



Audiometric Screening Training

Presented by

Child Health and Disability Prevention (CHDP) Program
Los Angeles County Department of Public Health

10/4/17

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Objectives

By the end of the training, participants will be able to:

1. Demonstrate understanding that Play Audiometry can be used on children 3-6 years of age, children with special needs or older children who appear to be shy.
2. Identify 4 things needed for successful screening.
3. Demonstrate how to condition, recondition, and screen using Play Audiometry.
4. Identify the recommended tone and the difference between pulse, steady, and warble.

Objectives (Continued)

- Identify 2 examples of visual cues and 1 example of patterning during screening.
- Understand and demonstrate the steps of Play Audiometry and Traditional Audiometry (for patients 7 years and older).
- Be able to properly document screening results and refer abnormal findings.

Audiometric Screening and Play Audiometry Training



Bright Futures Periodicity Schedule

American Academy of Pediatrics
RECOMMENDED BY THE BOARD OF ALL COLLEGIATES

Recommendations for Preventive Pediatric Health Care
Bright Futures/American Academy of Pediatrics



Each child and family is unique; therefore, these Recommendations for Preventive Pediatric Health Care are designed for the care of children who are receiving competent parenting, have no manifestations of any important health problems, and are growing and developing in a satisfactory fashion. Developmental, psychosocial, and chronic disease issues for children and adolescents may require frequent counseling and treatment visits separate from preventive care visits. Additional visits also may become necessary if circumstances suggest variations from normal.

These recommendations represent a consensus by the American Academy of Pediatrics (AAP) and Bright Futures. The AAP continues to emphasize the great importance of continuity of care, comprehensive health supervision and the need to avoid fragmentation of care. Refer to the specific guidance for age as listed in the Bright Futures Guidelines (Pages 37, 38, 45, Duncan PM, eds. Bright Futures: Guidelines for Health Supervision of Infants, Children, and Adolescents. 4th ed. Elk Grove Village, IL: American Academy of Pediatrics, 2017).

