

Conductive hearing loss in the classroom



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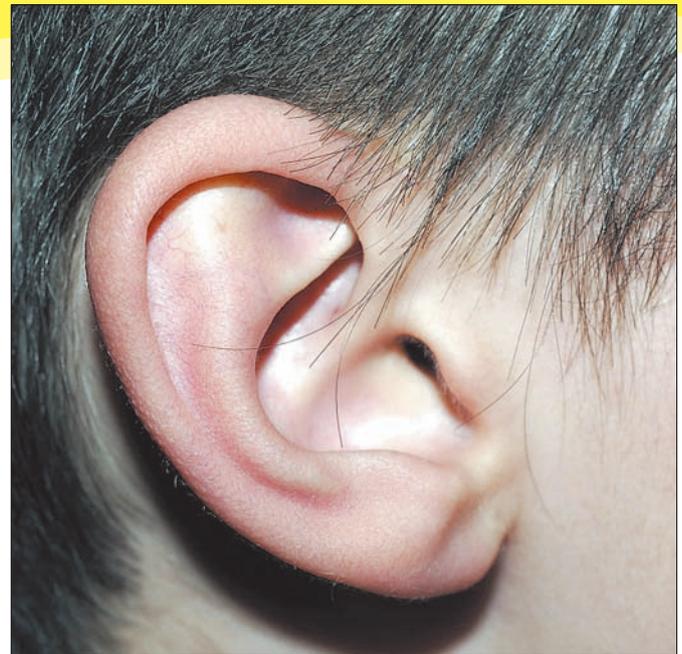
What is otitis media?

Otitis media is an inflammation of the middle ear that reduces children's ability to hear clearly. Fluid builds up behind the eardrum, making it difficult for sound to travel or 'conduct' through the middle and inner ear, and because of this, otitis media is sometimes named conductive hearing loss. Otitis media is prevalent in young children, particularly in indigenous families, and is often caused when children have a common cold. A recent study from the Telethon Institute for Child Health Research has also shown a link between passive smoking and the incidence of middle ear infection (Jacoby et al., 2008).

Otitis media can vary in severity from a mild infection that can be cleared with antibiotics, to a perforation (hole) in the eardrum and ongoing infection. On average, 50% of all Aboriginal and Torres Strait Islander school children have otitis media and hearing loss that could effect their ability to participate in classroom activities (Australian Hearing, 2004).

In some cases, long-term middle ear infection can also lead to permanent hearing loss. According to the American Speech and Hearing Association, 'The earlier hearing loss occurs in a child's life, the more serious the effects on the child's development' (ASHA, 2008).

