Cornell Guided Notes

Human Anatomy & Physiology (Human Body Systems) | 2026-10-19

Name	Period	Date	Lesson
		2026-10-19	

Lesson focus

Drug effects on signaling

Key words and questions	Prepared details and student notes

Essential question
What is today's target?

Analyze your reaction-time data and explain how drugs alter neural signaling with a CER.
Big idea: Drugs alter reaction time by changing neurotransmitter availability or receptor sensitivity at synapses; your experimental data provides a baseline to reason from.

My notes, examples, and questions

Key words
What vocabulary unlocks the lesson?

- reflex
- reaction time
- stimulus
- response
- myelin
- receptor
- effector

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?**	- Depressants (alcohol, antihistamines, opioids, benzodiazepines) slow synaptic transmission by enhancing inhibition or blocking excitation, increasing reaction time. - Stimulants (caffeine, amphetamines) accelerate synaptic transmission by increasing excitatory neurotransmitter release or blocking reuptake, decreasing reaction time. - A data-based CER about drug effects must use the observed distraction-condition pattern as the analogy: if distraction slowed reaction by X ms, a depressant would be expected to slow it further and in a similar way. **My notes, examples, and questions**
Process notes **What happens during class?**	- 0-8: Intro: how depressants and stimulants alter synaptic transmission - 8-25: Build bar graph: baseline vs distraction average reaction time - 25-45: PLTW online analysis: drugs and synaptic signaling - 45-55: Describe observed trend and predict direction of drug effect - 55-75: Write CER: depressant or stimulant effect on reaction time, mechanism at synapse - 75-80: Submit labeled graph and CER **My notes, examples, and questions**

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Steps and evidence **What do I do and turn in?**	- Graph your reaction times by condition. - Describe how the distraction or a drug would shift the results. - Complete the PLTW online analysis on drugs and synaptic signaling. - Write a CER claiming how a depressant or stimulant would change reaction time, using your data pattern as evidence. - Submit your labeled graph and signaling CER. Evidence: CER - Bar graph of baseline vs distraction average reaction time (labeled, with units) plus a CER explaining how a depressant or stimulant would alter the pattern via synaptic mechanism. **My notes, examples, and questions**
Checks for understanding **How do I know I got it?**	- You can graph and interpret reaction-time differences. - You can explain drug effects on signaling with a CER. **My notes, examples, and questions**

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Lab or safety notes
What must I handle carefully?

Supplies:
- Reaction-time ruler or reaction timer app
- Reflex hammer
- Stopwatch or timing device
- Data table sheet
- Lab notebook
- Patient case clue cards

My notes, examples, and questions

Summary

Today's lesson focused on Drug effects on signaling. The main target was: Analyze your reaction-time data and explain how drugs alter neural signaling with a CER. The evidence of learning is CER: Bar graph of baseline vs distraction average reaction time (labeled, with units) plus a CER explaining how a depressant or stimulant would alter the pattern via synaptic mechanism.. In my own words, the most important idea from today is:

My summary

My final question or connection