

2027-03-16 · 80 minutes

Wk9 CER: Bioethics: drugs and driving

Your goal: Debate how society should treat slowed reaction times from legal drugs while driving, then post a CER.

One product: One-paragraph CER taking a position on whether drivers impaired by legal medications should face the same rules as drivers impaired by alcohol.

Question: Should documented impairment from legal medication bring the same driving rules as impairment from alcohol, and which fairness conditions matter?

Start the work

1. Read the prompt: should drivers on legal drugs that slow reaction time face the same rules as impaired drivers?
2. List two safety arguments and two fairness arguments.
3. Choose a side and write a one-sentence claim with your reasoning.
4. Debate in your John Carroll bioethics group and note the strongest counterpoint.
5. Post a CER response on reaction time, drugs, and public safety.

If access is unavailable, save the same paragraph and tell the teacher. When access works, post it and save your own-post screenshot. Keep the official introductory task and weekly evidence separate.

Words you will use

reaction time

The interval between a stimulus and the start of a response. Driving also requires attention, decisions and coordinated action.

stimulus

A change that can be detected, such as a brake light.

response

An action following a stimulus, such as starting to press a pedal.

neuron

A nervous-system cell that receives and sends information.

synapse

A junction where a neuron communicates with another cell.

neurotransmitter

A chemical messenger released by a neuron.

receptor

A protein that responds to a matching chemical signal; a sensory receptor detects a stimulus.

central nervous system (CNS)

The brain and spinal cord.

depressant

A drug that reduces activity in parts of the central nervous system; this label does not specify every effect.

stimulant

A drug that increases activity or alertness through particular mechanisms; it is not a guarantee of safe performance.

GABA

Gamma-aminobutyric acid, a neurotransmitter that usually has inhibitory effects in the adult brain.

inhibitory

Reducing the likelihood of particular neural activity, depending on the cell and receptor.

benzodiazepine

A drug class that includes diazepam and can enhance GABA's inhibitory action.

adenosine

A chemical signal whose receptors help regulate neural activity and sleepiness.

antagonist

A substance that blocks or reduces activation of a receptor by its usual signal.

antihistamine

A medicine that blocks histamine actions; some can cause drowsiness or impair performance.

diphenhydramine

An antihistamine used in some allergy medicines; E2 supplies its driving-warning example.

side effect

An unwanted effect of a medicine in addition to its intended effects.

drug interaction

A change in how a drug acts because of another drug, food, supplement or medical condition.

prescription

An instruction from an authorized clinician for a medicine.

over-the-counter (OTC)

Available without a prescription; this does not mean free of risks.

impairment

Reduced ability to perform a task safely; individual impairment needs appropriate evidence.

dose

The amount of medicine taken on an occasion; no dose instructions are provided here.

liability

Responsibility under a rule or law; this lesson debates proposed rules rather than deciding an actual case.

public safety

Protection of people from harm.

fairness

Just treatment that considers relevant differences and burdens.

counterpoint

A serious challenge to a position.

CER

Claim, Evidence, Reasoning: a position, its support and the explanation connecting them.

threshold

A chosen cutoff for a decision; it needs validation for its intended use.

validation

Testing whether a measure or rule supports its intended interpretation.

false positive

A test result flagging a condition that is not present.

false negative

A test result missing a condition that is present.

reflex

A relatively automatic response through a neural pathway; it is not identical to a conscious driving decision.

myelin

Insulating material around parts of some axons that supports rapid signal conduction.

effector

A muscle or gland that carries out a response.

E1: required MedlinePlus Drug Reactions fact

MedlinePlus Drug Reactions explains that medicines can help treat illness but can also cause unwanted reactions. These include side effects, interactions and allergies. It lists drowsiness as one possible side effect. An interaction can change a drug's effects.

Use at least one of these facts in your CER and name MedlinePlus Drug Reactions. The overview does not determine whether a particular driver was impaired or caused a crash. An unwanted reaction is not proof of misuse. This is source interpretation, not advice to start, stop or change medicine.

