

From Fiona Butterworth:

You can find more information regarding different types of hearing loss here:

<https://rnid.org.uk/information-and-support/hearing-loss/types-of-hearing-loss-and-deafness/>

Hearing therapy is effective in supporting a number of symptoms such as tinnitus and diplacusis. It will utilise a variety of methods to help you understand what you are experiencing and explore any possible ways to reduce the impact the symptoms have on your life.

HEARING AIDS

If you are unhappy with the benefit of your existing hearing aids, I would strongly recommend that you seek assistance from your audiologist and explain your difficulties. Harley Street Hearing also includes the Musicians' Hearing Services, and we support a great number of musicians with their hearing and hearing aids. You will also find further information from the British Association of Performing Arts Medicine (BAPAM) regarding audiologists who support musicians if you are not able to travel to London.

Often, finding an audiologist who understands your experiences to be able to translate them into the audiological adjustments required by the hearing aids can be enough to resolve the issues you face. Most hearing aids will automatically detect the presence of music, but to achieve the best possible and most natural sound for musicians, we recommend a dedicated music programme. Hearing aids are designed to process speech as a priority, so it means that music can sound distorted in some cases; by creating a dedicated music programme, we can tailor the settings to suit your musical endeavours.

Hearing aids have built-in safety features to ensure that the level of sound they are providing is not too loud, and they do not speed up the deterioration of a hearing loss. They are not designed to act as hearing protection in noisy environments.

HEARING PROTECTION

The level of hearing protection required is always dependent on the level of noise in the environment; it is not affected by the age of the user or presence of any hearing loss.

The certainty of the protection provided by off-the shelf hearing protection is all dependent on the correct insertion of the device. To ensure the best fit, custom-made hearing protection is the best option.

Using hearing protection may help to reduce any tinnitus that may be related to noise exposure.

Ear defenders were generally designed for industrial hearing protection; they will remove a greater amount of sound and therefore most musicians find that they take away too much from the environment to be able to continue performing while using them.

If you are a hearing aid user, you will need to take your hearing aids out to be able to use hearing protection.

FROM THE EVENT CHAT

What is Andy's company called?

Advanced Communication Solutions (ACS) <https://www.acscustom.com/uk/>

What is the name of the custom made earplug and where can we get it?

https://www.acscustom.com/uk/?gclid=Cj0KCQiA6LyfBhC3ARIsAG4gkF-Aj0xX_FAOXaHS_EjU6RZWroldz_06g-KYmiAxBhN6X3MysVWcCdtoaAh4yEALw_wcB

How inexpensive is it?

Making Music members get a discount from ACS - <https://www.makingmusic.org.uk/resource/acs-offering-making-music-member-discounts-their-custom-and-universal-hearing-protection>

I use custom moulded earplugs and highly recommend them.

Me too - they fit comfortably and I can hear the rest of the orchestra

will there ever be enforcement of legislation that prevents amplified noise, eg in cinemas, musical shows and gyms above a certain level? Also the level of noise in restaurants and bars?

Andy Schiach: Legislation already exists to cover the employees that work in noisy environments, but in situations where the source of the noise can't be controlled, such as in a restaurant, bar or at an event, it's almost impossible to enforce. In the cinema situation, the volumes are made deliberately high, but they are calculated so as not to cause hearing damage.

Q; I wear hearing aids for a moderate hearing loss. Would I take them out in order to wear the earplugs?

Andy Schiach: Good quality hearing protectors may provide you with a more musical sound, because they still allow you to hear the higher notes that occur above the speech frequencies that your hearing aids are designed to deal with.

Our band has an age range of 8 to about 80. Does the age of the player change the sort of the hearing protection they should be using?

Andy Schiach: The younger players will have no age-related hearing loss, so the use of hearing protection will be much more straightforward for them, whereas providing hearing protection for the elder players, some of whom will have various degrees of hearing loss, will be more challenging. Whatever level of sound reduction is put in place by the hearing protectors, it will add to the hearing loss that's present in each individual player. Earplugs that use specialist filters with different levels of sound reduction, can help to provide each player with a more balanced production of their performance.

If off-the shelf ear plugs seem to work ok i.e. reduce noise to a comfortable level, are they protecting you enough?

Andy Schiach: To allow people to make an informed choice, all legal hearing protection products must display their individual sound reduction levels. There are 4 numbers that are important.

- *SNR (single number rating) This tells you the average overall sound reduction. E.g. An SNR of 20 means that the ambient sound will be reduced by an average of 20 decibels.*
- *H (high frequency spectrum) The average sound reduction measured across the higher frequency range*
- *M (medium frequency spectrum) The average sound reduction measured across the mid frequency range*
- *L (low frequency spectrum) The average sound reduction measured across the low frequency range*

For musicians, the ideal sound reduction would be to reduce all the frequencies as evenly as possible to retain the fidelity of the music (just like turning down the volume). In nearly all music environments, between 15 – 20 decibel reduction is enough protection. Wearing earplugs that have a high SNR and higher H readings than L and M doesn't work because they cut out too much sound.

