

AUDIOLOGICAL EVALUATION  
TEST DATE: March 16, 2013

ISTORY

**Name:** Caitlin Calvin

**Age:** corrected age 4 months (corrected for 13 weeks prematurity)

**Reason for visit:** Follow-up hearing evaluation

**Hearing history:** During a neonatal stay in the UWMC NICU, Caitlin did not pass a newborn hearing screening using the brainstem auditory evoked response (BAER) test on September 30, 2012; she did not pass the BAER screening in both ears.

**Middle ear history:** Caitlin has a negative history of ear infections.

**Family history of childhood hearing loss:** Negative.

**Medical History:** Born at 27 weeks gestation, 882 grams. Neonatal history is significant for: chronic lung disease, retinopathy of prematurity stage I, e. coli sepsis, multiple doses of antibiotics concurrently with loop diuretics, and a diagnosis of congenital cytomegalovirus (CMV) infection.

**Developmental progress:** Caitlin's parents report that she startles to sounds and calms to voice.

**Medical home:** Caitlin lives with her parents in Bellingham and is followed by Dr. Smith at Whatcom Pediatrics.

TEST RESULTS

The BAER tests were conducted after Caitlin fell into natural sleep.

**Brainstem Auditory Evoked Response**

**Procedure:** The intensity of the stimulus was manipulated to determine the lowest intensity which elicited a detectable response, or threshold of the response. Upon completion of the test, the resulting BAERs were analyzed both in terms of the presence of a response and the latency of waves within each response. BAER threshold values have been corrected to dBeHL values to reflect the relationship between BAER and behavioral thresholds.

**Normal range:** Normal auditory function is defined as BAER thresholds of 0-20 dBeHL. Both dBnHL and dBeHL values are listed for each intensity level tested.

Level	Wave V (msec)	Level	Wave V (msec)
<b>Left Ear</b>		<b>Right Ear</b>	
<b>500 Hz</b>		<b>500 Hz</b>	
15 dBeHL (30 dBnHL)	13.6	15 dBeHL (30 dBnHL)	13.9
10 dBeHL (25 dBnHL)	No response	10 dBeHL (25 dBnHL)	No response
<b>2000 Hz</b>		<b>2000 Hz</b>	
15 dBeHL (20 dBnHL)	10.4	15 dBeHL (20 dBnHL)	10.2
5 dBeHL (10 dBnHL)	No response	5 dBeHL (10 dBnHL)	No response
<b>4000 Hz</b>		<b>4000 Hz</b>	
10 dBeHL (10 dBnHL)	9.83	10 dBeHL (10 dBnHL)	9.93