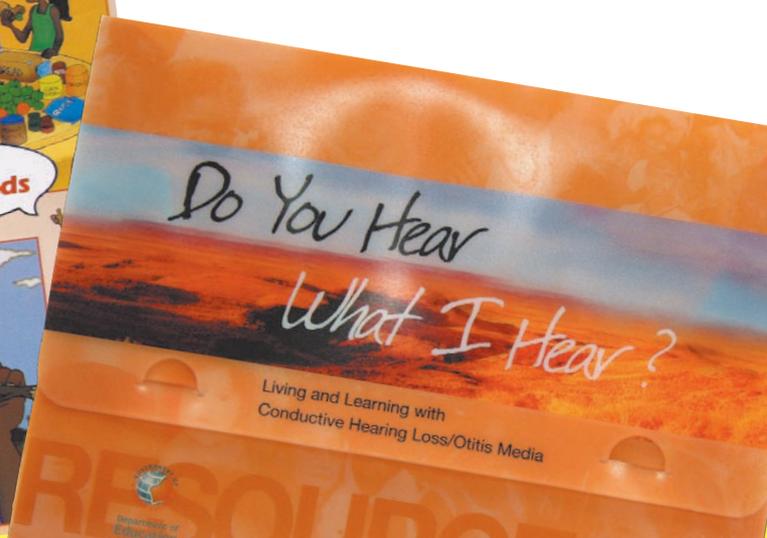
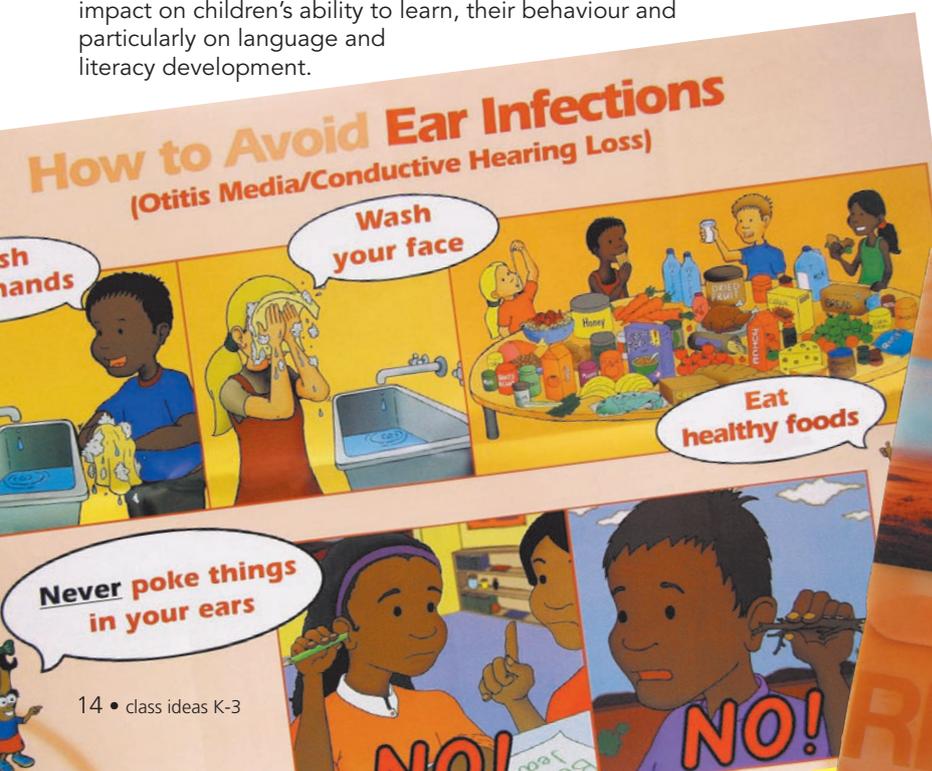
For many children the effects of otitis media vary from day to day, so children may be able to hear clearly one day but not the next—the sounds they hear may be softer than usual or sound distorted. Children who have recurrent ear infections may become so used to their level of hearing that they do not know what it is like to hear clearly! This has a significant impact on children's ability to learn, their behaviour and particularly on language and literacy development.



Impact of otitis media on language and literacy development

For children to learn language, they need repeated exposure to good language models. So the more children hear language, the more they learn! When children have intermittent hearing loss such as otitis media, the messages they hear can vary on a daily basis. This impacts on the words children learn (therefore the size and quality of their vocabulary) and their ability to discriminate sounds in words (phonemic awareness), both important elements in learning to read, write and spell.

It seems logical then that children with ongoing middle ear problems are more likely to develop persistent learning difficulties, widening the gap between themselves and the academic achievements of their peers. In addition, the social impact on children with persistent difficulties should not be underestimated.



What can I do?

If you suspect a child suffers from hearing loss, then encourage the child's caregiver to see his or her GP. If warranted, the GP may refer the child to an otolaryngologist (ear, nose and throat specialist) or, for further hearing assessment, to an audiologist. The school nurse is also a great resource. In some circumstances, the local speech pathologist may be able to perform a hearing screen and assist the referral process.

