

Tinnitus red flags for audiology and functional listening difficulties associated with tinnitus

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Overview

- Tinnitus? Recognising signs
- Impact on patient management in clinic settings
- Red flags for audiology



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Background

- Audit 10 patients seen during 2005 /6 in Nuffield
- Average age 13.8 years, female
- 90% had ear 'history'
- 60% had a hearing loss – incl. fluctuating cond, mild HF SN HL, unilateral SNHL
- Extended work since



Histories / reports that may indicate intrusive tinnitus

- Referral in for ‘spurious’ audiological results – authenticity of thresholds data questioned
- History of unreliable audiograms in the Nuffield – bit of a puzzle
- Difficulties with hearing aid use – rejecting one HA in particular for no obvious reason



Histories / reports that may indicate intrusive tinnitus

- Complaints about uncomfortable ‘something’ in one or both ears – may be reason given HA rejection
- Intense dislike or trust of one ear – even if thresholds are regarded as stable
- Perception that one ear hears better than the other when thresholds are comparable



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Patient report about PTA testing

- Entering booth – confidence levels drop – & quiet listening conditions
- Problem when presented with a loud signal above threshold or
- when approaching threshold
- May be a copy cat signal



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Patient report about PTA testing

Most had not told staff about their tinnitus because:

- Patient is unaware what the sound is anyway / its name
- Erratic responses previously - ?'lying' (looks between professionals can say it all)
- Felt testing problems dismissed by staff - disclosure impossible
- Fear of being laughed at or reason given dismissed – Not real? No one had talked / asked them about it. Maybe they are mad?



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If reported during PTA what was response?

- Told to listen harder
- Told to ignore the tinnitus sound
- Told to hurry up as its taking too long
- Told they must be making it up as they want to have something wrong with them (not in Nuffield, phew!)



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Possible behavioural indicators tinnitus may be involved

- Competent, chatty, confident young person becomes agitated and fearful in association PTA
- May try to stall / avoid: 'do I have to' 'did it last time'
- Anxiety – hand wringing, sweating, becomes pale
- Change in demeanour at any point (from entering booth to during testing)



Tinnitus? Audiological test procedure

- Steady pure tone to warble pure tone
- Continuous signal to pulsed signal
- Pure tone to narrow band
- Estimated frequency of tinnitus – certain frequencies likely to be more difficult – aud know when to change presentation level / method

With thanks to Sonia Van Rooyen, Audiologist, Nuffield



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Overview

- Working with young people with tinnitus
- Functional listening impact on learning
- Strategies and management



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Engaging discussion

- Tell me about...
- Tell me more..
- How do you feel when..
- What happens if...
- How well can you hear your teacher...
- ..Noises in your ears?
- What happens when you have your ears tested?...



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Approach

- Your information is very important...we believe you!
- Ifs and buts are important - subtle information - often explains particular strategies, avoidances, anxieties
- Clarifying detail - affirms confidence we are listening & informs practical solutions / more complex issues
- Other people need to know - parents, best friends, adults you trust in school



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Why are we interested?

- Effective learning – 70% of day relies on listening
- Tinnitus can be associated with an increase in speech discrimination difficulties
- Opportunity to work to reduce the impact
- Improving individuals learning experience and well being



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Reported impact of tinnitus on functional listening / learning

- Reduces speech perception abilities by up to 40% (patient report)
- ‘Catch words’ but cannot understand them
- Competing signals are confusing and lead to mistakes being made
- Focus shifts to tinnitus alone / distracting



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Reported impact of tinnitus on functional listening / learning

- Masks teachers voice
- Feel disconnected from classroom experience / learning
- Delay in returning to normal function
- Feel stressed and unhappy



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LIFE UK: Listening Inventories for Education UK (hear2learn.com)

Speech perception in background noise






1. The class have just finished an activity and are tidying up. The teacher says something to the class.



- ✓ Teacher-Child
- ✓ Lipreading
- ✓ Noise

FM System Yes / No

How well can you hear the words the teacher is saying?

Always easy	Mostly easy	Sometimes difficult	Mostly difficult	Always difficult
				



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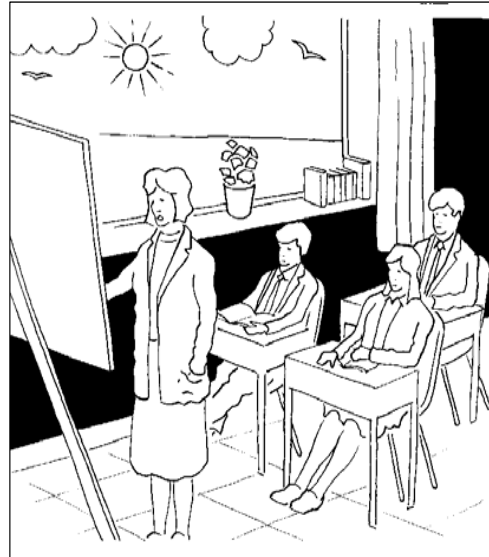
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Listening Inventories for Education UK

Speech perception in background noise






1. It is a quiet day and there is no noise from outside the classroom.



- ✓ Teacher-Child
- ✓ No lipreading
- ✓ Quiet

FM System Yes / No

How well can you hear the words the teacher is saying?

