Homeostasis Animations

Directions:
This is your first use of some CD technology employed within this course. Insert and install your Interactions: Foundations CD.

a. *Click the "Contents" button,*
b. *Open the Homeostasis file,*
c. *Click on Animations,*
d. *Work through Communication, Regulation, and Homeostasis.*

Complete the following worksheet and add it to your notes.

I. Interactions CD/Contents/Homeostasis/Animations/**Communication, Regulation, and Homeostasis**

1. Define homeostasis _____

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2. Define normal limits. _____

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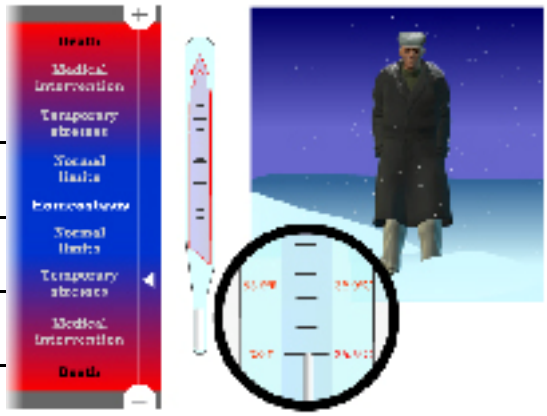
3. Explain how temporary stresses can be accommodated by physiological changes.



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4. Describe a homeostatic disruption that may require medical intervention?

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5. How are the nervous and endocrine systems critical to maintaining homeostatic balance?

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6. A. Define a *feedback system*. What is a *controlled condition*?

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B. Explain the three parts of a feedback system:

1. *receptor* _____

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2. *control center* _____

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3. *effector* _____




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C. Contrast the functions of *negative* and *positive feedback systems*.

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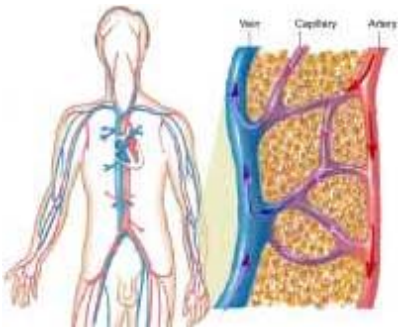
II. Negative Feedback Control of Blood Pressure

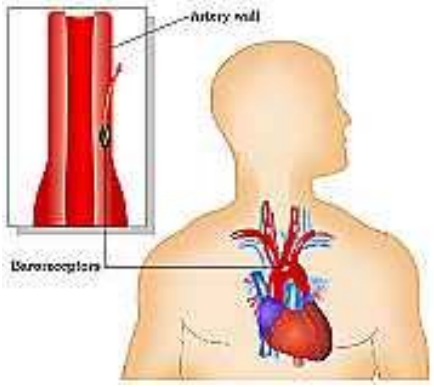
Complete the following note sheet for Negative Feedback Control of Blood Pressure animation. Locate it on your Interactions: Foundations CD by following:

Interactions CD/Contents/Homeostasis/Animations/Negative Feedback Control of Blood Pressure

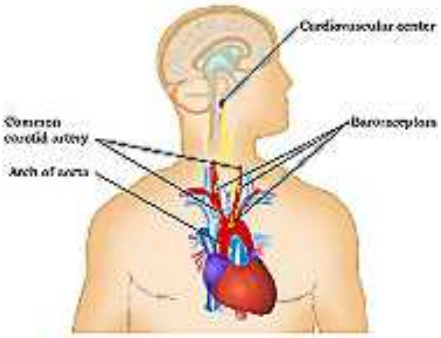
1. Explain how high or low blood pressure affects capillary blood flow.

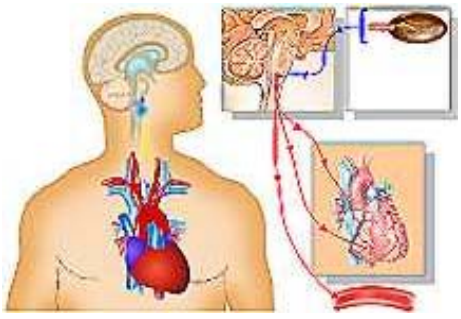


2. What is the function of baroreceptors? _____



3. Explain the negative feedback loop between baroreceptors, the cardiovascular (CV) center, and the heart. Address: dropping blood pressure, heart stimulation, and hormonal vessel constriction. How do these all work together to achieve homeostasis?

