



Keeping Hearing Aids on Young Children – Effective Strategies to Share with Families

Karen L. Anderson, PhD & Jane Madell, PhD

www.successforkidswithhearingloss.com

www.JaneMadell.com



Learning Objectives:

- Participants will be able to describe hearing aid retention methods and strategies to keep hearing aids on infants, toddlers and preschool age children
- Participants will be able to describe the research methods used to identify effective strategies for keeping hearing aids on young children
- Participants will know how to obtain free information to share with families to assist them in keeping their young children's hearing aids on consistently

Need a handout? Email karen@successforkidswithhearingloss.com

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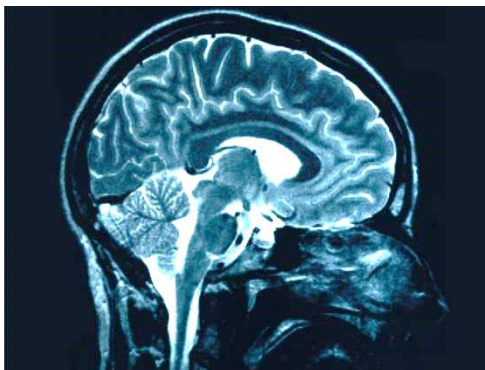
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Why Wear Hearing Aids All Day?

- Hearing aids are the child's primary access to learning language
- Auditory stimulation is critical for auditory brain development
- Developing the auditory brain is critical for literacy and for social development





Brain access tools



- The best predictors of verbal language skill development are
 - age when full time hearing aid use started
 - degree of hearing loss
 - amount of exposure to meaningful listening experiences.
- Hearing ability with technology must be provided as close to the typical hearing level as possible if the family wants the child to learn to listen and use spoken language.



What is the Problem?

- Parents can be overwhelmed by a diagnosis of hearing loss
- Parents frequently do not understand the importance of full time hearing aid use.
- If parents do not see responses to sound with hearing aids it may effect how many hours a day they are worn.
- If parents have trouble keeping hearing aids on the infant, it may effect how many hours a day they are worn.



How Much Language Exposure is Needed?

	PARENTS			CHILDREN		
	Professional	Working class	Welfare	Professional	Working class	Welfare
IQ age 3				117	107	79
Vocab size	2,179	1,498	974	1,116	749	525
Average. Utterances per hour	487	301	176	310	223	168
Average Diff Words per Hour	382	251	167	297	216	149
Average Words per Hour	2,153	1,251	616			
Average Words per 14 hour day	30,142	17,514	8,624			

Hart, B and Risley, T.T (1995) Meaningful Differences in the Everyday Experience of Young American Children, Baltimore: Paul H. Brooks Publishing Co, Inc

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Hart And Risley: Implications for Practice

Words Spoken by Parent/Day	Words Spoken by Child/Day age 3 years	Child's IQ at age 3 years
8,624	525	79
17,514	749	107
30,142	1,116	117



Expectations for Hearing Aid Wear *Nothing less than full-time!*

"If your baby wears hearing aids only four hours each day, it will take six years to give him as much listening experience as a normally hearing infant accumulates in one year."

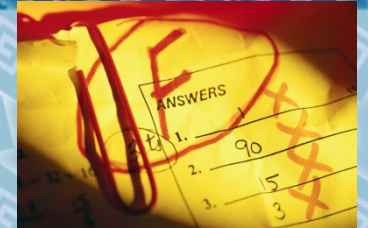
(Stovall, D. [1982]. *Teaching Speech to Hearing Impaired Infants and Children*. Springfield, IL: Charles C. Thomas.)





The *math* of hearing aid wear

- Babies listen for about a year before they say their first word.
- If a baby with hearing loss is awake for 8 hours day and only wears hearing aids for 2 hours then he will only be able to 'tune in' to the hearing world 25% of the time.
- It may take up to 4 years for his first word.
- A school-aged child is awake about 100 hours/week.
- If he only wears hearing aids in school, that is about 30 hours/week.
- If the child is only wearing hearing aids 30% of the time then we can expect 30% achievement since listening and language development occurs during all waking hours.





