

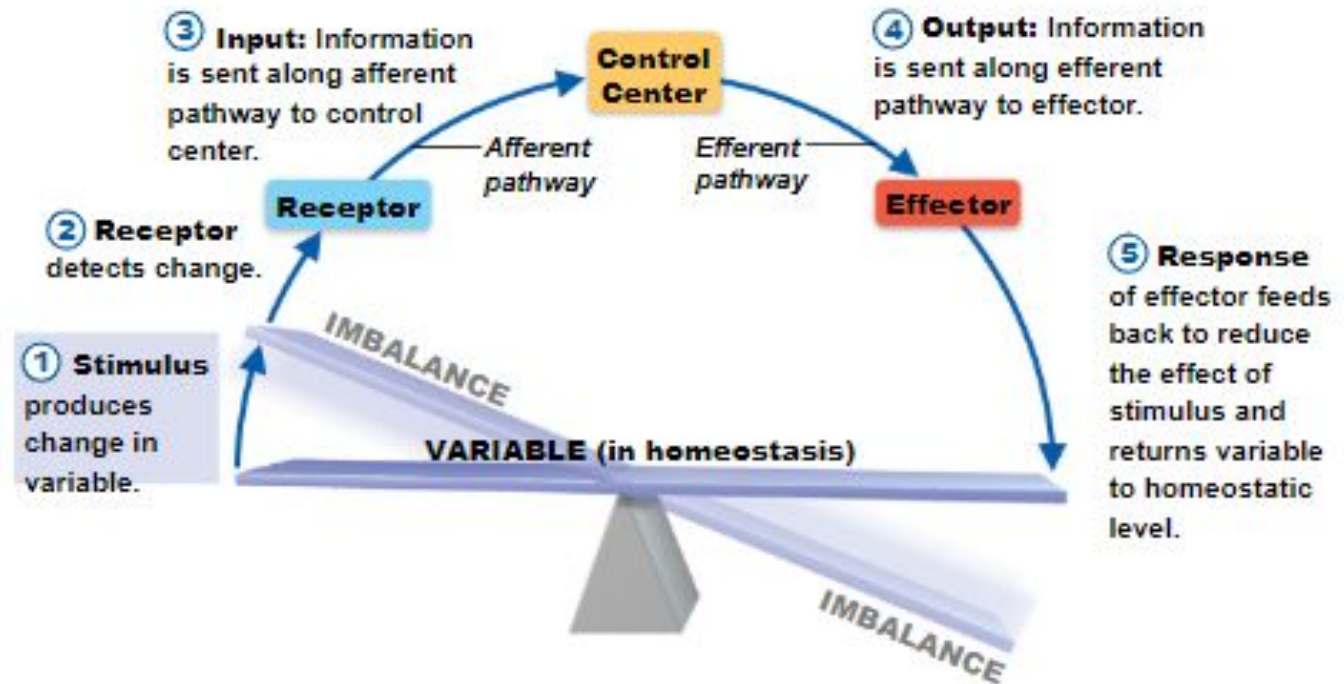
# Homeostasis

- **Homeostasis**—maintenance of relatively stable internal conditions
  - A **dynamic** state of **equilibrium**, or balance
  - Necessary for normal body functioning and to sustain life
- Main controlling systems
  - **Nervous system**
  - **Endocrine system**
- Homeostatic imbalance
  - A disturbance in homeostasis results in **death**

