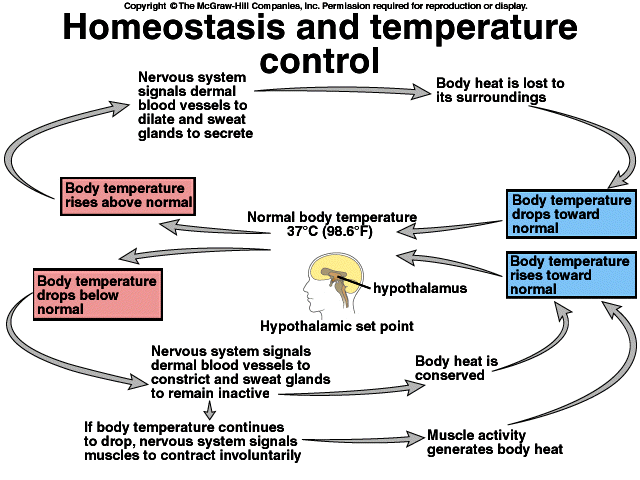
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**Homeostasis Homework—10 points**

  
This diagram illustrates the homeostatic regulation of temperature control inside the body. The **hypothalamus** is a part of the brain that links the nervous system to the endocrine system. It is a monitoring center; it receives information about body temperature from the rest of the body and responds to those signals. The “hypothalamic set point” is 98.6°F—normal body temperature.

Other vocabulary in this diagram:  
**Dermal blood vessels**: blood vessels in the skin  
**Secrete**: In this context, to produce sweat. In a broader sense, secrete means to discharge or release a hormone or some other chemical from a cell or gland to the rest of the body.  
**Dilate**: Increase in volume  
**Constrict**: Decrease in volume

Questions to Answer: Use complete sentences.

1. What is the stimulus for sweating? (1 pt)
2. How is the production of sweat an example of negative feedback? (2 pts)
3. What is the stimulus for constricting the dermal blood vessels? (1 pt)
4. How is shivering—involuntary muscle contractions—an example of negative feedback? (2 pts)
5. Why are the negative feedback systems we’ve examined—insulin/glucagon, PTH/calcitonin, and this body temperature example—critical for maintaining homeostasis? (4 pts)