More, and more, and more...

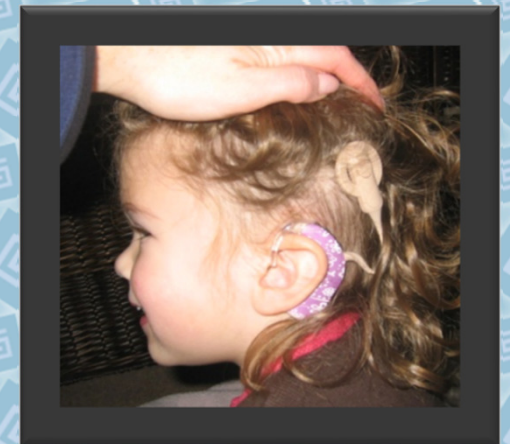
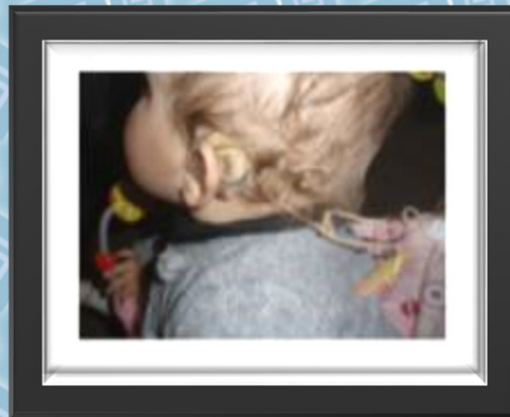
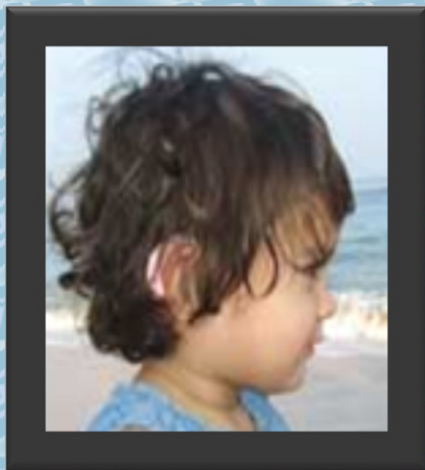
- About 90% of what very young children know about the world is learned incidentally, casually and passively.
- Children with hearing loss require 3 times the exposure to learn new words and concepts due to their reduced ability to easily overhear the language used around them.
- Only through the concerted effort of families, can children with hearing loss catch up and learn language at a rate similar to age peers.





We know..

