

How Do You Solve a Problem Like an Earworm?

JUAN SILVA *Getty Images*

Chewing gum is just one way to drive that annoying jingle from your brain

By [Harriet Brown](#) | Oct 15, 2015

If you are one of the 92 percent of the population who regularly experience earworms—snippets of music that pop uninvited into your head and won't go away—you might wish there was a way to make them stop. Earworms are a generally benign form of rumination, the repetitive, intrusive thoughts associated with anxiety and depression.



Psychologists have long been looking for ways to turn off those unwelcome thoughts, and now a study from the University of Reading in England suggests a fresh approach: chew some gum. Psychologist Philip Beaman and his colleagues found that college students exposed to a catchy song snippet who then chewed gum reported fewer earworms than those who did not chew. The act of chewing gum, as with silently reading, talking or singing to yourself engages the tongue, teeth and other parts of the anatomy used to produce speech, called subvocal articulators. These subvocalizations lessen the brain's ability to form verbal or musical memories.

For some people, gum chewing might just be enough to head off continuous replays of “Maria” from *The Sound of Music*. The technique probably will not do much for deeply entrenched earworms, however. I personally have had the same one stuck in my head for more than 30 years, a series of nine notes from a tune I have never been able to name. (Experts say that such persistent earworms are very rare but not entirely unheard of.) Chewing gum did not help.

Other strategies for eradicating earworms include what British music psychologist Victoria Williamson of the University of Sheffield describes as “distract and engage.” The most effective distractions, she explains, are verbal or musical: chanting a mantra, reciting a poem, listening to a different song, even playing an instrument. They work by activating the component of working memory involved in earworms, a storage and rehearsal cycle called the phonological loop. “If you fill it up with something else that occupies the same circuitry, there's not enough left to make the earworm,” Williamson says.

Focusing on a specific mental task—say, thinking through your schedule for the week—can also rout a repetitive melody. Yet if the task is either too easy or too hard, your mind tends to fall back on the earworm. It has to take up just the right amount of cognitive load—what Ira Hyman, a professor of psychology at Western Washington University, calls the Goldilocks effect. Researchers at the University of Cambridge designed what they believed was the perfect exercise: mentally generating random numbers, at about one a second, without ever repeating a number.

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The other common approach is to engage the earworm. Instead of trying not to think about it, you deliberately listen to the entire song, start to finish, several times in a row. Most earworms are fragments, which very likely contributes to their stubborn longevity; incomplete memories last longer than complete ones, a phenomenon known as the Zeigarnik effect. By completing the fragment, Williamson says, you might drive the song from your conscious memory.

Or you might not. Neither distraction nor engagement worked for me. In the long run, some experts say, the best strategy might simply be learning to enjoy the concerts in your head. I've been trying to identify, disrupt and interrupt my earworm for three decades, with no luck. Occasionally it subsides for a day or two, and I think it's gone; then I find myself silently humming those same nine notes. I have come to think of it as the sound track for my life. And it could be worse. I could find myself silently breaking into "It's Friday, Friday, gotta get down on Friday."

Sizing Up Earworms

- 15 to 30 seconds: the estimated length of a typical earworm episode
- 92 percent of people experience an earworm at least once a week
- 99 percent of the population experiences earworms occasionally
- Most people describe earworm episodes as benign, but:
 - 15 percent find their earworm "disturbing"
 - 33 percent describe their earworm as "unpleasant"

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