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RECOMMENDATION	INFANT CHILDHOOD												ADOLESCENCE																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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mo	1644 mo	1650 mo	1656 mo	1662 mo	1668 mo	1674 mo	1680 mo	1686 mo	1692 mo	1698 mo	1704 mo	1710 mo	1716 mo	1722 mo	1728 mo	1734 mo	1740 mo	1746 mo	1752 mo	1758 mo	1764 mo	1770 mo	1776 mo	1782 mo	1788 mo	1794 mo	1800 mo	1806 mo	1812 mo	1818 mo	1824 mo	1830 mo	1836 mo	1842 mo	1848 mo	1854 mo	1860 mo	1866 mo	1872 mo	1878 mo	1884 mo	1890 mo	1896 mo	1902 mo	1908 mo	1914 mo	1920 mo	1926 mo	1932 mo	1938 mo	1944 mo	1950 mo	1956 mo	1962 mo	1968 mo	1974 mo	1980 mo	1986 mo	1992 mo	1998 mo	2004 mo	2010 mo	2016 mo	2022 mo	2028 mo	2034 mo	2040 mo	2046 mo	2052 mo	2058 mo	2064 mo	2070 mo	2076 mo	2082 mo	2088 mo	2094 mo	2100 mo	2106 mo	2112 mo	2118 mo	2124 mo	2130 mo	2136 mo	2142 mo	2148 mo	2154 mo	2160 mo	2166 mo	2172 mo	2178 mo	2184 mo	2190 mo	2196 mo	2202 mo	2208 mo	2214 mo	2220 mo	2226 mo	2232 mo	2238 mo	2244 mo	2250 mo	2256 mo	2262 mo	2268 mo	2274 mo	2280 mo	2286 mo	2292 mo	2298 mo	2304 mo	2310 mo	2316 mo	2322 mo	2328 mo	2334 mo	2340 mo	2346 mo	2352 mo	2358 mo	2364 mo	2370 mo	2376 mo	2382 mo	2388 mo	2394 mo	2400 mo	2406 mo	2412 mo	2418 mo	2424 mo	2430 mo	2436 mo	2442 mo	2448 mo	2454 mo	2460 mo	2466 mo	2472 mo	2478 mo	2484 mo	2490 mo	2496 mo	2502 mo	2508 mo	2514 mo	2520 mo	2526 mo	2532 mo	2538 mo	2544 mo	2550 mo	2556 mo	2562 mo	2568 mo	2574 mo	2580 mo	2586 mo	2592 mo	2598 mo	2604 mo	2610 mo	2616 mo	2622 mo	2628 mo	2634 mo	2640 mo	2646 mo	2652 mo	2658 mo	2664 mo	2670 mo	2676 mo	2682 mo	2688 mo	2694 mo	2700 mo	2706 mo	2712 mo	2718 mo	2724 mo	2730 mo	2736 mo	2742 mo	2748 mo	2754 mo	2760 mo	2766 mo	2772 mo	2778 mo	2784 mo	2790 mo	2796 mo	2802 mo	2808 mo	2814 mo	2820 mo	2826 mo	2832 mo	2838 mo	2844 mo	2850 mo	2856 mo	2862 mo	2868 mo	2874 mo	2880 mo	2886 mo	2892 mo	2898 mo	2904 mo	2910 mo	2916 mo	2922 mo	2928 mo	2934 mo	2940 mo	2946 mo	2952 mo	2958 mo	2964 mo	2970 mo	2976 mo	2982 mo	2988 mo	2994 mo	3000 mo	3006 mo	3012 mo	3018 mo	3024 mo	3030 mo	3036 mo	3042 mo	3048 mo	3054 mo	3060 mo	3066 mo	3072 mo	3078 mo	3084 mo	3090 mo	3096 mo	3102 mo	3108 mo	3114 mo	3120 mo	3126 mo	3132 mo	3138 mo	3144 mo	3150 mo	3156 mo	3162 mo	3168 mo	3174 mo	3180 mo	3186 mo	3192 mo	3198 mo	3204 mo	3210 mo	3216 mo	3222 mo	3228 mo	3234 mo	3240 mo	3246 mo	3252 mo	3258 mo	3264 mo	3270 mo	3276 mo	3282 mo	3288 mo	3294 mo	3300 mo	3306 mo	3312 mo	3318 mo	3324 mo	3330 mo	3336 mo	3342 mo	3348 mo	3354 mo	3360 mo	3366 mo	3372 mo	3378 mo	3384 mo	3390 mo	3396 mo	3402 mo	3408 mo	3414 mo	3420 mo	3426 mo	3432 mo	3438 mo	3444 mo	3450 mo	3456 mo	3462 mo	3468 mo	3474 mo	3480 mo	3486 mo	3492 mo	3498 mo	3504 mo	3510 mo	3516 mo	3522 mo	3528 mo	3534 mo	3540 mo	3546 mo	3552 mo	3558 mo	3564 mo	3570 mo	3576 mo	3582 mo	3588 mo	3594 mo	3600 mo	3606 mo	3612 mo	3618 mo	3624 mo	3630 mo	3636 mo	3642 mo	3648 mo	3654 mo	3660 mo	3666 mo	3672 mo	3678 mo	3684 mo	3690 mo	3696 mo	3702 mo	3708 mo	3714 mo	3720 mo	3726 mo	3732 mo	3738 mo	3744 mo	3750 mo	3756 mo	3762 mo	3768 mo	3774 mo	3780 mo	3786 mo	3792 mo	3798 mo	3804 mo	3810 mo	3816 mo	3822 mo	3828 mo	3834 mo	3840 mo	3846 mo	3852 mo	3858 mo	