Questions and Answers

Guest Hearing Health Professional
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Dr. Theresa Cullen is the owner and President of Cape Cod Hearing Center. She became the Cape's first Doctor of Audiology 24 years ago, when she moved her private practice from her home state of Michigan. For the last 27 years, she has used her advanced training to help thousands of patients.

Q Medicinal marijuana is legal in my state. Do you think marijuana could help me with tinnitus?

A Medical marijuana (cannabis) has been prescribed to help people with some of the conditions that can cause tinnitus, such as cancer and chemotherapy side effects. In those cases it would seem logical to conclude that marijuana might help with the tinnitus itself. Many pro-marijuana websites include testimonials from people claiming that marijuana has helped reduce the severity of their tinnitus. The rationale is that marijuana eases stress, and stress is known to exacerbate tinnitus. That being said, other anecdotal reports indicate a great number of tinnitus cases were *caused or increased* by marijuana.

Unfortunately, there have not been many clinical studies that definitively show whether marijuana is harmful or helpful for people with tinnitus. I would not recommend its use until further research and more concrete and clear evidence becomes available.

Q In preparation for a family trip to Africa, my doctor suggested we take anti-malarial pills as a precautionary measure. I've heard these drugs can be highly ototoxic and cause tinnitus. What are the long-term risks to me, my spouse, and children?

A The drugs chloroquine (brand name Aralen) and quinine (Legatrin) are the two most commonly prescribed anti-malarial drugs. These drugs are known to be ototoxic and can cause damage to the inner ear, resulting in hearing loss, tinnitus, dizziness, and vertigo—especially when given in high or prolonged doses such as in the *treatment* of malaria. Ototoxic damage is less likely to occur when these drugs are taken in low doses for a shorter period of time to *prevent* malaria. Yet, please keep in mind, if you already have hearing loss you can be more susceptible to the ototoxic effects of a drug like chloroquine.

Another anti-malarial drug, melfloquine (Lariam), has many well-documented and extreme adverse side effects—both ototoxic and otherwise. It should only be taken in specific circumstances and under careful supervision from your healthcare provider.

Q I was recently fitted for hearing aids, but after using them for a month my tinnitus seems to have increased. Is the sound amplification from the hearing aids causing this?

A Hearing aids have long been used as tinnitus treatment. There is research, dating back to 1947, that reports the efficacy of hearing aids in reducing tinnitus perception. The vast majority of research on the use of hearing aids for tinnitus management is firmly in favor of the effectiveness of amplification. So I commend you for trying hearing aids and am sorry that you are noticing your tinnitus more. I would strongly encourage you to return to your hearing specialist. Most tinnitus evaluation protocols include

loudness discomfort level testing. It is not uncommon for someone with tinnitus to have decreased sound tolerance or hyperacusis. Your specialist can recheck your loudness discomfort levels and use real ear measurement to verify that the maximum output (MPO) of your hearing aid does not exceed your discomfort levels.

Q I have heard about all kinds of masking sounds for tinnitus: white noise, pink noise, purple noise, and others. What is the difference between these sounds? Should I listen to just one type consistently or are they interchangeable?

A Just as there are different frequencies (pitches) of tinnitus, there are a variety of masking sounds, each with different frequency concentrations and power distributions. Scientists use color terms to categorize these sounds, with each color representing a specific range of spectral density. (Spectral density is the way that power is distributed through the various frequencies within a given sound.)

This rainbow of masking sounds contain all the frequencies that are audible to humans—20 to 20,000 hertz—but the way power is distributed among those frequencies differs. White noise has equal power distribution throughout all frequencies, so both low and high frequencies are presented at the same volume. In pink noise, the power per hertz decreases as the frequency increases, so the lower frequencies are louder than the higher frequencies. Purple noise is the inverse of pink, so higher frequencies are louder than lower frequencies.

Each color of masking noise has its own suggested uses. Most habituation therapies start with white noise, because it presents the widest range of frequencies. Pink noise is often recommended for sleeping. However, there is no harm in trying out different masking sounds to find what best works for you. You may find that one sound is consistently useful or that different sounds work better for specific situations.

The advice and opinions of outside health professionals do not necessarily reflect the opinions of the American Tinnitus Association. This advice is for informational purposes only and should not take the place of a full medical consultation and evaluation by a trained healthcare professional.

If you have a tinnitus question for the next edition, contact the ATA Editor at editor@ata.org or Tinnitus Today *Editor, American Tinnitus Association, P.O. Box 5, Portland, OR 97207.*