

A Guide To Glue Ear and Bone Anchored Hearing Solutions



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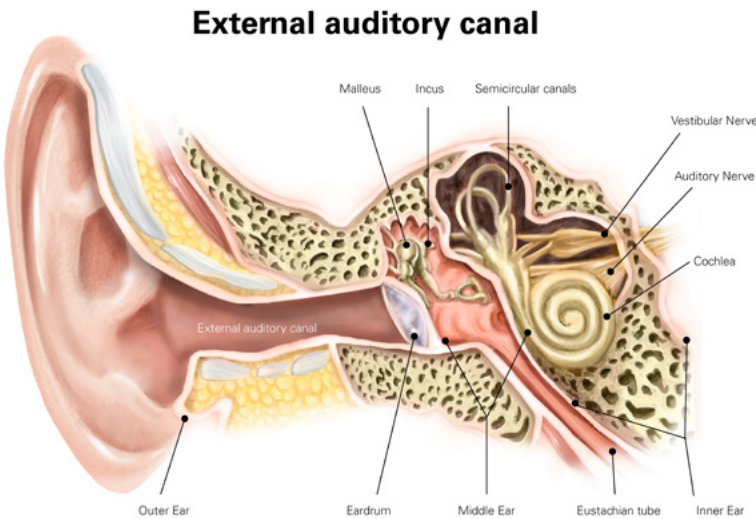
Glue Ear or Otitis Media with effusion as it is medically referred to, is a build-up of thick sticky mucus behind the ear drum, meaning that the ear cannot work as well as usual, so your child may have a temporary hearing loss. It is very common and 80% of children will experience it at some point in their childhood⁽¹⁾. It affects under 5-year olds more and in most cases, it will clear on its own, but in some children, it is a recurring challenge over many months or even years.

How the ear works

Normally, sound travels down the ear canal to the ear drum which then vibrates, shaking the three little bones in the middle ear, which then send the vibrations to the Cochlea, which interprets the vibrations as sound.

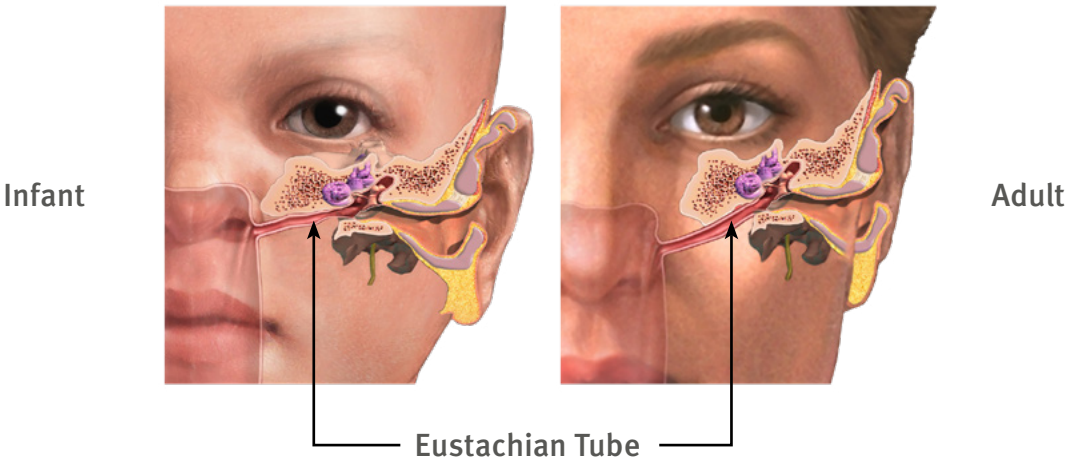
The Eustachian tube is also an important part to how our ears work and how they keep healthy.

The Eustachian tube sits just behind the eardrum and helps to drain the middle ear if fluid collects inside. It also helps to keep the air pressure equal



which is useful when on planes at higher altitude.

As you will see in the diagram below, in a child, the eustachian tube is more horizontal which makes any drainage or equalisation of pressure, a lot harder. But as they grow, this changes and as you can see, the eustachian tube in an adult is far better positioned to aid draining or equalisation of pressure changes as it slopes down. This is why children grow out of glue ear.



Signs that your child may have glue ear

There are no clear signs, however, you may notice a series of things which alert you to thinking that something is not right. These signs may include, a change in behaviour, becoming tired, lack of concentration, playing less with their friends, not

responding when called or TV being louder than normal.

Your GP can look in your child's ear and then refer you to the Ear, Nose and Throat dept where a hearing test will be undertaken, and advice given.

Treatment Options

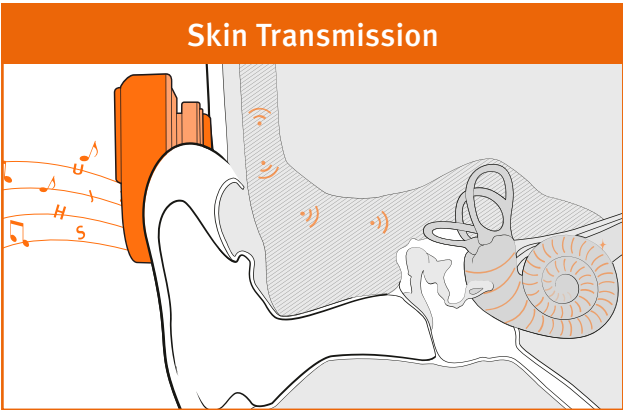
As Glue Ear is a temporary problem, you may wonder why it is important to treat your child whilst they have the condition. There have been many studies that show the importance of young children being able to hear during their early years⁽¹⁾. Stable hearing helps the hearing nerve pathways develop properly and avoids any delay in speech development, so treating your child as quickly as possible is important⁽²⁾.

