

How caffeine and alcohol affect your sleep

1. Warm-up: Daily habits

Discuss these questions with a partner.

Teacher's note: Answers will vary. This section is designed to activate students' prior knowledge and personal experiences related to the topic.

1. Are you a coffee or tea drinker? How many cups do you have a day, and when do you usually drink them?
2. Do you ever have an alcoholic drink in the evening to relax?
3. How would you describe your sleep quality? Do you usually feel refreshed when you wake up?
4. Have you ever noticed a link between what you eat or drink and how well you sleep?

2. Key vocabulary

Match the words with their definitions before you watch the video.

1. **Stimulant**

d

a. To break up or cause to break up.

2. Half-life	g	b. Helping you to feel better, stronger, or more energetic.
3. Circulating	f	c. A state of calm or sleep induced by a drug.
4. Restorative	b	d. A substance that raises levels of physiological or nervous activity in the body.
5. Sedation	c	e. To decide which of a group of things are the most important so that you can deal with them first.
6. Fragment (verb)	a	f. Moving continuously through a closed system or area.
7. Puritanical	h	g. The time required for a quantity to reduce to half of its initial value.
8. Prioritize	e	h. Having very strict moral attitudes.

3. Video: Sleeping with science

Watch the video and answer the questions below. You may need to watch it more than once.

1. What is the **half-life** of caffeine, and what does this mean for a cup of coffee you drink at 2 PM?

The half-life of caffeine is about five to six hours. This means that if you drink a coffee at 2 PM, a quarter of that caffeine could still be in your brain at midnight.

2. Besides making it harder to fall asleep, what is the second "hidden feature" of caffeine's effect on sleep?

It can change and decrease the quality of your sleep by reducing the amount of deep, restorative non-REM sleep you get.

3. The speaker says, "sedation is not sleep." What is the key difference he explains between the two?

Sedation is simply switching off brain cell activity. Natural deep sleep is an active

process involving hundreds of thousands of brain cells firing together and then going silent in a coordinated way.

4. List the three ways alcohol can be problematic for your sleep.

1. It causes sedation, not natural sleep. 2. It fragments your sleep by activating the "fight or flight" nervous system. 3. It blocks your REM (or dream) sleep.

5. What is REM sleep important for, according to the video?

REM sleep is important for emotional and mental health, and even for creativity.

[Watch the video on YouTube](#)

4. Vocabulary in context

Complete the sentences with the vocabulary from exercise 2. You may need to change the form of the word.

stimulant

half-life

circulating

restorative

sedation

fragment

puritanical

prioritize

1. I feel so much better after a good night's sleep; it has a truly **restorative** effect on my mood.
2. If you're feeling stressed, you need to **prioritize** your tasks and focus on what's most important.
3. The doctor explained that the medication has a long **half-life**, so its effects will last for most of the day.
4. Noise from the street can **fragment** your sleep, causing you to wake up many times during the night.
5. He has a rather **puritanical** view on entertainment, believing that all TV is a waste of time.
6. After the accident, the patient was kept under **sedation** to help manage the pain.
7. I avoid coffee in the afternoon because it's a powerful **stimulant** and keeps me awake.

8. There's still a lot of caffeine **circulating** in my system from that coffee I had hours ago.

5. Grammar focus: Explaining cause and effect

When explaining scientific concepts, we often use specific language to link a cause (an action or reason) with an effect (a result). The video uses several of these phrases.

- **As a result / As a consequence:** These are used to introduce the result of a previously mentioned action.
*"A quarter of that caffeine is still in your brain at midnight. **As a result**, it can make it harder to fall asleep."*
- **Can + verb (make, decrease, block, fragment):** This structure is used to describe a possible effect or outcome.
*"Caffeine **can decrease** the amount of deep sleep."*

Combine the sentences using the cause-and-effect language provided. Make any necessary changes.

1. Alcohol activates the "fight or flight" system. Your sleep becomes fragmented.
(Use: **As a result**)
→ **Alcohol activates the "fight or flight" system. As a result, your sleep becomes fragmented.**
2. Some people don't feel refreshed in the morning. They reach for more coffee.
(Use: **As a consequence**)
→ **Some people don't feel refreshed in the morning. As a consequence, they reach for more coffee.**
3. Alcohol is a sedative. It switches off the firing of brain cells. (Use: This means that...)
→ **Alcohol is a sedative. This means that it switches off the firing of brain cells.**

4. Caffeine reduces deep sleep. You don't feel restored by your sleep. (Use: **can make you...**)

→ Caffeine reduces deep sleep, which can make you feel not restored by your sleep.

5. Alcohol blocks dream sleep. This affects your emotional and mental health. (Use: which **can affect...**)

→ Alcohol blocks dream sleep, which can affect your emotional and mental health.

6. Useful phrases for discussing scientific information

The speaker uses specific phrases to explain complex ideas and manage his tone. Notice how these phrases can be used in your own discussions about health or science.

Explaining a concept:

- "Caffeine is in a class of drugs that we call..."
- "What that means is that..."
- "In other words..."

Introducing a problem or issue:

- "But it turns out that these two substances..."
- "The second issue with caffeine is that..."
- "It can be problematic for your sleep in at least three different ways."

Giving information neutrally (without being bossy):

- "Now I'm not here to tell anyone how to live."
- "I don't want to be puritanical."
- "What I want to try and do is provide you with the information..."

- "...so then you can make an informed choice."

7. Role-play: Giving advice

Work in pairs. Read your role and have a conversation. Try to use the vocabulary, grammar, and useful phrases from this lesson.

Teacher's note: Answers will vary. Encourage students to incorporate the target vocabulary (e.g., half-life, restorative, sedation, fragment), cause-and-effect grammar, and useful phrases for explaining concepts neutrally.

Student A: The tired friend

You feel tired every morning, even after 8 hours in bed. You don't understand why. You tell your friend about your daily routine:

- You drink a large coffee at 8 AM and another one at 4 PM to get through the workday.
- You often have a glass of wine or a beer around 9 PM to help you "wind down" and fall asleep.
- You believe you fall asleep quickly and stay asleep all night.
- You feel like you need more and more coffee just to feel normal in the morning.

Student B: The informed friend

You just watched a video about how caffeine and alcohol affect sleep. Listen to your friend's problem. Using the information from the lesson, gently explain how their habits might be affecting their sleep quality.

- Explain the concept of caffeine's **half-life**.
- Talk about how caffeine affects **restorative** deep sleep.
- Explain that alcohol causes **sedation**, not true sleep, and can **fragment** their night.
- Use phrases like "It turns out that..." and "What that means is..." to explain the science.

- Remember the speaker's advice: provide information so your friend can make an "informed choice."