

# Oregon EHDI Newsletter

December 2010



## In this issue

2010 Noisy Toy Naughty List

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Screening Tips for Hospital Staff

\*

Hip, Hip, Hooray for Hippotherapy!

\*

Free Infant & Toddler Hearing Screenings

\*

Mild Hearing Loss: What To Do?

\*

Annual EHDI Workshops

\*

Study Confirms Newborn Hearing Screening Benefits

\*

Contact Us

\*

More Noisy Toys Info.



## 2010 Noisy Toy Naughty List

### Are You Ready for the Holidays? Is Your Hearing??

The Sight and Hearing Association has released their own naughty list of noisy toys.

Consider this: Sounds measuring 85 dB (decibels) or louder can permanently damage your hearing. The louder the sound, the less time it takes to cause damage.

A sound measuring 85 dBA is safe for up to 8 hours.

A sound measuring at 100 dBA is only safe for 15 minutes.

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*This year's top offenders by age:*

#### **Bell Riderz Block Blaster blared at 129.2 dB**

Recommended for age group: 4-8 yrs

#### **Cars Shake 'N Go Ramone produces 119.5 dB**

Recommended for age group: 3-7 yrs

#### **CAT Honk & Rumble Wheel produces 96.6 dB**

Recommended for ages 2-5

#### **B.FunKeys produces 96.1dB**

Recommended for ages 6 months-3 years

#### **Bruin Musical Teething Toys produces 86dB**

Recommended for ages: 3 months +

For more information on noisy toys, see the table on the last page.

# Screening Tips for Hospital Staff: What to Say to Parents

## Oregon EHDI Hearing Screeners' Guide

*Note: Information about screening equipment and other updates have been added to this section since we published "Part 1" in July's issue, so the entire article is here for your reference. We will re-publish this periodically as it is updated.*

All screeners should introduce themselves to the parents and let them know why they are there when entering the room. If the screen is done in the nursery or in the NICU, the results and information should be put in the chart and marked so that the physician and/or nurse knows the parents need to be informed.

Some common questions that are asked by parents are listed below. If any other questions are asked, refer the parents to the local audiologist. If no local audiologists are available, please call EHDI for assistance.

When the parent asks:

### **"Why are you testing my baby's hearing?"**

Answer:

"The State of Oregon started a mandatory newborn hearing screening program in June of 2000. All newborns are tested for hearing."

If parent pursues with, **"Why?"**

"It is best to find out if there is a hearing loss in your child as early as possible. Without a newborn hearing screening, hearing loss is usually identified between 24-30 months. Identifying hearing loss and providing early intervention prevents delays with speech and language development."

### **"What is that test doing and how is it testing my baby's hearing?"**

**For AABR equipment:** "We test using the Automated Auditory Brainstem Response (AABR). This test is performed by presenting sounds into the ear with ear muffins or tiny insert earphones. Electrodes pick up the auditory response by the brain. The equipment analyzes the response and matches it to a pre-programmed template to give us a "pass" status or "refer" status."

**For OAE equipment:** "We test using the Otoacoustic Emissions (OAE) test. This test is performed by presenting sounds into the ear using small insert earphones. The sound stimulates the hair cells and pick up a response from the hair cells that is then recorded. The equipment analyzes the response and matches it to a pre-programmed template to give us a "pass" status or "refer" status."



### **If the baby PASSES in both ears, you say:**

"Your baby has passed the hearing screen at this time. There is a list of milestones that I will give you along with your pass form. If there is a family history of hearing loss, or if you notice any signs of possible hearing loss, please call to make an appointment with an Audiologist for further evaluation."

**NOTE: DO NOT say that the baby's hearing is NORMAL - this is just a SCREEN.**



When the baby **REFERS** in one or both ears, you say:

“Your baby did not pass the screening at this time. It is recommended that you return for diagnostic Audiological Follow-up in the next 2-6 weeks.”

