HOW LOUD IS TOO LOUD?
Noise exposure: all you need to know
Community Paediatric Audiology Team

If you would like to rearrange your child’s appointment please call:

0333 202 1065
InHealth Group, Paediatric Audiology, Ashurst Child & Family Centre, Lyndhurst Road, Ashurst SO40 7AR

ih.paediatricaudiology@nhs.net

InHealth Group, Beechwood Hall, Kingsmead Road, High Wycombe, HP11 1JL
T: 01494 560000
www.inhealthgroup.com

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What is Noise Exposure?

Everyday we experience sounds in our environment such as the TV, radio or traffic. Normally, these sounds are at safe levels which does not damage our hearing. But sounds can be harmful when they are too loud, even for a brief time, or when they are both loud and long-lasting.

How Noise Affects the Ear

All sounds enter the ear as vibrations which travel down the ear canal, through the eardrum and the middle ear bones which sit behind. From there, the vibrations reach the cochlea (the hearing organ) and signals are sent off to the brain to let us know that we have heard a sound.

The cochlea is a very complex organ, and inside are tiny hair cells which vibrate in response to sound.

These sounds can damage sensitive structures in the inner ear and potentially cause noise-induced hearing loss (NIHL). The term ‘noise exposure’ refers to when a person is exposed to potentially harmful levels of noise for any duration of time.

How Loud is Too Loud?

The extent of damage to your hearing depends on 3 factors:
1. **Volume**: How loud the sound is
2. **Distance**: How close you are to the sound
3. **Time**: The length of time you are exposed to the sound

Sound is measured in a unit called decibels. For context, normal conversation is roughly 60-70 decibels, a vacuum cleaner is approximately 75 decibels, and a jet engine is 140 decibels.

The World Health Organisation advises that the maximum noise exposure for children in recreational noise (such as through headphones or discos) is 80 decibels over an 8 hour period. So a child listening to music through headphones for a few hours a day is at risk of damaging their hearing if the volume is consistently set too high.

Tips for Safe Listening

- Lower the volume on music devices. Some music devices have parental controls to set volume control limits. As a rule, personal listening devices should be used at no more than half-volume.
- Even some childrens’ toys can be excessively loud. When purchasing infant toys, try to choose those with a volume control. Young children often like to hold noisy toys near to their faces.
- Move away from the noise. Encourage your child not to sit or stand right in front of concert speakers, such as at school discos.
- Allow your child to wear ear protectors, such as earplugs or earmuffs at loud events, such as firework displays.

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Remember – Noise Induced Hearing Loss (NIHL) is usually gradual and painless. If we look after our hearing when we are young, we set ourselves up for better hearing as we get older.