E2: driving risk and a supplied warning example

FDA explains that some medicines can interfere with driving. Antihistamines can slow reaction time or affect attention, sometimes even without felt drowsiness. NHTSA also identifies some prescription and OTC medicines as possible sources of driving impairment. Neither statement means every medicine or every user is impaired.

MedlinePlus's diphenhydramine entry provides the warmup example. It warns that drowsiness can occur and cautions against driving or operating machinery until the person knows its effects. Name diphenhydramine and explain the warning; no package search or personal medicine history is needed.

Taking the labeled amount, following every instruction and being unimpaired are three different claims. A dose record alone cannot prove all three. General warnings also cannot prove an individual's impairment, crash cause or blame. This lesson supplies no driving clearance, waiting period or medication instruction.

E3: a specific depressant mechanism

The official diazepam label describes it as a benzodiazepine with sedative effects. It links many effects to stronger GABA action. GABA is an inhibitory neurotransmitter in the CNS. This supplies a specific neural mechanism for the on-grade argument.

A chemical message acts at a receptor; changing that response can alter a network's activity. Increased inhibitory action can contribute to sedation and delayed responding. It does not mean every axon conducts more slowly or each messenger crosses a cleft more slowly. Reaction time includes detection, processing and response, not just one synapse.

For the self-check, use E3 and E4 to decide which drug is the depressant example more consistent with a risk of delayed responding. Explain its receptor mechanism. This explains a possible effect. It does not predict a measured result for a given driver. Do not extend the same mechanism to every antihistamine or opioid.

E4: caffeine is a different mechanism

The Institute of Medicine reviews how caffeine works. Blocking adenosine receptors is a key part of its effects on nerve activity and behavior. Caffeine is a stimulant example; it does not simply perform the opposite action at diazepam's target.

Compare the receptor pathways: diazepam facilitates GABA's inhibitory action; caffeine blocks adenosine receptor actions. Neither category fixes an individual reaction-time value. The supplied evidence does not show that caffeine reverses medication impairment or makes driving safe. No substance test or consumption is part of this task.

S1: original policy case, not an actual crash

An invented road-safety panel considers two fictional drivers. One is impaired after a legally obtained medicine. The other is impaired after alcohol. For this debate only, assume each has documented impairment relevant to driving. No measured values, legal threshold, crash record or actual person is supplied.

The medicine user reports following the labeled amount. The panel does not yet know what warnings were received or followed, what the person understood, or whether impairment was foreseeable. Those missing facts matter when comparing responsibility. The scenario does not establish a crime or claim medicine equals a particular alcohol concentration.

Choose a position on the SAME driving rules for the two cases. Distinguish a rule preventing impaired driving from a rule assigning punishment after harm. You may support equal rules, different rules or equal safety restrictions with different responsibility criteria. State your conditions and justify them. These are proposals, not descriptions of current law.

R1: two safety and two fairness arguments

Safety S-A: a rule based on relevant impairment could protect road users regardless of whether the substance is legal. Safety S-B: clear warnings and enforceable procedures could help prevent foreseeable risky driving. These are proposed reasons, not measured outcomes of a supplied policy trial.

Fairness F-A: a person who reasonably followed all instructions may deserve different blame from someone who knowingly ignored them. Fairness F-B: automatically penalizing everyone who uses a necessary medicine could burden treatment and mobility even when no impairment is shown. Consider other road users' interests too.

List all four arguments in your own words. Weigh at least one safety reason against one fairness reason in the final paragraph. Separate medicine use from documented impairment. Supporting a safety rule does not require claiming that every user is unsafe.

C1: strongest counterpoint, recovery and policy extension

If you support identical rules, consider why equal impairment might justify equal safety restrictions but not equal blame. If you favor different rules, consider whether a harmed road user faces the same danger. If you favor a conditional policy, explain how decisions could be made consistently and reviewed.

Record the strongest counterpoint actually heard in your John Carroll group and answer it. If the group is absent or unavailable, label a selected C1 counterpoint as original solo practice. Do not invent attendance, peer words or a watched recording. No recording is required today.

