How do you choose the "right" tinnitus treatment to suit individual needs?

A lot of current research interest in the tinnitus field is around understanding how individual factors play a part in:

- Shaping tinnitus perception
- Influencing the response (or lack of response) to certain treatments. There are increasing arguments for adopting a more holistic approach to tinnitus treatment, which considers individual needs and preferences and providing a choice of treatments in clinical settings, rather than a "one-therapy-fits-all" approach.

My recently completed PhD examined how specific personality traits, emotional reactions, memory and the ability to predict incoming sounds of individuals may contribute towards their perceived tinnitus intensity.

So what did the research show?

A short term clinical trial showed that overall white noise sound therapy resulted in a greater reduction in tinnitus compared to nature sounds.

Participants described white noise to be effective at diverting their attention away from the tinnitus, although for some participants the noise wasn't very pleasant to listen to.

Nature sounds, while not as effective as white noise, were reported as being more pleasant to listen to and more relaxing. Participants were also more willing to try the nature sounds over a longer period of time.

The results may mean there are two possible pathways by which sounds may effectively interact with tinnitus; one which stresses attention diversion and one which stresses the emotions evoked by sounds and serves a psychological function.

Individual variability was apparent in terms of which sound was most favoured, which sound had the most benefit, as well as how their response to treatment changed as time progressed.

Translating these findings clinically is important. Given the diversity in the causes and symptoms of tinnitus presented by people with tinnitus, to gain the most fruitful results, it is important that individuals have a wide variety of sounds accessible to them, and have the option of trialing different sounds to see which interact best with their individual tinnitus and are in line with their treatment goals. That is why Tinnitus Tunes provides access to a wide range of masking, relaxation and attention refocusing sounds that members can try until they find out which types of sounds meet their needs.

For example, some individuals may primarily need relief from the cognitive load of tinnitus, whereas others may need something to counteract the negative emotions which may be

evoked as a by-product of tinnitus. Also, the psychological benefits of sound therapy should be considered in selecting sounds.

I am also very excited that our research lab has received funding by the American Tinnitus Association (https://www.ata.org/) for conducting a trial investigating whether tinnitus relief is greater when using sounds that cover up tinnitus in 3D (the sound is played over the perceived spatial location of an individual's tinnitus) than using normal stereo 2D sound (heard in both ears).

The project involves using take-home sound therapy devices and we will also be using imaging techniques to understand which regions of the brain may be involved in "masking" of the tinnitus signal.

This study will be starting up soon and will further probe the value of treatment specialized for individual tinnitus characteristics. I feel fortunate to be working in this area, at a time of small and large paradigm shifts in our knowledge and comprehension of the tinnitus phenomena.

I look forward to updating you with future findings!

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