# Maintaining Homeostasis

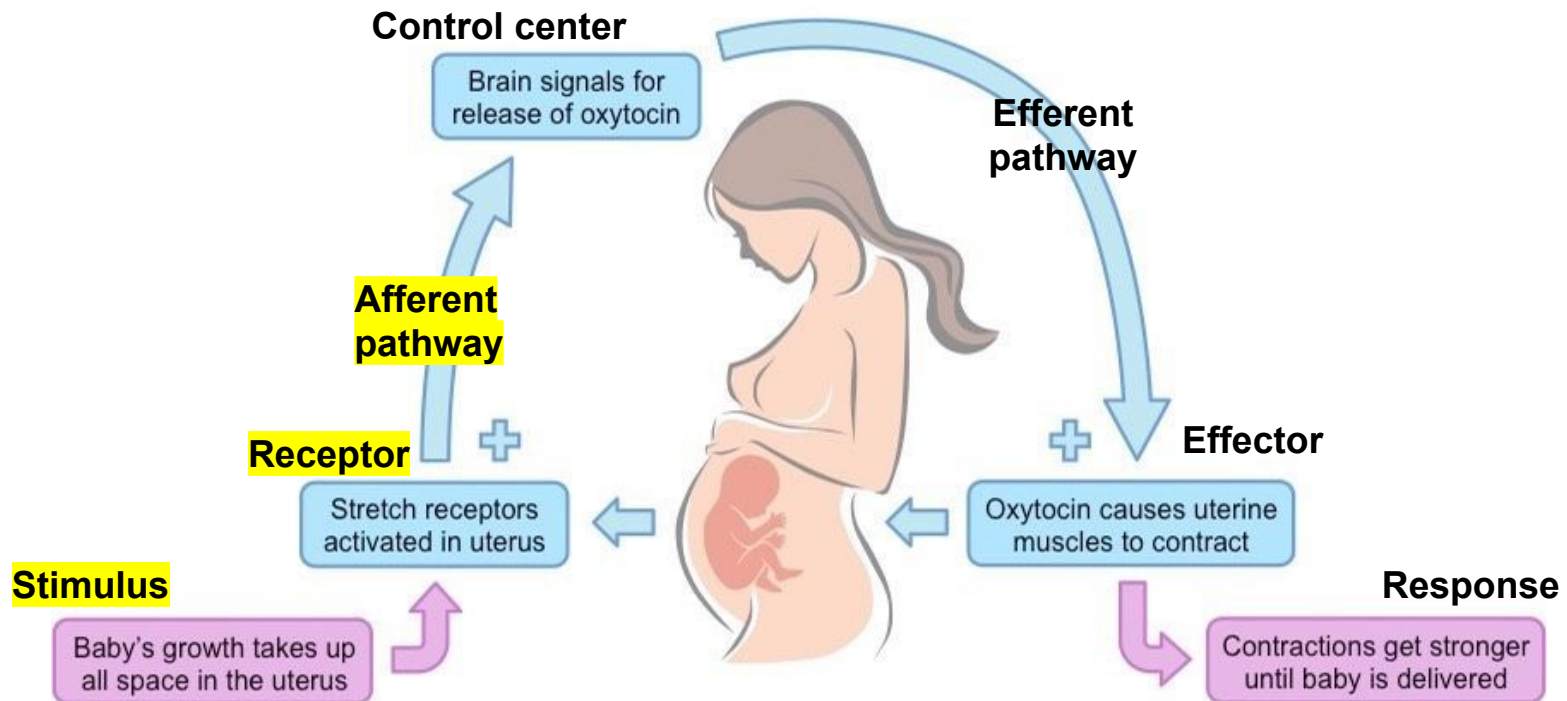
- All homeostatic control mechanisms have at least three components:

