**Homeostasis Lab**

Names:

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**Introduction**

*Living things need a relatively stable internal environment in order to function properly. Organ systems are interdependent, and failure to maintain* ***homeostasis*** *in one organ system causes other organ systems to work less efficiently. Homeostatic regulation is achieved when* ***receptors****,* ***control centers****, and* ***effectors*** *sustain physiological values near the* ***set point****. The body is in good health when physiological values stay close to their set points. Deviations from homeostasis result in diseases such as diabetes and hypertension.*

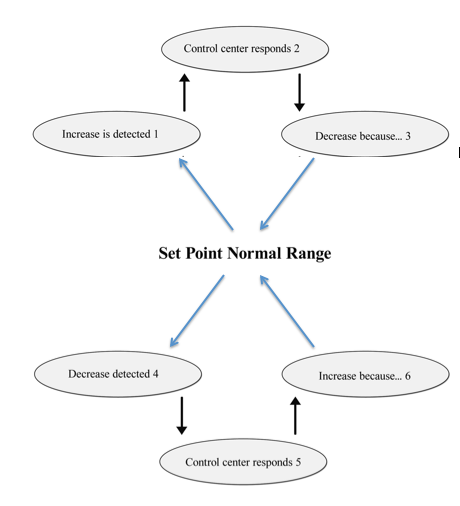
**Directions**

1. Cut out the pieces for Part A, B, C, and D. Be sure to keep these pieces in distinct piles.

2. Turn to Part A on p. 2 and use the cut-out pieces for Part A to correctly diagram the homeostatic regulation that occurs. Glue these pieces on the diagram when you are satisfied with your responses.

3. Follow the same procedure for Parts B, C, and D. Be sure to answer questions you encounter along the way.

# Part A - Regulation of Oven Temperature at 375°F

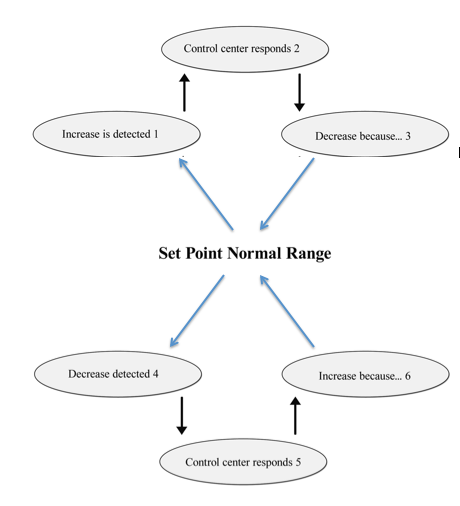


1. What is homeostasis?

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# Part B - Body Temperature Regulation



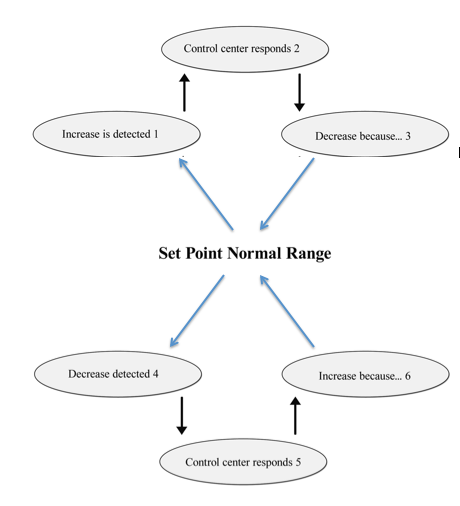
2. **In the context of the example above**, what is the role of the:

receptor: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

control center:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

effector:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# Part C - Blood Glucose Regulation



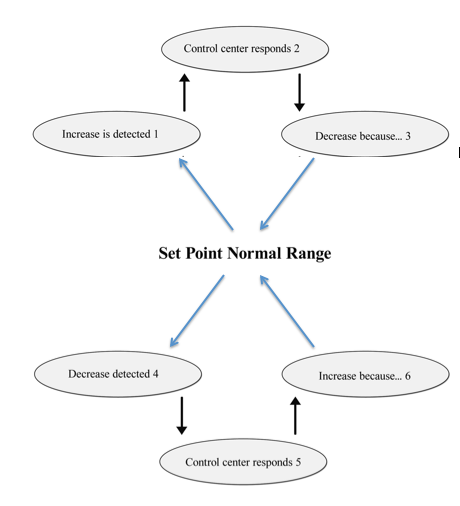
3. What would happen if your body couldn’t produce insulin?