If you need a hearing aids, it is a good idea to wear them because the access to sound and conversation can help prevent dementia.

Very important point - noise exposure is cumulative, not just during rehearsal or gig.

My issue is that I conduct a choir of (now) mostly old men, and about half of them have hearing aids. What are the consequences for them hearing me, themselves, and each other? Are there any ways for the choir to improve things?

They have been singing for a long time, but they learn by ear. It is unaccompanied so they do need to listen

I don't think they can hear what I'm asking them to do, although they listen attentively

Andy Schiach: In Ear Monitoring is the technology that's used in the pro audio sector. Each individual performer can have their own detailed mix of the performance delivered through earphones. This results in the reduction of the ambient sounds of the performance and a lower, safer level of sound delivered directly to the ears. There are some hearing aids with features that can allow the performance to be played through the hearing aids.

Hearing aids. I had a test earlier this week and the list of aids I was given ranged from £500 to £3,000 !! On Amazon you can buy one from about £49. Which way should one go with choosing a hearing aid?

I got mine free on NHS worth over £1000. Talk to GP/audiologist.

NHS hearing aids are provided at no charge, and are very good, but you have to be assertive in declaring your need for them, also for hearing tests, as NHS provision is nhs is not what it was, and much has been outsourced. If you have wax in your ear/s, the RNID can remove it free of charge if you are referred by your GP. Private suppliers of hearing aids e.g. Boots, Specsavers will do it for about £50.

Can custom ear plugs help with tinnitus? I have minimal hearing loss but mild tinnitus 24/7.

Andy Schiach: If the tinnitus is aggravated by loud sound, then appropriate hearing protection can reduce the onset of an increase in the volume of the tinnitus when worn in noisy environments. As tinnitus is the perception of sound with no external source, then the wearing of earplugs will subjectively make the tinnitus sound louder because the earplugs

are reducing the ambient sounds. If the tinnitus is not noise induced, then wearing earplugs won't help.

My NHS aids are set up with 3 programmes. The three programmes on my NHS aids are - 1: General, 2: focus on the person in front of me with reduced surroundings, 3: Music (with reduced latency - for piano in particular)

What make of hearing aid? Want some!!

Don't have a make - they are just the standard NHS issue. They are updated every couple of years when new models appear.

I have the same programmes on my NHS hearing aids.

<https://www.stuffthatworks.health/tinnitus/join>

When I started to wear hearing aids I left them at home when I went to rehearsal, fearing that fellow musicians would question my credibility. It took me some time to overcome this, but I eventually realised that my hearing aids do for my hearing what my spectacles do for my eyesight.

I agree, I decided it was no different from putting your glasses on when needed!

I use NHS Signia hearing aids; what (if any) benefit would I derive from buying devices privately that can cost typically around £2,000? [Obscene price!]

'Only £2000'?! Some high street up to £5000/pair!!!

Where do ear defenders (external over ear) sit on the spectrum of hearing protection?

Andy Schiach: All hearing protection products must display their individual attenuation (sound reduction) data. This data allows the user to select the most appropriate product for the situation it's intended to be used in. Most over the ear products have high levels of sound reduction, putting too much protection in place for the presentation of live music.

Is the HSE 'Sound Advice' document still valid, or out of date now?

Andy Schiach: Sound Advice was published in 2008 but is still relevant today.

Do the speakers have any thoughts about this blog by Chris Rowbury?

<https://blog.chrisrowbury.com/2017/05/singers-with-hearing-loss-how-choir.html>

I foolishly carried on singing in a rock band, when the other 3 old men were turning the volume up because of THEIR hearing loss. If I had used earplugs, or left the band, I may not now have to use hearing aids. I'd advise anyone to use their aids as much as possible, and to develop a positive attitude towards them, even if it takes a while to get used to them. The only time I turn them off is when people are playing loud music that I don't want to hear.

Will someone be discussing the weird issue of occlusion? I am unlucky and suffer terribly from this, so in-ear plugs can be very unpleasant as all I hear is my heart beating, blood swooshing and every movement of my jaw. If I speak I can only hear my booming distorted voice. I am sure other would be interested if maybe, Fiona, can mention something about this?

Andy Schiach: Occlusion occurs when the acoustic properties of the ear are destroyed by blocking the ears. Specialist membrane filtered earplugs ventilate the ears and reduce the

effects of occlusion. Putting too much protection in place heightens the effect of occlusion, in the same way that wearing sunglasses in the dark makes seeing difficult and unpleasant.

D used to find that it was really disconcerting to play an octave on the piano and yet it didn't sound like it. Friends and family were supportive in keeping him going. keeping on playing the notes , listening and trying to sing. Things are a lot better now.

I play in a wind band. I remove my hearing aids and wear my earplugs when playing.

My NHS Scotland Danalogic hearing aids allow you to adjust frequencies on the BeMore app yourself. It is very useful but I still prefer playing with them switched off.

