

Cochlear™ Wireless For Kids

A Simply Smarter Way to Connect Children to a World of Sound

Children with hearing loss need access to better signal-to-noise ratios than adults.¹ Input processing and dual microphone technology are great ways to improve hearing in difficult listening environments, but there are numerous listening situations in which direct connection can yield further improvements.

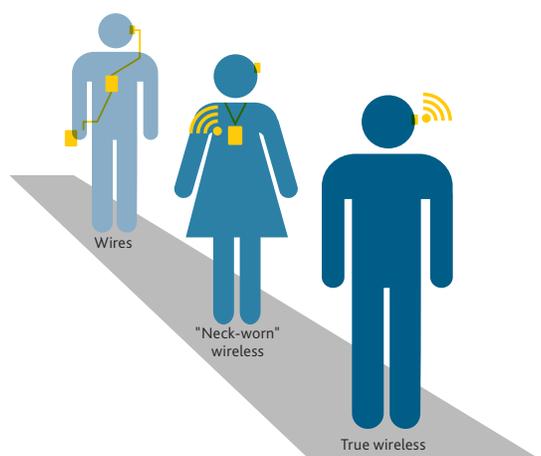
Methods for delivering direct connection have evolved over time.

First generation connectivity options such as personal audio cables do a great job of transmitting the signal, but they do so at the cost of freedom of movement, as the child is tethered to the source.

Second generation connectivity options use an intermediary streaming device to create a wireless bridge between the sound processor and the target signal. The child typically wears this "streamer" around the neck, similar to a necklace. The utility of second generation wireless devices is limited due to size, placement and cost. This is especially true for children as the device can snag during play or be spilled on during meals. Because these streamers are intermediary devices, utilizing their full functionality usually requires coupling them with additional accessories at an added cost to the family (e.g., *Remote Microphones, Television Interfaces*).

With the recent breakthroughs in 2.4 GHz technology, **Cochlear's third generation connectivity** streams the signal directly to the child's sound processor(s) without the need for a connection wire or a neckworn streamer. This "true wireless" connectivity gives the child more freedom of movement and removes the need to wear a neckloop.

With a simple software update, every Cochlear™ Nucleus® 6 Sound Processor can connect wirelessly to the Cochlear Mini Microphone, Cochlear Phone Clip and Cochlear TV Streamer.



Mini Microphone
Portable clip-on microphone that transmits speech or sound, so a child can listen to the target signal regardless of background noise



Phone Clip
Hands-free audio connection to Bluetooth® devices, so a child can be more confident when using the phone



TV Streamer
Stereo audio streaming from the television and other consumer electronics, such as a stereo or PC, so a child can hear sounds at the preferred volume independent of the speaker output

How True Wireless Helps Children Access Better Hearing

Here are just a few of the ways children with Cochlear hearing implants might use these accessories.

Affordable, Portable FM Alternative

Numerous studies have shown that children with hearing loss benefit in an academic setting from better signal-to-noise ratios.³ FM technology is the standard in most schools today. Now, with the Cochlear Mini Microphone, educators have an excellent low-cost alternative to deliver improved signal-to-noise ratios. And for classrooms with multiple Nucleus 6 System users, the teacher can transmit to all of these children using a single Mini Microphone.



Car Rides

Due to the forward facing position of the occupants, sub-optimal acoustics and lack of visual cues, car rides can be a difficult communication environment for passengers. With the Cochlear Wireless Mini Microphone, the voice of someone in the front can reach a child in a car seat in the back of the vehicle. *Children need to hear approximately 21,000 words per day for their vocabularies to develop at an appropriate pace,² so using the Mini Microphone can help to transform ride time into learning time.*



Hearing at Home

Because of their high cost, FM systems are often not permitted to come home from school, meaning the signal-to-noise ratio benefits disappear when the bell rings at the end of the day. With the Cochlear Wireless Mini Microphone, parents can be confident that their children can hear them; so talking with children during daily routines just got easier.



At the Pool

The Cochlear Nucleus Aqua+^{*} lets children swim while wearing their sound processor, but the experience takes on a whole new dimension when Mom or Dad can communicate directly with their swimmer's sound processor(s) via the Mini Microphone! Swimming lessons in particular pose a unique challenge, especially if they are conducted at an indoor pool where reverberation can make it hard to hear the teacher. While the Mini Microphone is not designed to get wet, a swim teacher on the pool deck can use it to ensure her voice is being heard during the lesson.



In the Family Room

The Cochlear TV Streamer works in parallel with a television's regular speakers to transmit digital sound directly to a young viewer's sound processor(s). So, even if the family room gets loud, a child can still hear the signal from the television and not get left out. Whether playing a video game or having movie night, the TV Streamer is there to enhance the child's listening experience.



Teen Scene

Make no mistake, smartphones are vitally important to those teens that are lucky enough to have one. Whether it's keeping up on their social life, listening to the newest pop song, or even making a plain old phone call, the Cochlear Wireless Phone Clip uses Bluetooth[®] technology to do it hands free. And with no wires and no neckloops, it might just make it cooler, too, which means a teenager may actually answer that call from his Mom!



Cochlear Wireless accessories were created with kids in mind. They are designed to be easy to pair and use, so more time can be spent hearing, connecting and communicating with the world. To learn more about Cochlear Wireless Accessories visit www.Cochlear.com/US/Wireless

*The Nucleus 6 Sound Processor with the Aqua+ is water resistant to level IP68 of the International Standard IEC60529. This water protection only applies when you use the Aqua+ and rechargeable batteries without the acoustic component.

References

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2. Hart & Risely, 1995, *Meaningful Differences in the Everyday Experiences of Young American Children*. Bookes publishing Co.
3. Anderson, K. L., Goldstein, H., Colodzin, L., Iglehart, F. (2005). Benefit of S/N enhancing devices to speech perception of children listening in a typical classroom with hearing aids or a cochlear implant. *Journal of Educational Audiology*, 12, 14-28

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