



Management of monaural (single ear) hearing

Information for patients who only have one hearing ear.

About single-sided deafness

Being able to hear in both ears is very important. Without two ears, the auditory processing centre within the brain cannot perform functions which allow us to do the following:

- Binaural summation: a process which makes sound louder and can only be achieved when sound is heard through both ears at the same time.
- To determine which direction sound is coming from.

The following scenarios are also much more difficult when you are unable to hear in both ears:

- To hear when someone is talking on the side of your worst ear.
- To hear when you can't see someone's lip movements or facial expressions (i.e. when driving or if a person's face is covered).
- To hear in background noise (i.e. restaurants, shops etc.).

Meeting the challenges of monaural hearing

If you have a hearing loss in one or both ears, your audiologist may talk to you about hearing aids. The following are examples of when you may not be able to wear a conventional hearing aid, or may not experience significant benefit by doing so:

- Previous ear surgery which prevents the use of a hearing aid.
- Persistent ear infections (where treatment has not been successful).
- Anatomical variations to the ear which prevent a hearing aid from being worn.
- Where the degree of hearing loss exceeds the maximum amplification that a hearing aid can provide.
- Where testing indicates that your brain cannot adequately process sound from one of your ears.

Provided that you are able to wear and benefit from a hearing aid in your other ear, your audiologist may offer you the following options. An appointment will be arranged for advanced testing prior to any devices being fitted to determine if there is any reason to recommend one treatment option over the other.

CROS hearing aids

CROS stands for Contralateral Routing of Signal. A CROS hearing aid is suitable for individuals who are unable to wear a hearing aid in one ear and have normal hearing in the other ear.

A CROS hearing aid involves the user wearing a device behind both ears. The device behind the 'un-aidable' ear is a wireless microphone. It picks up sound and sends it wirelessly to the

device worn on the better hearing ear. This allows the user to hear all sounds in their better hearing ear.

Potential benefits of a CROS hearing aid:

- You may be less likely to miss someone speaking to you from the side of your worse hearing ear.
- Improved hearing in situations when it is quiet (i.e. there is little background noise and the room acoustics are good).

Potential disadvantages of a CROS hearing aid:

- They cannot improve your ability to tell where a sound is coming from.
- They are unlikely to improve your hearing in noisy environments, particularly if noise is all around you or on the side of your ‘un-aidable’ ear. When noise is all around you, or on the side of your ‘un-aidable’ ear, CROS hearing aid may make it harder to hear than if you were not wearing the devices.
- No hearing aid will pick up a person’s voice if they are further than 6 feet away from the hearing aid’s microphone.

A single hearing aid with a Multi Mic

A Multi Mic is a discrete small portable device that is paired with a single hearing aid. The hearing aid is worn in your ‘better’ hearing ear. The Multi Mic can be placed in any location and streams sound wirelessly to your hearing aid.

Potential benefits of a single hearing aid with a Multi Mic:

- Flexibility – you will be able to place the Multi Mic in any location (such as in front of a TV or on speaker’s podium if attending a talk or lecture). This will allow you to stream sounds or voices, which are further away, directly to the hearing aid in your better hearing ear. Multi Mics can be used as a clip-on microphone to stream the wearer’s voice to a hearing aid. A Multi Mic is capable of streaming sound for up to 25 meters with a clear line of sight.
- Use of a Multi Mic can improve the signal to noise ratio and hearing in noisy environments.
- Multi Mics can be used to stream audio (e.g. music) directly to your hearing aid from any device that has a headphone output.

Potential disadvantages of a single hearing aid with a Multi Mic:

- A hearing aid and Multi Mic cannot improve your ability to tell where a sound is coming from.
- A hearing aid and Multi Mic may give limited benefit in noisy places if you have a severe hearing loss in the ear which is wearing the hearing aid.
- A Multi Mic cannot be worn or located close to an electronic medical device (i.e. a pacemaker).

Making the most of your hearing whatever you choose

It is important that anyone with a hearing loss (whether or not they choose to use a device to help them hear) uses good communication tactics to help them manage in different listening situations. Please ask for our leaflet on communication tactics for more information. For those with hearing in only one ear, the following tactics might be particularly helpful:

- Ask people to stand or sit on the side of your better hearing ear.

- If you're not using a device to improve your hearing, it might help in noisy situations to sit with your back to the wall or in the corner of the room, with your better hearing ear directed to the rest of the room.

Patient safety information:

Hearing aids are electronic devices, and should be removed when requested, such as when in hospital undergoing a MRI or X-ray, or if going through an airport security scanner etc.

Please note that batteries used in hearing aids can pose a serious safety risk if they are swallowed by humans or animals. Batteries should be kept out of reach from those who may attempt to ingest them. Battery locks are available on some hearing aids, which can prevent accidental loss or inappropriate removal of a hearing aid battery. Please speak with your Audiologist if you feel that you would benefit from your hearing aids having a battery lock.

Contact details

If you have any concerns or need further advice about your hearing, please contact the Audiology Department on:

Tel: 0118 322 7238

Email: audiology.royalberkshire@nhs.net

Website: www.royalberkshire.nhs.uk/audiology

To find out more about our Trust visit www.royalberkshire.nhs.uk

Please ask if you need this information in another language or format.