3864 mo	3870 mo	3876 mo	3882 mo	3888 mo	3894 mo	3900 mo	3906 mo	3912 mo	3918 mo	3924 mo	3930 mo	3936 mo	3942 mo	3948 mo	3954 mo	3960 mo	3966 mo	3972 mo	3978 mo	3984 mo	3990 mo	3996 mo	4002 mo	4008 mo	4014 mo	4020 mo	4026 mo	4032 mo	4038 mo	4044 mo	4050 mo	4056 mo	4062 mo	4068 mo	4074 mo	4080 mo	4086 mo	4092 mo	4098 mo	4104 mo	4110 mo	4116 mo	4122 mo	4128 mo	4134 mo	4140 mo	4146 mo	4152 mo	4158 mo	4164 mo	4170 mo	4176 mo	4182 mo	4188 mo	4194 mo	4200 mo	4206 mo	4212 mo	4218 mo	4224 mo	4230 mo	4236 mo	4242 mo	4248 mo	4254 mo	4260 mo	4266 mo	4272 mo	4278 mo	4284 mo	4290 mo	4296 mo	4302 mo	4308 mo	4314 mo	4320 mo	4326 mo	4332 mo	4338 mo	4344 mo	4350 mo	4356 mo	4362 mo	4368 mo	4374 mo	4380 mo	4386 mo	4392 mo	4398 mo	4404 mo	4410 mo	4416 mo	4422 mo	4428 mo	4434 mo	4440 mo	4446 mo	4452 mo	4458 mo	4464 mo	4470 mo	4476 mo	4482 mo	4488 mo	4494 mo	4500 mo	4506 mo	4512 mo	4518 mo	4524 mo	4530 mo	4536 mo	4542 mo	4548 mo	4554 mo	4560 mo	4566 mo	4572 mo	4578 mo	4584 mo	4590 mo	4596 mo	4602 mo	4608 mo	4614 mo	4620 mo	4626 mo	4632 mo	4638 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mo	5394 mo	5400 mo	5406 mo	5412 mo	5418 mo	5424 mo	5430 mo	5436 mo	5442 mo	5448 mo	5454 mo	5460 mo	5466 mo	5472 mo	5478 mo	5484 mo	5490 mo	5496 mo	5502 mo	5508 mo	5514 mo	5520 mo	5526 mo	5532 mo	5538 mo	5544 mo	5550 mo	5556 mo	5562 mo	5568 mo	5574 mo	5580 mo	5586 mo	5592 mo	5598 mo	5604 mo	5610 mo	5616 mo	5622 mo	5628 mo	5634 mo	5640 mo	5646 mo	5652 mo	5658 mo	5664 mo	5670 mo	5676 mo	5682 mo	5688 mo	5694 mo	5700 mo	5706 mo	5712 mo	5718 mo	5724 mo	5730 mo	5736 mo	5742 mo	5748 mo	5754 mo	5760 mo	5766 mo	5772 mo	5778 mo	5784 mo	5790 mo	5796 mo	5802 mo	5808 mo	5814 mo	5820 mo	5826 mo	5832 mo	5838 mo	5844 mo	5850 mo	5856 mo	5862 mo	5868 mo	5874 mo	5880 mo	5886 mo	5892 mo	5898 mo	5904 mo	5910 mo	5916 mo	5922 mo	5928 mo	5934 mo	5940 mo	5946 mo	5952 mo	5958 mo	5964 mo	5970 mo	5976 mo	5982 mo	5988 mo	5994 mo	6000 mo	6006 mo	6012 mo	6018 mo	6024 mo	6030 mo	6036 mo	6042 mo	6048 mo	6054 mo	6060 mo	6066 mo	6072 mo	6078 mo	6084 mo	6090 mo	6096 mo	6102 mo	6108 mo	6114 mo	6120 mo	6126 mo	6132 mo	6138 mo	6144 mo	6150 mo	6156 mo	6162 mo	6168 mo	6174 mo	6180 mo	6186 mo	6192 mo	6198 mo	6204 mo	6210 mo	6216 mo	6222 mo	6228 mo	6234 mo	6240 mo	6246 mo	6252 mo	6258 mo	6264 mo	6270 mo	6276 mo	6282 mo	6288 mo	6294 mo	6300 mo	6306 mo	6312 mo	6318 mo	6324 mo	6330 mo	6336 mo	6342 mo	6348 mo	6354 mo	6360 mo	6366 mo	6372 mo	6378 mo	6384 mo	6390 mo	6396 mo	6402 mo	6408 mo	6414 mo	6420 mo	6426 mo	6432 mo	6438 mo	6444 mo	6450 mo	6456 mo	6462 mo	6468 mo	6474 mo	6480 mo	6486 mo	6492 mo	6498 mo	6504 mo	6510 mo	6516 mo	6522 mo	6528 mo	6534 mo	6540 mo	6546 mo	6552 mo	6558 mo	6564 mo	6570 mo	6576 mo	6582 mo	6588 mo	6594 mo	6600 mo	6606 mo	6612 mo	6618 mo	6624 mo	6630 mo	6636 mo	6642 mo	6648 mo	6654 mo	6660 mo	6666 mo	6672 mo	6678 mo	6684 mo	6690 mo	6696 mo	6702 mo	6708 mo	6714 mo	6720 mo	6726 mo	6732 mo	6738 mo	6744 mo	6750 mo	6756 mo	6762 mo	6768 mo	6774 mo	6780 mo	6786 mo	6792 mo	6798 mo	6804 mo	6810 mo	6816 mo	6822 mo	6828 mo	6834 mo	6840 mo	6846 mo	6852 mo	6858 mo	6864 mo	6870 mo	6876 mo	6882 mo	6888 mo	6894 mo	6900 mo	6906 mo	6912 mo	6918 mo	6924 mo	6930 mo	6936 mo	6942 mo	6948 mo	6954 mo	6960 mo

