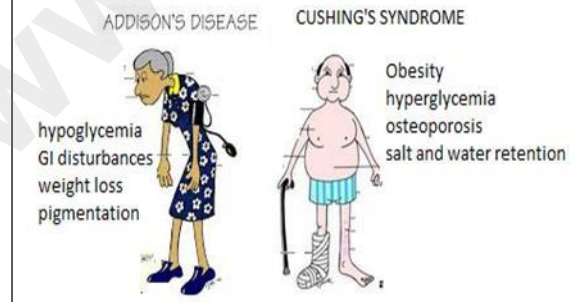
**JOHNNY JOHNNY YES PAPA
BULGING EYES AND NECK? YES PAPA
CHECK YOUR THYROID YES PAPA**



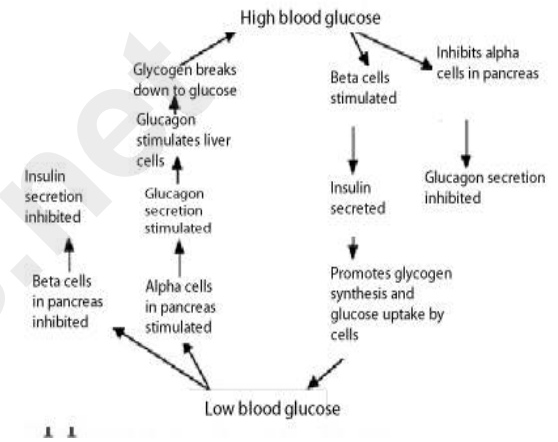
**JOHNNY JOHNNY YES PAPA
TOO TALL OR TOO SHORT? YES PAPA
CHECK YOUR PITUITARY YES PAPA**



**JOHNNY JOHNNY YES PAPA
ADDISON'S OR CUSHING'S? YES PAPA
CHECK YOUR ADRENAL YES PAPA**



NEGATIVE FEEDBACK LOOPS



Gland	Hormone	Function
Pituitary (master gland) Base of brain	Growth hormone Tropic hormones Vasopressin (ADH) Oxytocin	Growth of muscles and bones Regulates secretion of other hormones Regulates water content Aids childbirth and lactation
Adrenal Above kidney	Adrenaline Cortisone	Prepares body to meet emergencies Regulates metabolism
Thyroid Neck region	Thyroxin	Regulates basal metabolism, influences general growth and mental development
Pancreas	Insulin Glucagon	Decreases blood sugar level Increases blood sugar levels