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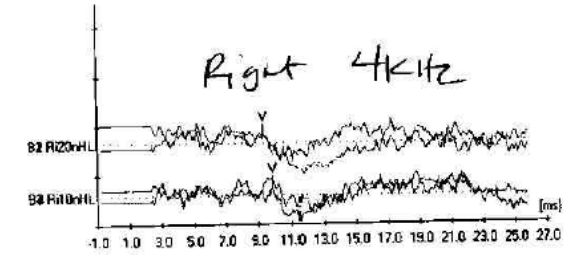
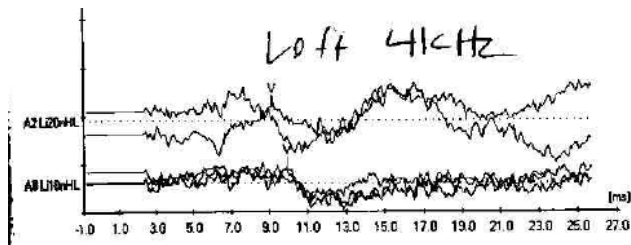
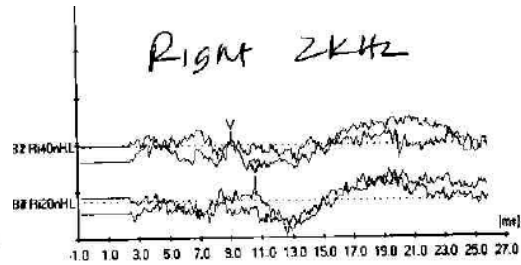
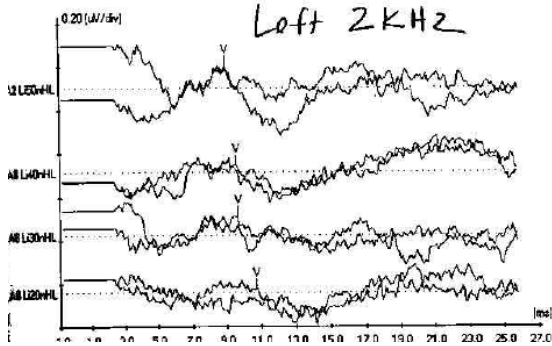
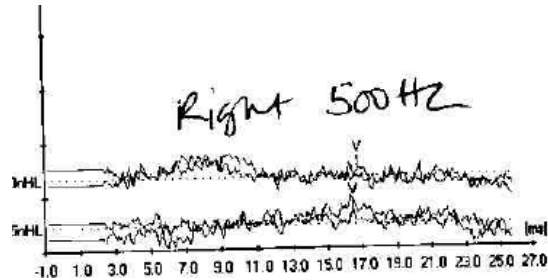
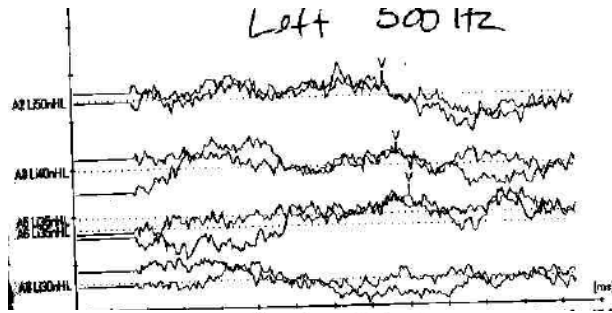
NAME: CALVIN, CAITLIN

DOB: 09-25-12

UW Medicine

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Center on Human Development and Disability (CHDD)  
University of Washington Medical Center  
Seattle, WA 98195

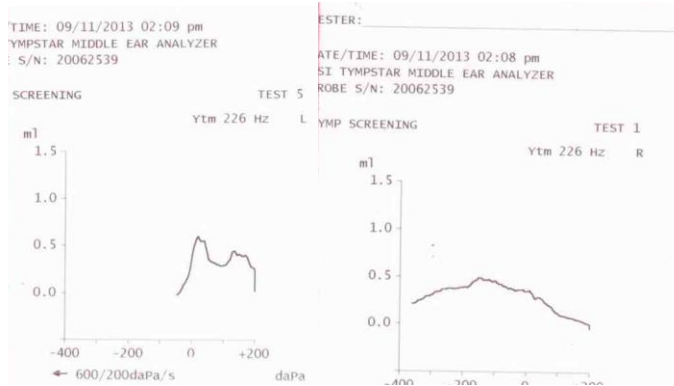
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**Immittance and Otoscopy**

**Procedure:** The status of the child's outer and middle ear system was evaluated using tympanometry with a 1000 Hz probe tone.

**Normal range:** For tympanometry measures in infants, normal tympanograms are indicated by a positive compliance, but there are no normative values.



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PROGRESS - BLUE

ASSESSMENT

Caitlin has normal auditory function and normal outer/middle ear function in both ears. Specifically, Caitlin demonstrates BAER tone pip thresholds in both ears at 500, 2000, and 4000 Hz at levels of 10 to 15 dBHL. She demonstrates normal outer and middle ear function in both ears, as indicated by normal tympanograms. Caitlin shows an improvement in hearing from her initial newborn hearing screen.

It should be noted that the BAER provides information about the status of the auditory system but does not indicate how a child makes use of auditory information.

RECOMMENDATIONS

Due to the risk of late onset hearing loss associated with congenital CMV, it is recommended that Caitlin's hearing be monitored closely. In line with national recommendations for monitoring hearing, it is recommended that her hearing be re-evaluated in 3 months and then yearly, thereafter if hearing loss is ruled; hearing evaluations can be scheduled sooner if there is a concern about a change in hearing.

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Student Name  
Graduate Audiology Student Clinician

cc: parents (Chris and Cathy Calvin)  
primary care physician (Dr. Smith @ Whatcom Pediatrics)

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