Bright Futures Hearing Screening Recommendations

EARLY CHILDHOOD							
AGE	12m	15m	18m	24m	30m	3 y	4 y
Hearing	*	*	*	*	*	*	●

MIDDLE CHILDHOOD						
AGE	5 y	6 y	7 y	8 y	9 y	10 y
Hearing	●	●	*	●	*	●

- To be performed
- * Risk assessment to be performed with appropriate action to follow, if positive

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Bright Futures Hearing Screening Recommendations

ADOLESCENCE							
AGE	11 y	12 y	13 y	14 y	15 y	16 y	17 y
Hearing	←	←	●	→	←	●	→

ADOLESCENCE				
AGE	18 y	19 y	20 y	21 y
Hearing	←	←	●	→

← ● → = range during which a service may be provided
 Screen both ears at 6000 Hz and 8000 Hz once between 11-14 y/o, once between 15-17 y/o, and once between 18-21 y/o

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The Importance of Early Screening

1. Hearing loss affects the child and the entire family.
2. Failure to identify hearing loss at 3-6 years of age can result in life long developmental deficits.
3. Early discovery of hearing loss is the key to successful treatment.



Audiometric Screening and Play Audiometry Training



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How Hearing Loss Affects the Child

1. Affects their ability to communicate
2. Interferes with normal speech development
3. Isolates the child from family and friends
4. Associated with self-esteem issues
5. Poor academic performance

