Sensory Service
supporting Kent schools

Kent County Council
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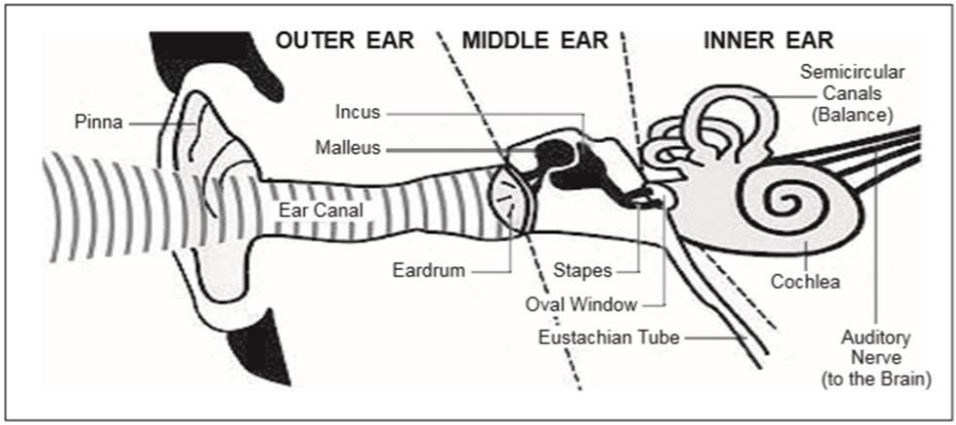
The Ear

General information for parents and carers



The ear is made up of three parts: the outer ear, the middle ear and the inner ear. These parts all work together to help us recognise sound.

The outer ear

The pinna (the flappy outside part of the ear that can be seen) collects sound waves and directs them down the ear canal to the ear drum.

The middle ear

The eardrum separates the outer ear from the middle ear. When sound waves hit the eardrum, it vibrates. The vibrations are passed across the middle ear by the ossicles; the three smallest bones in the body (the malleus, incus, and stapes). They may also be called the hammer, anvil and stirrup. These bones increase the strength of the vibrations and help the sound move along its journey into the inner ear.

The inner ear

Vibrations come into the inner ear via the oval window and enter the cochlea. This is the curled tube that looks like the shell of a snail. The cochlea is filled with liquid which moves, like a wave, when the ossicles vibrate. It is also lined with thousands of tiny sound sensitive hair cells which move with the vibrations. As these hair cells move, they create nerve signals, a bit like small electrical charges. These signals are carried along the auditory nerve to the brain where they are interpreted as sound.

The ear has two main functions which are closely connected:

1. To collect sounds and convert them into signals that the brain can understand.
2. To help us keep our balance

Hearing and Deafness

For an ear to work fully and allow us to pick up sound, all the described parts must work well.

Deafness happens when one or more of these parts of the system is not working properly.

Balance

Ears also help us to keep our balance. The brain takes in information from what we see and feel. Above the cochlear in the inner ear are the semi-circular canals; three loop shaped tubes. These are filled with liquid and movement sensitive hair cells. As we move, the liquid moves the tiny hairs which send messages to the brain about the head's position. The brain then sends this information to the right muscles so that we keep our balance.

Frequently asked questions

Why do I have wax in my ears?

Wax is produced in the ear canal to protect it. It helps fight off infection and collects dirt to help keep the ear canal clean. Without wax the ear may become dry, cracked and sore.

Can I clean my ears?

No, do not go poking around in your ears, especially with cotton wool buds. Doing this can cause wax to impact and lead to temporary hearing loss.

NB. Your hearing is precious so protect it. Wear ear plugs in loud music or around noisy machinery. Keep the volume down on the stereo, especially when in the car or when wearing headphones.

Specialist Teachers for Hearing Impairment (ST HI)

The Role:

- provide support and advice to parents, carers, early year's settings, schools, and colleges.
- work with children and young people with bilateral moderate, severe, or profound hearing loss.

The needs of children with unilateral or mild hearing loss can be met by settings and schools implementing strategies set out in Best Practice Guidelines (Early Years) or Mainstream Core Standards (schools). Therefore, ST HI do not normally work with children and young people with these losses.

STLS HI Contact Details

Telephone advice can be provided by the Co-ordinators for Hearing Impairment

East Kent—Jo Clarke: 07825 380152

jclarke@valence.kent.sch.uk

West Kent—Sue Holder: 07825 013351

sholder@valence.kent.sch.uk

General information and advice is available from the National Deaf Children's Society helpline:

0808 800 8880

or the website www.ndcs.org.uk