Remediation: assume a hypothetical person followed every label instruction, not merely the stated amount. Argue in two sentences whether equal punishment would be fair. State one reason. This is preparation; return to the full one-paragraph CER when able.

Extension: propose one rule distinguishing responsible labeled use from taking more than directed AND relevant impairment. Name a biological measure your rule would use. For example, it might use response time on a standard test. State what evidence must validate it before any cutoff is used.

A single reaction-time score cannot establish which dose was taken or whether all instructions were followed. Your rule would also need facts about the case and a fair review process. Discuss false positives and negatives; invent no numerical legal threshold or drug-testing protocol.

P1: paragraph, posting and remaining work

Warm up by defining depressant and stimulant in one line each using E3/E4. For both opening prompts, name the supplied diphenhydramine warning and explain reaction time in driving. Use the fictional brake-light-to-pedal example; give no personal medication or health details.

Draft a one-sentence claim with a reason. Build one paragraph using an E1 MedlinePlus fact, E3's specific mechanism, a safety/fairness tradeoff and a serious counterpoint with reply. End with a limit on what the evidence establishes. Different ethical positions are acceptable when supported.

The async route requires reading the Drug Reactions overview and posting a written CER citing one fact from it. E1 supplies its needed facts with the source link. Post to the confirmed class board and save a screenshot of your own post for the evidence packet. Keep other people's posts and private information out.

The exact assignment title is Wk9 CER: Bioethics: drugs and driving. Section 1292 uses assignment 8544578826; section 6792 uses 8544578853. Confirm your section. If access is unavailable, save the same paragraph and tell the teacher. Capture your own post after the board opens.

Today's official work is the Activity 2.1.6 Ready, Set, React! introductory task, with evidence from doing it; stay current in Lesson 2.1. Ask the teacher to confirm the assigned portion and stopping point. This original CER does not complete unseen official screens.

Today is Tuesday, March 16. Before class on March 17, spend 25 minutes on Reflex arc and myelin in Lab Notebooks. Obtain that assigned input and complete it as directed. It remains separate from this CER.

The weekend item is Submit nervous-system evidence in Class Records, with no duration supplied. Weekly reflex/reaction data analysis and evidence through Activity 2.1.7 Here Comes the Hammer remain separate. The teacher-posted data/model absence packet must be obtained; this policy case does not replace it.

March 17 measurement work and March 18 drug-signaling graph/CER need their actual instructions and data. The unit's partner comparisons, reflex arc and patient-clue diagnosis branch are also separate. No patient clues or measured response data are provided here, and no diagnosis or drug-effect size can be inferred.

Restart with the four arguments, then the one-sentence claim, counterpoint and full paragraph. During the final share or written exit, identify the science fact that most changed your reasoning. Record unfinished authentic and official requirements honestly.

M1: a different model about equipment rules

An invented workshop compares two faulty lifting carts. One operator followed the maintenance directions; another ignored a known fault. The panel assumes both carts are currently unsafe, but no actual incident or person is described.

Model claim: remove both carts from service while examining responsibility separately. Equal immediate protection need not mean identical blame. A counterpoint says different penalties weaken deterrence; the reply is a clear review of warnings, knowledge and preventable choices.

This analogy organizes safety and responsibility questions. It supplies no drug mechanism, driving threshold or legal outcome. Use E1-E4 and the actual S1 conditions for your own paragraph.

Try the decision

Which statement respects S1 and the source limits?

- Debate equal safety restrictions and responsibility separately, using a mechanism and evidence of relevant impairment without inventing the law.
- The labeled amount proves the person could drive safely, so no further information can matter.
- Caffeine acts as the opposite of diazepam, so taking it would establish fitness to drive.

Explain your choice using the reading. Discuss it or say it to yourself. This practice does not add another submission.