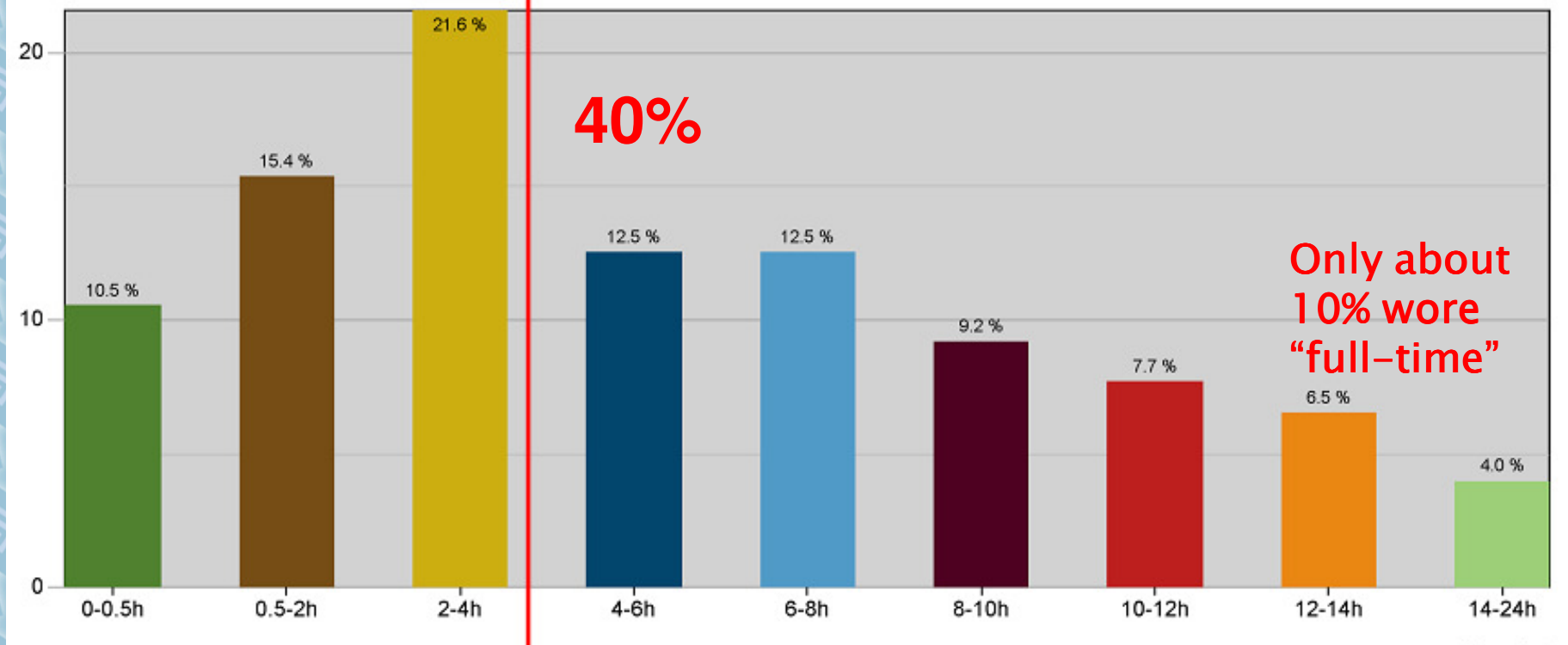
For most children, the single most effective means to address learning and development issues associated with hearing loss is through the consistent use of hearing technology (hearing aids, cochlear implants, BAHA, FM)





Data Logging Study Findings

Over 8 months – almost 5000 children



Only about
10% wore
“full-time”

