#### **How to Talk to People with Hearing Loss**

People with hearing loss may have difficulties distinguishing words that sound similar. The main function of a hearing aid is to amplify sounds, not to restore one's hearing. The more severe the hearing loss is, the poorer the ability to understand speech, and thus more time is required to process and comprehend the sounds. It is better to converse with hearing impaired individuals in a quiet place, and speak in a clearer and slower manner without shouting.

#### **Degree of Hearing Loss**

Average Threshold (decibels)	Degree	Amplification Needs
-10 - 25	Normal	
26 - 40	Mild	Difficulties in hearing speech that is soft and from a distance; need for preferential seating; would benefit from hearing aids
41 - 55	Moderate	<ul> <li>Able to hear with concentration any conversation within a distance of 3 – 5 feet</li> <li>Needs to wear hearing aids</li> </ul>
56 - 70	Moderate Severe	<ul> <li>Needs others to raise their voice; difficulties in hearing others in group conversation</li> <li>Needs to wear hearing aids</li> </ul>
71- 90	Severe	<ul> <li>Needs others to speak loudly to the ear</li> <li>Unable to distinguish environmental sounds; able to distinguish vowels but not consonants</li> <li>Needs to wear hearing aids</li> </ul>
>91	Profound	<ul> <li>Only able to hear very loud sounds; in severe need of hearing aids to amplify sounds in daily conversation</li> </ul>

For enquiries and appointments, please contact us at:

## Li Shu Pui ENT Head & Neck Surgery Centre Hearing and Dizziness Laboratory

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#### Service Hours (By appointment only)

Monday to Friday: 9:00 am - 5:00 pm Saturday: 9:00 am - 1:00 pm Closed on Sundays and Public Holidays

#### www.hksh.com

# **Using Hearing Aids**



李樹培耳鼻喉頭頸外科中心 Li Shu Pui ENT Head & Neck Surgery Centre

# Using Hearing Aids

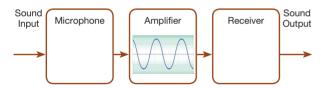
#### **About Hearing Aids**

A hearing aid is basically a sound-amplifying device. It transmits amplified sounds via the ear canal to the middle and inner ear, from where the hair cells send signals to the central nervous system.

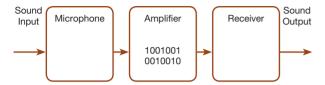
#### Mechanism

A hearing aid comprises 3 major components, i.e. a microphone, an amplifier and a receiver. Sounds are first received by the microphone. They are then converted into electrical signals. The amplifier amplifies the electrical signals and transmits them to the receiver. The receiver converts the electrical signals back to acoustic signals which are then sent to the ears.

The conventional analog hearing aids convert sounds into electrical signals. The signals are then amplified and converted back into acoustic sounds.



A digital hearing aid converts sounds into digital signals. The signals are then processed by a computer microchip which increases the gain, reduces background noises, zooms to the sound source, etc.



Supported by computer software, current digital hearing aids have a wide range of automatic functions such as automatic feedback cancellation, digital signal processing, automatic gain control, signals automatic multichannel processing, etc.

#### Other Components

- On/Off switch
- Volume control knob
- T-switch for use of phones with telecoil
- Program switch to cater for different environments
- Far hook attached to ear mould.
- Batteries

#### Selection of Hearing Aids

You are advised to consult your doctor to check for any medical condition leading to hearing loss. If the hearing loss is irreversible, hearing aids may offer some benefits. An audiologist will provide professional advice and assistance in the selection of hearing aids. The audiologist will work out the most suitable hearing aids with you with reference to factors such as age, social needs, unilateral/bilateral hearing loss, etc. The hearing aid will be optimally adjusted according to the type and degree of hearing loss for individual channel gain. output loudness, feedback cancellation, etc. so that you can reap the greatest benefit from fitting a hearing aid.



### **Type of Hearing Aids**

In-the-canal (ITC) and in-the-ear (ITE) hearing aids are fitted in the ear canal. Small in size, the ITC and ITE hearing aids are not suitable for those who have poor finger or hand dexterity. As a child grows with age, the ear canal will also grow bigger and thus the ITC or ITE hearing aids will fall off easily. ITC and ITE hearing aids are suitable for those with mild or moderate hearing loss.

Behind-the-ear (BTE) hearing aids are larger in size and are suitable for those with mild to profound hearing loss as well as for those with hand dexterity problems. Farmould is required.

Body-worn (BW) hearing aids are suitable for those with mild to profound hearing loss. BW hearing aids have bigger control knobs and are suitable for those who have finger or hand dexterity problems, yet are also not cosmetically appealing.

Spectacle hearing aids have all the electronic components fitted inside the arms of the glasses. They are suitable for those who need to wear glasses and hearing aids at the same time.







Behind-the-ear (BTE) In-the-canal (ITC)

In-the-ear (ITF)

#### Unilateral vs. Bilateral Hearing Aids

Advantages of wearing bilateral hearing aids:

- Sounds will become louder by 3-5 dB with bilateral rather than unilateral hearing aids
- Less difficult to hear in noisy environment
- Better sound localisation
- Sounds will become clearer, more multi-dimensional and more natural
- Wear bilateral hearing aids unless there is any medical or audiological contraindication

#### **Getting Used to Wearing Hearing Aids**

An audiologist will guide you on wearing and adjusting the hearing aids. When you first wear the hearing aids, vou may hear some background noise. This is normal. A lower volume output is advised until you have adapted to the amplified sounds, at which time the hearing aids may need another readjustment.