Your 80-minute flow

0–5 minutes	Define classes and complete the two supplied warmups.
5–20 minutes	Read E1-E4/S1 and list two safety and two fairness arguments.
20–40 minutes	Debate in the available group or use labeled C1; record the strongest counterpoint.
40–55 minutes	Draft the claim, choose source facts and plan the reply.
55–75 minutes	Write and revise one paragraph; post and save your own screenshot, or tell the teacher if access fails.
75–80 minutes	Share or write how the science shaped the argument; complete the mechanism check.

Your response record

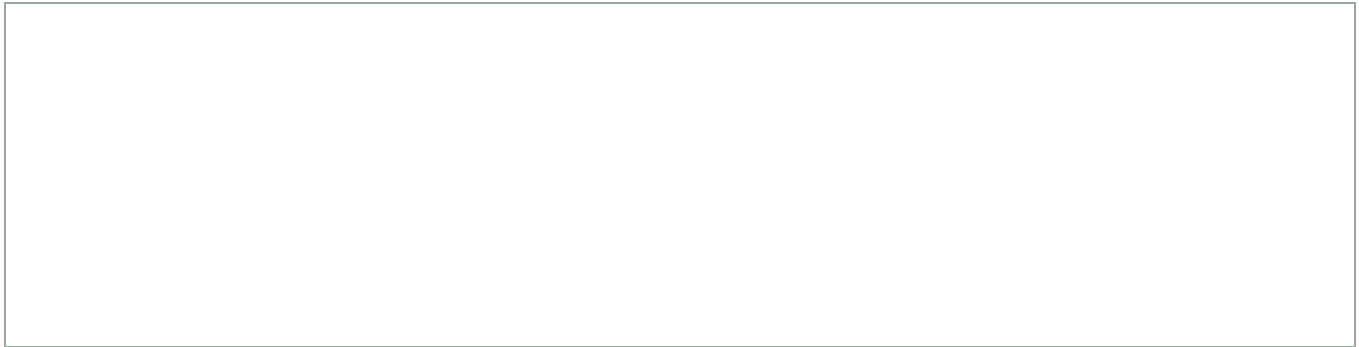
Use these labels on paper or in your document. The space below also works when this page is printed.

Two drug classes and both warmups

Define depressant and stimulant. Name the supplied medicine warning and explain reaction time using a fictional driving example.

Use E2-E4. Do not search personal medicines, disclose health history or take any substance.

Use this space or the same labeled section in your existing document. Add paper when your table, graph or drawing needs more room.

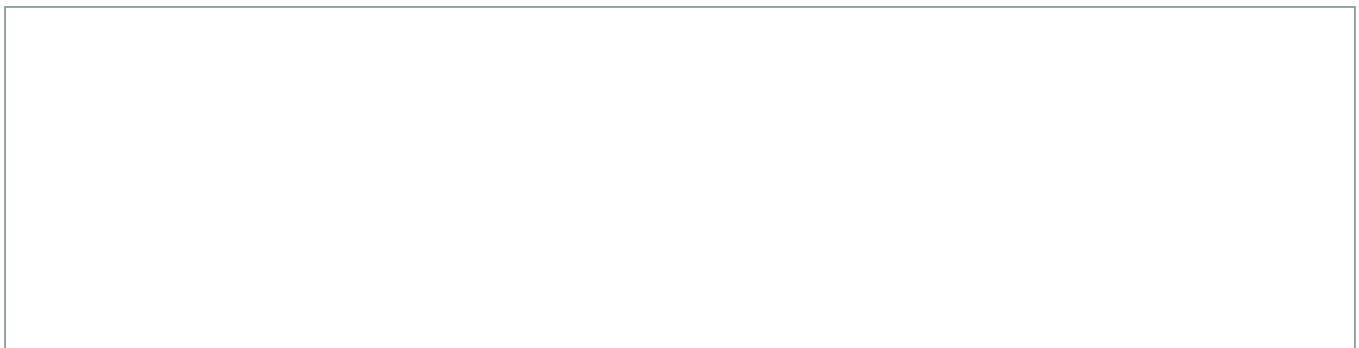


Two safety and two fairness reasons

Record S-A, S-B, F-A and F-B from R1 in your own words. Mark the safety/fairness tension most relevant to your S1 position.