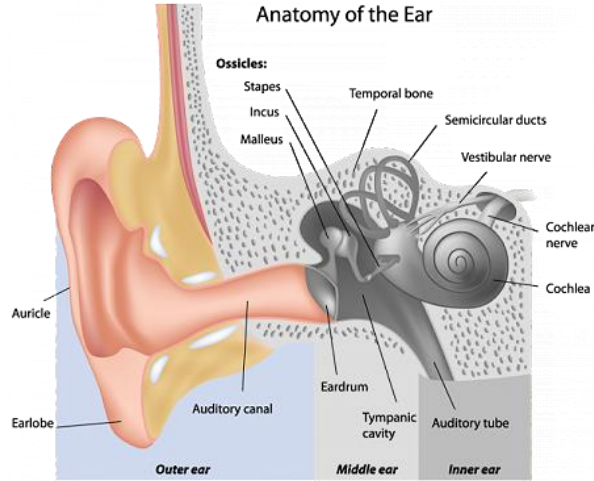


Audiometric Screening and Play Audiometry Training

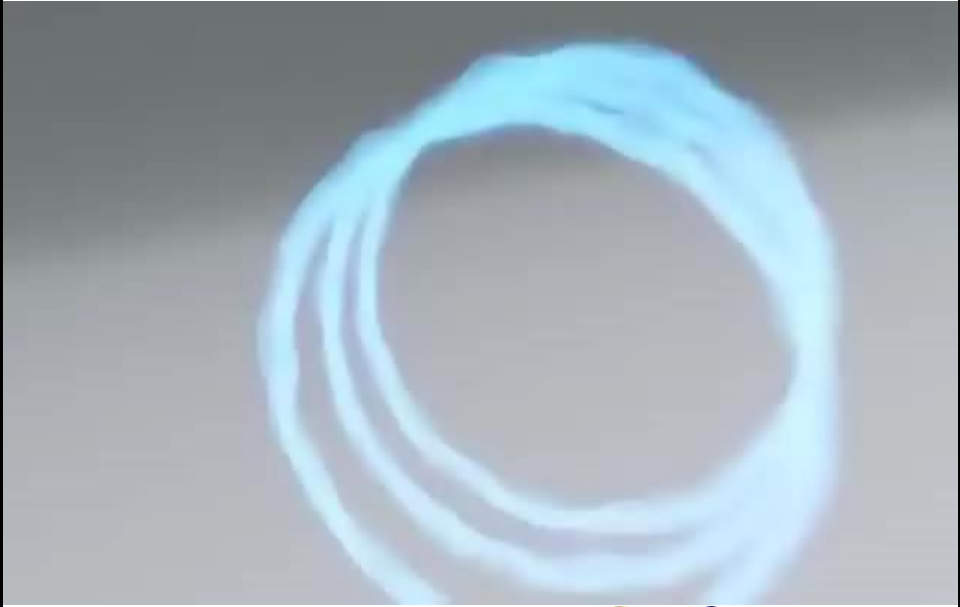


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Anatomy of the Ear



Anatomy and Physiology of the Ear – How Hearing Works



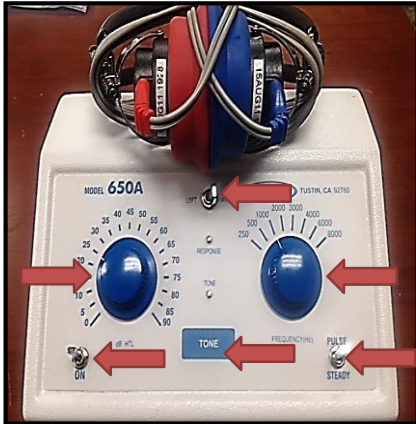


4 Things Needed for a Successful Screening

1. Qualified person to perform screening
2. Calibrated audiometer – annually
3. Properly functioning audiometer
4. Quiet screening environment



Review of Equipment for Play Audiometry



A. Audiometer

- a. Calibration
- b. Knobs
 - Power Switch
 - Ear Selector Control
 - Frequency Dial – Hertz
 - Intensity – Decibels
 - Tones – 2 or 3 types
- c. Ear Phones
- d. Cords

Audiometric Screening and Play Audiometry Training



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Frequencies

Hz = Hertz (Frequency)

4000 Hz

3000 Hz

2000 Hz

1000 Hz



Each frequency is done as a separate test!

Audiometric Screening and Play Audiometry Training



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Intensities

dB=decibel (Intensity)

90 dB - Conditioning

50 dB – Reconditioning

20 dB or **25 dB** - Screening



Tones

Three types of tones:

a. Pulse tone – ONLY recommended tone



b. Steady tone



c. Warble tone



Review of Equipment for Play Audiometry

B. Blocks

- a. Shape
- b. Size
- c. Color
- d. Edges



C. Noise Free Baskets

- a. Plastic
- b. Wicker



References

Presentation Guide for Audiometric Screening and Play Audiometry (2007). Children's Medical Services (CMS), Child Health and Disability Prevention Program (CHDP), California Department of Health Care Services.

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Rawiszer, Steven J. (2007 January). *Audiometric Screening and Play Audiometry* [Video]. California, CA: California Department of Health Care Services, Children's Medical Services Branch.

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Play Audiometry Screening Procedures



1/31/18

Speech Observations

- A 1 year old normally communicates by using **one** word. For example, “up” means “pick me up”.
- A 2 year old normally uses **two** word phrases. For example, “me up” means “pick me up”.
- A 3 year old normally uses **three** word sentences like “pick me up”.
- A 4 year old normally uses **four** word sentences like “pick me up now”.



State Audiometric Screening Video: Play Audiometry



A. Conditioning

Teaching the child how to play the game

1. Screening Preparation
2. Present Beep
3. Demonstrate Game
4. Present Tone, Demonstrate – You Go First
5. Present Tone, let child win
6. Child Plays Alone



A. Conditioning


Step 1: Screening Preparation

1. Position child participant on your dominant side for screening
2. Power ON audiometer
3. Set audiometer to the RIGHT EAR
4. Keep the EARPHONE on the TABLE
5. Set audiometer to 90 dB
6. Set audiometer to 4000 Hz
7. Set audiometer to PULSE TONE



Conditioning

Step 2: Present Beep

1. Introduce the game
2. Ask child to listen 
3. Press tone for "1 Mississippi"
4. Acknowledge that child heard the sound



Conditioning



Step 3: Demonstrate Game

1. Screener and child each get a block.
2. Instruct and prompt child to put block in the basket when beep is heard. (screener points to ear and taps basket, but DO NOT put the block in the basket).
3. Give empty basket to child



Conditioning



Step 4: Present Tone, Demonstrate Screener Goes First

1. Ask child to listen 
2. Press tone
3. Screener puts block in the basket first 
4. Child follows after
5. Screener praises the child: “Wonderful!”, “Good job!”, “Awesome!”






Conditioning

Step 5: Present Tone, Let Child Win

1. Screener and child each get a block 
2. Screener: "Let's see how fast you are."
3. Ask child to listen 
4. Press tone
5. Let the child win (child puts block in basket first)
6. Screener follows after
7. Screener praises the child: "Wonderful!", "Good job!", "Awesome!"




Conditioning

Step 6: Child Plays Alone

1. Give child a block (screener does not get a block) 
2. Ask child to listen 
3. Press tone
4. Child puts block in the basket 
5. Screener praises the child: "Wonderful!", "Good job!", "Awesome!"