If the parent then asks,

**“Why didn’t my baby pass? Does this mean that he/she has a hearing loss?”**

“This test is just a screen. I am unable to interpret results from this test today. Infants can refer for reasons aside from hearing loss. Sometimes the problem is temporary and resolves itself (i.e. excess vernix in the ear). It is important that the problem is identified. I will refer you on to an Audiologist for further diagnostic testing.”

**\*\* NEVER SAY THAT THE BABY HAS A HEARING LOSS OR IS DEAF.**

If the parent then asks,

**“What do I need to do to complete the testing?”**

“I will give you a list of diagnostic audiology centers closest to you. You may call the number on your follow-up form to make an appointment to see the audiologist. Your pediatrician will also receive information regarding your baby’s need for follow-up.”

**“What is the Audiologist going to do?”**

“The audiologist will perform a full diagnostic evaluation. The testing will be similar to what we’ve done here today, although it will be more thorough and the audiologist will be able to interpret the results for you. The audiologist will do testing to determine the sound levels at which the baby hears for different types of sound. These sounds are important for speech recognition. The results of this test will determine if the child has any hearing loss and the degree of hearing loss. Similar to the hearing screening, the baby will need to be calm during testing, preferably asleep.”

**“Will the test hurt my baby?”**

“Just as in today’s testing, the testing the audiologist will do is safe and painless. Please feel free to call the audiologist if you have any questions before your appointment.”

**Note: Do not mention hearing aids at this point!!**

**“Can I see the Audiologist before I leave? I want to get this over with as soon as possible!”**

“It is important to follow up with the hearing evaluation soon, however because this test is more involved, we recommend your baby is at least 2 weeks old at the time of testing. (\*\*This means that if the baby is born premature, it is recommended they wait until they are 2 weeks CORRECTED AGE) I will give you the information for the Audiologist and you can call and make an appointment that is best for you.”

**“How come my baby can have the hearing screen now but has to wait to have the diagnostic test? What was the point of even doing the test today then?”**

“The test we do here in the hospital is just a screen. If the baby needs further testing, it is best for your baby to be older because the diagnostic test is a little more involved. Those few extra weeks allow for further neural maturation and increase the chances of getting a more complete diagnostic evaluation.”

If the parent asks,

### **“Do I have to do this now? Why can’t I just wait to see if my baby shows any signs of hearing loss?”**

“Research has shown that if a baby is identified by 3 months of age, they can be in early intervention by 6 months of age. If they can be in early intervention by 6 months of age, they will most likely have typical speech and language development.”

**You may add if you feel necessary:** “If you wait until your child shows signs of hearing loss, there is most likely a delay in speech and language already present.”

### **Sometimes it may also be okay to tell the parents:**

“It is best to have the test administered by a professional. Making noises in your baby’s ears or making loud, startling sounds to see their response is not an accurate method in determining hearing sensitivity and can lead to unnecessary anxieties about your baby’s hearing. All babies react differently to sounds.”

### **“What if my baby really has a hearing loss?”**

“Well, there are different degrees of hearing loss. The audiologist will go over the results in detail with you and what your options are if a hearing loss is present.”

**\*\*(If the parent presses further on this point, have them call an audiologist.)**

Some statistics:

- 1-3 babies out of 1000 are born with a severe sensorineural hearing loss
- 3 babies out of 1000 are born with a moderate sensorineural hearing loss
- The risk of hearing loss is higher for infants who spend time in the NICU compared to well baby nurseries
- It is important to screen ALL babies because 50% of babies with hearing loss will have NO KNOWN risk factors or family history of hearing loss
- Of the babies that refer on for further diagnostic testing, between 5-20% will have hearing loss



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## **HIP, HIP, HOORAY FOR HIPPO THERAPY!**

### **A Parent’s Story by Jill McManigal**

It is not uncommon for me to see a perplexed look when I say the word “hippo therapy”. I often end up staring at a blank face with the question, “What in the world is hippo therapy?” Last summer, we discovered hippo therapy. With this new type of therapy, it has been nothing short of a miracle for my profoundly deaf son Caleb. Now, at age five, we are finally seeing the progress we had only dreamed about years ago because of this amazing therapy.

