Meet Dr. Meyer…

Ted A. Meyer, MD, PhD joined the Department of Otolaryngology – Head and Neck Surgery at MUSC in 2004. He was named the Director of the MUSC Cochlear Implant Program. Dr. Meyer oversees all clinical and research protocols involving patients with cochlear implants.

Dr. Meyer grew up in St. Louis, Missouri and graduated from Washington University where he majored in Mathematics and was captain of the tennis team. In 1995 he graduated from the Medical Scholars Program with an MD and a PhD from the University of Illinois College of Medicine. His PhD was from the Department of Speech & Hearing Science. Dr. Meyer then completed his residency in Otolaryngology – Head and Neck Surgery at Indiana University, followed by a fellowship in Otology-Neurotology at the University of Iowa. Dr. Meyer then left the Midwest and the Big Ten to join the faculty at MUSC.

Dr. Meyer limits his practice to the evaluation and treatment of hearing and balance disorders in adults and children. Examples of his specialty areas include hearing loss, cochlear implants, ear infections, tympanic membrane perforations, cholesteatoma, otosclerosis, vertigo, Meniere’s disease, facial paralysis, congenital ear malformations, acoustic neuromas, glomus tumors, and other skullbase lesions.

Dr. Meyer has published 15 manuscripts, and 5 book chapters. He has received three grants to study mechanisms of speech perception with cochlear implants, and he frequently presents his results at national and international research meetings. Dr. Meyer is a fellow in the American Academy of Otolaryngology – Head and Neck Surgery.

Dr. Meyer lives with his fiancé on Johns Island.

Ted A. Meyer, M.D., Ph.D.
Director, MUSC Cochlear Implant Program
Assistant Professor of Otolaryngology - Head & Neck Surgery

The Annual MUSC Cochlear Implant Center Picnic was held Saturday, April 18, 2009 at Wannamaker County Park with over 160 attendees. It was an excellent opportunity for CI users and their families to meet and interact. MUSC provided the food and activities, and a good time was had by all. Next year’s picnic will be April 24, 2010. We hope to see you there!
On April 8, 2009, Keller Dowdy turned 10 months old. For most 10-month-old boys, the day would probably not garner much attention. Keller, however, spent the day at MUSC obtaining bilateral cochlear implants. In January, Keller had otitis media, an ear infection. Unfortunately, the ear infection was not routine, and Keller developed bacterial meningitis. The next six weeks were spent at MUSC receiving antibiotics and in rehabilitation trying to recover much of the neurological development that was lost during the illness.

Although Keller was making remarkable progress neurologically, his parents, Kathy and Jeff Keller, noticed that he was not responding to sounds. Keller’s hearing was evaluated by Kimberly Orr, Director, MUSC Audiology, and it was evident that the meningitis had affected his hearing significantly. Behavioral testing demonstrated no responses, otoacoustic emissions (OAEs) were absent, and no responses were present on the auditory brainstem responses under any conditions.

Keller also had a speech and language evaluation by Nevitte Morris who found Keller to have expressive, receptive, and pragmatic language delays secondary to his hearing loss.

Keller saw Dr. Meyer who ordered a CT scan and an MRI scan that demonstrated some bony growth, or ossification, from the meningitis in the cochlea. Both cochleae appeared to be patent for a cochlear implant, and surgery was scheduled for April 8.

In the operating room, we found that Keller’s inner ears, or cochleae, were substantially ossified from the meningitis. Surgery took about twice as long as expected, but Keller did well. Both implants were fully inserted into his cochleae, and electrodiagnostic testing performed by Meredith Edgerton demonstrated responses on both sides. Keller spent two nights in the hospital. Quite a day for a 10-month-old boy.

Keller did well at home, and he underwent his initial stimulation on April 24, 2009. He continues to progress and shows a clear behavioral reaction when sound is presented to his devices. The Dowdy’s and the CI team are excited about Keller’s prospects.

The number of patients treated through MUSC’s Cochlear Implant Program continues to grow at a significant rate each year. Keller was MUSC’s 300th CI patient since 2000!

Communication takes teamwork, and everyone’s effort helps the state progress towards maximizing speech and language in children with hearing impairments.

Nevitte Swink Morris, MSP, CCC-SLP, Cert. AVT
Introducing Stacey deVries, MS

Stacey deVries, M.S. has been a welcome addition to the MUSC Cochlear Implant Team within the Department of Otolaryngology - Head and Neck Surgery. Stacy joined the team in 2006 as a Speech-Language Pathologist. Stacey received her Master of Science in Rehabilitation in Communication Sciences and Disorders from the Medical University of South Carolina in 2006. She is a speech-language pathologist currently serving pediatric patients in the acute care and outpatient settings at MUSC. Professional interests include working with children with hearing loss and pediatric feeding/swallowing disorders. She is a member of the American Speech and Hearing Association and Alexander Graham Bell Association. Stacey is actively working towards certification in Auditory-Verbal Therapy.

Dr. Meyer Responds to Common CI Questions

**Are two cochlear implants better than one?**

Many patients who are cochlear implant candidates can be considered for either a single cochlear implant or for two cochlear implants. When two implants are placed at the same time, this is simultaneous bilateral implantation. When the devices are implanted at different times, this is sequential bilateral cochlear implantation.

Over the past few years, we have seen a dramatic increase in the number of patients opting for bilateral cochlear implants for themselves or for their children. Many patients in the MUSC Cochlear Implant Program have had their second side implanted, often many years after the first cochlear implant. In addition, we have performed simultaneous bilateral cochlear implants on children under the age of one and on adults over the age of 90.