B. Confirm



1. Give child a block 
2. Set audiometer to 50db, 4000 Hz
3. Place earphones on child (red to right ear)
 - a. Remove items that impede screening (e.g. glasses, earrings, headbands, etc)
 - b. Push back any hair covering the ears
 - c. Earphones should be in the middle of the head and in line with the ears
4. Ask child to listen 
5. Press tone
 - a. If child puts block in basket, start screening 



Confirm (continued)

What if the child does not respond at 50 dB?

1. If child does not put the block in the basket, switch to the left ear.
2. If child still does not put the block in the basket, take earphones off and repeat conditioning (steps 1-6).
3. If child does not respond after repeating conditioning (steps 1-6), schedule child for a re-screen in 2-6 weeks.



Why will the child not put the block in the basket?

Three Reasons:

1. The child does not understand the game.
2. The child is not paying attention or distracted.
3. The child cannot hear at that frequency.



C. Screening

1. Set audiometer at 20 or **25** dB, 4000 Hz
2. Confirm ear selector control knob is set to right ear
3. Give child a block



Screening (continued)

Right Ear

Praise child each time they drop block into the basket.

25 dB 4000 Hz "Listen." Press tone. Child responds. Give child a block.

25 dB 3000 Hz "Listen." Press tone. Child responds. Give child a block.

25 dB 2000 Hz "Listen." Press tone. Child responds. Give child a block.

25 dB 1000 Hz "Listen." Press tone. Child responds. Give child a block.



Screening (continued)

Left Ear

Switch to left ear.

Praise child each time they drop block into the basket.

25 dB 1000 Hz "Listen." Press tone. Child responds. Give child a block.

25 dB 2000 Hz "Listen." Press tone. Child responds. Give child a block.

25 dB 3000 Hz "Listen." Press tone. Child responds. Give child a block.

25 dB 4000 Hz "Listen." Press tone. Child responds.

Remove earphones and thank the child for playing the game.
Document results.



Screening (continued)

What if the child does not respond at any ear?

Give child a block.

25 dB 4000 Hz “Listen.” Press tone. Child responds. Give child a block.

25 dB 3000 Hz “Listen.” Press tone. Child responds. Give child a block.

25 dB 2000 Hz “Listen.” Press tone. **No Response**

25 dB 1000 Hz “Listen.” Press tone. Child responds. Give child a block.

If no response to **ANY** of the Hertz (Hz) at 25 dB, proceed to the **reconditioning** steps to continue screening.



RECONDITIONING STEPS

Reminding the child how to play the game

IF NO RESPONSE AT ANY OF THE FREQUENCIES (1000, 2000, 3000, 4000)

- Stay at same frequency (Hz)
- Set Audiometer to 50 dB
- Present the beep

If child puts block in the basket:	If child does not put block in the basket:
<ol style="list-style-type: none"> 1. Praise the child 2. Give child a block 3. Set audiometer to 25 dB 4. Introduce the beep 5. Child puts block in the basket (If child does not put block in the basket, immediately document not pass (-) at this frequency) 6. Praise the child 7. Continue screening at next frequency (Hz) 	<ol style="list-style-type: none"> 1. Immediately document not pass (-) at this frequency while praising child 2. Set audiometer to 25 dB 3. Continue screening at next frequency (Hz)



Important Steps to Remember

If the child still has a block in their hand at the **END** of the screening:

- Stay at the same frequency
- Increase to 50 dB or last frequency heard
- Press the tone
- Let the child drop the block in the basket to end the “game” successfully

State Audiometric Screening Video: Play Audiometry - Patterning



Things to avoid



1. Avoid visual cues

a. Examples:

- Turning your head to look at the child when pressing the tone
- Blinking when pressing the tone
- Any obvious body movements or smiling when pressing the tone



Things to avoid (continued)



2. Avoid auditory cues

a. Examples:

- Asking child, “Did you hear that?” when pressing tone
- Saying, “Put the block in the basket” when pressing tone

3. Patterning

a. Example:

- Saying, “Listen” and **immediately** pressing the tone each time

b. Avoid establishing a rhythm or pattern when pressing the tone



Uncooperative Child

- Most challenging and important to screen due to possible hearing loss.
- Provide enough time to screen.
- After several unsuccessful attempts, repeat procedure in 2-6 weeks.
- If child is uncooperative on second visit, refer to hearing specialist.



Documentation

Complete documentation of audiometric screening results on the audiogram:

1. Record a passing audiometric result with a check mark (✓) at the completion of the screening procedure.
2. Immediately record a **non-passing** audiometric result with a dash mark (–) while praising the child.



