



Homeostasis and Feedback Mechanisms Guided Notes

Homeostasis is a steady, yet dynamic state.

- An organism will attempt to _____ (such as body temperature in endotherms), but may have to change or make adjustments (dynamic) by shivering in order to do so.
- Maintaining _____ requires the body to constantly monitor its internal conditions.
- Alteration in the mechanisms of homeostatic feedback often result in deleterious _____.

The Essentials

- _____ mechanisms maintain dynamic homeostasis for a particular condition by regulating physiological processes. Returning the changing condition back to its set point.
- _____ mechanisms _____ responses and processes in biological organisms.
- Organisms respond to changes in their environment through behavioral and physiological mechanisms.

Negative and Positive Feedback Video — Notes



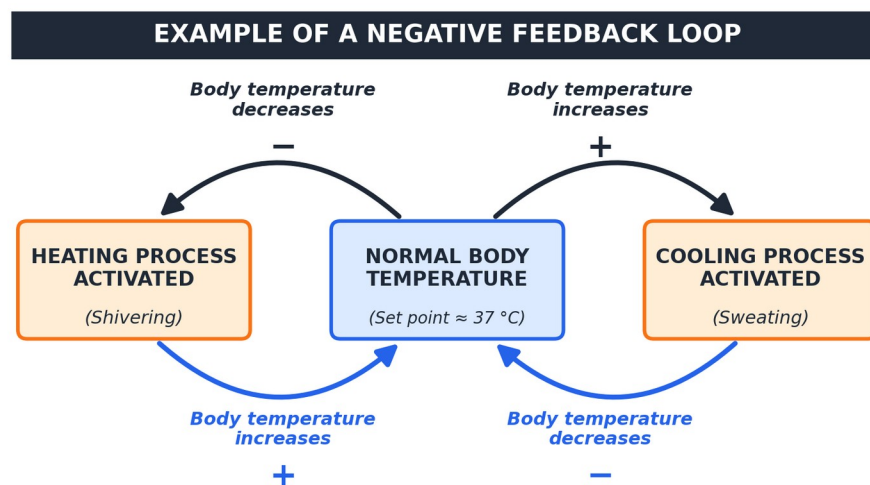
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Negative Feedback

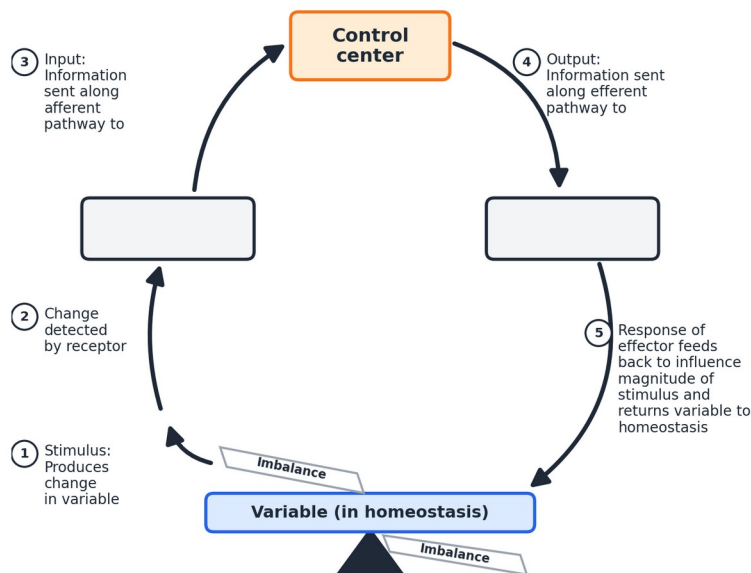
- Negative Feedback: The process in which a stimulus produces a response that _____ the original stimulus.

○ Examples:

1. _____
2. _____



- Components of a Negative Feedback loop:

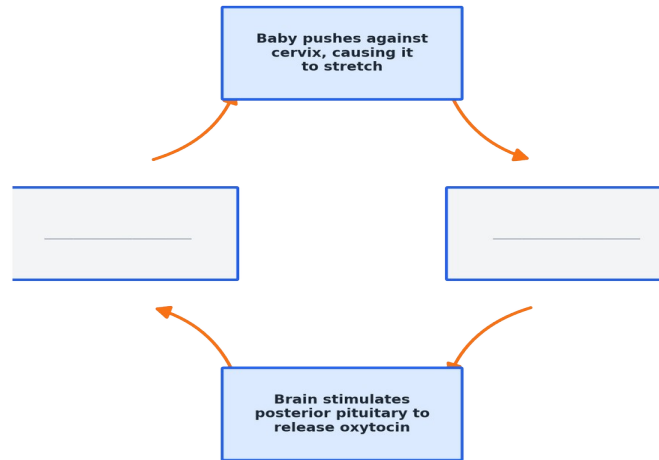


- _____ or *receptor* – monitors a physical value

- _____ – compares the value to the normal range
- _____ – causes the change to reverse a situation.

Positive Feedback

Positive Feedback Example: Childbirth



- Positive Feedback: _____ a change in the body's physiological condition rather than reversing it.
 - The system moves farther away from the normal range.
 - *Examples:*
 1. _____
 2. _____



Homeostasis Connections

- Homeostatic Mechanisms reflect both _____ and divergence due to adaptation in different environments.
- Organisms have various mechanisms for obtaining nutrients and eliminating wastes.
- _____ control systems in species of microbes, plants, and animals support _____.

Reflection

In your own words, explain how negative and positive feedback mechanisms work together to support homeostasis in living organisms.