

The Endocrine System

Homeostasis = the body's ability to regulate itself (internal environment), to stay STABLE.

Examples:

- body temperature
 - sugar intake
 - salt intake
 - water intake
 - calcium intake
- levels in the BLOOD!


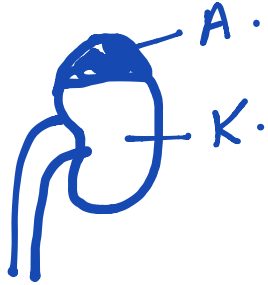
Negative Feedback = response by the body to CORRECT or REVERSE something.

* Neg. Fdbk. is most common!

Positive Feedback = response by the body to INCREASE or REINFORCE something.

(EX: Blood clotting - once the chain reaction starts, it keeps going faster).

What are the glands involved with Feedback?

1. Hypothalamus
 2. Pituitary
 3. Pineal
 4. Thyroid
 5. Parathyroids
 6. Thymus - chest, above the heart
 7. Adrenals - 2, each above a kidney
 8. Pancreas - located behind stomach
 9. Ovaries/Testes - ♀ and ♂
- Brain - attached to the hypothalamus (hanging from it).
- Neck
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Feedback Cycles- CALCIUM.

\uparrow Ca^{++} in the blood, it causes the THYROID to increase CALCITONIN (hormone) production.

- Calcitonin \downarrow Ca^{++} blood, by:

1. increase absorption of Ca^{++} into BONES.
2. decreases absorption of Ca^{++} by sm. intest.
3. increases Ca^{++} filtration by kidneys (goes to urine)

\downarrow Ca^{++} in blood causes the PARATHYROID gland to produce PARATHY. HORMONE, which:

1. increase absorption of Ca^{++} at sm. intest.
2. reduce the amount of Ca^{++} taken by bones

3. decreases Ca^{++} filtration
by kidneys.

→ ↑ Ca^{++} in blood.

* This is NEG. feedback
because Ca^{++} levels
are reversed!