1. Receptor
2. Control center
3. Effector



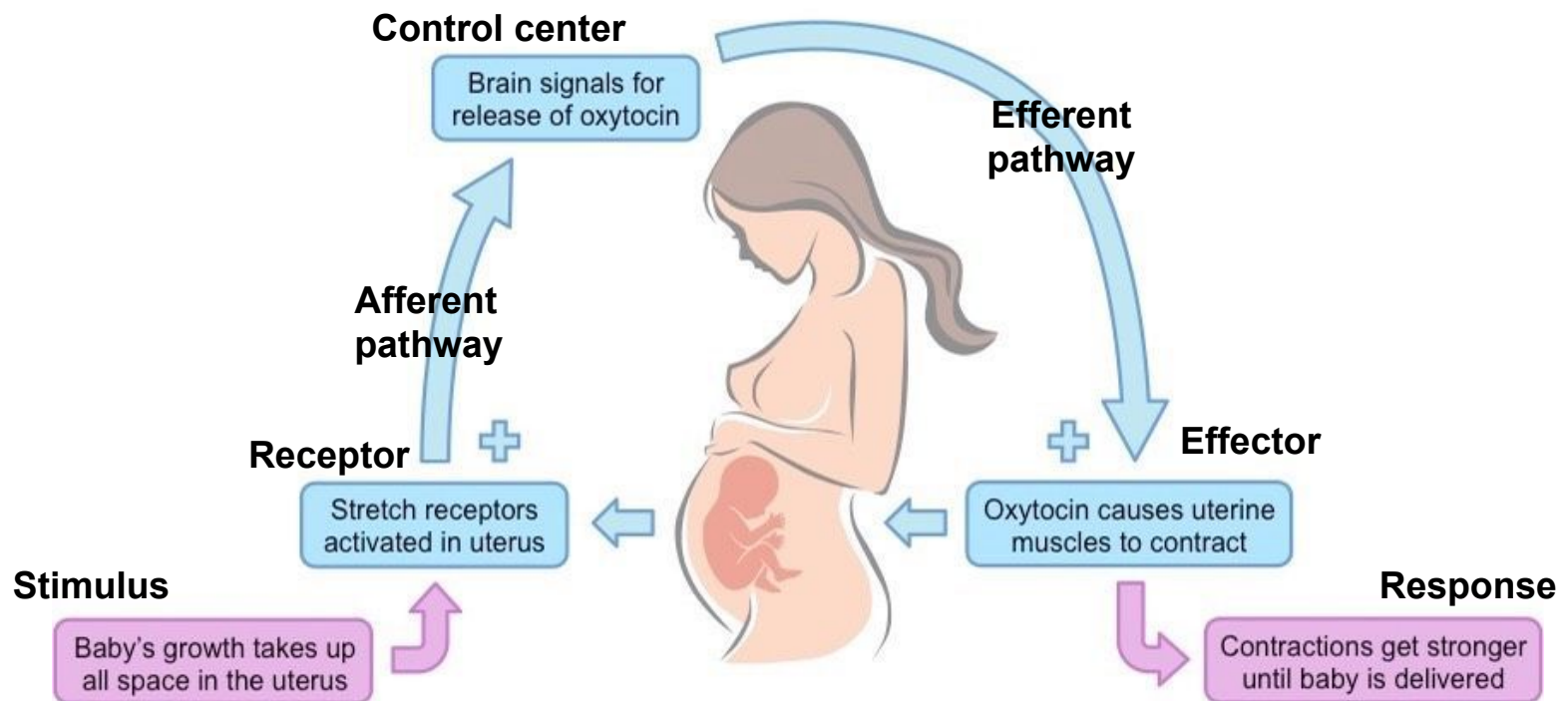
# Maintaining Homeostasis

- Receptor
  - Responds to changes in the environment (**stimuli**)
  - Sends information to control center along an **afferent pathway** (afferent: approaches)