My son Caleb was born deaf, identified at birth and was aided at a very early age. When he was two years old, our concerns regarding his development in speech and language began to deepen. Caleb was not making very much progress and we had growing suspicions that he was just not hearing what he should be with his hearing aids. When he was 2 ½ years old he was identified as profoundly deaf and a candidate for cochlear implants.

A few weeks later, a CT scan revealed something very interesting about Caleb’s inner ear. His Ear, Nose and Throat doctor had a difficult time reading the CT scan and making sense of what should be his cochlea, since this part of his inner ear was completely malformed. We had always made the connection between the ear and balance, but could Caleb’s two malformed cochleas have anything to do with his balance? We also noticed that he was extremely clumsy and would often trip and fall.

continued with speech therapy. To help with his newly identified balance and sensory issues, he also started occupational therapy. Yet a year and a half later, with attending oral school and regular therapy sessions, Caleb was not making the progress that we had hoped for. So we thought we'd try something different.

So what is hippotherapy? Does it have anything to do with hypnosis? Or hippos? No, it does not involve either hypnosis or hippos, but horses. The American Association for Hippotherapy (AHA) describes it as, "... a physical, occupational, and speech-language therapy treatment strategy that utilizes equine (horse) movement as part of an integrated intervention program to achieve functional outcomes... The horse provides a dynamic base of support, making it an excellent tool for increasing trunk strength and control, balance, building overall postural strength and endurance, addressing weight bearing, and motor planning." With a licensed occupational therapist and two volunteers, weekly sessions include playing games like ring toss, darts and speech drills while riding (either forwards or backwards) on a horse.



Since beginning hippotherapy five months ago, Caleb's progress has been on an uphill climb. We have seen a tremendous difference in his concentration, coordination, motor planning, balance, sensory awareness and yes, improvement in his speech and language acquisition. Hippotherapy has miraculously delivered all that it intended to do and then some for my son. Though he still has a long road ahead, the progress that we once hoped for is becoming a reality thanks to hippotherapy.

More info: [www.americanhippotherapyassociation.org](http://www.americanhippotherapyassociation.org)

Local program: [www.forwardstride.org](http://www.forwardstride.org)

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## Free Infant and Toddler Hearing Screenings

Free hearing screenings are now available for babies and children up to five years old. Anyone can make an appointment to have their child's hearing screened.

The screening is noninvasive and takes about ten to twenty minutes. Babies who are born in hospitals usually get their hearing screened before they are discharged. Many of those babies should be re-screened. Children born out of hospitals don't get their hearing screened unless their parents take them somewhere to get it done. The cost is usually \$100, maybe beyond the reach of the uninsured, which is why these free screening clinics are so important.

### THE FACTS:

1. Hearing loss is hard to identify without testing - it can be subtle, yet serious.
2. Six out of every 1,000 babies born will have some degree of hearing loss.
3. Hearing loss may result in delays in speech and language development.
4. Early identification and intervention enhances your child's potential for speech and language development.

### UPCOMING FREE SCREENING CLINIC:

Wednesday, January 26, 2011  
Portland State University Audiology Clinic  
Neuberger Hall, Room 85  
725 SW Harrison  
Portland, OR 97201

**You must make an appointment for a free screening by calling Melinda at 503-725-3070.**

# Mild Hearing Loss: What To Do?

by Don Plapinger, Ed.D CCC-A Director Clinical Audiology, OHSU

In 2000, the Oregon Legislature passed a law mandating that all infants born at birth centers with more than 200 births a year had to have a hearing screening prior to leaving the hospital. Smaller birthing centers had to provide information to families on where they could get a free screening. Prior to this law, the average age of identification of childhood hearing loss was approximately 2 ½ years. Since the law's inception this has dropped to under 6 months. Clearly this has been a great advancement in treating childhood hearing loss.

