

# Listen from Ear to Ear Tips of the Month

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OSDH Newborn Hearing Screening Program

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## UPCOMING EVENTS FOR FAMILIES:

### Bring your box Workshop

Help families learn about the accessories that their child has for their cochlear implant and how to use them

August 4, 6-8 p.m.  
August 5, 10 a.m.-Noon

Integris Cochlear Implant Clinic  
3434 NW 56th  
Suite 101  
Oklahoma City, OK

Call to register  
405-947-6030



**AABR tip:** For low electrode impedances, try one drop of saline on electrode. Another option is baby wash or NuPrep on a small piece of gauze and scrub skin gently. Alcohol may dry skin out too much.

## How is bilirubin and hearing loss related????

Clinicians need to be aware of risk factors for hearing loss and the need for follow-up hearing screenings. The Joint Committee on Infant Hearing (JCIH) set forth risk factors for hearing loss (birth-28 days)

\*Family history of hearing loss

\*Placement in a level II or III nursery

\*Infant had exchange transfusion

\***Infant had serum bilirubin level of  $\geq$  15mg/dL**

\*Infant suspected of having a congenital infection (neonatal herpes, cmv, rubella, toxoplasmosis, syphilis)

\*Infant has craniofacial anomalies (such as pinna/

ear canal abnormality, cleft lip/palate, hydrocephalus). A frequent question asked by hearing screening clinicians is "How is bilirubin and hearing loss related????"

The definition of bilirubin: Pigment in bile created during the breakdown of hemoglobin, which is then excreted from the body. Bilirubin can build up in the blood, causing the skin to take on the yellow discoloration known as jaundice. If bilirubin gets too high, it can be treated. Phototherapy is usually very effective. At high, more extreme levels, an exchange transfusion may be used, to rapidly remove the toxic bilirubin from the

blood.

Severe hyperbilirubinemia can result in **damage** to the auditory nerve and/or brainstem nuclei in the auditory system, neurons in the cochlear nuclei, in particular are severely damaged. It can involve lesions of the basal ganglia and can effect the oculomotor system, vestibular systems and the cerebellum. Many infants and children diagnosed with a hearing disorder referred to as Auditory Neuropathy Spectrum Disorder (a topic covered in later newsletters) have a history of hyperbilirubinemia.

## Follow-up protocol for risk factors for late-onset hearing loss

The Oklahoma Newborn Hearing Screening Program sends an initial letter to families and primary care providers recommending follow up for babies that either do not pass the initial screening or for babies who pass but have a risk factor for late onset hearing loss. For babies with risk factors, another letter is sent out at 5 months of age recommending another hearing screening by six months of

age. The Joint Committee on Infant Hearing (JCIH) Position Statement 2007 recommends that infants who pass the initial screening but have a risk factor should have at least **one diagnostic audiology assessment by 24-30 months of age**. Early and more frequent assessments may be indicated for a child with cytomegalovirus infection, syndromes associated with progressive hearing

loss, postnatal infections, for children who received extracorporeal membrane oxygenation (ECMO) or chemotherapy and when there is caregiver concern, or a family history.

\*If you have a specific topic or question you would like to ask, we want to know!

\*Submit your questions for future newsletters!

\*If you have specific questions about hearing loss, equipment etc, contact us anytime!