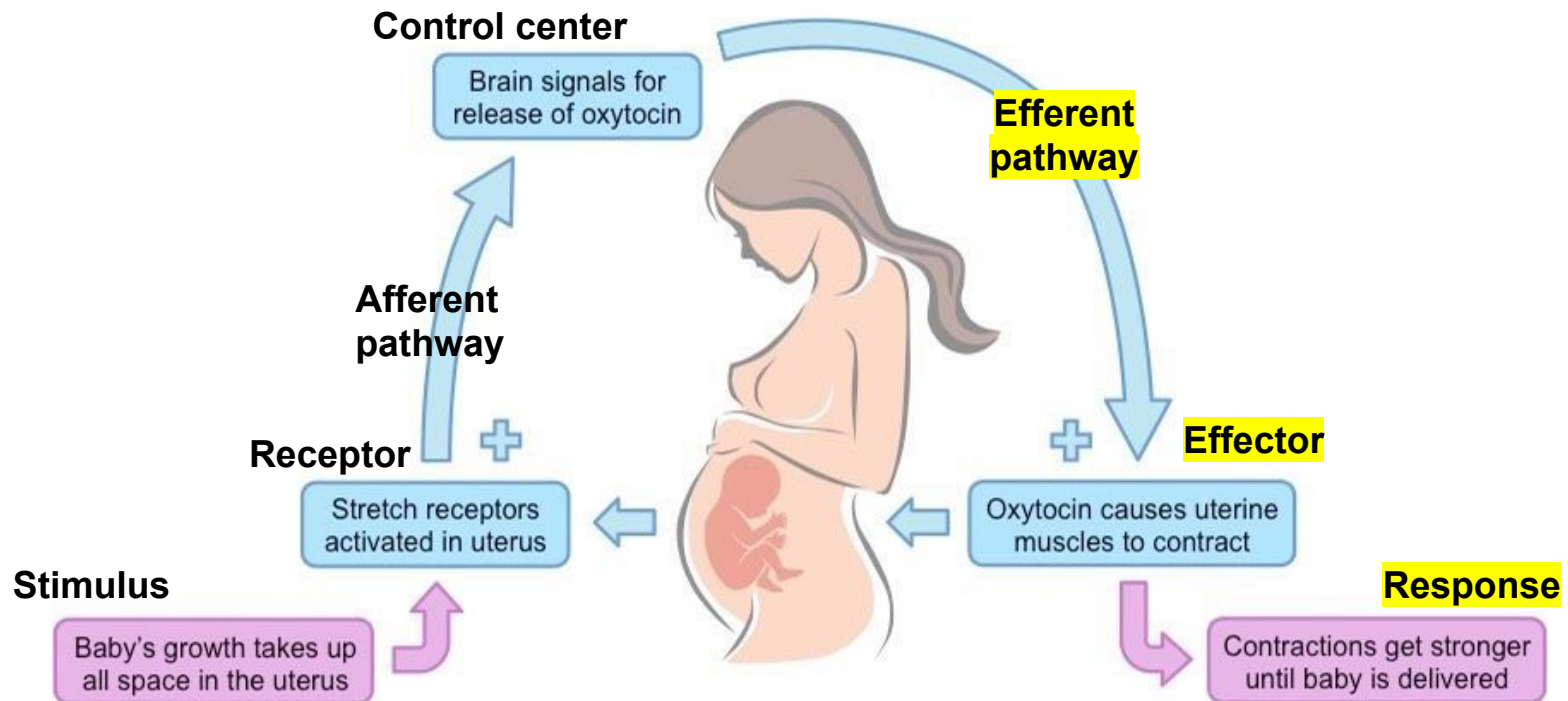
# Maintaining Homeostasis

- Control center
  - Determines **set point**
  - Analyzes **information**
  - Determines appropriate **response**



# Maintaining Homeostasis

- Effector
  - Provides a means for **response** to the stimulus
  - Information flows from control center to effector along **efferent pathway** (efferent:exit)



# Types of Feedback Loops

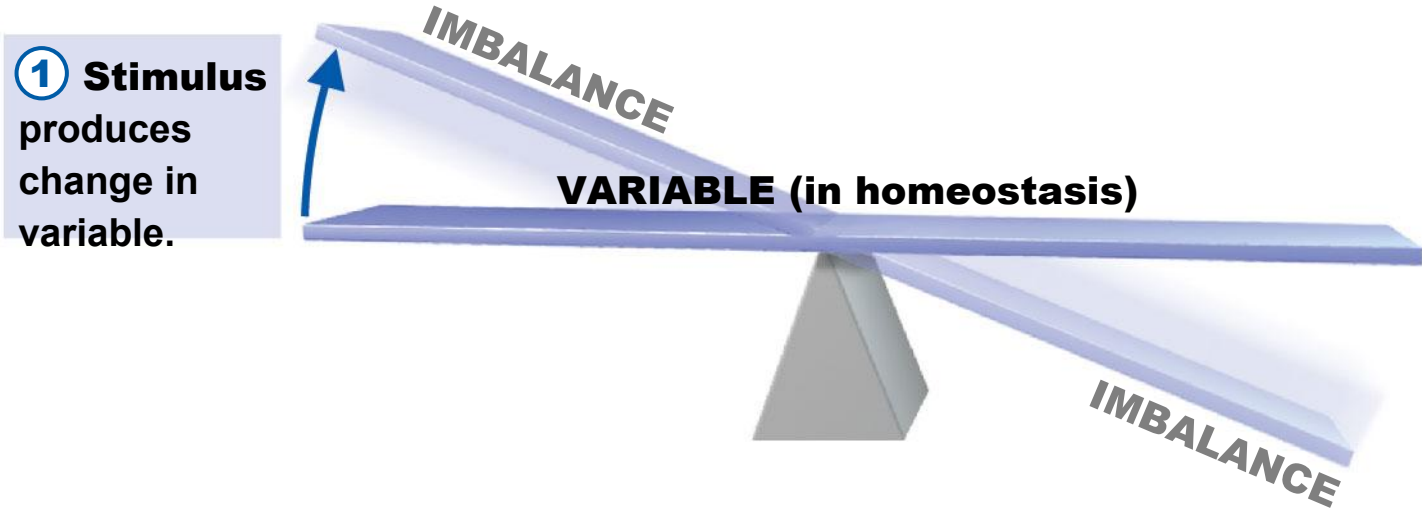
- There are two types of feedback:
  - **Negative**
  - **Positive**

