Dear Alice,

Any new breakthrough, new therapy, or drugs for tinnitus or head noise? More and more people are being affected by this and some commit suicide since they cannot sleep.

Answer

Dear Reader,

From buzzing to humming, roaring to clicking, and even things that go bump in the night: these are just a few of the ways people with tinnitus describe the cacophony that floods their ears. Simply put, tinnitus is the feeling that your ears are ringing (or roaring, buzzing, clicking, whooshing, etc.) when there?s not actually any noise. And you?re right, it can affect people?s ability to get peaceful zzzs and can lead to anxiety and stress. That said, tinnitus itself isn?t a disease, but rather a red flag that something else may be amiss with the hardwiring of the auditory system. In fact, about 15 percent of adults experience some form of tinnitus. Because it?s relatively common and can be so frustrating, researchers have been on their A-game working on new treatments. While there?s still no surefire cure, there are several options for decreasing the sensation and the associated anxiety. And, there are some very sci-fi sounding? technologies on the horizon that might provide additional relief. More on these later!

The severity and duration of cases can vary greatly from person to person, making it tricky for there to be a one-size-fits-all solution. The ringing, humming, or clicking can be constant or intermittent; it could last just a few hours or for years. Sometimes known as the club disease, many instances of tinnitus are tied to exposure to very loud noises (like a DJ dropping those beats) for long periods of time. However, there are certainly other causes, including buildup of wax or fluid, allergies, or as a side effect of some medications. Sometimes, the cause of tinnitus isn?t known at all. Regardless of its roots, tinnitus can be a huge bother, causing sleep disturbances, depression or anxiety, difficulty hearing or understanding speech, and difficulty focusing.

In some instances, such as one-time exposure to loud noise, tinnitus may clear up on its own. But this isn?t always the case. Until scientists know more about these mysterious auditory annoyances, health care providers can offer a few options to help out with a bout of tinnitus that just won?t quit:

- **Treating an underlying cause**, like removing excess wax or stopping a medication
(such as aspirin or non-steroidal anti-inflammatory medications \(^3\)) that might be the culprit.

- **Trying hearing aids or cochlear implants** in cases that might be causing hearing loss.
- **Using wearable or tabletop sound generators** that produce white noise or other sounds to mask the sounds of tinnitus and help people with tinnitus relax enough to fall asleep.
- **Trying acoustic neural stimulators**, which stimulate the auditory system to desensitize a person to the sounds of tinnitus so that they’re less noticeable.
- **Seeking psychological treatment** (counseling or medication) if the tinnitus is causing anxiety or depression.

Those are some ideas for the here and now, but what does the future look like? Well, it actually might be even brighter for those suffering from tinnitus! Most of the newer developments rest on the presumption that this condition might be due to the brain’s attempt to recover lost frequencies following damage to the ear structures. Here’s a sneak peak of some of the potential treatments currently in research or development:

- **Electrical or magnetic stimulation of the brain**: The idea here is that an implantable device could stimulate the specific area of the brain that’s misfiring and rework the auditory neural circuits to get them back in properly working order.
- **Repetitive transcranial magnetic stimulation (rTMS)**: This device would be used on top of the scalp to provide magnetic pulses that would help regulate the electrical signals in the brain and temporarily alleviate tinnitus. In preliminary trials of this treatment, there’s been a wide range of effectiveness, so researchers are trying to hone in on where exactly these magnetic pulses need to be focused to have the max impact.
- **Deep brain stimulation**: These electrical stimulators would be placed inside the brain to calm the areas that might be hyperactively firing and causing tinnitus.
- **Nerve stimulation**: This strategy would involve providing signals to the vagus nerve (a nerve that ranges from the head, neck, and abdomen) while the person is also listening to single-frequency tones. The idea behind this one-two punch is that the nerve will trigger the release of certain brain chemicals that can help the auditory areas of the brain reorganize, with the help of the tones being heard.

List adapted from [National Institutes of Health](https://www.ninds.nih.gov/.[4])

So, as the science continues to push further, keep those ears of yours tuned in to any developments. For anyone troubled with tinnitus, working with a professional (medical or mental health) will help determine what options work best for any given case.

?Hears? to some new breakthroughs soon!

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**Alice!**

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