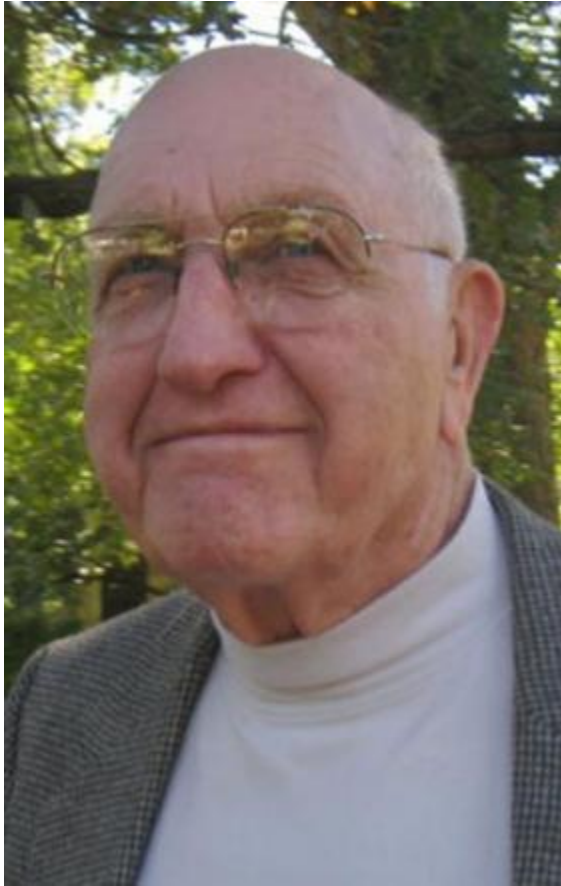


WT prof's tinnitus research rings true

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Leslie Dalton

By [Yann Ranaivo](#)

A professor at West Texas A&M University may have discovered a way to help permanently decrease or remove tinnitus, a condition that causes a constant, and often irritating, ringing in the ears.

The American Tinnitus Association reports that tinnitus affects up to 50 million Americans. The causes of the condition vary but include hearing loss, exposure to loud noises, serious illnesses and consumption of substances such as nicotine, caffeine and medicine.

Leslie Dalton, a professor at WT's speech and hearing clinic, has spent the past 12 years developing tinnitus treatment mostly delivered through the use of a chip, software and large headphones. The chip sends a quiet and pre-programmed sound to the headphones, changing the channels sound takes to reach the brain.

Dalton, in his third year at WT, likens the process to reorganizing roads to change the way a vehicle reaches a destination. Whatever conditions lead to tinnitus affect the brain's normal functions, causing the ringing sound, he said.

"It causes the brain to reprocess in the wrong place," he said. "We return the hearing so that the normal part of the brain takes over."

Dalton has seen some success with his work.

Gretchen Mercer, who took Dalton's treatment a few times during the past year, said the method completely removed her tinnitus whenever she put on the headphones.

"The first time I put on the headphones, my whole body just relaxed," she said. "You hear nothing. It totally erases the tinnitus."

One of the goals with the tinnitus research is to create a prototype that can be distributed to local audiology clinics before the end of the summer, said Paige Brittain, owner of Headsets Inc., an Amarillo business that sells aviation and military headsets.

About a year ago, Brittain and Dalton helped start up another company, Dichonics Inc., with plans to later manufacture personal devices that can deliver the sound treatment.

"We will continue to improve the product," Brittain said. "But right now, we're just trying to put it together and put it in the hands of specialists."

While the treatment Dalton performs at WT provides no long-term fix for tinnitus, he said he thinks that giving patients daily access to a device at home would let them train their brains into ignoring the condition.

"Once we get to nano-technology, we can turn into a kind of hearing aid," he said.

While millions of Americans suffer from tinnitus, many more do not report the condition, said Diana Wise-McPherson, an Amarillo audiologist. She said most of her patients suffer from the condition.

"From past numbers I've heard, about half of the world's population has some kind of head noise," she said. "Now whether it bothers their life, that's another thing."

Treatments to relieve tinnitus exist, but none of them decrease or remove the condition, she said. Existing treatments include acupuncture and massage therapy, she said.

"People do all kinds of things, but there's nothing scientifically proven on the market that alleviates tinnitus," she said.

Other treatments include masking the tinnitus with other sounds or sending electricity into the ear's cochlea, Dalton said.

"But the patient still hears something," he said.

Mercer said she developed tinnitus about two years after contracting the West Nile virus in 2004. The virus caused some hearing loss, she said.

"In my experience, it can be debilitating," she said. "It can drive you insane. It's a constant humming in your head. Sometimes, you can ignore it, but there are times when it's just loud and it gets worse."