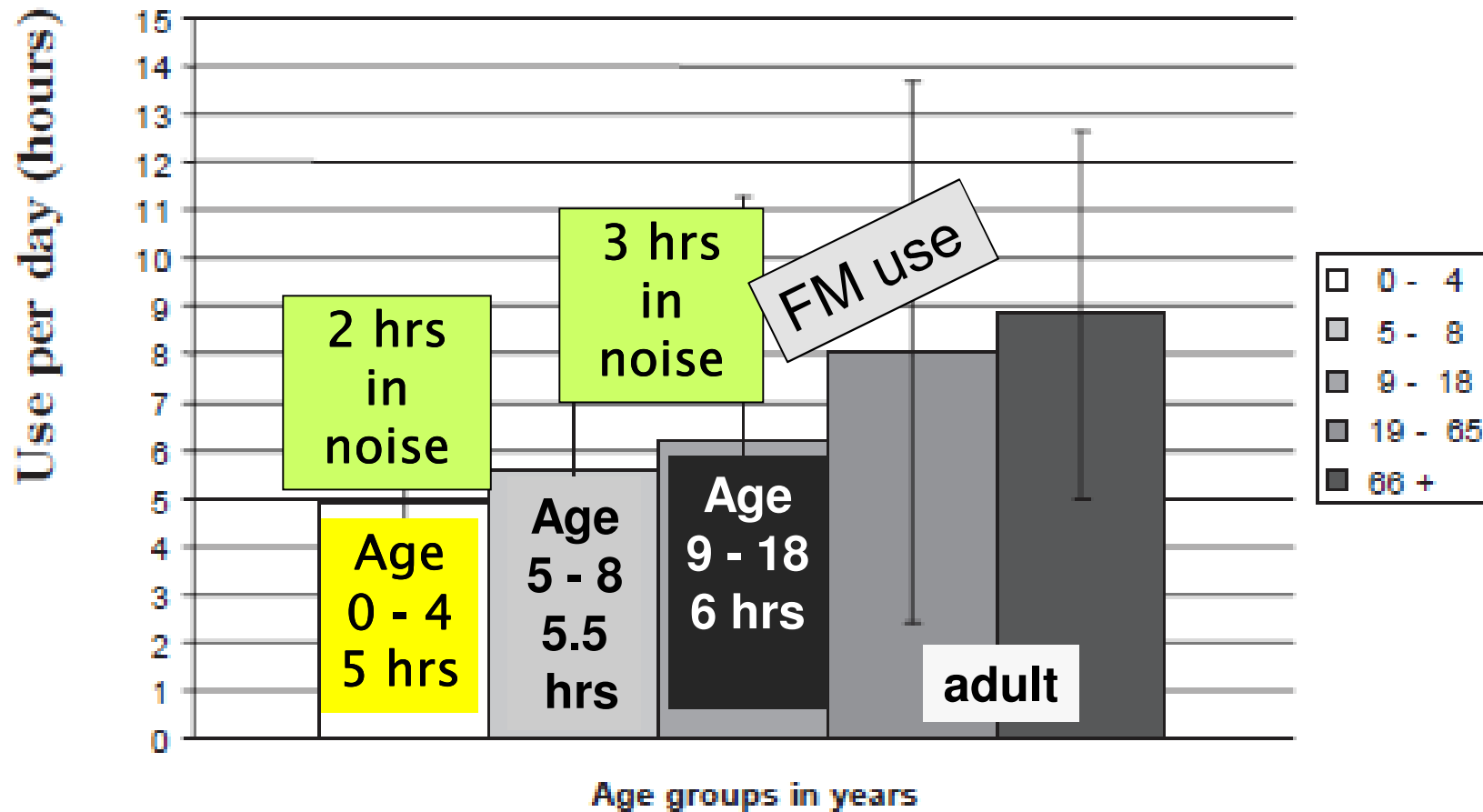
Percentiles by usage time

40% of children use their aids less than 4 hours per day

Hours of hearing aid wear: http://www.phonakpro.com/content/dam/phonak/gc_hq/b2b/en/events/2010/Proceedings/Pho_Chap_12_Jones_Final.pdf



Data logging study Number of hours by age



Hours of hearing aid wear: http://www.phonakpro.com/content/dam/phonak/gc_hq/b2b/en/events/2010/Proceedings/Pho_Chap_12_Jones_Final.pdf



Parent Report of HA Use

NECAP Study

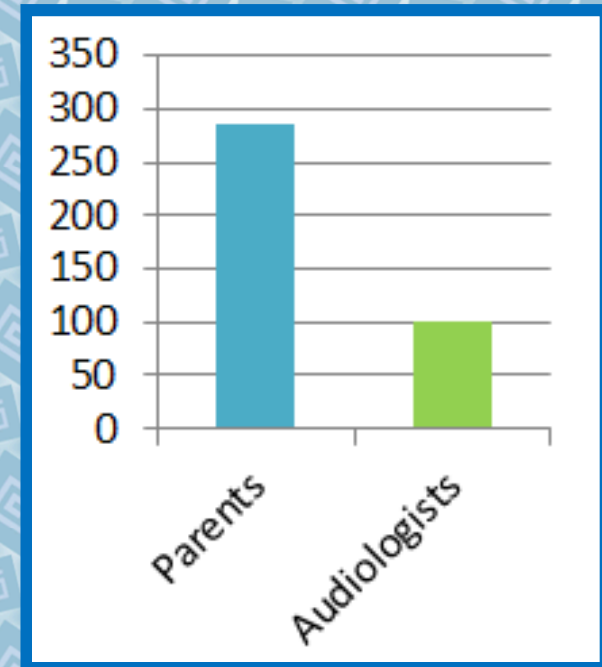
	Percent of Day Wearing Hearing Aids
0-3 hours/day	15%
3-5 hours/day	11%
6-10 hours/day	25%
11-15 hours/day	25%



