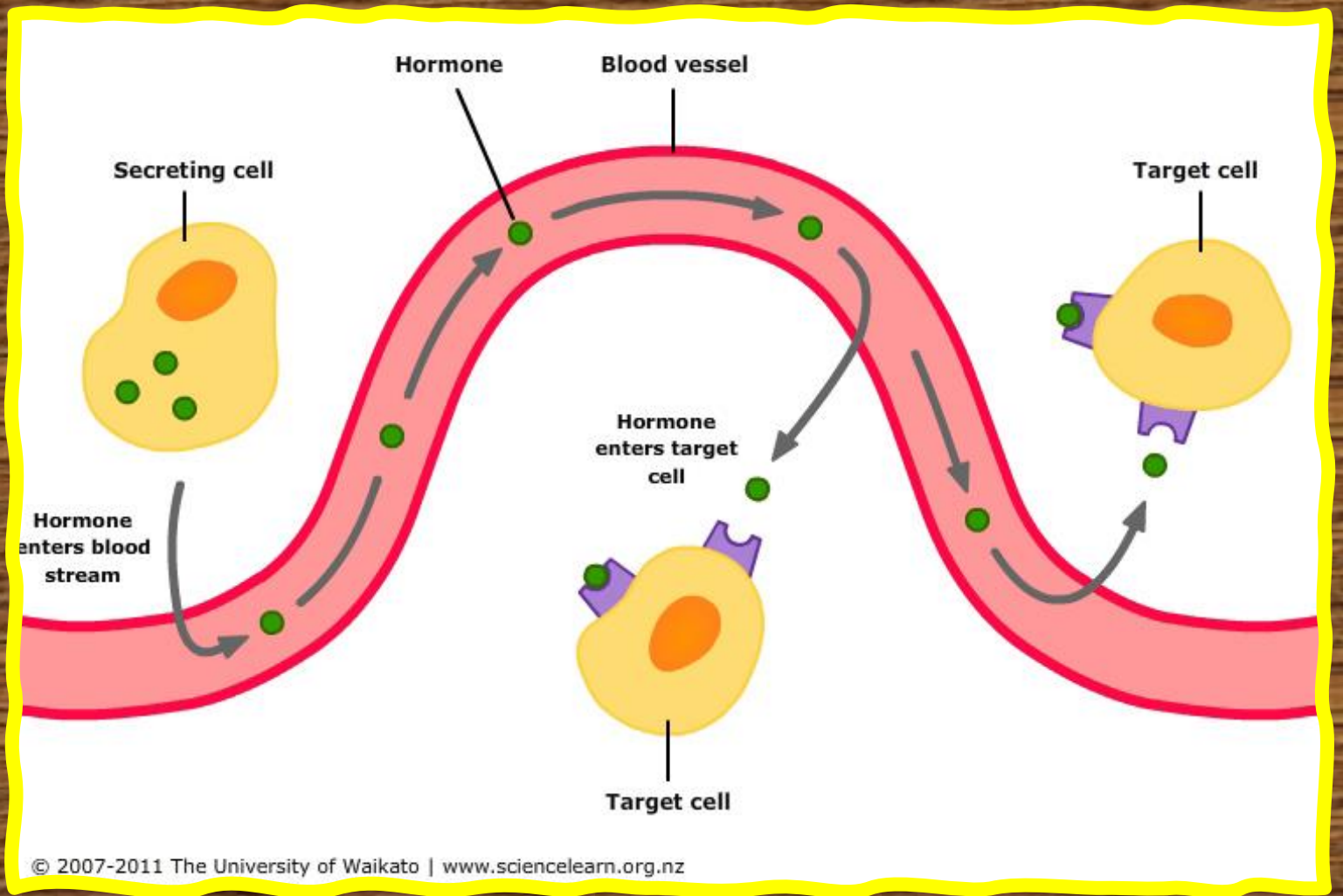


HORMONES

Hormones are your body's chemical messengers. They travel in your bloodstream to tissues or organs.



HORMONES

They work slowly, over time, and affect many different processes, including...