These are ethical reasons and possible policy effects, not measured trial outcomes.

Use this space or the same labeled section in your existing document. Add paper when your table, graph or drawing needs more room.



Claim and strongest counterpoint

Write one sentence stating your position and why. Record the strongest actual group counterpoint and reply, or identify C1 as solo practice.

Use M1 for structure, not as biomedical evidence. Two-sentence remediation stays partial until you write the full CER.

Use this space or the same labeled section in your existing document. Add paper when your table, graph or drawing needs more room.

One-paragraph drugs-and-driving CER

Write the exact one-paragraph product for S1. Include an E1 Drug Reactions fact, the E3 mechanism, a safety/fairness tradeoff and counterpoint/reply. State whether you mean safety rules, penalties or both.

Cite the supplied sources by name or ID. Equal, different or conditional rules are acceptable if justified; do not declare actual law or individual fitness.

Use this space or the same labeled section in your existing document. Add paper when your table, graph or drawing needs more room.

Mechanism check, post and screenshot

Compare diazepam and caffeine using E3/E4. Explain which supplies the depressant-risk example and why; give one individual-prediction limit. Post your paragraph and save a screenshot of your own post. If access fails, save the paragraph and tell the teacher.

For the optional policy extension, name a measure and its validation limits using C1. Keep evidence from your board post and assigned official task separate.

Use this space or the same labeled section in your existing document. Add paper when your table, graph or drawing needs more room.

Check your product

- Two safety and two fairness arguments are present.
- The paragraph takes a specific position on the same-rules comparison and distinguishes safety from blame.
- A MedlinePlus Drug Reactions fact and specific neural mechanism support the reasoning.
- The strongest counterpoint is answered and its actual or solo origin is clear.
- No personal impairment, drug equivalence, medical instruction, law or official completion is invented.
- Check your own board post and screenshot, and ask the teacher for anything needed for the other requirements.

Keep the limit: Original policy discussion only. It cannot establish measured impairment, a crash, drug-alcohol equivalence, a valid threshold, a clinical recommendation, actual law or official completion.

Turn in your work

Post one CER paragraph to the teacher-confirmed class board under the exact assignment title and save a screenshot of your own post for the evidence packet. Confirm your HBS section.

If access is unavailable, save the same paragraph and tell the teacher. When access works, post it and save your own-post screenshot. Keep the official introductory task and weekly evidence separate.

[Section 1292: Wk9 CER: Bioethics: drugs and driving](#)

[Section 6792: Wk9 CER: Bioethics: drugs and driving](#)

Carry forward

Judge impairment and responsibility with evidence; a medicine's legal status alone settles neither.

Obtain the assigned Reflex arc and myelin preparation for March 17; actual lab instructions and evidence remain separate. What information would distinguish a reflex pathway from a measured response time?

Sources and resources

[Open today's page](#)

MED-REACTIONS · Drug Reactions, Summary

MedlinePlus, National Library of Medicine

<https://medlineplus.gov/drugreactions.html>

FDA-DRIVING · Some Medicines and Driving Do Not Mix

U.S. Food and Drug Administration

<https://www.fda.gov/consumers/consumer-updates/some-medicines-and-driving-dont-mix>

NHTSA · Drug-Impaired Driving

National Highway Traffic Safety Administration

<https://www.nhtsa.gov/risky-driving/drug-impaired-driving>

MED-DIPH · Diphenhydramine, special precautions

MedlinePlus Drug Information

<https://medlineplus.gov/druginfo/meds/a682539.html>

DIAZEPAM · Diazepam tablet, Clinical Pharmacology

Official drug labeling published in DailyMed; Chartwell RX, updated May 3, 2024

<https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=6cb19468-be02-4219-9e80-94a28e2317b9>

IOM-CAFFEINE · Pharmacology of Caffeine, Caffeine and Adenosine Receptors

Institute of Medicine, National Academies Press, 2001; NCBI Bookshelf

<https://www.ncbi.nlm.nih.gov/books/NBK223808/>