HEARING AID RETENTION STUDY

Anderson and Madell, 2012

- Survey Monkey
- Distributed through Hands and Voices, A. G. Bell
- Respondents
 - 286 Parents
 - 101 Pediatric Audiologists





HEARING AID RETENTION STUDY

Anderson and Madell, 2012

Basic Conclusions

- Families are overwhelmed at time of diagnosis and do not understand the impact of hearing loss on language development
- Audiologists lack information on hearing aid retention accessories and strategies which would enable them to provide families with good support.





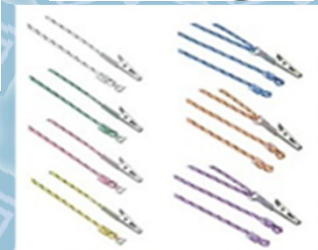
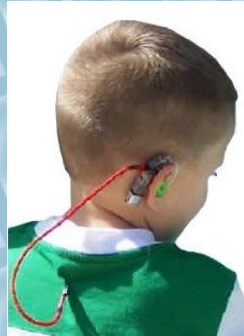
Parent Ratings of Retention Accessories

Parent Ratings of Hearing Aid Retention Accessories/Strategies

Based on the results of the Children's Hearing Aid Retention Survey (Anderson & Madell, 2012).

Retention Accessory	Effectiveness	Child Safety	Durability	Ease of Use	Keeps aids on & working	Average of all areas
Ear Gear	1	2	1	2	1	1
Cap	3	1	2	1	2	2
Safe-N-Sound	2	1	3	2	2	3
Wig / Toupee Tape	2	3	9	4	4	4
Oto / Critter Clips	5	7	7	6	5	5

8 Retention Accessories were rated in a survey completed by 286 parents.





HIPS Accessories!

Hearing Instrument Protection & Safety

- Clips



Criticr Clips
Westone



Junior Kidz Clips
Phonak



OtoClips
Westone

- Consider sharp edges
- Can the baby still put the device in his mouth?

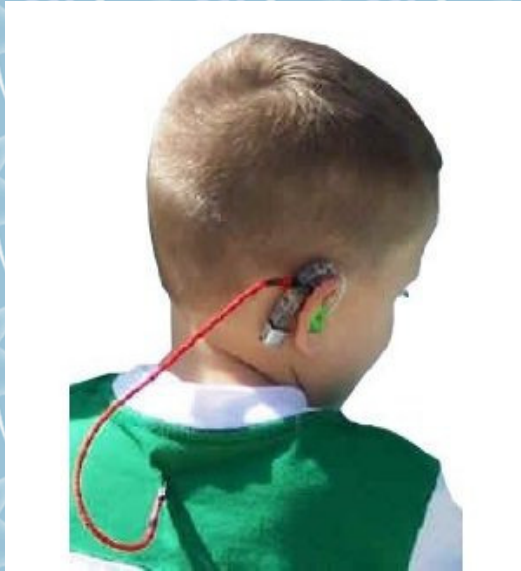


HIPS Accessories!

- Clips + firmer device holders



Ear Gear



SafeNSound



- Consider potential for allergic reactions
- Can the baby still put the device in his mouth?



HIPS Accessories!

