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**LOOKING  
AFTER BONE  
CONDUCTION  
HEARING AIDS**

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Deaf  
Children  
Australia.



### Did you know?

Bone conduction hearing aids only work if the cochlea is functioning. They are different to cochlear implants, which have electrodes in the cochlea itself.

**Many children who are deaf or hard of hearing (DHH) use devices that amplify sound. Bone conduction hearing aids (BCHAs) look different to regular hearing aids because they do not sit inside the ear. Here's what you need to know about BCHAs, including how they work and how to care for them.**

### What is a bone conduction hearing aid?

A BCHA is a type of hearing aid that transmits sound waves through the bones in the head directly to the cochlea (inner ear). They can be good for children with certain types of hearing loss, or when problems with the outer or middle ears (such as chronic ear infections) mean a regular hearing aid is not suitable.

BCHAs have two parts: a small implant that is surgically inserted into the bone behind the ear, and an external sound processor. The sound processor is connected to the implant either via a magnet or a small fixture that protrudes through the skin (known as an 'abutment').

Some BCHAs do not use a surgical implant. Instead, the device sticks to the skin behind the ear or is held in place by a headband.

### How do they work?

In normal hearing, sound travels from the outer ear to the middle ear to the cochlea. Bone conduction hearing aids bypass the outer and middle ears.

The sound processor picks up sounds and turns them into vibrations. These vibrations are transmitted to the implant, which sends them through the head bones directly to the cochlea. The cochlea converts the vibrations into electrical impulses, which are sent to the brain via the hearing nerve.

### How to look after a bone conduction hearing aid

- > A BCHA needs special care and maintenance. If a child has one, they or their caregivers are responsible for looking after it, so you don't need to know all the details. But understanding some basics can give you peace of mind.
- > The external sound processor is not waterproof, so it needs to stay dry. If the child is doing water-based activities, they'll need to take it off or put it inside a waterproof cover.
- > If the sound processor gets wet, it needs to be dried as soon as possible using a special drying unit. Ask the child's family about the type of drying unit they use.
- > The sound processor also needs to stay clean. Be careful using hairspray or other products around the child's ears.
- > If you have to clean the sound processor, make sure your hands are clean and dry. Clean it using a dry, non-abrasive cloth.

### The sound processor should be taken off during contact sports.

- > If the child is doing an activity where they could lose the sound processor, they should use a safety line. This is a thin line that attaches to the sound processor with a clip that attaches to their clothing. Make sure the line is at the shortest possible length and positioned so it does not create a risk of strangulation.
- > Children can wear a sweat band over their hearing aids or sound processor to help keep the device in place and prevent moisture from getting into it.
- > Agree on a signal that everyone knows in case the device is knocked off during play.
- > A direct blow to the implant can damage it. Children taking part in contact sports where a head clash or direct knock from a ball could occur should wear a helmet.
- > Batteries need to be recharged or replaced regularly. You might like to keep spare batteries at your club.

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