I have worked with deaf people for many years and also have an acquired hearing loss. One recommendation to support communication during rehearsals is to say something before the key part of the message to alert and give people time to look up and support hearing with lipreading.

I wear hearing aids (not programmable) but have to take them out when ringing handbells - the large amount of high frequency content means the sounds of each bell merge together...

With my hearing aid which has 3 programmes it is possible to have different sound levels for each programme. Switching between programmes and sound levels can help.

The big problem I have with my hearing aids is that the music program muffles speech whereas the speech program distorts the music

Is it advisable not hear music through ear plugs?

Andy Schiach: If the earplugs have the correct sound reduction capabilities, it's better to use them. If the wrong protection is used, everything will sound unclear and muffled.

In my case, I could not wear hearing aids when playing. I discussed with my NHS audiologist and we tried loads of different things. Eventually we hit on the right solution that works for me. It took A LONG TIME! Not a simple thing. Be patient it pays off! There is no quick fix!

Given what Fiona has just said about the difference between hearing aid capacities for speech and music, we need to "train" our conductors and leaders to give spoken directions clearly in rehearsal sessions.

I have hearing aids but take them out to play and wear my custom made musician's ear plugs. I can hear myself and the rest of the orchestra although it is not the same. But it allows me to keep playing. I have permanent tinnitus which I worsened by loud noise so it's important to look after my ears. I always have a quiet day after rehearsing.

We try to have a generous space between the strings and the wind players in rehearsals at least.

Education is important. There is an expectation to hear music at very high levels of volume. Loud is not lovely!

As a trombonist, solid acoustic screens can be a nightmare if they are in front of and the sound bounces back at you it can be dangerous for our ears and actually concentrates the impact. I have always advocated foam or absorbant screens carefully positioned so as to protect the person in front of the bell but not to deflect or totally absorb the sound.

There is an Australian acoustic screen with in built sound deadening to aid the brass player from too much bounce back

I was the person who introduced hearing protection for military musicians - the resistance was incredible.

My brass-playing teenagers have ACS Pacato 16 ear plugs (with handy cord) but I am aware one only wears hers if the trombones are behind her, and the other doesn't wear them unless the MD tells them to.

I would like to learn much more about prevention. I have been told that when using acoustic screens it is better to place the screen closer to the person in front of the noise source - the person you are trying to protect - rather than directly in front of the source? Is this true?

Andy Schiach: Placing the screen further away from the source, reduces the amount of sound reflected on those producing it, reducing their exposure as well as the people the screens are there to protect.

The screens are specifically for the person in front of them.

Cost of acoustic screens is also an issue

And storage...

Is there a reasonably cheap way of measuring sound levels in a hall

Andy Schiach: There are many Class 2 sound level meters on the market, starting from around £50.00. To obtain reasonably accurate results, it's important that the device is classified as a Class2 instrument.

Extraneous noise (e.g. noisy air conditioning or heating systems) needs to be eliminated.

I have a iPhone app - Decibel X - measures sound levels - does an app give reliable readings?

Andy Schiach: No, the results from any sound level meter app are unreliable and often inaccurate. Reliable sound level measurements should be taken using a calibrated sound level meter or dose badge.

Decibel X is the best one I could find.

There are apps for iPhone - not as absolutely correct with dB levels (need a specialist calibrated device). They are good to get relative levels ie measure effect of increasing distance from source or at different locations in a large ensemble

DB volume is one such app I have found useful

Also curious to know if there are devices that can measure sound levels in a rehearsal space? would they be any use in warning and reminding performers that noise levels are too high? At present it's a subjective opinion.

Andy Schiach: Warning devices such as these, www.noisemeters.co.uk/product/soundear/se2ear/ can be placed to monitor overall sound levels to various degrees of accuracy.

Can we point out that noise exposure is cumulative. If you have reached your maximum noise dose during a rehearsal you need to take account of exposure for the rest of the day.

Does an amateur orchestra committee have a duty to help members avoid hearing damage or help if damage is occurring?

Andy Schiach: There is no legal duty, but it's important that the members are informed about any potential risks. Legislation only applies to the workplace where employers have an obligation to protect their workers. Outside of the workplace it's up to the individual, which is why education and awareness to the potential risks is so important.

I sing with two online choirs. We have to wear headphones to record our voice. Which type of headphone would be best - in-ear buds or over ear cups?

Andy Schiach: Either work, so choose the one that you are most comfortable with.

Over-ear if you wear hearing aids.

I do not wear hearing aids.

I also sing with 2 online (Digital choirs) Homechoir.org has an excellent section on the website about this aspect

Orchestral conductors must also be a risk of hearing loss

I use a small amp and wear a microphone. My choir seem to appreciate it....

No chatting/banter in the rehearsal - it's impossible to concentrate!

Our concert band conductor wears a microphone headset which is fed through the speaker system in the hall where we rehearse.

How about conductors also making everyone feel free to say if they can't hear!?

Instead of saying lets go from figure D --it's D for Dog (or whatever!)