When we think about hearing loss, we tend to focus on children with severe to profound hearing loss. In fact, due to their overt lack of responses to sound, children with severe to profound hearing loss were identified at a relatively young age. It was those children with mild hearing loss, high frequency hearing loss and unilateral hearing loss that went unidentified, often not till over 5 years of age. Due to their late identification, children in these categories often had significant delays in communication, socialization, and academics.

Part of the problem is our perception of the terminology used to classify hearing loss. We classify hearing loss by degree, normal, mild, moderate, severe, and profound. If we look at this terminology in another context, we can get a different perspective. Imagine you are at a picnic and get involved in a softball game. The next day your arm is sore and you go to the doctor, and you are diagnosed with a mild sprain. You think nothing of it, no big deal, and it goes away in a week or so. The same applies to hearing loss, as a parent you hear the word mild and you think “not a big deal”. This is supported by observing your child. Your child startles to sound, turns to their name and is even acquiring a few words. **But, the mild hearing loss is nothing to be ignored, it can have significant impact on a child's development.**

**What is a mild hearing loss?** That depends. In adults, normal hearing is from 0-25 decibels (dB). However, at OHSU for children, normal hearing is between 0 and 15dB. Most children have hearing at 0dB or even better. A mild hearing loss would be hearing levels between 15 and 35-40dB. To get an appreciation of what this means, we need a reference point. Our reference point is the level of “normal” conversation. This is approximately 45dB. So a child with normal hearing, let's say 10dB, listens to normal speech, 45dB, that is a 35dB “dynamic range”. Now our child with the mild hearing loss, 30dB, and the signal stays the same, 45dB, that child only has a 15dB dynamic range.

**What is the impact of mild hearing loss?** To answer this question, let's look at the child with the 30dB hearing loss. With speech coming in at 45dB, words will sound much softer to this child with mild loss than they do to a child with normal hearing. The impact of this will be most noticeable as we increase the distance from the speaker to the child, and when we talk to the child in a noisy environment. The result of this will be a delay in speech, language, and conceptual development. Some of these may include, omission of grammatical markers such as the /s/ at the end of a word that signifies plurals or possessions; delay in the use of past tense markers like /ed/ and what we might call “garbled speech”.

**What can be done for children with mild hearing loss?** The most important measure to take for children with mild hearing loss is the fitting of hearing aids. Unlike children with severe or profound hearing loss, children with mild hearing loss will receive immediate and noticeable benefit from properly fit amplification. Like children with more severe hearing loss, children with mild hearing loss should be enrolled in an early intervention program that focuses on the use of listening to develop spoken language. Children with mild hearing loss should continue to have their hearing evaluated as it is not unusual for hearing loss to be progressive. During the first year, hearing should be evaluated every three months. After one year hearing

should be evaluated every 6 months or at the recommendation of the audiologist. At a minimum, all children with hearing loss should have yearly hearing assessments.

The benefits of the newborn hearing screening program in Oregon is that we are now identifying children with all degrees of hearing loss from mild to profound. This allows us to work with families to initiate appropriate intervention. Through this intervention program all children with hearing loss regardless of degree can have access to information that will allow for the development of spoken language.

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## Annual EHDI Workshops Continue Educational Opportunities

In recent months, EHDI sponsored educational workshops for audiologists and hospital newborn hearing screening coordinators. These events not only provided an opportunity for learning new things or refining attendees' existing knowledge, but also encouraged and strengthened EHDI's partnerships with hospital staff and audiologists around the State.

Over 35 audiologists attended September's Pediatric Audiology Training led by keynote speaker K. Shane Moodie, M.Cl.Sc. Dr. Moodie is the Clinical Supervisor in Audiology at the School of Communication Sciences and Disorders, University of Western Ontario, Canada. He presented on "Hearing Assessment and Hearing Instrument Fitting in Children."