Why two implants? Two ears help us to localize sounds in space and to hear speech in noise more clearly. A patient with a single cochlear implant has more difficulty in these dimensions than a patient with bilateral cochlear implants. Some patients with bilateral cochlear implants also feel that communication is, in general, easier with two implants instead of one. This is a hard concept to measure, but we feel strongly that it is another reason to consider bilateral cochlear implants.

Most insurance companies cover bilateral cochlear implants placed either simultaneously or sequentially if a patient meets criteria, and if bilateral implants are deemed appropriate.

**What are the current criteria for a cochlear implant?**

For a child to be considered for a cochlear implant he or she must have severe-to-profound sensorineural hearing loss and not demonstrate significant improvement in the development of speech and language using conventional highpowered hearing aids. These measures will be determined by the cochlear implant team. An adult must have severe-to-profound sensorineural hearing loss and also have difficulty communicating with conventional amplification.

The FDA criteria for implantation of adults state that the patient should obtain less than 50% of the words on the HINT sentence test in the ear to be implanted and less than 60% in the opposite ear or bilaterally. Medicare has more stringent criteria. Medicare rules allow implantation in patients who receive up to 40% on the HINT sentences.

A patient with conventional high-power hearing aids who has difficulty communicating and is interested in a cochlear implant evaluation should be tested at conversational speech levels using the HINT test to determine whether cochlear implantation is an option.

**What if I have pain around my implant site?**

Pain around an implant site may be caused by many things including trauma, infection, a magnet that is too strong, or for many other reasons. If you have pain around your implant site please call the cochlear implant program for a follow up visit with your surgeon and/or audiologist.

**I have single-sided deafness and good hearing in the other ear, am I a cochlear implant candidate?**

Currently, cochlear implant candidates must have significant hearing loss in both ears. As cochlear implant technology improves the criteria might change. At present a patient with single-sided deafness may choose to do nothing with that ear. They may also consider a CROS hearing aid system, consisting of a microphone on the non-hearing ear that sends information across to a hearing aid in the good ear. The patient can also choose to have a BAHA. The BAHA is a bone anchored hearing aid system in which a titanium post is secured to the skull behind the ear through an outpatient surgical procedure. After three months, the post integrates into the skull and an external receiver and bone vibrator is attached to the post. At this time, sounds coming from the direction of the ear that has no hearing can be heard by the good ear.
The 2008 Camp Communication Vacation was July 14-18. This marked the camp’s tenth year. Camp Communication Vacation (CCV) is a week-long summer camp designed to serve children with hearing impairments between the ages of 4-12 from throughout the Lowcountry.

CCV provides communication and language stimulation in a fun and interactive environment that fosters social interaction among peers. CCV also serves to provide graduate students studying to become speech-language pathologists with a clinical experience in aural habilitation. Campers are children who use spoken language and/or sign language as their primary mode of communication. CCV builds camaraderie among the children representing a unique patient population, and provides a therapeutic experience for them.

Last Summer’s theme was From HEAR to There with a transportation theme used throughout camp. Throughout the day all crafts, stories, games, language, and science learning activities were in some way related to transportation and safety. The children went to Blackbeard’s Cove for the field trip where they rode go-carts, played put-put and arcade games, played in jump castles, and ended the event with pizza and snacks! A lot of FUN happened “From HEAR to There!”

The 2009 CCV, Cheering for Hearing, was sports themed and ran from July 20-24. For more information about upcoming CCVs contact Nevitte Morris at 843-792-6136 or swink@musc.edu.
Cochlear Implant Clinical Team

Paul R. Lambert, M.D.
Professor and Chairman
Director, Otology-Neurotology
M.D.: Duke University
Residency: UCLA Medical Center
Fellowship: House Ear Institute, Los Angeles
SPECIAL INTERESTS: Adult and pediatric hearing loss, middle ear infections and cholesteatoma, acoustic tumors, cochlear implants

Ted A. Meyer, M.D., Ph.D.
Assistant Professor
Director, Cochlear Implant Program
M.D.: University of Illinois
Ph.D.: University of Illinois
Residency: Indiana University
Fellowship: University of Iowa
SPECIAL INTERESTS: Adult and pediatric hearing loss, middle ear infections and cholesteatoma, acoustic tumors, cochlear implants

David R. White, M.D.
Assistant Professor
Director, Pediatric Otolaryngology
Director, MUSC Airway and Aspiration Center for Children
M.D.: Medical University of South Carolina
Residency: University of North Carolina, Chapel Hill
Fellowship: Cincinnati Children’s Hospital
SPECIAL INTERESTS: Pediatric otolaryngology, airway reconstruction, pediatric otology, velopharyngeal insufficiency, cleft palate repair, pediatric sinus and allergy, pediatric neck masses

Kimberly A. Orr, M.A.
Director, Audiology
M.A.: Ohio State University
SPECIAL INTERESTS: Identification hearing impaired infants and children; Habilitation and management of hearing impaired infants and children

Abby C. Connell, MEd
Instructor
MEd: University of Georgia
SPECIAL INTERESTS: Pediatric and adult cochlear implants

Stacey deVries, M.S.
Speech-Language Pathologist
M.S.: Medical University of South Carolina
SPECIAL INTERESTS: Pediatric dysphagia and pediatric hearing loss

Meredith H. Edgerton, AuD
Instructor
AuD: University of North Carolina, Chapel Hill
SPECIAL INTERESTS: Identification, assessment, and habilitation of hearing impaired infants and children; cochlear implants

Nevitte Swink Morris, M.S.P., CCC-SLP Cert. AVT
Speech-Language Pathologist, Certified Auditory-Verbal Therapist
M.S.: University of South Carolina
SPECIAL INTERESTS: Pediatric and adult hearing loss


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It’s no secret that MUSC offers an unparalleled level of expertise in Otology Services for patients of all ages.

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