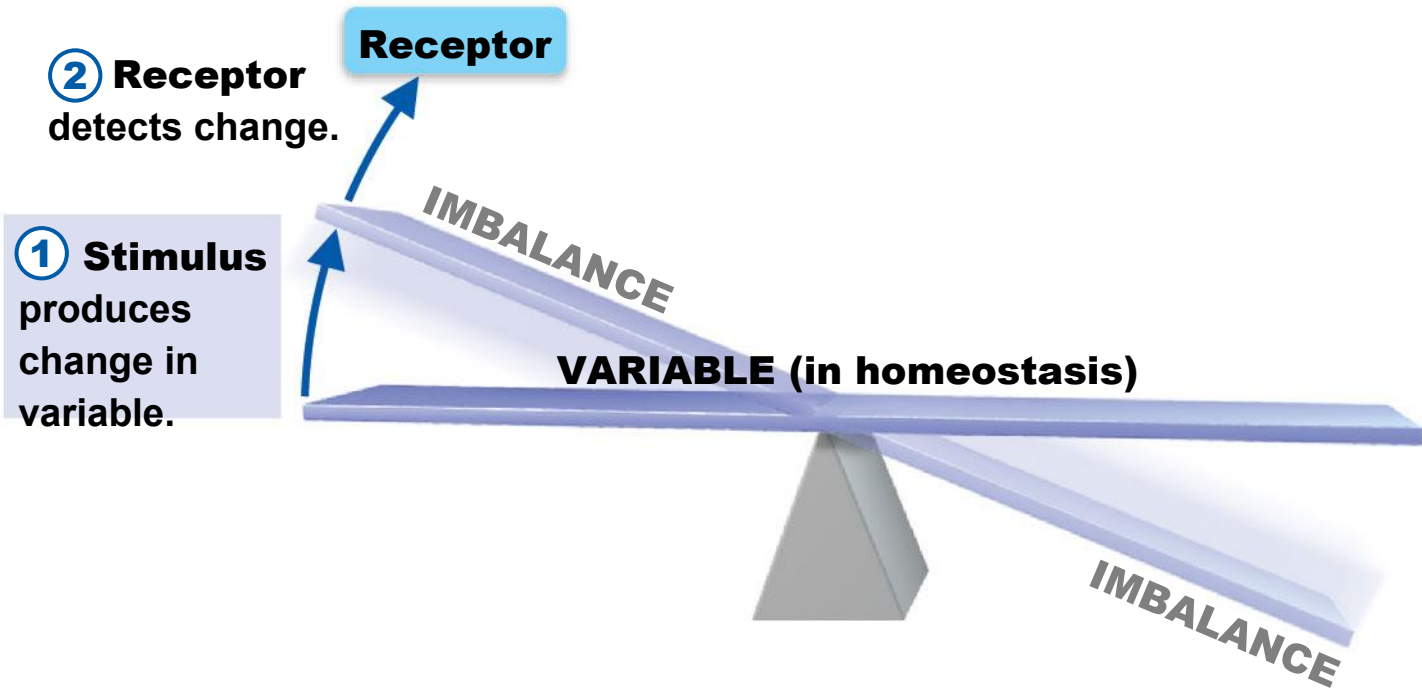
## Negative feedback

- **Decreases** the intensity or shuts off the original stimulus
- Most common type of feedback loop