There are many options available to treat glue ear. The most common treatment options being Bone Conduction Hearing Processors, temporary conventional hearing aids or an operation to put a grommet into the ear drum.

Your audiologist may have recommended that your child uses a Bone Conduction Solution. In the next section, you will see how it works on a softband.

Bone Conduction Sound

Have you ever noticed how different you sound when you hear yourself on a recording, or, how loud the drill sounds at the dentist? Well, bone is brilliant at carrying sound waves and this clever fact enables the processor, to take the sound from the outside, straight through into the Cochlea by using the bone to carry the waves. This means that the sound does not have to try to battle its way through the sticky mucus and will give a more constant level of sound that is clearer than some treatment options.



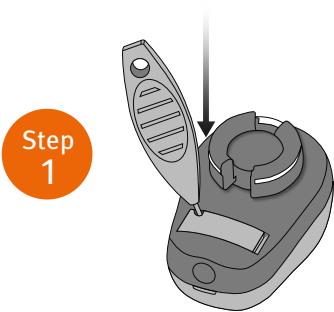
How Does Your Ponto Work?

Ponto is the name of the Bone Conduction processor and as Glue Ear will get better over time, you should follow the instructions that your audiologist has given you as to when to wear it and for how long.

The processor picks up the sound and then changes the sound waves into vibrations. In order for those vibrations to get to the cochlear, the processor is placed onto a Softband which sits around your child’s head and as it is in contact with the head the vibrations can then be taken along the bone to the cochlear and your child can once again hear more clearly.

If you would like additional information about Glue Ear, you can visit the website for the National Deaf Children’s society.

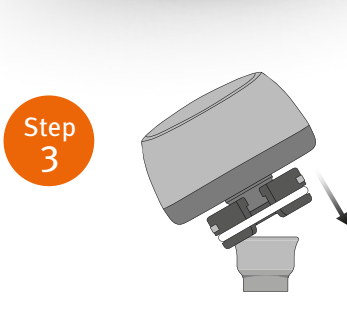
www.ndcs.org.uk



Put a battery into the processor. Close the door, which will turn the processor on.
Flashing lights will appear.
If orange, check the manual.



Lock the Battery door.
The sound processor will make a jingle

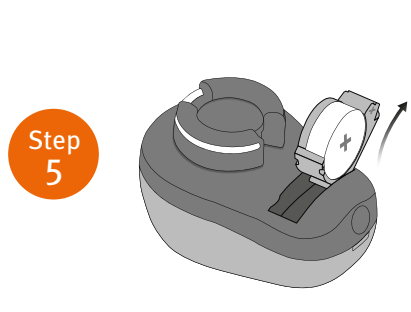


Put a battery into the processor. Close the door, which will turn the processor on.
Flashing lights will appear.
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Place softband onto your child’s head following these points:

1. Put the processor on the side that your audiologist has suggested as in picture below.
2. Make sure the softband is not too tight by making sure you can put two or three flat fingers between your child’s head and the band. As the vibration has to travel through the bone, the band must be in touch with your child’s head but, it should be comfortable to wear.
3. Remove at night or when the child is asleep. There is a safety release on the band which can be reconnected should it come apart.



Switch the processor off by opening the battery door when your child is not wearing the softband/ processor. Please keep all batteries out of the reach of children.

Please note: This is not the full instruction for use make sure to always follow the Instructions For Use provided with the products (Ponto sound processor and soft band). You can also find these on our website: <https://www.oticonmedical.com/uk>

Useful Apps available for support

- The Oticon ON App for features such as Volume Control, Find my Processor and Battery Management.
- Ponto Care App features being able to track your child's progress through a virtual diary as well as a number of FAQs for support.



References

1. Simpson, S.A., Thomas, C.L., van der Linden, M., et al. (2007) Identification of children in the first four years of life for early treatment for otitis media with effusion (Cochrane Review). The Cochrane Library. John Wiley & Sons, Ltd.
2. Rosenfeld, R.M., Shin, J.J., Schwartz, S.R. and et al. (2016) Clinical practice guideline: otitis media with effusion (update). Otolaryngology - head and neck surgery 154(1 Suppl), S1-S41.
3. National Collaborating Centre for Women's and Children's Health (2008) Surgical management of otitis media with effusion in children. RCOG Press. NICE, "What is the prevalence of otitis media with effusion (OME)?," National Institute for Health Care Excellence, 2016. [Online]. Available: HYPERLINK <https://cks.nice.org.uk/topics/otitis-media-with-effusion/background-information/prevalence/>. [Accessed: 20-Oct-2020].

Useful Contacts

Hospital Contact Details:

Where to get batteries from:

Oticon Medical Customer Services

t: 01698 208 234

e: sales@oticonmedical.co.uk

Technical Support

t: 01968 208 200

e: support@oticon.co.uk