

the Trumpeteer

An Ear- Responsible Publication of Central Carolina ENT, PA

Apex Office Moves

Central Carolina ENT moved its Apex office to a new location within the Apex Medical Park in September. Officially, our new address is **1001 W. Williams, Suite 103**. When you turn into the the Apex Medical Park, our new office is on your immediate left. Parking is located directly across the drive. Thanks to our new internet phone system, the phone numbers remained exactly the same, **919-363-9311**.

One of the big challenges was breaking down and moving the sound booth. George Bair and Associates from Pittsboro, NC, specialize in the setup and moving of audiology sound rooms for the Veterans Administration and private practices. He and his crew took 4 hours to breakdown and reassemble the 13 panels of the sound booth that collectively weighed 3500 lbs.



Crew loads panels on trailer



Setting up the Base



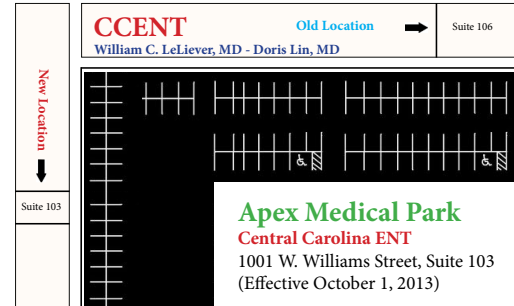
Sound room ready to go



New Office
1001 W. Williams, #103



Office Manager
Sharon McNeill



West Williams Street, Apex, NC

← To Route 1/440

To Highway 64 →

In This Issue

Page 2: Microtia and Congenital Aural Atresia (CAA)

Page 3: Patient profile: Dr. Jon Theile, Senior Scientist at Neusentis-U.S.

Page 4: The Cough by Christine Lupienski, FNP

Page 5: Widex Zen therapy updates



Microtia and Congenital Aural Atresia

In this issue of the Trumpeteer, we are featuring the story of Jonathan W. Theile, a Ph.D senior biologist with Pfizer. (see page 3) Dr. Theile is one of our hearing aid patients. As you will read in his personal biography, he was born with Microtia and Congenital Aural Atresia (CAA). Microtia is a rare birth defect involving the abnormal development of the outer ear. It has an incidence range of 1 in 5,000 to 1 in 20,000 births. Unilateral microtia and CAA are more common than bilateral defects (10%), with an increased frequency on the right side. Boys are affected more frequently than girls, and whites and blacks tend to be least affected compared to Hispanics and Asians.

When a baby is found to have microtia, the primary concern is with the child's ability to hear. Auditory brainstem audiometry (ABR) can be performed immediately after birth to determine if the child has a normal functioning cochlear (inner ear) on each side. Then a computerized tomography (CT) scan is also required to further assess middle and inner ear anomalies. Sometimes the CT will be obtained within the first months of life, while others will wait until the inner ear structures are fully mature around 4 to 6 years of life. Then the patient can be assessed for the, "drill out" procedure. This consists of carving out a canal through the bone to allow sound to reach the middle ear and then eventually be processed by the inner ear. Candidacy for atresia surgery is based on a 10-point scoring system including criteria such as ossicle (ear bones) location and facial nerve position. If a child is not a candidate for the "drill out" procedure but does have an intact cochlea, then a bone conduction hearing aid is an option. It transmits sounds to the cochlear via the bones of the skull. A bone anchored hearing aid (Baha) is one option that is often covered by most insurances and then there is the older conventional bone conduction hearing aid that sits on the mastoid bone via a headband.¹



Microtia, before and after surgery

1. Anthony R. Theile, DO, et al: "Microtia and Congenital Aural Atresia", *Scientific*, Volume 108 (January 2010): 1-4.

Introducing Cochlear™ Baha® 4



- **Smarter Hearing – Wireless Freedom**
Intelligent adaptive signal processing and true wireless technology designed to offer patients a new level in hearing performance, ease of use and listening comfort.
- **Soft Tissue Preservation**
A less invasive surgery with soft tissue preservation means patients spend less time in surgery and get better results.
- **Superior Stability**
Combining the advantage of the TiOblast™ surface with a wider diameter provides patients with industry-leading implant stability.



