



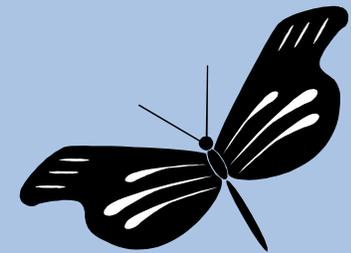
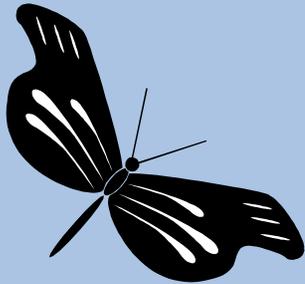
*Perfecting Your Screening
Technique*

“Meet Me” Call

July 7, 9, & 12, 2010

Why is Infant Hearing Screening Important?

Screening is the first step in determining which babies need additional testing to identify a hearing loss.



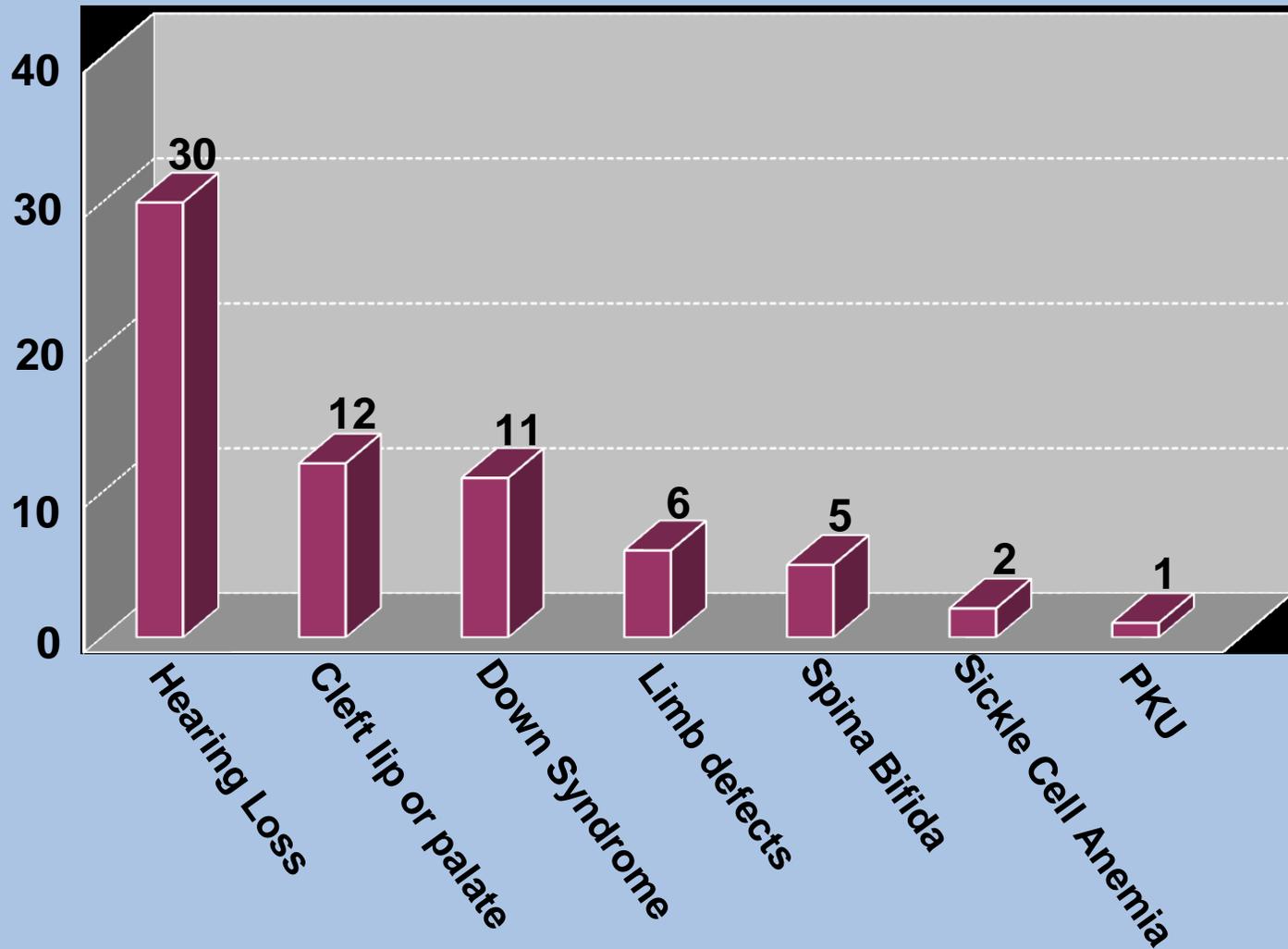
Why is Early Identification of Hearing Loss so Important?



