



# Management of single-sided deafness

## Information for patients who have been diagnosed with single-sided deafness.

### About single-sided deafness

Being able to hear in both ears simultaneously (at the same time) is very important. Without two ears, the auditory processing centre within the brain cannot perform functions that allow us to do the following:

- Binaural summation: a process that makes sound louder and can only be achieved when sound is heard through both ears.
- 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 simultaneously:

- 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 background noise.

### Meeting the challenges of single-sided deafness

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 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 patients who are unable to wear a hearing aid in one ear and have normal hearing (or an 'aid-able' hearing loss) 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.

The **potential benefits** of a CROS hearing aid are:

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

**What a CROS hearing aid may *not* help with:**

- They cannot improve your ability to tell where a sound is coming from.
- They may not improve your hearing in noisy environments.
- If you have your 'un-aidable' ear towards noise, the CROS hearing aid may make it harder to hear than if you weren't wearing it.
- Hearing sound or people talking from further away. No hearing aid will pick up a person's voice if they are further than 6 feet away.

- **A single hearing aid with a MultiMic:** A MultiMic is a discrete small portable device that is paired with a single hearing aid. The hearing aid is worn in your 'better' or 'aid-able' ear. The MultiMic can be placed in any location and streams sound wirelessly to your hearing aid.

The **potential benefits** of a single hearing aid with a MultiMic are:

- Flexibility – you will be able to place the MultiMic in any location (such as in front of a TV or on speaker's podium if attending a talk or lecture).
- You can use the MultiMic to hear sounds that are further away. They can stream sound to your hearing aid for up to 25 meters with a clear line of sight.
- They can improve signal to noise ratio in noisy environments. Depending on the degree of hearing loss, altering settings within the device can improve hearing in background noise.
- They can be used to stream audio (e.g. music) directly to your hearing aid from any device that has a headphone output.
- They can be used as a clip-on microphone and streams the wearer's voice to your hearing aid.

**What a single hearing aid with a MultiMic may *not* help with:**

- A hearing aid and MultiMic cannot improve your ability to tell where a sound is coming from.
- A hearing aid and MultiMic may not improve your hearing in noisy environments. Background noise and poor acoustic environments are always challenging for hearing aid users.

## **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 devices 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 single-sided deafness 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 in a hospital when undergoing an 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 – so please keep batteries out of reach from those who may attempt to ingest them. All batteries should be stored in a safe and secure location, and disposed of appropriately.

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](mailto:audiology.royalberkshire@nhs.net)

Website: [www.royalberkshire.nhs.uk/audiology](http://www.royalberkshire.nhs.uk/audiology)

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