

# Hearing restored with breakthrough technology

During years of speech therapy, **Antje** (sounds like ancha) **Goebelsmann** thought she was just slow. She never realized how crisp and clear human speech was until she tried a special bone-conduction hearing device called a BAHA®, or bone-anchored hearing aid.

The BAHA is perfect for people who cannot wear a conventional hearing aid or who have hearing loss due to a missing ear canal, nonfunctioning middle ear, or draining ears which cannot be surgically restored. The device consists of a titanium implant that is inserted into the skull and an abutment, or external coupler, and a sound processor that sends sound directly through the bone to the cochlea, or inner ear.

The implant adheres to the bone by a complex process called osseointegration. UW Medical Center was one of the first hospitals to perform the procedure on an investigational basis under the direction of **Dr. Larry G. Duckert**, UW professor of Otolaryngology-Head and Neck Surgery, and **Dr. Phillip Worthington**, professor of Oral and Maxillofacial Surgery, over 10 years ago. Both surgeons received advanced training in Goteborg, Sweden where the principle of osseointegration was developed.



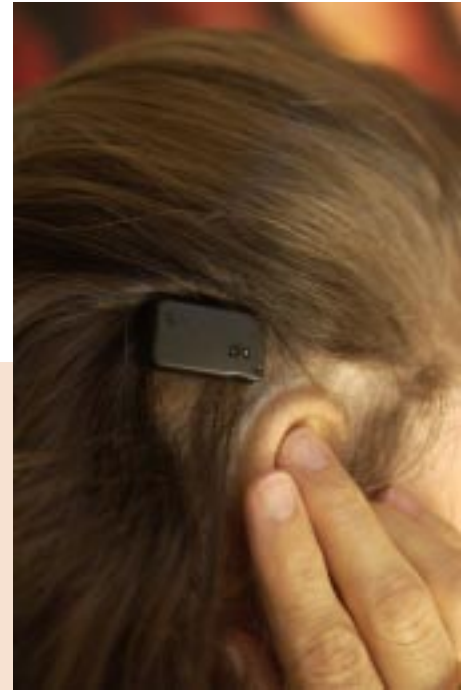
Dr. Larry Duckert

Bone conduction hearing devices are now more comfortable and less obvious than the headphone and wire versions that Antje wore up until two years ago. “They looked like a headband with an earphone and vibrator attached on one side that sat just behind my ear,” Antje says, who has an 85 percent hearing loss in each ear. “I would get sores from the denting in my head from the headpiece because it had to be worn as close as possible to my head to conduct the best sound.”

In a simple 30-minute outpatient procedure, Dr. Duckert created a small incision behind Antje’s ear and drilled a



The BAHA changed her life; now Antje rejoices in hearing every little thing.



The tiny bone anchored hearing device resonates sound directly through the bone to the inner ear.

small hole into her skull to receive the implant; the abutment attached the sound processor to the implant. After three months, her implant fully integrated, Antje’s BAHA was fitted.

“The hardest part was waiting those three months,” Antje says. “And now that I have it, it is light and extremely comfortable. I’m not even aware that it is here.”

“The BAHA has changed my life,” says Antje. “As a child, there was such a stigma about having hearing aids. I had a hard time in physical education and I tried to be still so they wouldn’t show or fall off. I’m sure there’s a lot I didn’t hear.”

Antje never took exercise classes with her old devices because she could never hear the instructors well enough, or the device would feedback when she moved her head sideways. But, right after she got her BAHA she went to a yoga class. “I could do the stretches and headstands without worry,” Antje says. “For athletes and kids, this would be awesome. I’ve even worn it sea kayaking.”

The only thing the BAHA can’t do is get wet, so while swimming or bathing Antje just snaps it off and puts it in a protected place until she’s ready to snap it back on again.

“I can now hear footsteps of people approaching my front door,” Antje says, “and the cat’s claws as she walks across the wood floor. It’s made me feel safer, more self-confident. But the best thing of all is hearing my baby gurgling and cooing as he just wakes up. I think I hear him before anyone else does.”



For more information about the BAHA, please call the Otolaryngology - Head & Neck Surgery Clinic at 206-598-4022.