- Growth and development
- Metabolism - *how your body gets energy from the foods you eat*
- Sexual function
- Reproduction
- Mood



Adrenal gland



Brain



Testicle



Pancreas

ENDOCRINE SYSTEM



Ovary



Thymus

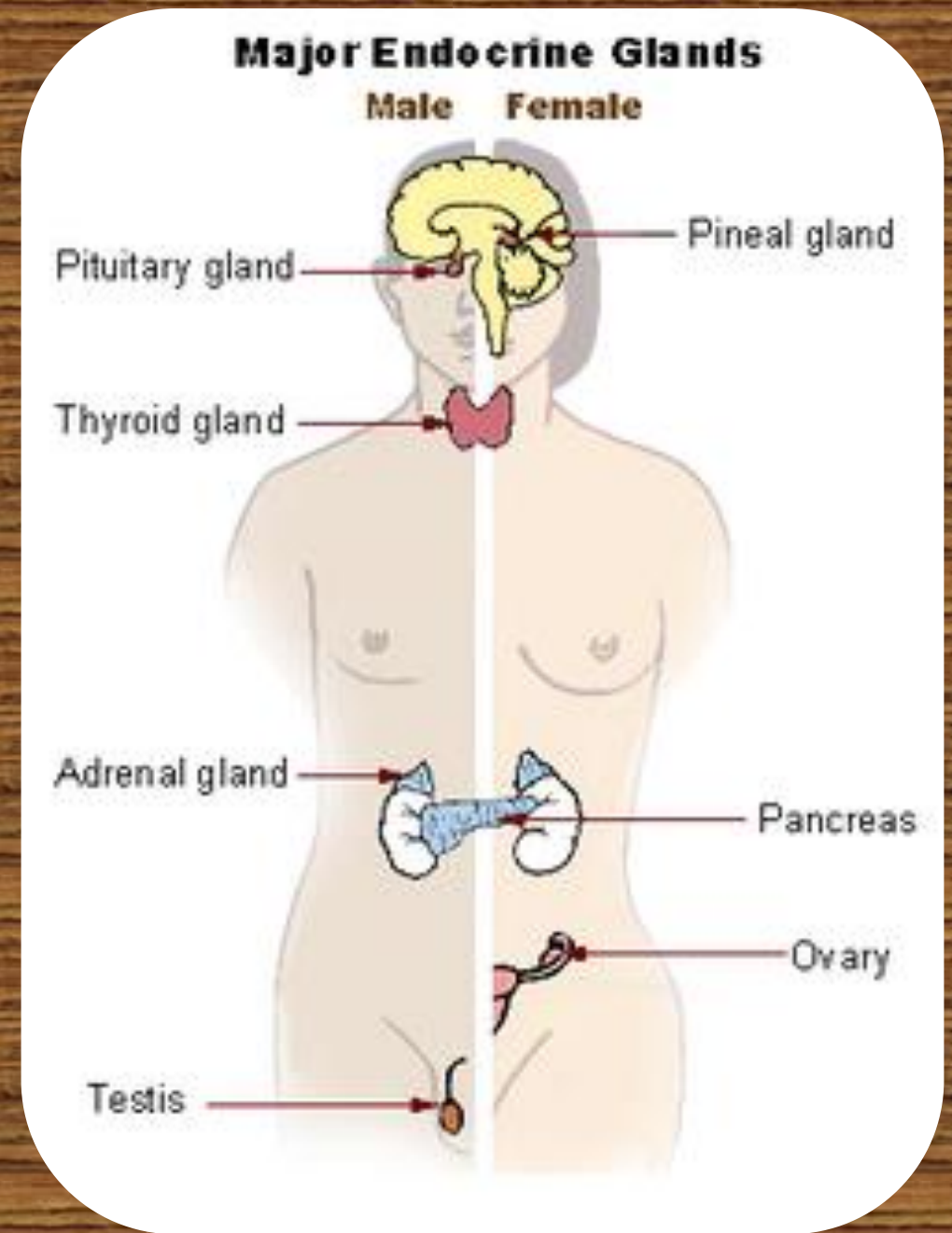


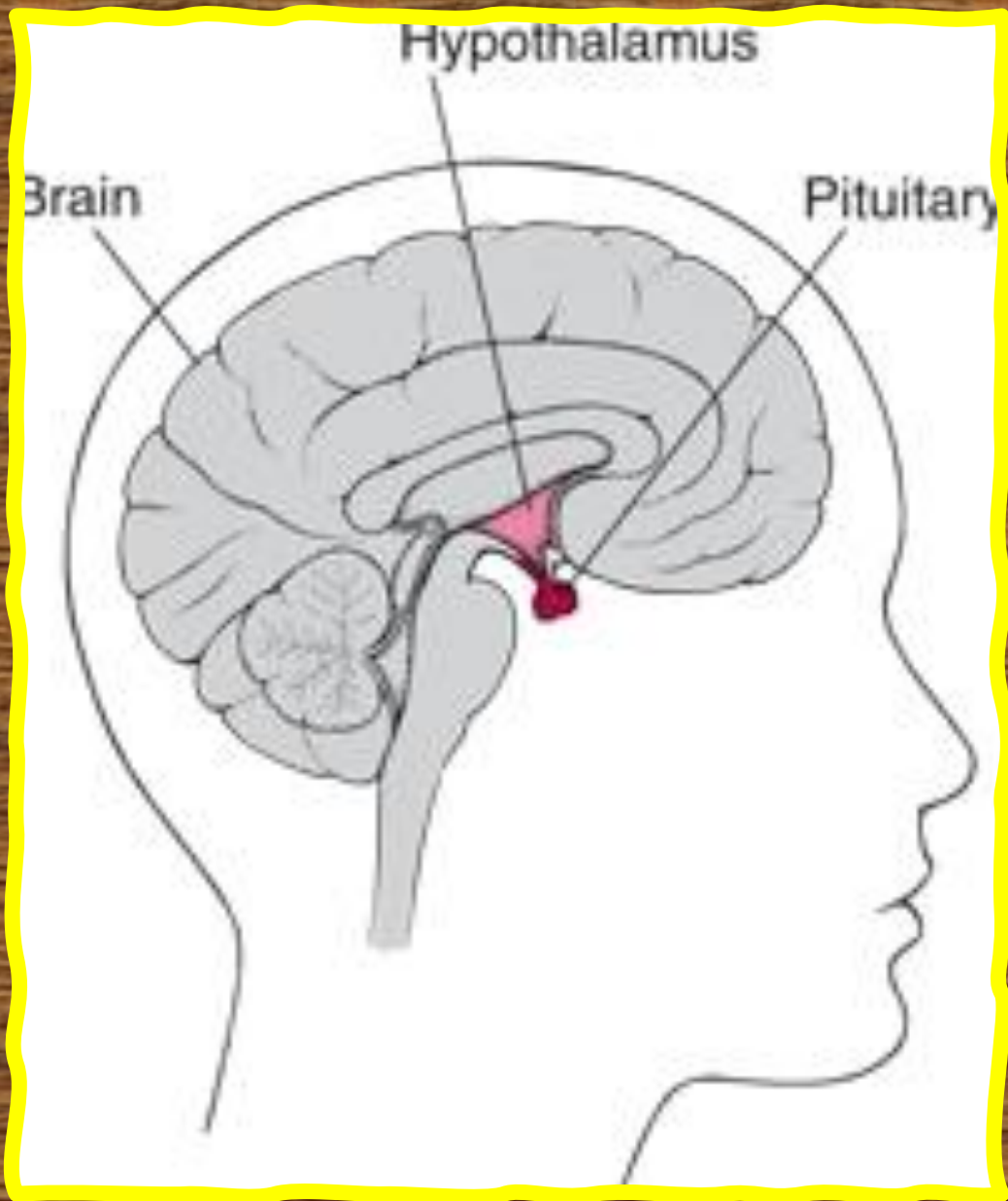
Pituitary gland



Thyroid

The word endocrine derives from the Greek words "endo," meaning within, and "crinis," meaning to secrete.