November's Newborn Hearing Screening Coordinator training was attended by 32 hospital staff members. In all, 22 Oregon hospitals were represented. EHDI staff presented on various topics including proper screening protocols, EHDI's history and mission, and data gathering and reporting through the new Oregon Vital Events Registration System (OVERS). Hospital staff also spent time together, discussing issues and brainstorming solutions to common challenges.

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## Study Confirms Newborn Hearing Screening Leads to Better Developmental Outcomes\*

It is widely thought that the earlier permanent childhood hearing impairment is detected, the better will be the developmental outcome. A new study published in the Journal of the American Medical Association this October, supports this idea. Children ages three to five years with permanent hearing loss who were identified by newborn hearing screening had better developmental outcomes than those whose hearing loss was detected by hearing screening at a later age.



The study took place in the Netherlands from 2003 through 2005, at a time when all regions of the country were transitioning from behavioral hearing screening at approximately nine months to physiologic screening (OAE and ABR) during the newborn period. The main outcomes measured were: education, spoken and signed communication, general development, language development, and quality of life.

Subscribers to the Journal of the American Medical Association can view the complete study at:

<http://jama.ama-assn.org/cgi/content/full/304/15/1701>

\*Many thanks to Washington State's EHDDI Program for contributing this article.

# Happy Holidays

From

Oregon EHDI!



## Contact us

**EHDI Program questions: 1-800-917-HEAR (4327)**

**Web site: <http://www.oregon.gov/DHS/ph/ch/hearing/index.shtml>**

**Submit newsletter contributions to [julie.a.hass@state.or.us](mailto:julie.a.hass@state.or.us)**

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## Sight and Hearing Association: Noisy Toys Study 2010

Toy	Manufacturer	Recommended Age Group	Type of Toy	Decibel level dB(A)	
				0 inches	10 inches
Bell Riderz Block Blaster	Bell Sports, Inc.	ages 4-8	Hand	129.2	112.9
Cars Shake 'N Go Ramone	Mattel, Inc.	ages 3-7	Floor/Hand	119.5	80.3
Transformers Optimus Prime Cyber Sword	Hasbro	4+	Hand	110.1	82.8
True Heroes Sonic Battle Blasters	Geoffrey, LLC	3+	Hand	110	85.1
CAT Mini Mover	Toy State Intl Ltd.	3+	Floor	104.8	86.4
Rocket Boost Iron Man 2	Hasbro	3+	Hand	103.2	76.6
Road Rippers Rush & Rescue Fire Truck	Toy State Intl Ltd.	3+	Floor	101.6	82.9
Interaction Morris	Learning Curve Brands, Inc.	3+	Floor	98.7	78.9
Proto Bat-Bot Figure	Mattel, Inc.	4+	Hand	98.6	82.9
CAT Honk & Rumble Wheel	Toy State Intl Ltd.	ages 2-5	Hand	96.6	90.7
Dora Tunes Microphone	Fisher Price, Inc./Mattel	3+	Hand	96.3	74.9
B. FunKeys	Battat Inc.	6 mo-3	Hand	96.1	80.5
Dora Magic Adventure Wand	Fisher Price, Inc./Mattel	3+	Hand	94.8	82.8
Sesame Street Singing Pop-Up Pals	Mattel, Inc.	ages 1-3	Floor	93.6	83.8
Bruin Musical Teething Keys	Geoffrey, LLC	3 mo.+	Hand	86	62.7
Fisher Price Laugh & Learn Learning Phone	Fisher Price, Inc./Mattel	6-36 Mo.	Hand/Ear Toy	84.1	62.2
Bruin Mini Kitchen	Geoffrey, LLC	2+	Table-top	83.1	71.1
Bruin Lights & Sounds Fire Truck	Geoffrey, LLC	2+	Floor	82.7	68

All measurements were taken with a calibrated sound level meter, A-weighted scale, fast-response.

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www.sightandhearing.org 800/992-0424