Tinnitus Key Facts for ENTs

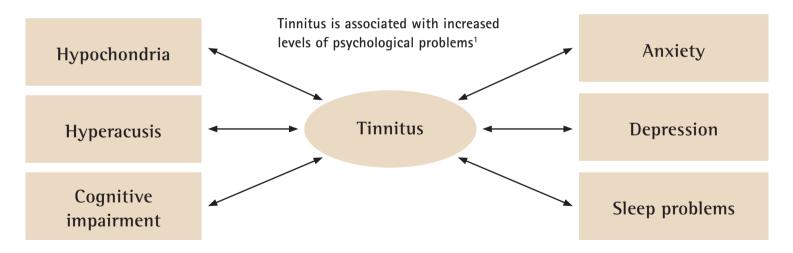
- Tinnitus Tinnitus is perceived sound in the absence of an external stimulus and is experienced by 10–15% of the population.¹
- Main risk factors for tinnitus are hearing loss, increasing age and gender (male).¹
- In many cases, tinnitus is associated with hearing impairment due to sudden hearing loss, noise trauma, agerelated hearing loss or administration of ototoxic drugs.^{1,2}
- Around 80% of people with idiopathic sensorineural hearing loss develop tinnitus.³
- Pathological changes to the auditory pathway translate into abnormal neurological activity in multiple brain regions, including the auditory cortex, hippocampus, prefrontal cortex, amygdala and anterior cingulate gyrus, among others.^{1,2}

- The central nervous system responds to reduced sensory input by increasing neuronal sensitivity (gain) and via other neurological changes, resulting in the perception of noise.^{1,2}
- Patients with tinnitus often report psychological problems: frustration, annoyance, distress, irritability, anxiety, depression, insomnia, poor concentration. (see figure on back page).^{1,4}
- Treatment focuses on symptom reduction and management of psychological consequences of tinnitus.^{1,5}
- A systematic review of studies of hearing aids for tinnitus management revealed that 17/18 showed a benefit (see figure on back page).⁶
- Hearing aids improve symptoms and severity of tinnitus by up to 50%.⁷



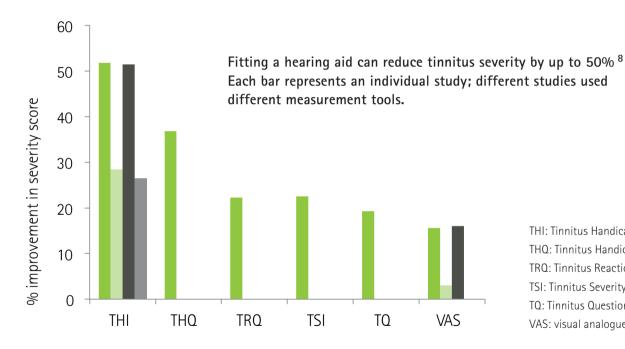
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- Hearing aids may help distinguish real and false sounds and mask tinnitus. They also improve communication with others whilst increasing the audible of ambient noise, which is reported to help with tinnitus.⁷
- Phonak is the leading manufacturer of hearing aids with a portfolio of devices to meet individual patients' needs.





Tinnitus measurement tool



THI: Tinnitus Handicap Inventory

THQ: Tinnitus Handicap Questionnaire

TRO: Tinnitus Reaction Questionnaire

TSI: Tinnitus Severity Index TO: Tinnitus Questionnaire

VAS: visual analogue scale (various)



² Norena AJ & Farley BJ. (2013) Hear Res. 295;161-171.

³ Nosrati-Zarenoe et al. Acta Otolaryngol 2007;127:1168-1175

⁴ Geocze L, et al. (2013) Braz J Otorhinolaryngol.79:106-111.

⁵ Robinson SK, et al. (2003) Int Tinnitus J. 9:97-103.

⁶ Hoare DJ, et al. (2011) Laryngoscope. 121:1555-1564.

⁷ Shekhawat GS, et al. (2013) J Am Acad Audiol. 24:747-762.

⁸ McNeill C, et al. (2012) Int J Audiol. 51:914-919.