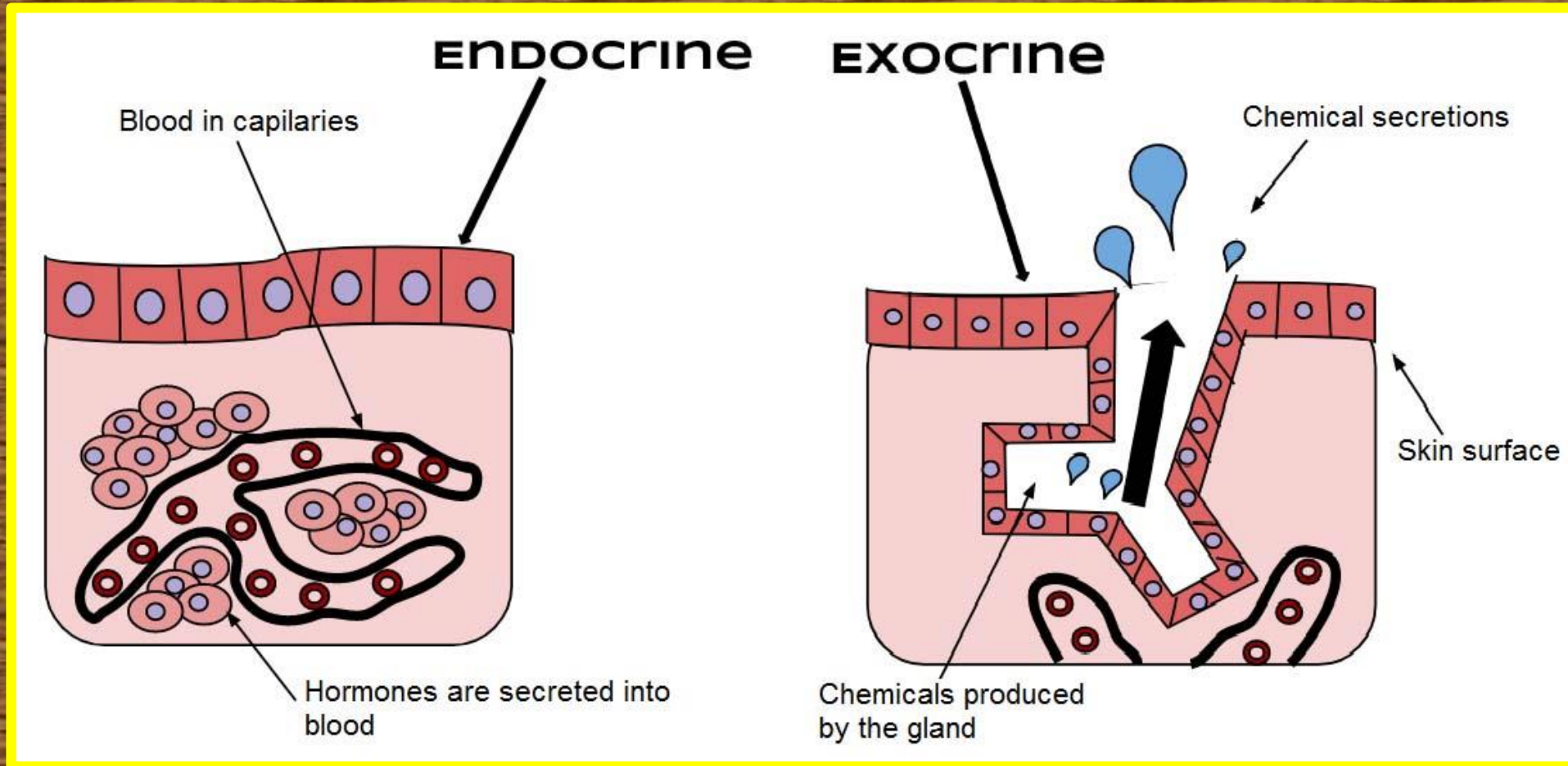


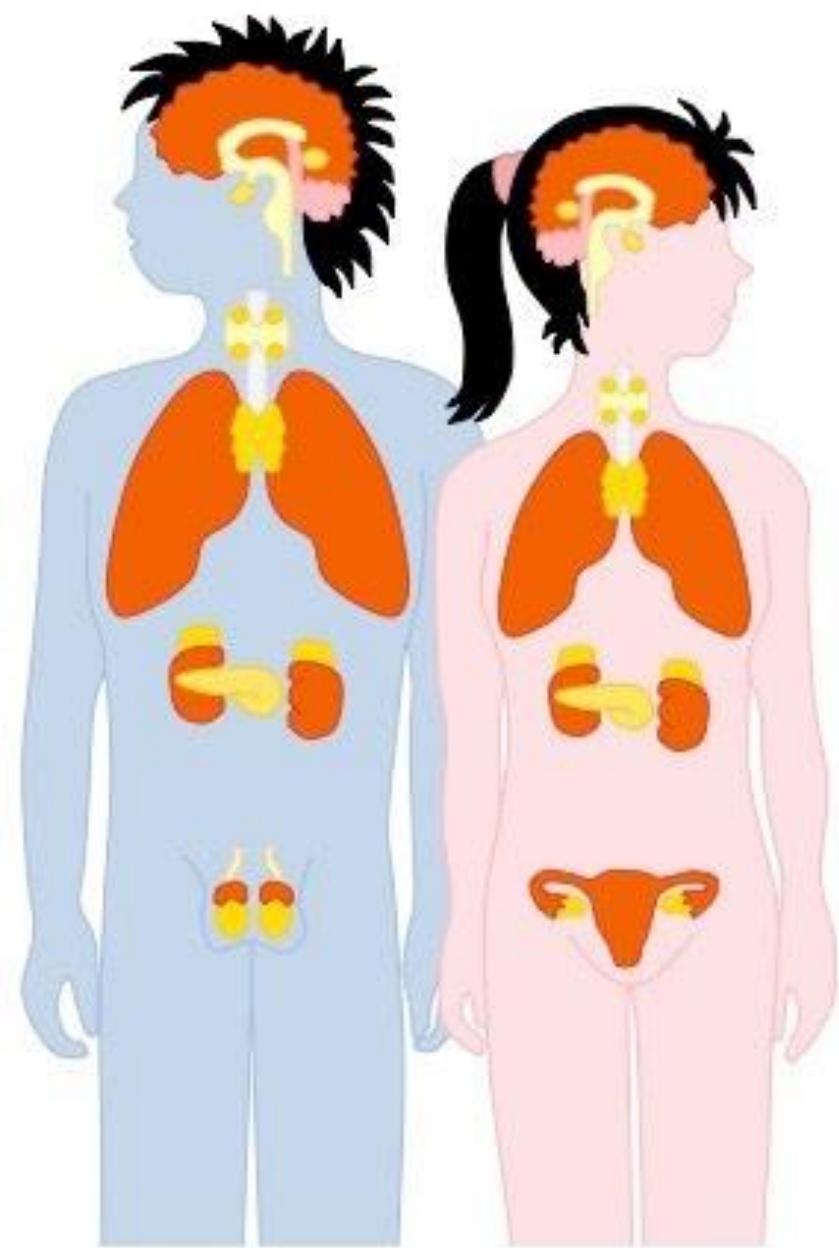


- **Hypothalamus.** This organ connects your endocrine system with your nervous system. Its main job is to tell your pituitary gland to start or stop making hormones.

- **Pituitary gland.** This is your endocrine system's master gland. It uses information it gets from your brain to tell other glands in your body what to do.

In general, a gland selects and removes materials from the blood, processes them and secretes the finished chemical product for use somewhere in the body. The endocrine system affects almost every organ and cell in the body





Gland	Hormone	Target Organ	Function
Pineal gland	melatonin	many	biological clock
Pituitary gland	FSH / LH ADH growth hormone oxytocin prolactin	ovaries kidneys many uterus breast tissue	menstrual cycle osmoregulation growth & division birth contractions milk production
Thyroid gland	thyroxin	liver	metabolic rate
Adrenal glands	adrenaline cortisol	many many	fight or flight anti-stress
Pancreas	insulin / glucagon	liver	blood sugar levels
