Tech Reviews

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Neosensory Buzz: can a wristband really help with sound awareness and tinnitus?

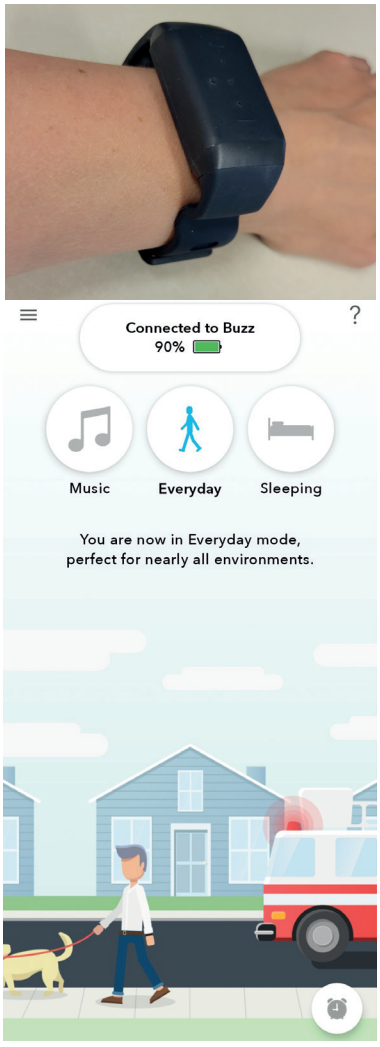
BY EMMA LEBLANC

As an audiologist, I am always looking for alternative and innovative solutions for patients who have tried all other traditional approaches. What else can I offer to patients who struggle to hear, even with appropriate amplification, or those who struggle with tinnitus even after trying different tinnitus management therapies? Could Buzz be the answer to the concerns and frustrations of many of my patients?

The Neosensory Buzz is a wearable wristband that provides environmental sound awareness and tinnitus relief through vibration patterns. It has a microphone, four motors to create vibration patterns, a rechargeable battery and a faceplate that has status lights and controls. The band has four pressure points which relate to different frequencies – higher frequencies are closer to the motor and the lower frequencies are farther away. This allows the wearer to feel the vibration of different frequencies on different parts of the wrist.

From an aesthetic point of view, the band itself is a sleek matte black design made with a hypoallergenic silicone. The motor and faceplate are integrated into the band and sit on the top of the wrist. It is a bit cumbersome and heavy, especially for individuals with small wrists, but is, overall, comfortable to wear.

Buzz comes with a beautifully designed app that is easy to navigate. The app walks the wearer through how to charge it and pair it to their phone through Bluetooth. It then walks the wearer through the vibration patterns of common sounds so the user can start to recognise what certain sounds feel like. The app has three different program settings, called Modes, which the user can switch between for optimal listening. The Everyday Mode is the go-to program that helps the wearer hear the world around them without picking up unwanted background noise. The Music Mode helps the listener hear music more in depth without having to turn up the volume. And the Sleep Mode filters out more environmental noises, such as snoring and fan noise, but will alert the wearer of important emergency sounds as well as their alarm clock.



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When wearing Buzz, I found that it picked up a lot of background noise, such as the air conditioning in my office, but that I was able to adjust the sensitivity fairly accurately with the +/- buttons on the faceplate. I could feel the different vibration patterns of all the noises in my environment and noticed how the vibrations changed when switching between each Mode. When listening to music, for example, in the Everyday Mode, the vibrations were more focused on mid-level frequencies whereas when in the Music Mode, there were more high frequencies.

As it is extremely difficult to evaluate the usefulness of a device like Buzz for someone like myself with normal hearing, I recruited one of my patients to try it out for a few weeks and report back. My patient has a long-standing severe sensorineural hearing loss with fair word recognition scores, bilaterally, and has been wearing binaural BTEs for many years. After one month of wearing it, my patient reported that they could see its benefit for new hearing aid users and those who are deaf and hard of hearing. They felt that Buzz could really show a person what they were missing to help them understand the benefits and need for amplification. My patient did find that certain sounds, such as birds chirping, were more noticeable when wearing Buzz, but felt that individuals new to the world of hearing aids may benefit more from this device than those with long-standing hearing loss.

Neosensory has added another feature to Buzz for individuals suffering from tinnitus called Duo for Tinnitus. Through the app, the wearer is told to listen to a series of tones for 10 minutes a day while wearing Buzz. The sounds are synced with the vibration patterns on the wristband. Over approximately two months, the theory is that the brain learns which sounds are external versus internal, allowing the brain to pay less attention to the internal (tinnitus) sounds, thereby reducing tinnitus symptoms. It will be interesting to see the results of an article currently in publication that is cited on the Neosensory website [1]. If the results show that there was a reduction in perceived tinnitus by a large group of individuals while wearing Duo for Tinnitus, then this device may become another tool that audiologists can use to help tinnitus sufferers.

I think the most successful candidate for Buzz sound awareness would be those with cochlear implants, especially individuals who are newly implanted, those who need more help than hearing aids can provide, and new hearing aid users. A successful candidate for the Duo for Tinnitus would be any tinnitus sufferer, especially those with normal hearing or aided hearing loss. With a 30-day money back guarantee and a slightly clumsy wristband, both someone who needs a bit of extra help with hearing and a tinnitus sufferer have little to lose by trying this device.

Reference

1. Perrotta M, Eagleman D. Use of sound-touch bimodal stimulation to reduce symptoms of tinnitus. Frontiers in Neuroscience 2021. In preparation. https://neosensory.com/science/ Last accessed September 2021.