Hearing loss is the most frequent birth defect

- Every day, 33 babies (or 12,000 each year) are born in the United States with permanent hearing loss.
- Approximately 3 out of every 1000 newborns are born with hearing loss.

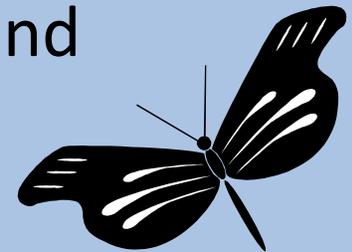
Incidence per 10,000 of Congenital Defects/Diseases

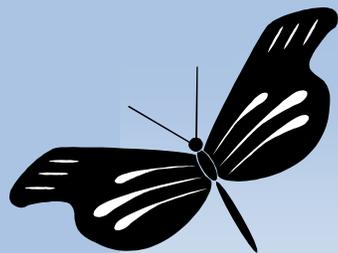


Why is Early Identification of Hearing Loss so Important?

Undetected hearing loss has serious negative consequences.

- The most critical period for developing speech and language is between birth and three years.
- Without newborn hearing screening, hearing loss is detected late, resulting in delayed speech and language development.

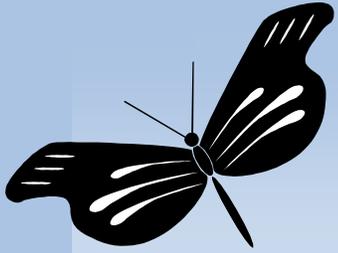




Perfecting Your Screening Technique will:

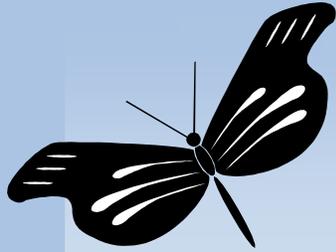
- Lower Referral Rates
- Decrease Screening Time
- Decrease Screener Frustration
- Improve the Quality of Your Infant Hearing Screening Program.





The Screening





Testing Environment

A QUIET ENVIRONMENT IS A MUST!



- Post a sign to alert others that a hearing screening is in progress.
- Screen in a quiet area away from ringing phones and conversation.
- Move away from noisy equipment (alarms/beeps)
- Keep conversations among screeners to a minimum.

QUIET PLEASE!!!

**NEWBORN HEARING
SCREENING IN
PROGRESS!**





Preparing the Baby for Screening

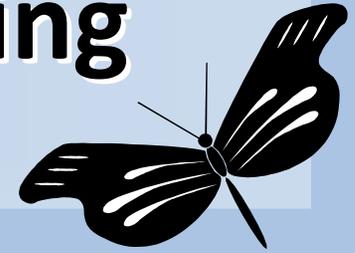
OPTIMAL STATE FOR SCREENING BABIES

- Swaddled
- Well Fed
- Comfortable
- Quiet (preferably sleeping)



A happy baby makes for a happy screener!

Newborn Hearing Screening Methods



- **OAE** – Otoacoustic Emissions



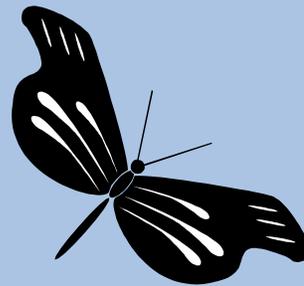
- **ABR** – Automated Auditory Brainstem Response



Otoacoustic Emissions (OAEs)

What are they?

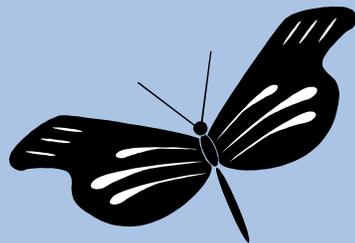
- Very soft sounds produced by a normal ear that are measured in the ear canal
- Generally, OAEs are not present when there is a hearing loss

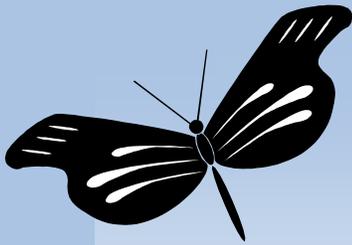


Auditory Brainstem Response (ABR)

What is it?

