

Cornell Guided Notes

Human Anatomy & Physiology (Human Body Systems) | 2027-03-22

Name

Period

Date

Lesson

Lesson focus

Negative feedback model build

Key words and questions

Prepared details and student notes

Essential question
What is today's target?

Students will build and run a physical model of blood-glucose negative feedback involving insulin and glucagon. Big idea: Negative feedback loops are the core mechanism by which the body detects deviation from a set point and corrects it.

My notes, examples, and questions

Key words
What vocabulary unlocks the lesson?

- hormone
- endocrine gland
- feedback loop
- insulin
- glucagon
- homeostasis

My notes, examples, and questions

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Cornell Notes - Continued

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Must-know ideas

What should I understand by the end?

- Insulin is released when blood glucose rises; glucagon is released when it falls.
- Negative feedback opposes the change that triggered the response, returning the variable toward its set point.
- Diabetes results from disruption of this feedback loop, linking pathophysiology to homeostasis concepts on the WebXam.

My notes, examples, and questions

Process notes

What happens during class?

- 0-10: Review: how does the pancreas detect blood-glucose change?
- 10-25: Build feedback model: assign card roles for glucose, insulin, glucagon, and pancreas sensor
- 25-42: Meal simulation: add glucose tokens and trace insulin response to set point
- 42-58: Fasting simulation: remove glucose tokens and trace glucagon response
- 58-70: Record loop diagram with labeled arrows showing negative feedback
- 70-80: Pair-share and submit loop diagram

My notes, examples, and questions

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Steps and evidence What do I do and turn in?

- Review how the pancreas senses high and low blood glucose.
- Build a feedback loop model using cards or tokens for glucose, insulin, and glucagon.
- Simulate a meal by adding glucose and trace the insulin response.
- Simulate fasting and trace the glucagon response.
- Record how the model returns glucose toward the set point.

Evidence: Notebook check - Feedback loop diagram showing insulin and glucagon responses for both a meal and a fasting scenario, with labeled negative-feedback arrows.

My notes, examples, and questions

Checks for understanding How do I know I got it?

- Model correctly shows insulin lowering and glucagon raising glucose.
- Notes describe return to set point as negative feedback.

My notes, examples, and questions

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Lab or safety notes
What must I handle carefully?

Supplies:

- Blood-sugar feedback model cards or tokens
- Whiteboard or chart paper
- Colored markers for glucose, insulin, glucagon
- Endocrine gland body diagram
- Lab notebook
- Simple glucose-level tracking sheet

My notes, examples, and questions

Summary

Today's lesson focused on Negative feedback model build. The main target was: Students will build and run a physical model of blood-glucose negative feedback involving insulin and glucagon. The evidence of learning is Notebook check: Feedback loop diagram showing insulin and glucagon responses for both a meal and a fasting scenario, with labeled negative-feedback arrows.. In my own words, the most important idea from today is:

My summary

My final question or connection