KEY CONCEPT

Homeostasis is the regulation and maintenance of the internal environment.
Conditions within the body must remain within a narrow range.

- Homeostasis involves keeping the internal environment within set ranges.
Control systems help maintain homeostasis.

- sensors gather data
- control center receives data, sends messages
- communication system delivers messages to target organs, tissues
- targets respond to change
Negative feedback loops are necessary for homeostasis.

- Feedback compares current conditions to set ranges.
- Negative feedback counteracts change.

Negative Feedback Loop

Holding breath, CO₂ levels rise,

O₂/CO₂ level returns to normal

Control system forces exhale, inhale

O₂/CO₂ level returns to normal
28.2 Mechanisms of Homeostasis

- Positive feedback increases change.
  - Torn vessel stimulates release of clotting factors
  - growth hormones stimulate cell division