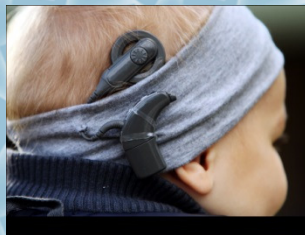
- Other device holders



Huggie Aids



**Huggie Aids
Headband**



**Headband
Hearing Henry**



**Caps
Hearing Henry**

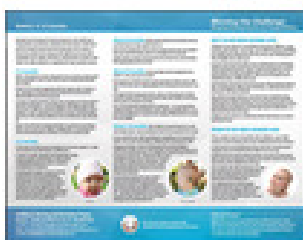
- Consider acoustic transparency, comfort, difficulty putting on, washing, durability



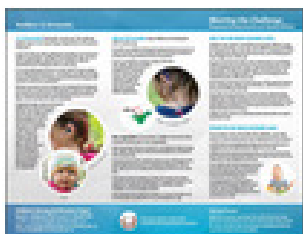
Free brochures for you to download and print

<http://successforkidswithhearingloss.com/hearing-aids-on>; www.JaneMadell.com

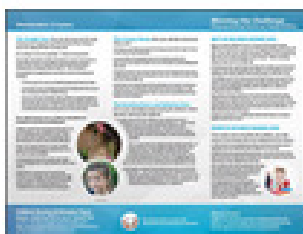
Download and print your brochure information now! Select the brochure below and print! Both sides is suggested, using 28# or 30# paper.



Babies and Hearing Aids – 0-12 Months: 0-3 months; 4-6 months; 6 months; 9 months; 12 months; how to keep hearing aids out of your baby's mouth; how to discourage his practicing the skill of yanking off the hearing aids



Toddlers 12 to 24 months: during the second year; about 20 months; how to discourage your child from yanking off the hearing aids; checking the hearing aids daily with toddlers



Preschoolers and Hearing Aids – 2-5 Years: the terrible twos; the curious threes; the sensitive fours; checking hearing aids daily with preschoolers





Basic issues for keeping hearing aids on

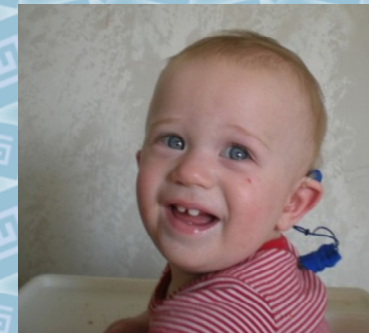
- Hearing aids may be too loud or too soft
- The earmold is uncomfortable
- The earmold is not clogged with wax which prevents sound from getting through
- The child has put something in her ear (a bean, a bug) or has a lot of wax in her ear canal, making it uncomfortable to insert the earmold
- There may be an ear infection causing the ear canal to feel uncomfortable





Age related issues & strategies

- 0-3 months: unintentionally may knock off an aid
- 4-6 months: if unintentionally knocks off aid he may put it in mouth
 - Tightly fitting earmolds
 - Locking battery drawers
 - Accessory to prevent aid from going in mouth
- 6-7 months: discover their own hands. May swipe hand against ears. When eating solid food may result in food accidentally getting in/on aids
 - Accessory to protect against dirt/moisture





Age related issues & strategies

- 9 months: new ability to yank, push, pull. Pulls off hats, socks, hearing aids (*Look what I can do!*)
 - Accessory to prevent aid from going in mouth
 - Wig tape on back of hearing aid to make it less comfortable when he yanks off the aid
- 12 months: *I am mobile and I know what I want!*
Not unusual to yank off aids when upset/bored
 - “Only Mommy or Daddy take off your hearing aids”
 - Try a cap when replacing the aid and distraction are not enough (may only wear a short time)





