
Specialist services: single sided deafness (SSD)

What is Single Sided Deafness (SSD), what causes it and what treatment is available?

The Single Sided Deafness (SSD) clinic is a specialist clinic for patients who have no functional hearing in one ear. The hearing in the other ear may range from normal to significantly impaired. There are a number of causes of SSD including: as a result of vestibular schwannoma surgery (sometimes known as acoustic neuroma), infection or unknown cause. There are approximately 9000 new cases of SSD in the UK per year.

- Inability to pick up sound coming from the affected side (known as the head shadow effect)
- Reduced ability to recognise where sounds are coming from (poor localisation). To tell where a sound is coming from the brain compares information for both ears. With SSD the input to each ear can no longer be meaningfully compared.
- Inability to separate background noise from target sounds. Loss of binaural processing makes it more difficult for the brain to pick out signals of interest and ignore general hubbub and background noise.

The first of these problems can be improved by use of a CROS (Contralateral Routing Of Sound) hearing aid which uses a transmitter worn on the bad ear to pick up sound coming from this direction and sends it to a receiver worn on the better hearing ear. If amplification is also required on the better hearing ear then the aid is known as BiCROS. As all the sound is still being received and processed by the better hearing ear only, difficulties with localisation and hearing in background noise remain. Both wireless and wired digital CROS/BiCROS are commonly available on the NHS.

A surgical alternative to a CROS aid is a BAHA (Bone Anchored Hearing Aid). A BAHA consists of a titanium screw which is surgically implanted in the bone just above the affected ear, with a small abutment exposed through the skin to which a vibrating sound processor is attached. The vibrations pass through the bones of the skull to the cochlea of the better hearing ear. Outcomes for BAHA and CROS aids are very similar and they have the same benefits and limitations. Funding for these devices varies by PCT and may require a special application.

Assistive Listening Devices can be of benefit if the hearing loss makes it difficult to hear alerting devices eg phone, doorbell, smoke alarm especially at night when people may be lying on their good ear. Depending on your needs and where you live these can be provided by Social Services for free or purchased through a catalogue.

Lip-reading can be a useful skill to learn to help in background noise so that sounds which are not audible can be recognised visually instead. Lip-reading classes are available around the country either linked to hospitals or further/higher education colleges.

Good communication tactics are also very important to try to achieve the best possible listening conditions. These include facing the person who is speaking, trying to minimise or move away from background noise, careful positioning to favour the better ear for example tables in restaurants and modifying the environment to minimise reverberation. Being proactive in letting other people know about hearing difficulties and what they can do to help can also reduce the frustration of unsuccessful communication.

What to expect at your appointment?

The first appointment is an assessment to discuss the history of the hearing loss, the current difficulties experienced with hearing and any other related symptoms. If a hearing test has not been performed recently this will be completed along with a number of questionnaires which try to quantify the difficulties experienced. Advice will be given on any suitable devices and on communication tactics specific to the situations which are particularly hard for each person. If it is decided that a CROS/BiCROS aid would be useful arrangements can be made to have this fitted, either here or more locally. After the CROS/BiCROS fitting a follow up appointment will be arranged to check on progress and to complete the questionnaires again to obtain a before and after picture of people's experiences. Further follow up and servicing of any devices will also be arranged as necessary.

If a BAHA is found to be the most suitable option, a referral to the appropriate service will be made and the patient discharged from our clinic.

How to get an appointment/ referral criteria

You will need a referral if you would like to be seen on the Single Sided Deafness Clinic, this can be arranged via your audiologist or ENT consultant.