Here are some basic strategies teachers can use in the classroom to support children with otitis media:

- Be aware of your own voice and volume in the classroom, ensure you project your voice and try not to talk to the whiteboard! Children benefit from seeing your facial expressions and lips when you are speaking and reading.
- Stand still! If you're talking to the class, stand still so children can focus on one point. Moving around the room while talking can be distracting and you're also varying the distance between yourself and the children who find it difficult to hear you. Stand closer to children who you know have a hearing difficulty and ensure they can see your face.
- Noisy classrooms often present a challenge to children with otitis media, particularly when they are trying to hear instructions given by the teacher! Ensure the class is quiet before giving instructions as this will help cut down on background noise, which can be very distracting. This also includes other sources of background noise such as electrical appliances and ceiling fans. Unfortunately, the design of some open-plan classrooms do not always make them conducive to offering a quiet learning environment.
- Some children with long histories of hearing loss will not have learnt how to listen. Listening involves physically staying still and attending to and then understanding and thinking about what's being said. As such, gain children's attention before giving instructions, repeat the key elements, check their understanding by asking

them to repeat the main points and provide visual cues and scaffolding where possible.

- Pairing children with a buddy is also another helpful strategy. When children don't understand or have difficulty understanding instructions, they can be encouraged to go to a nominated buddy who will explain the task.
- Working in small groups or in pairs is often helpful for children with otitis media as the number of voices they need to pay attention to are decreased when compared to the whole class.
- Talk to children about hearing loss, including what it feels like and the strategies that children themselves can employ (such as asking a friend, keeping the noise down, facing the person when speaking, speaking clearly and asking questions to clarify information when you don't understand). Awareness leads to action and acceptance.
- Children with persistent middle ear infection often have 'poorly organised and ... inaccurate representation of sounds in words' (Jacobs, Sinclair, Williams & QuanSing Rowlands, 2002), so a specific focus on phonological and phonemic (individual sound) awareness skills is vital. The ability to discriminate between sounds and identify the first, last and middle sounds in words has an enormous impact on a child's ability to learn to read, write and spell. Many children benefit from the explicit teaching of phonemic awareness (sounds, not letters!) as well as pairing sounds with visual or gestural cues.
- Some classrooms are equipped with a sound field amplification system which helps to project the teacher's voice to the children by making it louder and easier to hear. Research suggests that sound field systems can benefit ALL children in a classroom, not just those with hearing loss (Flexer, 2004).

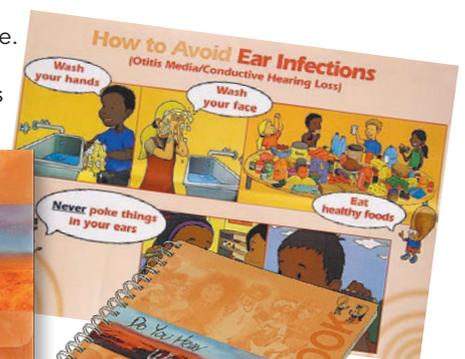
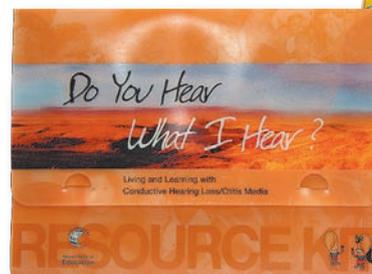
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Resources and further information

In 2002, the then Western Australian Department of Education produced a resource book for teachers called *Do you hear what I hear? – Living and learning with conductive hearing loss/otitis media*, a copy of which was sent to all public schools. The resource pack was written by teachers and speech pathologists and contains information about otitis media, the physical signs and symptoms, as well as lots of classroom intervention strategies and activity ideas. The pack comes with an informative CD-ROM as well as a basic screening tool and posters to raise children's awareness.

Copies of the kit are available for purchase. Please visit <http://www.det.wa.edu.au/education/abled/conductive_hearing_loss_resource.html> for details.



In other states and territories, most education departments have a similar resource kit available, or at least information and hints offered through the various department websites. There are also lots of other websites you can access for more information by typing 'otitis media', 'conductive hearing loss' or 'middle ear infection' into any search engine.