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# Part D - Blood Pressure Regulation

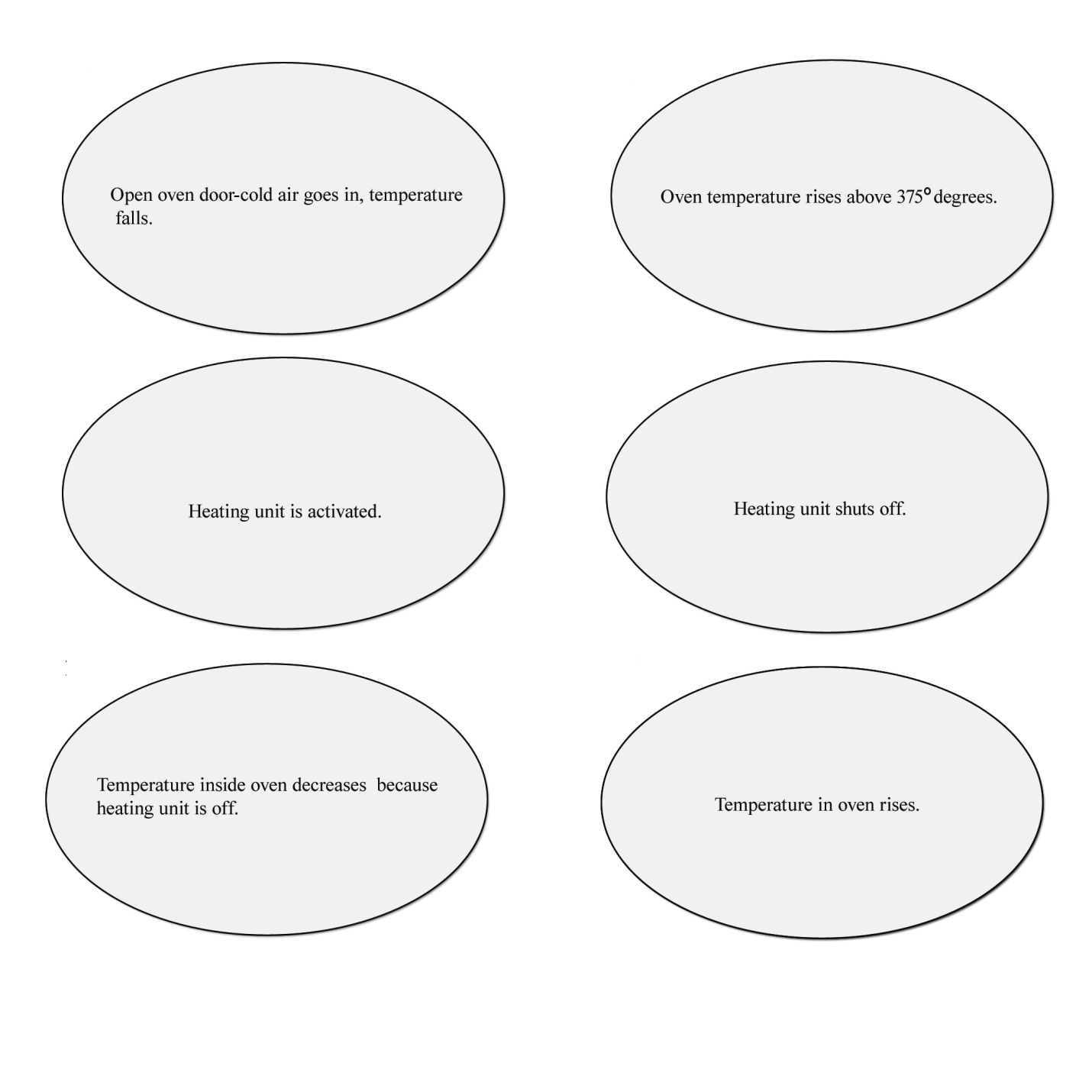


4. Do Parts A, B, C, and D demonstrate a positive or negative feedback system? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

