

Are noise-cancelling headphones impairing our hearing skills? Some audiologists are beginning to worry

Level 2: Intermediate

1 Warmer

a. Discuss the following questions in pairs.

- Do you use noise-cancelling headphones? When do you find them most useful? Why?
- Do you think that reducing background noise could have any negative effects on our hearing or brain? Why or why not?

2 Key words

a. Find the words from the wordpool in the article. Then use the words to complete the definitions using the correct form.

adaptable
audiologists
autism

background noise
blocking out
concerned

debates
diagnosed
injury

long-term effects
proof
source

1. _____ is the set of facts that support the truth of something.
2. _____ are formal discussions where people give different opinions on a particular topic.
3. If something is _____, it can change easily in new conditions or situations.
4. _____ is a medical condition that affects a person's communication, social interaction and behaviour.
5. A(n) _____ is damage to the body, usually caused by an accident.
6. _____ are the consequences or results of something that continue for a long time.
7. A(n) _____ is where something, such as a sound, comes from.
8. _____ means ignoring sounds or noises around you.
9. If someone is _____, they are worried or anxious about something.

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- _____ is an extra sound that can be heard while listening to something. For example, the sound of cars in traffic while you are on the phone with someone.
- When something is _____, it means it has been identified through a medical exam or test.
- _____ are professionals who specialise in hearing problems.

b. Complete the sentences with the correct form of the words from the previous activity.

- After her hearing test, Maria saw a(n) _____ for more treatment.
- Tom was _____ about his friend's health after the accident.
- I had to stay home from school because of a sport _____ to my leg.
- It was difficult to concentrate at work because of the _____ from the construction site outside the office.
- Erin uses noise-cancelling headphones to _____ the noise while studying.
- This new software is very _____ and can be used with different operating systems.
- You need to give a(n) _____ for the statistics you mention, so the editor can check the information.
- Do you have any _____ that it was Adam who stole your phone?
- Children with _____ may need specialist teaching to help them with communication.
- The class _____ about the positive and negative impacts of technology on education was really interesting.
- Paula's doctor _____ her with a mild case of flu.
- The _____ of smoking can include breathing problems and cancer.

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Some specialists suspect that constantly filtering out background noise may have unintended consequences

Ian Sample

22 February, 2025

- Noise-cancelling headphones are popular for making travelling to and from work less boring and for blocking out the noise of daily life. However, audiologists are concerned that using them too much might affect people's hearing.
- While the technology has clear benefits, such as helping people listen to music at lower volumes, some experts worry that blocking out background noise may have negative effects.
- Renee Almeida, an audiology expert at Imperial College Healthcare NHS Trust, has noticed an increase in adults coming to her clinic with hearing problems. However, tests often show their hearing is fine. The problem is not with their ears but with their brains. These people might find it hard to locate where a sound is coming from. They may also have difficulty following conversations in noisy places like trains, bars or restaurants.
- This condition, known as auditory processing disorder (APD), is usually diagnosed in children, so the rise in adults with similar problems surprised Almeida. She believes that frequent use of noise-cancelling headphones could be the cause. "The brain is used to dealing with thousands of sounds at once, and it knows what to pay attention to. With noise-cancelling headphones, the brain only gets one sound source, like music or a podcast. There's nothing else to focus on," she explains.
- Too much use of noise-cancelling headphones might affect how children develop the ability to focus on sounds. For adults, it could make their brains less active, like muscles getting weaker from lack of exercise. In both cases, it might be harder to hear speech clearly in noisy environments.
- Although there is no scientific proof that noise-cancelling headphones cause APD, Almeida believes more research is needed. "Studies should look into the long-term effects of using these headphones, especially in young people," she says.
- APD affects around three to five per cent of school-age children. It is linked to low birth weight and ear infections. In older adults, APD can be caused by a head injury, though the cause is often unknown.
- Harvey Dillon, a professor at the University of Manchester, agrees that how we listen affects our ability to focus on speech when there is background noise. He explains that children improve at focusing on sounds from age five to fourteen. However, if children have many ear infections, they may have problems focusing on sounds from one direction.
- Adults seem to be more adaptable. Dillon explains that if someone wears a single earplug for a week, they will slowly relearn how to locate sounds. When the earplug is removed, their ability decreases but recovers quickly. He believes that noise-cancelling headphones could actually help because they allow people to listen at lower volumes without background noise.
- Professor Dani Tomlin, from the University of Melbourne, says that using noise-cancelling headphones for long periods might make listening harder when they are taken off. However, she says they may be good for people with autism. "Instead of recommending people stop using noise-cancelling headphones, we need more research," she says.
- For now, Almeida suggests people practice listening, such as by listening to debates on the radio or writing down the words of songs. "The brain is very adaptable," she says. "Make an effort to listen carefully to what's being said."

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First published in *The Guardian*, 22/02/2025

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3 Comprehension check

a. Are these sentences True (T) or False (F) according to the article?

- Noise-cancelling headphones are completely safe and have no negative effects on hearing. _____
- Audiologists have noticed that using noise-cancelling headphones might help people listen to music at lower volumes. _____
- Auditory processing disorder (APD) is only diagnosed in children. _____
- Professor Harvey Dillon suggests that adults can quickly readjust their hearing after using earplugs or noise-cancelling headphones. _____
- According to the text, more research is needed to understand the long-term effects of noise-cancelling headphones. _____
- APD affects more than 10 per cent of school-age children. _____

4 Key language

a. Choose the correct option (a or b) to complete the sentences.

- People _____ be careful about using noise-cancelling headphones too often.
a. might b. should
- Some audiologists _____ recommend limiting headphone use in children.
a. must b. may
- Children _____ practise listening in different environments.
a. need to b. might not
- Researchers _____ to investigate the long-term effects of noise-cancelling headphones.
a. have b. must

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5. Parents _____ talk to their children about responsible headphone use.
- a. can b. ought to
6. You _____ damage your ears if you listen to such loud music.
- a. might b. should

5 Discussion

a. Discuss these questions.

- Do you think it's a good idea to use noise-cancelling headphones a lot? Why or why not?
- Have you ever found it difficult to hear someone in a noisy place? What did you do?
- How has technology changed the way we experience sound in daily life?

6 In your own words

a. In pairs or small groups, find a short spoken text such as a news report, a conversation or a set of instructions. Then find a pre-recorded sound clip of crowd noise, music or multiple voices speaking at once.

Student A: listens to the spoken text only.

Student B: listens to the same text with the background sound clip playing at the same time.

Student C: (optional) listens to the spoken text using noise-cancelling headphones.

b. Then discuss the following questions as a class:

- Who found it easiest to understand the text?
- How did the background noise affect comprehension?
- How might this reflect real-life challenges for individuals with APD or autism?
- What can we do to be more inclusive of people with APD or autism?