LAST NAME:	FIRST NAME:	AGE:
PLACE OF SCREENING:	SCORING:	Child responds at 25 dB: <input checked="" type="checkbox"/>
AUDIOMETER MODEL:		Child does not respond at 25 db: <input type="checkbox"/>
DATE OF LAST CALIBRATION:		

1 st Screen	RIGHT EAR:						LEFT EAR:					
Date:	1000	2000	3000	4000	*6000	*8000	1000	2000	3000	4000	*6000	*8000
2 nd Screen												
Date:	1000	2000	3000	4000	*6000	*8000	1000	2000	3000	4000	*6000	*8000

Comments: _____

Referred to: _____

*Per AAP/Bright Futures Periodicity update February 2017, screen audiometry including 6,000 and 8,000 Hz high frequencies once between ages 11-14 years, once between 15-17 years, and once between 18-21 years.



LAST NAME: Doe	FIRST NAME: John	AGE: 4
PLACE OF SCREENING: Dr. Audio	SCORING:	Child responds at 25 dB: <input checked="" type="checkbox"/>
AUDIOMETER MODEL: Ambco		Child does not respond at 25 db: <input type="checkbox"/>
DATE OF LAST CALIBRATION: 11/1/17		

1 st Screen	RIGHT EAR:						LEFT EAR:					
Date:	1000	2000	3000	4000	*6000	*8000	1000	2000	3000	4000	*6000	*8000
2 nd Screen	✓	✓	✓	✓			✓	✓	✓	✓		
Date:	1000	2000	3000	4000	*6000	*8000	1000	2000	3000	4000	*6000	*8000

Comments: _____

Referred to: _____

*Per AAP/Bright Futures Periodicity update February 2017, screen audiometry including 6,000 and 8,000 Hz high frequencies once between ages 11-14 years, once between 15-17 years, and once between 18-21 years.



Referral & Follow Up

If child does not pass:

- a. 1st screening, rescreen in 2-6 weeks.
- b. 2nd screening, refer to a specialist.
- c. Refer any suspected hearing loss to a medical specialist.
- d. Two failed screenings **at least 6 weeks apart** can be referred to California Children’s Services (CCS).



LAST NAME: Doe	FIRST NAME: John	AGE: 11
PLACE OF SCREENING: Dr. Audio	SCORING: Child responds at 25 dB: <input checked="" type="checkbox"/>	
AUDIOMETER MODEL: <u>Ambco</u>	Child does not respond at 25 dB: <input type="checkbox"/>	
DATE OF LAST CALIBRATION: 11/1/17		

1 st Screen	RIGHT EAR:						LEFT EAR:					
Date: <u>12/1/17</u>	1000	2000	3000	4000	*6000	*8000	1000	2000	3000	4000	*6000	*8000
2 nd Screen	✓	✓	✓	✓	—	—	✓	✓	✓	✓	—	—
Date:	1000	2000	3000	4000	*6000	*8000	1000	2000	3000	4000	*6000	*8000

Comments: Recheck in 6weeks

Referred to: _____

*Per AAP/Bright Futures Periodicity update February 2017, screen audiometry including 6,000 and 8,000 Hz high frequencies once between ages 11-14 years, once between 15-17 years, and once between 18-21 years.



LAST NAME: Doe	FIRST NAME: John	AGE: 11
PLACE OF SCREENING: Dr. Audio		SCORING: Child responds at 25 dB: <input checked="" type="checkbox"/>
AUDIOMETER MODEL: <u>Ambco</u>		Child does not respond at 25 dB: <input type="checkbox"/>
DATE OF LAST CALIBRATION: 11/1/17		

1 st Screen	RIGHT EAR:						LEFT EAR:					
Date: 12/1/17	1000	2000	3000	4000	*6000	*8000	1000	2000	3000	4000	*6000	*8000
2 nd Screen	✓	✓	✓	✓	—	—	✓	✓	✓	✓	—	—
Date: 1/12/18	1000	2000	3000	4000	*6000	*8000	1000	2000	3000	4000	*6000	*8000
	✓	✓	✓	✓	—	—	✓	✓	✓	✓	—	—

Comments: Recheck in 6 weeks

Referred to: CCS (or according to office policy)

*Per AAP/Bright Futures Periodicity update February 2017, screen audiometry including 6,000 and 8,000 Hz high frequencies once between ages 11-14 years, once between 15-17 years, and once between 18-21 years.