Ovaries	estrogen / progesterone	uterus	menstrual cycle
Testes	testosterone	many	male characteristics

Hormone levels that are too high or too low indicate a problem with the endocrine system. Hormone diseases also occur if your body does not respond to hormones in the appropriate ways. Stress, infection and changes in the blood's fluid and electrolyte balance can also influence hormone levels





9 IMPORTANT HORMONES

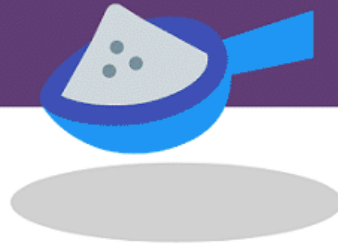
INSULIN

Secreted in response to elevated blood sugar to provide fuel to body's cells.



GLUCAGON

Releases stored glucose from the liver when you're hungry.



ADRENALINE

Triggers the body's fight-or-flight response by increasing heart and breathing rates.



SEROTONIN

Evokes feelings of happiness, contentment, and relaxation.



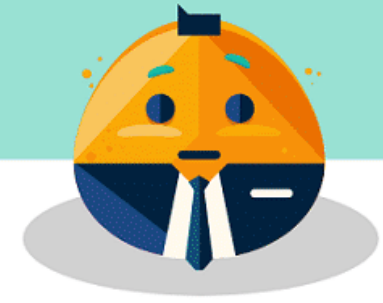
DOPAMINE

Natural reward system giving a daily boost of confidence and achievement.



CORTISOL

Excess cortisol leads to chronic stress, weight gain, and heart problems.



ESTROGEN

Released during menstrual cycle, strong dopamine response.



PROGESTERONE



TESTOSTERONE