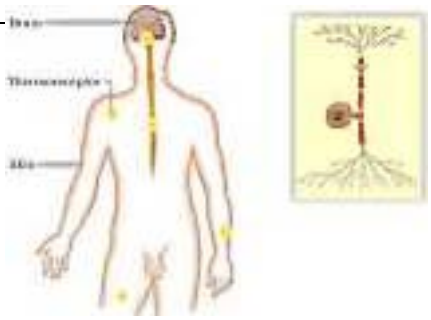




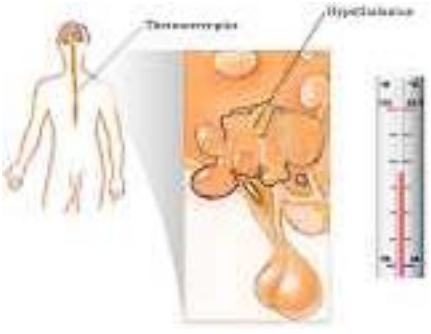
III. Negative Feedback Control of Temperature

(Interactions CD/Contents/Homeostasis/Animations/Negative Feedback Control of Temperature)

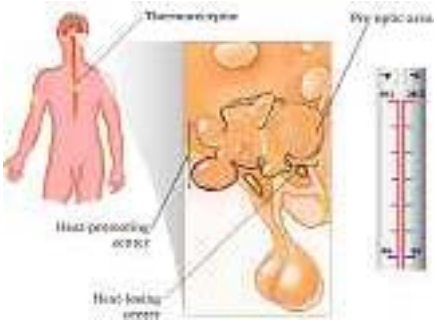
1. Describe the importance of homeostatic body temperature maintenance.



2. What is the function, and locations, of *thermoreceptors*?

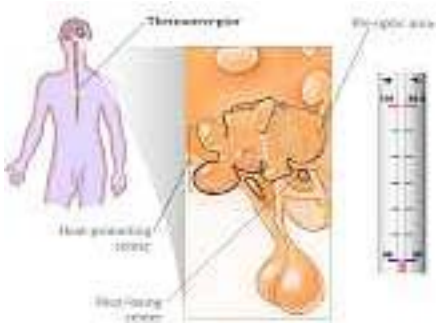


3. Explain the negative feedback control of body temperature using thermoreceptors, the hypothalamus, and the temperature control center.



4. How is homeostasis maintained under heat stress?
(include *heat-losing center, capillary dilation,* and *sweat production)*

5. How is homeostasis maintained under cold stress?
(include: *heat-producing center, capillary constriction, shivering)*



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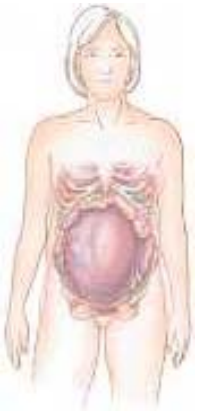
IV. Positive Feedback Control of Labor

(Interactions CD/Contents/Homeostasis/Animations/Positive Feedback Control of Labor)



1. What starts the positive feedback loop of childbirth labor? _____

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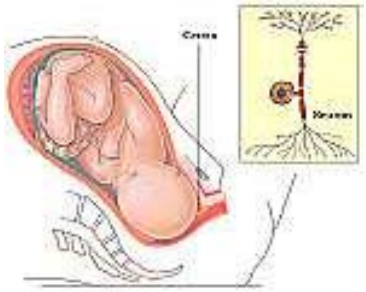
2. Describe the positive feedback loop between cervical stretch receptors, neurosecretory cells in the hypothalamus, oxytocin, and the uterine smooth muscle.



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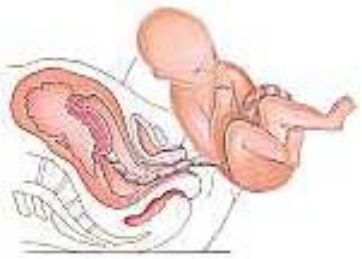
3. How is this positive feedback loop terminated? _____



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Assessing Your Learning

Work through the Homeostasis *Exercises* and *Concepts and Connections*. Just click the Contents button, open the Homeostasis file, and go to the Exercises and Concepts and Connections.