

# How Can Tinnitus Affect Your Emotions?

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Have you ever been enjoying a walk outdoors or a good book on a rainy afternoon only to have the moment ruined by a ringing in your ears?

If so, you may be suffering from tinnitus, a symptom of hearing loss that [affects around 20 percent of Americans](#), according to the Hearing Health Foundation. While this may just seem like a temporary aggravation at the time, a new study found that the buzzing can actually affect your emotions.

## The relationship between tinnitus and emotions

Researchers from the University of Illinois explored whether these ringing sounds impact how we feel. Authors of the study published their findings in the journal *Brain Research*, in which they used functional magnetic resonance imaging (fMRI) brain scans and found that [sensations of tinnitus](#) can provoke negative emotions in people.

Participants were separated into three groups, consisting of those who experienced mild-to-moderate hearing loss along with subtle tinnitus, individuals with auditory damage who did not report sensations of ringing in the ears, and an age-matched control group of subjects with neither hearing loss nor tinnitus. Each of the participants underwent fMRI brain scans while hearing a series of sounds. The noises administered included baby laughter, screaming

women and a water bottle opening, which the subjects were instructed to identify as pleasant, unpleasant or neutral.

### **Tinnitus irritates your brain - for real**

The researchers discovered that those with tinnitus were slower in determining the emotions provoked by the sounds, and that activity within the amygdala (the region in the brain responsible for associating emotion) was lower in those with tinnitus and hearing loss. What was interesting to note was that two other brain regions linked to emotional activity, the parahippocampus and insula, were more stimulated in those with tinnitus than subjects with normal hearing. This suggests that tinnitus could prompt the brain to rewire emotions to different regions of the brain, producing a wider spectrum of feelings.

Dr. Fatima Husain, a hearing science professor at the University of Illinois and leader of the study, was surprised by her team's results. She explained that visual brain scans allowed the researchers to have a better understanding of why people with tinnitus tend to experience more feelings of anxiety, depression and stress on a technical level.

"We thought that because [people with tinnitus](#) constantly hear a bothersome, unpleasant stimulus, they would have an even higher amount of activity in the amygdala when hearing these sounds, but it was lesser," Husain said in a statement. "Because they've had to adjust to the sound, some plasticity in the brain has occurred. They have had to reduce this amygdala activity and reroute it to other parts of the brain because the amygdala cannot be active all the time due to this annoying sound."

## **Managing tinnitus and emotions**

It's not uncommon for someone who is experiencing tinnitus to hide their irritability from others. More often than not this can lead to social withdrawal, which can potentially invoke feelings of depression and increase isolation. If you notice episodes of irritability accumulating in someone you suspect to be at risk for hearing loss, try to openly discuss how they are feeling and encourage them to seek treatment for their potential hearing loss.

Your primary care physician can help by removing earwax from the ear, taking a look at your medical history and current prescriptions, and testing to see if the issue is being caused by a blood vessel condition. If none of these solve the problem, see your local hearing instrument specialist for a thorough hearing exam. Hearing aids can be a cure for resolving tinnitus, as are other types of auditory equipment such as white noise machines or masking devices. In order to find out which option best suits your needs, [schedule an appointment](#) with your local AccuQuest Hearing Care professional for a thorough hearing exam.