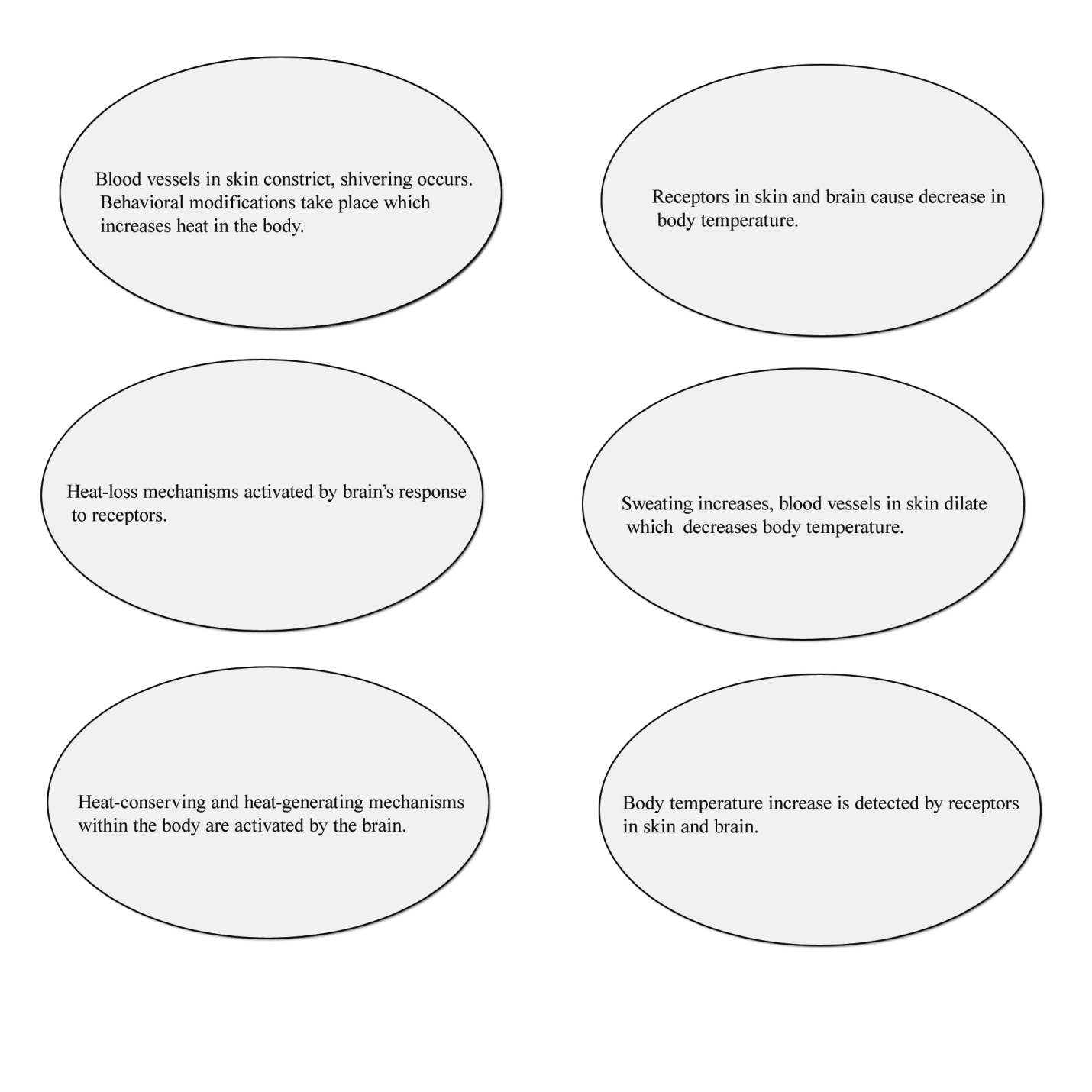
How do you know? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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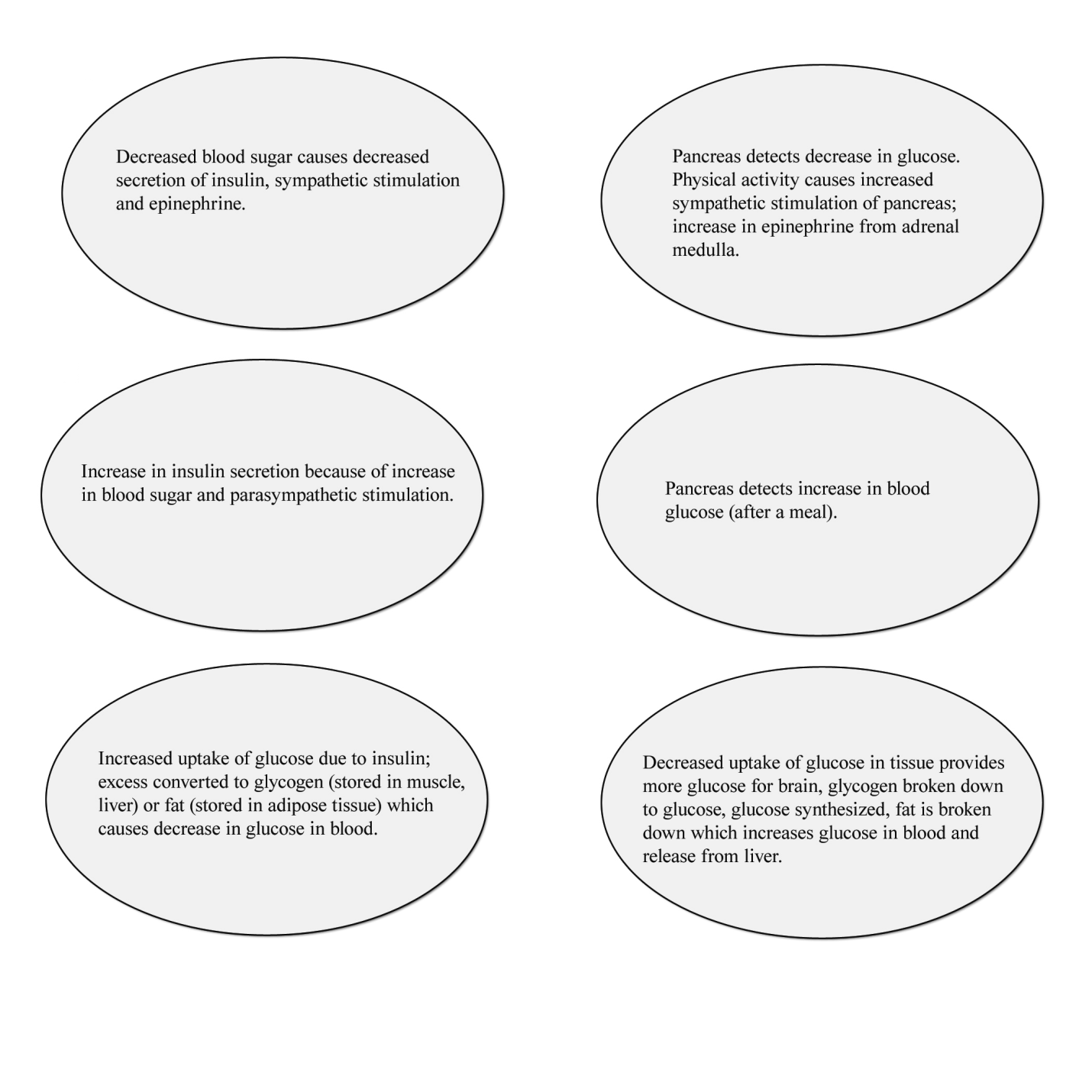
# Part A - Regulation of Oven Temperature at 375°F



# Part B - Body Temperature Regulation



# Part C - Blood Glucose Regulation



# Part D - Blood Pressure Regulation

