

Everyday Mysteries: Why songs get stuck in our heads

By Science Friday, adapted by Newsela staff on 02.17.17

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A man listens to an iPod MP3 player through earphones in Sydney, Australia, August 17, 2005. Ian Waldie/Getty Images

Question: Why do songs get stuck in our heads?

Answer: A song stuck in your head is called an "earworm." This is a song that replays on a loop in your head. A study shows that earworms are quite common, but the reason for them is still a mystery.

Earworms Stuck In Our Heads

Can't get that song out of your head? You've probably got an earworm. Scientist Elizabeth Margulis says an earworm is usually a small part of a song that "just plays and replays like it's stuck on loop in your head." Songs like "What Does the Fox Say?" and "Who Let the Dogs Out?" are just a couple tunes known to cause earworms.

Experiencing an earworm is quite common. A study found that more than 9 out of 10 people reported having an earworm at least once a week. About 1 out of 4 had earworms more than once a day.

Try To Remember

Although earworms are common, what causes them is still a mystery. That's mainly because earworms happen unexpectedly. As a result, it's nearly impossible for scientists to study them. The information that scientists have collected so far comes from small surveys and diary studies. In diary studies, people take notes on their experiences and then share the notes with scientists. But most people are not very good at remembering how often they get earworms, how long an earworm lasts, or when they first noticed one.

Earworms could have something to do with how music affects the part of the brain that controls movement. Margulis says that when people listen to music, there is "a lot of activity" in this brain area. "People are often imaginatively participating even while they're sitting still," she says. That might mean they are picturing themselves dancing, or preparing to jump up and dance.

Hey, I Know That Song!

Repetitive listening could also cause earworms. Most of the time we listen to music we've already heard before, Margulis says. Once you've heard a song four or five times, the sound of one note reminds you of the next note. "You can almost feel exactly what's going to happen next," Margulis says.

A song's structure might cause the music to get stuck in your head, too. Most earworms are simple and repetitive, professor James Kellaris says. Kellaris studies how people remember music.

Taking Notes ... On The Notes

In one study, scientists led by Victoria Williamson studied more than 50 different musical qualities. They found that earworm-causing songs tend to have longer notes. Earworms also tend to have notes with smaller differences in pitch. Pitch is how high or low the notes are. For example, a flute makes a high-pitch sound. A bass makes a low-pitch sound.

Williamson says note length and pitch are two features that make songs easier to sing. An earworm is basically your brain singing, she says.

Almost everyone gets earworms at some point. But Williamson has found that people with mild obsessive compulsive disorder (OCD) experience them more often. People with OCD tend to have repeated thoughts and feelings. Williamson says it's no surprise that they have repeated "mental music" as well.

In The Mood For An Earworm?

Experiencing earworms also seems to depend on being in the right mood at the right time. They are more likely to happen when you are tired or stressed out, Kellaris says.

Many people complain about earworms. But Williamson says most earworms are actually somewhat enjoyable, or at least not unpleasant, experiences. Her work has shown that only about 3 out of 10 earworms are "annoying."

To Lose An Earworm, Play The Whole Song!

"We're more inclined to remember the things that annoy us," she says. "So if you ask somebody about an earworm, they'll tell you about the one that annoyed them yesterday. They won't tell you the three or four they briefly had in their head which they didn't really notice."

Once an earworm gets in your brain, how do you get rid of it? Williamson says the best way is for people to distract themselves. You can listen to other music or do something that involves language, like a crossword puzzle. Another way to get rid of an earworm may seem surprising. Williamson says that listening to it repeatedly will tire-out the earworm, or "complete it." Because earworms are only bits of music, listening to the whole track might stop you from repeating the same part in your head.

Quiz

- 1 Which of the following are two MAIN ideas of the article?
1. *An earworm is a song that keeps playing in your head.*
 2. *Some people have earworms more than once a day.*
 3. *Even though earworms are common, scientists are not sure what causes them.*
 4. *Many people complain about earworms.*
- (A) 1 and 2
- (B) 1 and 3
- (C) 2 and 3
- (D) 2 and 4
- 2 Which sentence from the article would be MOST important to include in a summary of the article?
- (A) Most of the time we listen to music we've already heard before, Margulis says.
- (B) Once you've heard a song four or five times, the sound of one note reminds you of the next note.
- (C) Most earworms are simple and repetitive, professor James Kellaris says.
- (D) You can listen to other music or do something that involves language, like a crossword puzzle.
- 3 What is the connection between the Question/Answer section at the beginning of the article and the last section of the article?
- (A) The Question/Answer section states that earworms are very mysterious, and the last section explains why they are mysterious.
- (B) The Question/Answer section describes some common earworms, and the last section describes how earworms become annoying.
- (C) The Question/Answer section states that earworms are common, and the last section explains why they are common.
- (D) The Question/Answer section explains what earworms are, and the last section describes some ways to get rid of them.

4 Complete the sentence below.

Overall, the article is organized around

- (A) a description of the results of various scientific studies about earworms.
- (B) a description of the effects of earworms and some of their possible causes.
- (C) a comparison of earworms that happen unexpectedly with those that are expected.
- (D) a comparison of the different types of people who are more likely to get earworms.

Answer Key

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