- A response from the auditory pathway
- Recorded from electrodes on the baby's head
- Generally not present when there is a hearing loss

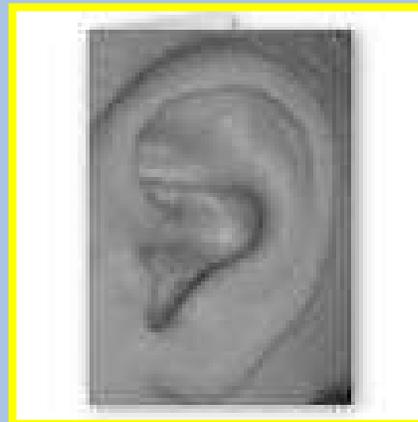


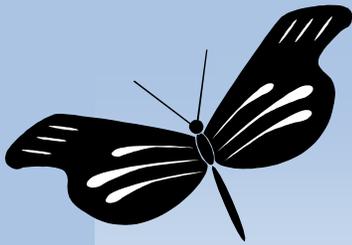


OAE SCREENING TIPS

INSPECTING THE EAR

- Visually inspect ear canal for debris (wax, blood or vernix)
- Gently massage ear canal if debris is filling the ear canal



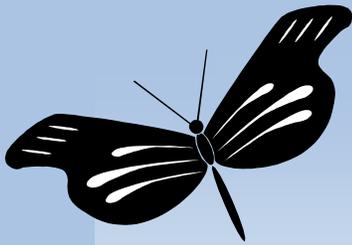


OAE SCREENING TIPS

CHOOSING THE PROPER TIP

The probe fit is the most important part of the screening and the most likely to cause problems!

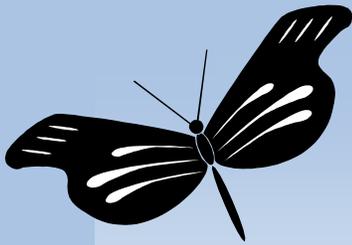
- Choose the tip that fits snugly into the baby's ear canal.
- Make sure that the tip is seated properly on the probe.



OAE SCREENING TIPS

PROBE PLACEMENT

- To insert the tip, gently pull the side of the ear up toward the top of the baby's head and out, so that the ear is pulled slightly away from the baby's head. This will help open the ear canal and ensure a better fit.
- Gently insert the tip as far as necessary for the probe to remain in place without support. Do not hold the probe during screening.

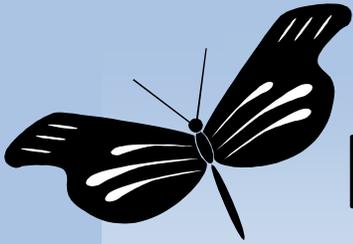


OAE SCREENING TIPS

SCREENING THE BABY

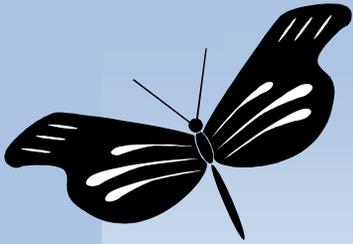
When the baby has settled, perform the OAE screening.





If the Baby Does Not Pass

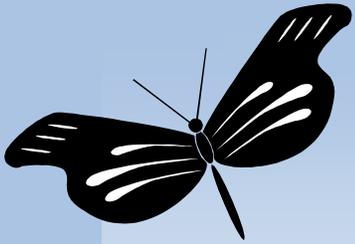
- **Remove the probe and check ear for debris**
 - If debris is present, gently massage ear canal
- **Check the probe tip for debris**
 - If debris is present, clean or replace probe
- **Reposition the probe and run the test again**



ABR SCREENING TIPS

ATTACHING THE ELECTRODES

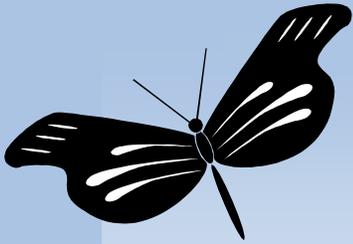
- Clean the electrode sites before placement of electrodes
- Be careful not to touch adhesive surface of electrodes
- Attach electrodes to spring clips prior to placing electrodes onto baby
- Place electrodes as directed by manufacturer



ABR SCREENING TIPS

ELECTRODE PLACEMENT IS IMPORTANT!!

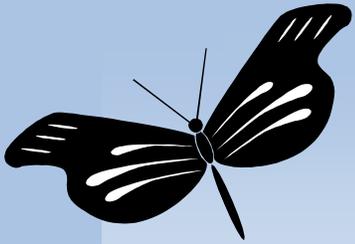
- Better contact = better impedance = better screening outcome
- Spending time to get the correct electrode placement is a must!
- The lower the impedance, the quicker the screening!