Dealing with Bilateral Microtia and Aural Atresia

Personal biography by:

Jonathan W. Theile, Ph.D.
Senior Scientist, Biology -
Electrophysiology Group
Pfizer, Inc. - Neusentis U.S.

“I started wearing my first bone-conducting hearing aid (resembling a headband) at the age of 5 months”

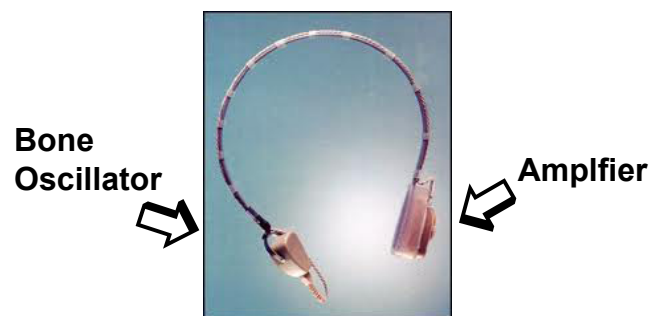
“I was born with bilateral microtia and bilateral aural atresia with a significant amount of middle ear hypoplasia. I started wearing my first bone-conducting hearing aid (resembling a headband) at the age of 5 months. As a child wearing a BC hearing aid, I did not perceive any difficulties with hearing, although I still underwent speech therapy at a very young age to assure that my speech developed appropriately. At age 7, I underwent auricular reconstruction, which consisted of 5 surgeries over 18 months, performed by Dr. Burt Brent in Mountain View, California.

As I got older I became more self-conscious of my physical appearance in wearing a very noticeable head band style hearing aid. At the age of 13, I had the oval window drill out procedure done in my left ear only, performed by Dr Robert Jahrsdoerfer, at the University of Virginia School of Medicine. This procedure allowed me to wear an in-the-canal hearing aid. Although I feel that the hearing quality is not as great as with the bone-conducting hearing aid, I am more satisfied with the physical appearance of the in-the-canal aid. However, I still wear my BC hearing aid at home, because I still find that the level of sound amplification with the bone-conducting hearing aid is unparalleled with any in-the-canal aid that I have worn thus far.

I struggle with hearing in certain situations and have thus relied upon lip-reading in those instances where I am conversing face-to-face with another person. Listening on the phone or over loud-speakers can be challenging at times, so I prefer to communicate in person whenever

possible. Because I only have the in-the-canal aid in one ear, I cannot accurately locate the direction of sounds. Overall, my hearing impairment has not significantly impacted my social life or my ability to perform in school or at work. I participated in multiple sports from a young age up through high school, including baseball, football and wrestling.

I graduated near the top of my class in high school. I earned a BA degree in Biology at Hanover College, where I was also Vice-President of my fraternity, Beta Theta Pi. I continued my studies at the University of Texas at Austin, where I earned my PhD in Cell and Molecular biology with a focus in Neuroscience. I then obtained a Post-doctoral fellowship position at the Stark Neurosciences Research Institute at the Indiana University School of Medicine. I am currently a Senior Scientist at Neusentis-U.S. (formerly Icagen, Inc.), a research unit of Pfizer, Inc., in the Research Triangle. I am an electrophysiologist with my primary focus on ion channels which drive cellular excitability related to pain and sensory disorders.”



Bone conduction hearing aid



The Common Cough

By: Christine Lupiensi, FNP

Categories of a cough

- acute (of sudden onset) if it is present less than three weeks
- subacute if it is present between three and eight weeks
- chronic when lasting longer than eight weeks.