Age related issues & strategies

- 20 months: *I'm learning to undress!* Off come the hearing aids too!
 - “Only Mommy or Daddy takes off the hearing aids”
 - You take them off and then have him ‘help’ you put on
 - Use a cap on outings to prevent ‘undressing practice’ when he is bored
- 24 months: May remove the aids to get your attention, as part of other upsets
 - Model “Ears off please!” and remove them
 - Ask to find out why he wants them out; Tired? Noisy? Ears hurt? Replace aids ASAP





Age related issues & strategies

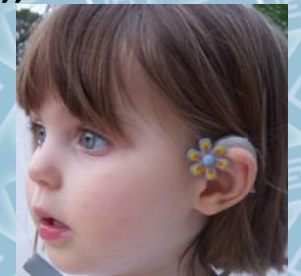
- 30 months: time to start training him to put on the hearing aids by himself. Should be able to do so by age 3
 - Make it clear that eating the batteries can hurt him!
- 36 months: *How does this work?*
Like to take things apart.
 - Accessory that covers the hearing aid and minimizes the ability for little fingers to explore
 - Talk about the parts of the hearing aid and engage his help as you check the hearing aid





Age related issues & strategies

- 4 and 5 year olds – Look at all the neat things I can do! I want to be noticed! I want to be liked!
 - What peers think and peer comments start to matter
 - It is important for the hearing aids to be “cool”
 - Colored cases, accessories, Tube Riders, hearing aid charms, etc. Talk about “cool ear computers.”
 - Practice how to respond to questions: “What are those things?”
 - Talk about how people ask because they don’t know. Most aren’t asking to be mean.

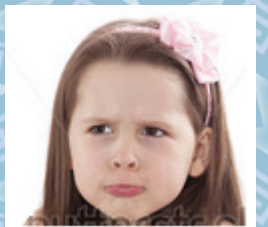
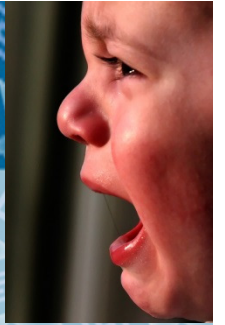




Keep at it!

The behavior will eventually stop.

- Stick to the schedule – no weekends or days ‘off’!
- “Taking a break” from wearing hearing aids for a morning, day or weekend, is just setting your child further behind.
- Be persistent. Toddlers must learn that wearing the hearing aids is non-negotiable. Unless you suspect that he is in pain (i.e., ear infection, broken hearing aid), ALWAYS replace them if they have been pulled out.
- Consider what the late toddler/early preschooler is getting out of the action of taking off the hearing aids.





Parent's Strategies for What Works!

Persistence in putting them back in, using accessories to keep them on the child's head and keeping the child distracted and 'happily listening' helps you get through!



- Sing whenever he pulls off his hearing aid – he won't want to miss hearing his favorite song!
- Clips to hearing aids attached to barrettes in hair; if child tries to pull off – she pulls hair too
- Wig tape to support a large hearing aid or FM receiver on a tiny ear

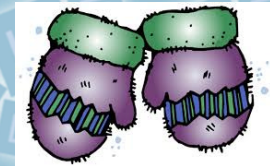


Parent's Strategies for What Works!

- Cap over the hearing aids with strings criss-crossed under chin and bow tied behind neck



- When in a carseat or stroller try



- Mittens so it is harder to grab the hearing aids
- Inflatable 'swimmies" (water wings) on her arms so she can't reach the hearing aids



- Really fun, favorite toys that can only be played with in the car/stroller



Conclusions

- Full-time use of hearing aids is critical
- It can be difficult at times!
- If parents understand why full-time use is critical they WILL be able to do the job
- Being persistent and using hearing aid retention accessories and strategies helps



Babies: 0-12 months.

Meeting the Challenge
Helping Hearing Devices on Young Children

Why DO WE NEED HEARING AIDS?

When DO WE NEED HEARING AIDS?

Did you know?

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Toddlers: 12-24 months.

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