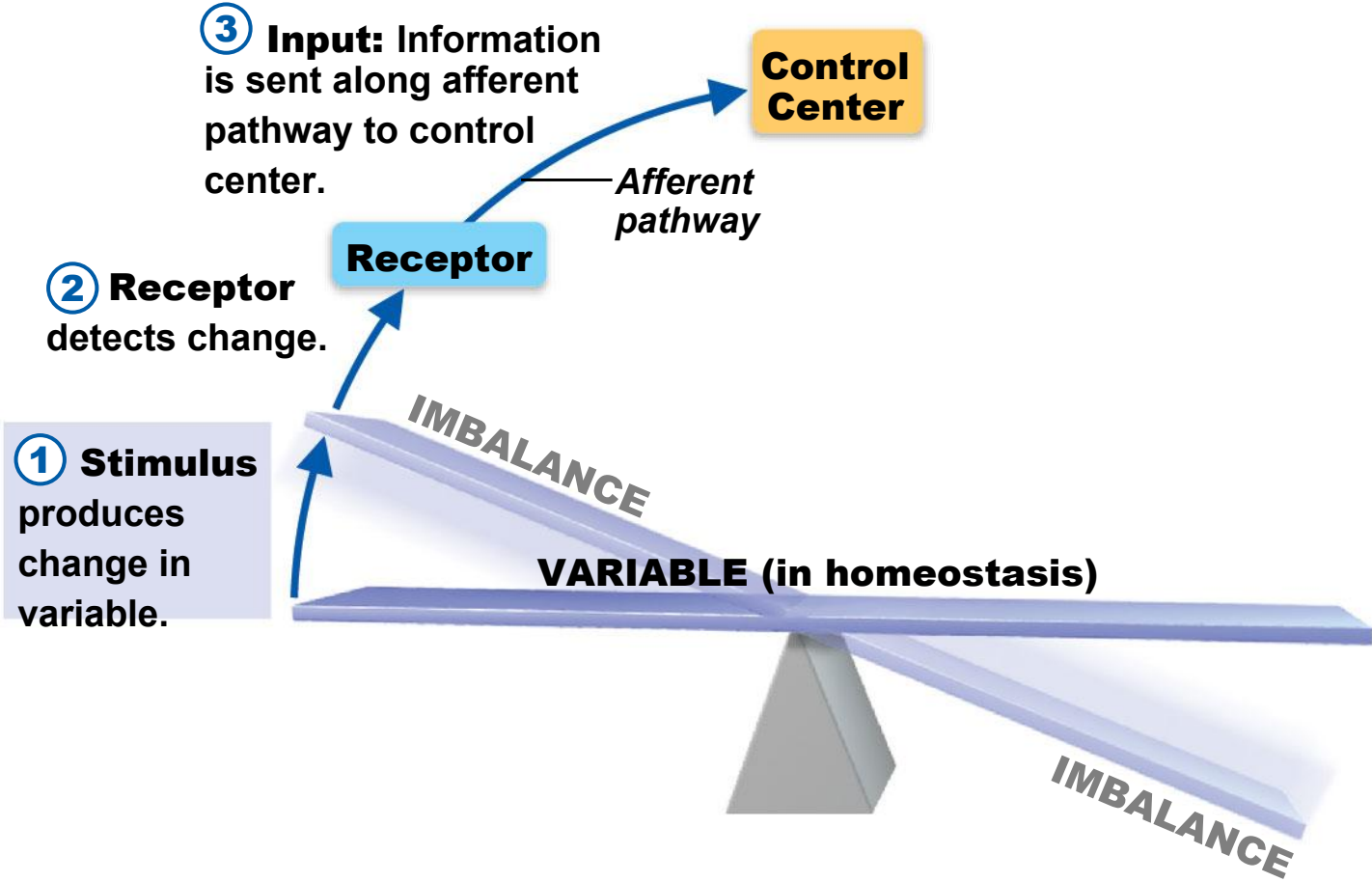
## Positive feedback

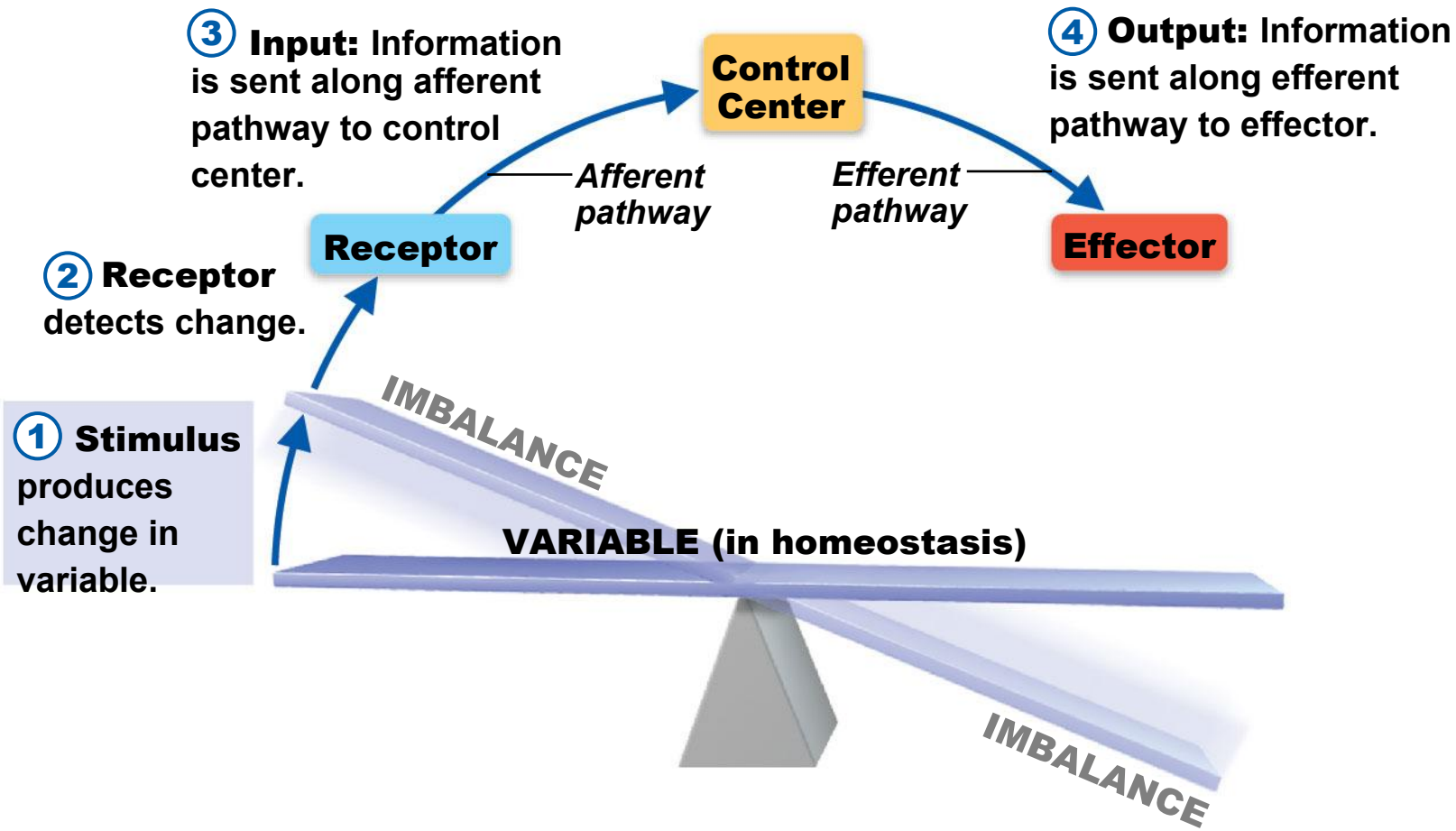
- **Increases** the original stimulus
- Rare in the human body