Referral & Follow-Up (continued)

- Maintain referral log to track status of the referral
- Follow-up with patient as needed



Traditional Audiometric Screening

(for patients 7 years and older)

A. Conditioning

1. Screening Preparation
2. Present Beep



A. Conditioning



Step 1: Screening Preparation

1. Position child participant on your dominant side for screening
2. Power ON audiometer
3. Set audiometer to the RIGHT EAR
4. Keep the EARPHONE on the TABLE
5. Set audiometer to 90 dB
6. Set audiometer to 4000 Hz
7. Set audiometer to PULSE TONE



Conditioning


Step 2: Present Beep

1. Introduce the test
2. Ask patient to listen 
3. Press tone for “1 Mississippi” 
4. Acknowledge that patient heard the sound (hand raised)
5. Screener praises patient: “Wonderful!”, “Good job!”, “Awesome!”



B. Confirm



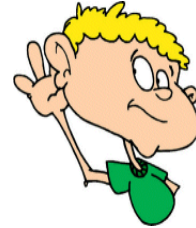
1. Set audiometer to 50db, 4000 Hz
2. Place earphones on patient (red to right ear)
 - a. Remove items that impede screening (e.g. glasses, earrings, headbands, etc)
 - b. Push back any hair covering the ears
 - c. Earphones should be in the middle of the head and in line with the ears
3. Ask patient to listen 
4. Press tone
 - a. If patient raises hand, start screening



Confirm (continued)

What if the patient does not respond at 50 dB?

1. If patient does not raise hand, switch to the left ear.
2. If patient still does not raise hand, take earphones off and repeat conditioning (steps 1 and 2) and confirm steps (B).
3. If patient does not respond after repeating conditioning (steps 1 and 2), schedule patient for a re-screen in 2-6 weeks.



C. Screening

1. Set audiometer at 20 or **25** dB,
4000 Hz (7-10 years old)
OR
Set audiometer at 20 or **25** dB,
8000 Hz (11-21 years old)
2. Confirm ear selector control knob
is set to right ear



Screening (continued)

Right Ear

Ages 7-10 years old

Praise patient each time hand is raised (right or left).

25 dB 4000 Hz "Listen." Press tone. Patient responds.

25 dB 3000 Hz "Listen." Press tone. Patient responds.

25 dB 2000 Hz "Listen." Press tone. Patient responds.

25 dB 1000 Hz "Listen." Press tone. Patient responds.



Screening (continued)

Left Ear

Ages 7-10 years old

Switch to left ear.

Praise patient each time hand is raised (left or right).

25 dB 1000 Hz "Listen." Press tone. Patient responds.

25 dB 2000 Hz "Listen." Press tone. Patient responds.

25 dB 3000 Hz "Listen." Press tone. Patient responds.

25 dB 4000 Hz "Listen." Press tone. Patient responds.

Remove earphones and thank the patient. Document results.



Screening (continued)

Ages 11-21 years old

Screen both ears at 6000Hz and 8000Hz once between 11-14 years old, once between 15-17 years old, and once between 18-21 years old.



Screening (continued)

Right Ear

Ages 11-21 years old

Praise patient each time hand is raised (right or left).

25 dB 8000 Hz "Listen." Press tone. Patient responds.

25 dB 6000 Hz "Listen." Press tone. Patient responds.

25 dB 4000 Hz "Listen." Press tone. Patient responds.

25 dB 3000 Hz "Listen." Press tone. Patient responds.

25 dB 2000 Hz "Listen." Press tone. Patient responds.

25 dB 1000 Hz "Listen." Press tone. Patient responds.



Screening (continued)

Left Ear

Ages 11-21 years old

Switch to left ear.

Praise patient each time hand is raised (left or right).

25 dB 1000 Hz "Listen." Press tone. Patient responds.

25 dB 2000 Hz "Listen." Press tone. Patient responds.

25 dB 3000 Hz "Listen." Press tone. Patient responds.

25 dB 4000 Hz "Listen." Press tone. Patient responds.

25 dB 6000 Hz "Listen." Press tone. Patient responds.

25 dB 8000 Hz "Listen." Press tone. Patient responds.

Remove earphones and thank the patient. Document results.



Screening (continued)

What if the patient does not respond?

If no response to **ANY** of the Hertz (Hz) at 25 dB, proceed to the reconditioning steps and continue screening.



Let's Review

- Conditioning **(90 dB)** – teaching the child how to play the game
- Screening **(25 dB)** – actual screening
- Reconditioning **(50 dB)** – reminding the child how to play the game
- Documentation – passing **(v)**, non-passing **(-)**



Thank You!