ABR SCREENING TIPS

CONNECTING EARPHONES

- If you are using earphones, attach connectors to ear phones prior to placing the earphones on the baby
- Use a gentle rolling motion (front to back) gently press the earphone to gain a tight seal
- Keep hair away from earphones
- Place earphones over both ears

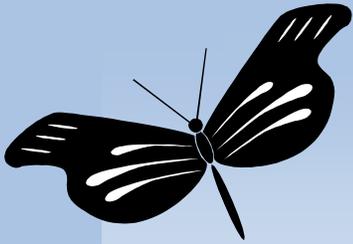


ABR SCREENING TIPS

SCREENING THE BABY

When the baby has settled, perform the ABR screening.

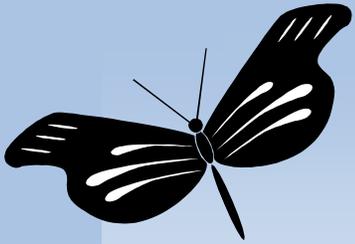




ABR SCREENING TIPS

Myogenic (Muscle) Noise

- Myogenic noise is created by the contraction of muscles as the baby moves
- Myogenic noise can interfere with the brainwave response from the hearing nerve
- Excess myogenic noise will slow or stop the ABR screening

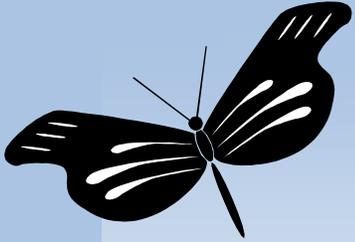


ABR SCREENING TIPS

Reducing Myogenic Noise

- Calm and swaddle the baby
- Feed the baby if necessary
- Remove pacifier if baby is sucking hard

The lower the myogenic noise, the quicker the test. Take the time to soothe and calm the baby!

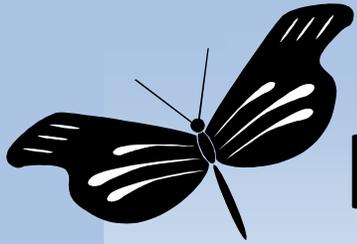


ABR SCREENING TIPS

ELECTRICAL NOISE

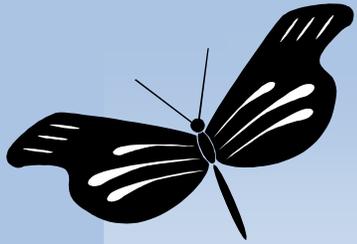
Electrical noise is interference created by electrical outlets and equipment surrounding the baby.

- Reduce electrical noise by moving away from large electrical appliances (refrigerators/air conditioning units/electrical doors etc.)
- Reduce electrical noise by moving to a different electrical outlet in a quiet area.



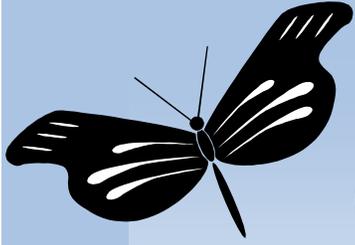
If the Baby Does Not Pass

- Check placement and seal of earphones
- Ensure proper placement of electrodes
- Check cable and cord connection
- Check electrical noise
- Check noise in the environment
- Make sure that baby is asleep
- **TEST AGAIN!**



Conclusion





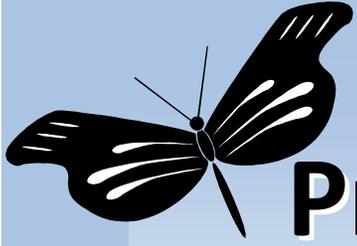
OAE/ABR SCREENING TIPS

*****KNOW WHEN TO QUIT!*****

Remember, your goal is NOT to pass every baby!

Newborn Hearing Screening's goal is to identify newborns at risk of hearing impairment and to assure that follow-up audiometric screening, diagnosis, and referral to intervention is provided.

Excessive screening may result in a baby with hearing loss falsely passing the hearing screening.

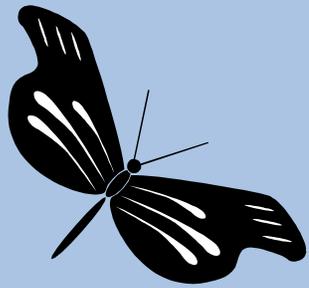


Proper Screening Techniques

BENEFITS

- Lower Referral Rates
- Quicker Screening Times
- Less Screener Frustration
- Lower Program Costs
- Quality Infant Hearing Screening Program

Training and Technical Assistance



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The background of the slide is a light blue gradient. It features several stylized butterflies and flowers. In the top left, there is a large butterfly with orange and red wings. To its right is a blue butterfly with white markings. Below these are a purple flower, a yellow and red flower, and a green butterfly. At the bottom, there is a yellow butterfly and a blue butterfly. The text "Questions and Answers" is centered in a bold, black, sans-serif font.

Questions and Answers