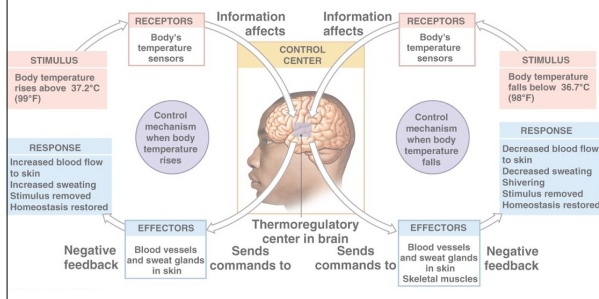


# Homeostasis and Feedback




---

---

---

---

---

---

---

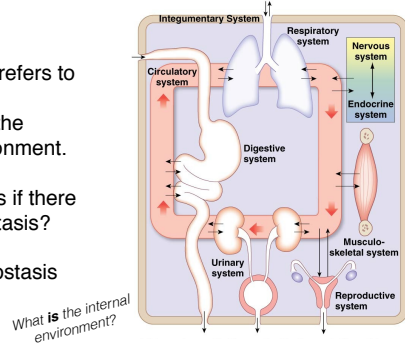
---

---

---

# Homeostasis

- Homeostasis refers to the dynamic constancy of the internal environment.
- What happens if there is no homeostasis?
- How is homeostasis controlled?




---

---

---

---

---

---

---

---

---

---

# Feedback

- Feedback is a process in which the effect or output of an action is 'returned' (fed-back) to modify the next action
- Feedback is essential in the management of all regulatory mechanisms
- Examples?

---

---

---

---

---

---

---

---

---

---

## Components of a Feedback Loop

1.  (receptors) monitor the variable
2. Integrators compare the sensor information to the
3. Effectors cause an change (effect) on the variable

---

---

---

---

---

---

---

---

## Negative Feedback

- Negative feedback is stabilizing; as a variable deviates from a setpoint, negative feedback 'pushes' it back towards the setpoint
- "The more product or result you have..."

---

---

---

---

---

---

---

---

In physiological systems,  
is the setpoint fixed?

Hmmm.....

---

---

---

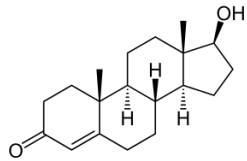
---

---

---

---

---




---

---

---

---

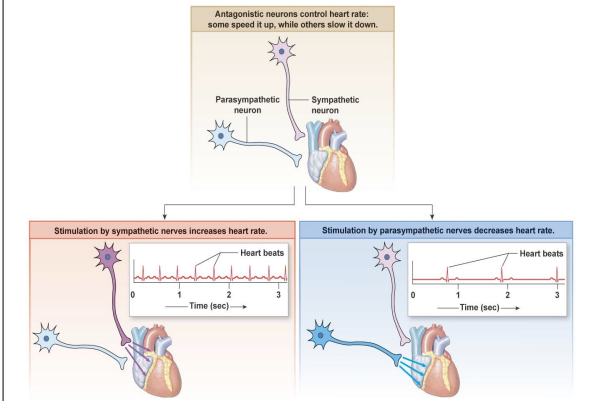
---

---

---

---

### Another Example of Negative Feedback




---

---

---

---

---

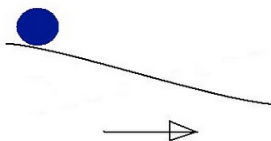
---

---

---

### Positive Feedback

- the system
- "The more you have..."
- So what stops them?




---

---

---

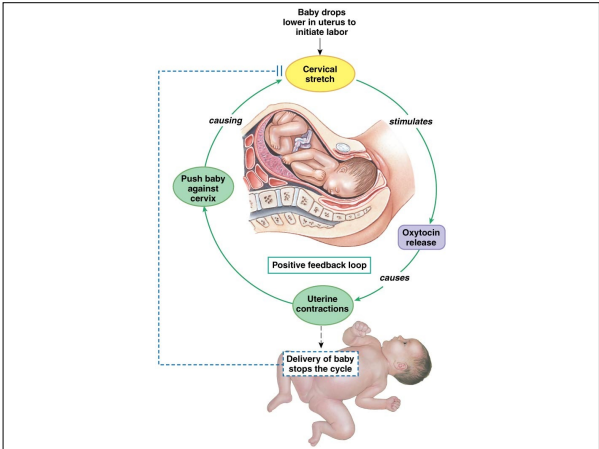
---

---

---

---

---



---

---

---

---

---

---

---

---

## Positive Feedback Loops

What are other examples of variables in the body controlled by positive feedback loops?

---

---

---

---

---

---

---

---