Characteristics of a cough

- non-productive (dry)
- productive (when sputum is coughed up)
- may occur only at night (then called *nocturnal cough*), during both night and day, or just during the day

Potential causes of a cough

In adults with a chronic cough, i.e. a cough longer than 8 weeks, more than 90% of cases are due to:

- postnasal drip
- asthma
- eosinophilic bronchitis
- gastroesophageal reflex (GERD)

Treating GERD

At Central Carolina Ears Nose and Throat (CCENT) we have Otolaryngologists, or ear, nose, and throat doctors that have extensive experience with the tools that diagnose GERD. The doctors at CCENT are specialists in the treatment of many complications of GERD including: cough. Gastroesophageal reflex disease or GERD, occurs when acid from stomach backs up into the esophagus. GERD can be seen in infants, children and adults. In infants and children, GERD can cause repeated coughing, and other respiratory problems such as sore throat and ear infections. In adults, more than half of the people with cough from GERD don't have any other symptoms.



Widex Zen Updates

Habituation is key in Zen Therapy

BY: J.P. Miller, MS CCC-A

It is estimated that 10 to 15% of the adult suffer from chronic tinnitus. Tinnitus is the perception of sound in the ears or head where no external source is present. The impact of these head or ear sounds on a person's life can vary from a mild irritation to a major disruption. In severe cases, sleep habits can be altered, family relationships strained, and the ability to work and concentrate compromised.

Frustrated patients are often told that there was nothing that could be done for tinnitus. They are typically told to just to live with it. After seeing many severe tinnitus patients at the clinic in recent months. I knew it was time to investigate possible solutions for this group of patients. I discovered Widex was offering a program called Zen therapy and I soon became involved with the program in February 2013.

To date I have fitted eight patients with Widex hearing aids that included Zen therapy program. Five out of the eight patients reported significant benefit from amplification and the Zen tones. The Zen option produces fractal tones that are generated in a manner based on the normal rules of music, but which are **not** predictable. This is paramount as the main goal of Zen therapy is **Habituation**- a process of ignoring the tinnitus stimulus without taking conscious effort and essentially trying to teach the brain to ignore the tinnitus so you do not have to focus on it consciously.

Tinnitus management usually involves a combination of counseling, stress reduction, and/or sound therapy. Constantly stimulating the brain with Zen tones (chime like sounds), can take the focus off the ringing, reduce stress, and promote relaxation. There are currently five pre-defined Zen styles available to the patients. But the pitch, tempo, and intensity of each can be modified by the audiologist to customize the Zen tones to the individual's needs and preferences.

I will continue to evaluate patients with severe tinnitus utilizing the Widex Zen therapy program. At this point, I believe it offers a superior, effective, FDA approved option to deal with tinnitus and hearing loss.

Zen Patient Comments



David Svendsgaard
Widex Fusion 440 RICS
Fitted 4-10-12

"I am a statistician at the U.S. EPA. I do a lot of work with the computer, attend meetings, and attend meetings on the phone.

When I got my first hearing aid 6 years ago, the first thing I noticed was the ringing in my ears. The hearing aid didn't help, it just made the ringing louder.

The Zen therapy program has improved my hearing. I have tinnitus in my left ear, and the hearing aid with the Zen program has helped me ignore the ringing sound. I know this because when I take the hearing aid off, I notice the ringing. I also have the music option on my hearing, and it has make listening to music much more enjoyable.

My wife says it is so nice for me to hear her when we are driving in the car. And I don't have to lean my bad ear towards a person now when talking to someone."

Tony Williams
Widex Dream 330 RICS
Fitted 9-12-13



"I have been having hearing problems for over 35 years which includes severe tinnitus. I finally decided to do something about it and went to Central Carolina ENT for an evaluation. Everyone was very helpful and I finally purchased a pair of Widex hearing aids with Zen.

The hearing aids are great and the Zen program has taken away ALL, and I repeat, ALL of the tinnitus I have had for over 35 years. Keep up the good work. I need to thank audiologist, Jonathan Miller, for his understanding of my hearing problems."