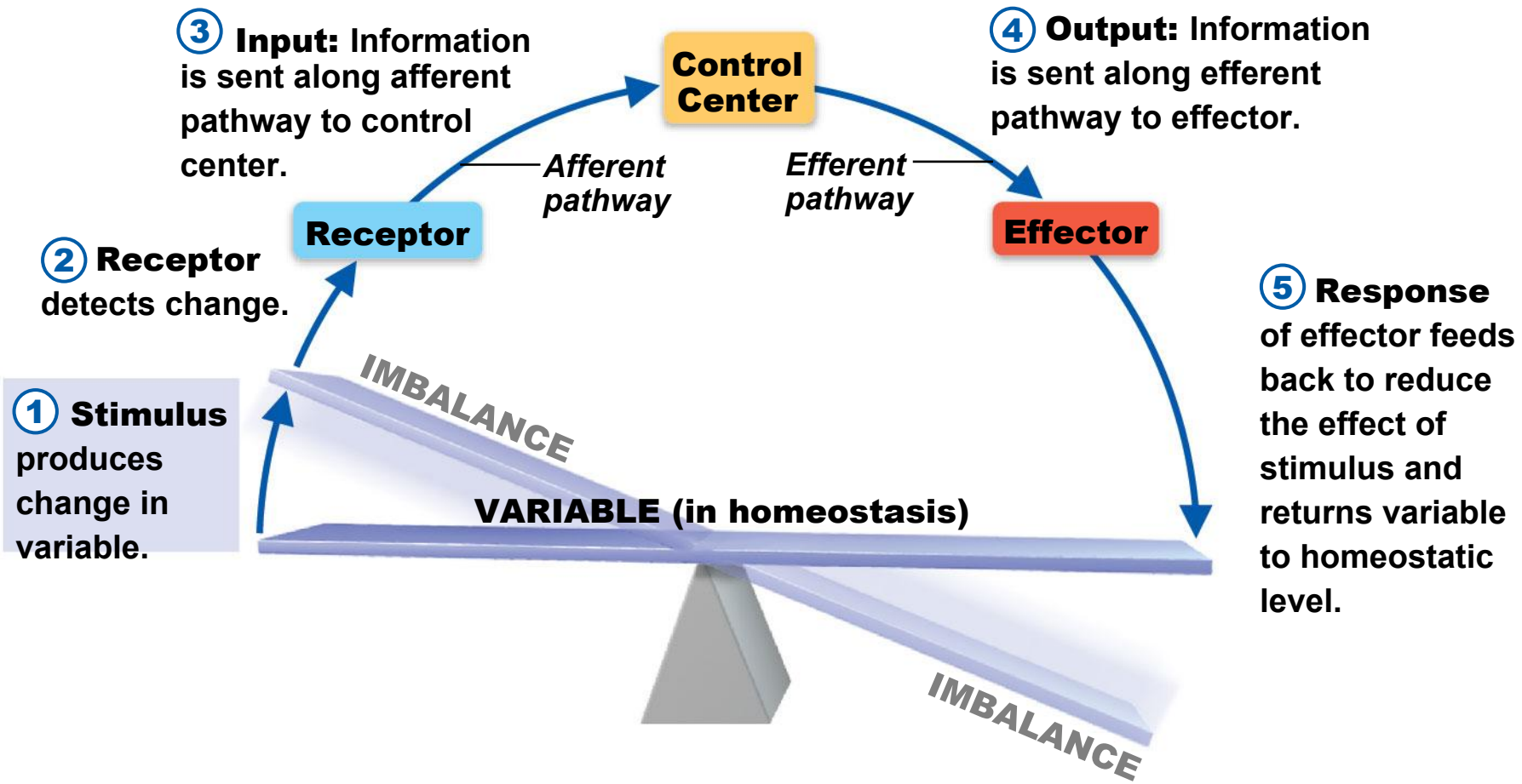












**EXIT SLIP**