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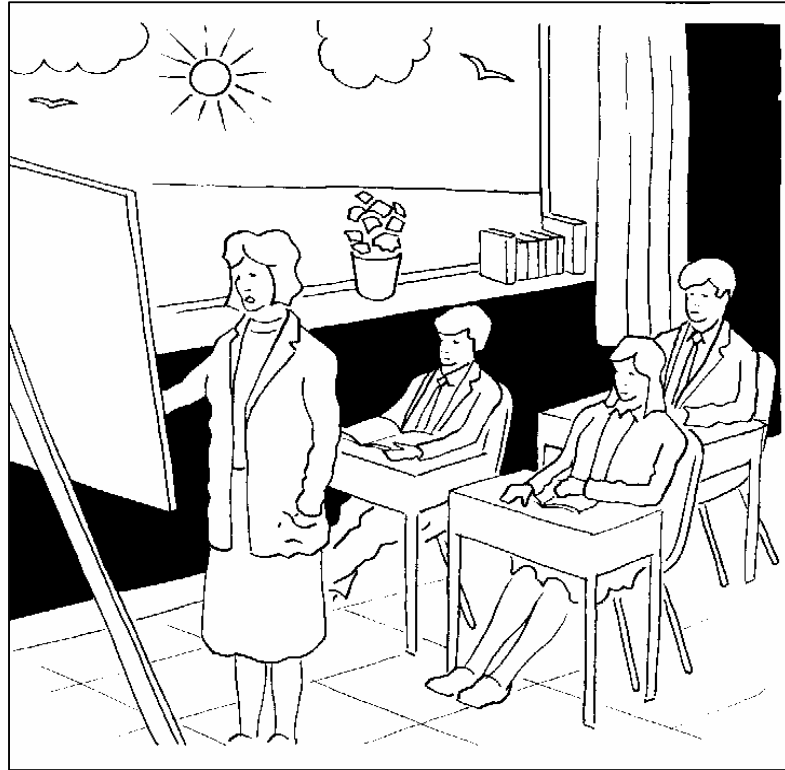


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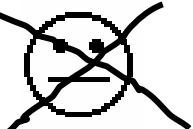


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- ✓ Teacher-Child
- ✓ No lipreading
- ✓ Quiet

FM System Yes / No

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Tinnitus alert

- Compromised speech perception is often described in background noise *and* in quiet listening conditions (Q.1 & 2 of LIFE questionnaire)



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Tinnitus alert

?Tinnitus associated with noise / noise of some level:

- Explore iPod / MP3 use
- Other noise exposure
- Advice on ear protection / hearing conservation
- Review tinnitus experience



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Tinnitus impact- functional listening in school

Compromised speech perception:

- in quiet listening conditions, associated with tinnitus
- in background noise, associated with hearing loss, and /or experience of ?tinnitus? triggered by noise (unwanted sound)**
- ‘Double whammy effect’ for patients with hearing loss *and* tinnitus



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Tinnitus impact - functional listening in school

- **Language** used to describe listening experience in class can be distinct from usual description about auditory access difficulties associated hearing loss



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Self help strategies

- Ask a friend – (*frequently in bother for talking*)
- Ask the teacher for help – (*frequently feel teachers are disbelieving that tinnitus is the root of the issue*)
- Avoidance of trigger situations when practical
i.e library time



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Management

- Planned approach with patient following careful exploration – keep things simple and manageable and achievable
- Agreement about what will help – we list these together linked to key difficulties
- Information to school SENco / direct approach – lots of description



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Management

- Use of auditory distraction at key times – fan in exams, low level music in reading time
- Teacher awareness of difficulties / triggers, time out, table alerts, sensitive approach, moving things on
- Patient self help skills



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What can be done – tinnitus and hearing loss

- Amplification – review as per ND pathway
- Liaison with local teacher of the deaf team as part of referral to support amplification / hearing issues
- Joint work with school on implications / management



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Red flags for Tinnitus

- History of unreliable testing
- Issue with use of hearing aid/s – no obvious explanation
- Mention of hearing testing = mood shift
- Functional listening difficulty described in noise *and* in quiet listening conditions in school**
- Sense there's more to tell ...doesn't add up



Noise induced tinnitus / hearing conservation

- iPod/ MP3 ear bud use – time spent listening, amplified level >, noise induced HL / tinnitus



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Need a sensible approach!



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Helpful websites

- www.hearingprotection.co.uk
- www.hear2learn.co.uk
- www.connevans.com
- www.rnid.org.uk/shop/tinnitus



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Finally....

Thank you for listening..



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