

Entitlement Eligibility Guideline

Chronic Otitis Media

Date reviewed: 22 January 2025

Date created: February 2005

ICD-11 code: AB01

VAC medical code: 00642 Otitis media

Definition

Chronic otitis media is persistent or recurrent inflammation in the middle ear. The middle ear is an air chamber containing the mechanism that conducts sound from the air in the external ear to the fluid in the inner ear. It includes the tympanic membrane (TM)/eardrum, the ossicles, and their ligaments.

For Veterans Affairs Canada (VAC) entitlement purposes, chronic otitis media, or an equivalent diagnosis, is established when the condition has been present **six months** or longer. A single incident of otitis media is insufficient for entitlement purposes.

For the purpose of this entitlement eligibility guideline (EEG), equivalent diagnoses for chronic otitis media include:

- recurrent acute otitis media (rAOM)
- chronic otitis media with effusion
- chronic suppurative otitis media (CSOM).

Note:

- A single episode of acute otitis media is not considered a chronic disability for entitlement purposes.
- For VAC purposes, each ear is entitled separately.
- For VAC purposes, vertigo, hearing loss (HL), and/or tinnitus may present as part of the symptom complex of a diagnosed medical condition, or they may present as a primary stand-alone diagnosed medical condition. In those presenting with symptoms of vertigo, HL, and/or tinnitus, but with a known diagnosed cause (e.g. Meniere's disease), these symptoms are included in entitlement and assessment of the medical condition. Prior to adjudicating the entitlement and assessment of vertigo, HL, and/or tinnitus, or a diagnosed

medical condition that may cause these symptoms, a close review of previously entitled medical conditions with potentially overlapping symptoms is required.

Diagnostic standard

A diagnosis from a qualified medical practitioner (ear, nose and throat specialist [ENT]/otolaryngologist, family physician), nurse practitioner, or physician assistant (within their scope of practice) is required.

Anatomy and physiology

The ear has three distinct parts. The outer ear consists of the pinna/auricle and the canal. The canal leads to the TM.

The middle ear is the cavity between the TM and the inner ear. The middle ear contains three small bones which transmit sound from the TM to the inner ear: the malleus known as the hammer, the incus known as the anvil, and the stapes also known as the stirrup. Normally the middle ear contains air at the same pressure as the atmosphere. This normal pressure is regulated by a normally functioning eustachian tube, a canal which links the middle ear with the back of the nose.

The inner ear contains the cochlea which perceives sound and the semicircular canals which perceive balance and position.

Chronology of events which result in otitis media:

Eustachian tube dysfunction or occlusion:

- The middle ear receives its ventilation and oxygen through the eustachian tube, which acts as a pressure-regulating device for the middle ear. Normally the air in the middle ear is absorbed into the mucosal lining and is continually replaced via the eustachian tube.
- When the eustachian tube is blocked, the pressure in the middle ear decreases and the TM is retracted. The stretching of the TM can lead to bleeding or bruising in the TM, fluid in the middle ear, and occasionally TM rupture.
- The eustachian tube can remain closed for a variety of reasons.

Middle ear effusion:

- Following retraction, several kinds of fluid, known as middle ear effusion (MEE), can collect in the middle ear space. A clear, watery substance (serum), may be drawn from the surrounding tissues. A thicker substance (mucus), may be secreted from glands. Blood from ruptured vessels may collect. These

three types of fluid may accumulate independently or simultaneously. With time the fluid thickens and adhesions, i.e. bands of fibrous tissue, can form on the ossicles and can ultimately destroy them.

Infectious process:

- The middle ear can become infected. If an infection is present, the effusion is described as purulent or suppurative. Long term infections may cause pathological changes in the mucosa of the middle ear and erosion, or necrosis of the ossicles. Additionally, it may produce an inflammation of the mastoid air cells of the temporal bone inside the mastoid process called mastoiditis.
- With continuation of the infectious process, the TM may rupture spontaneously. This produces a discharge of purulent matter (otorrhea). In most cases, the perforation resulting from the rupture of the TM will heal spontaneously. The rupture may destroy a portion of the TM or create a perforation too large to heal.
- A perforation which involves the margin of the TM may cause a cyst like growth of the middle ear called a cholesteatoma. Cholesteatomas tend to grow and expand into surrounding bone and also into the mastoid cavity.

Categories of otitis media:

1. **Acute otitis media (AOM)** is inflammation in the middle ear with MEE, for example, bulging TM with decreased mobility. It is of bacterial or viral origin and may be due to upper respiratory infection that reaches the middle ear via the eustachian tube, or more rarely, through a perforated TM. The main symptom is ear pain. On examination, there is bulging of the TM or erythema of the TM with MEE. Recent onset of ear discharge/otorrhea can also occur in complicated AOM.
 - **Acute suppurative otitis media** is a subtype of AOM characterized by pus in the middle ear. There may also be discharge from the ear, if the TM perforates.
 - **Recurrent acute otitis media (rAOM)** is defined by presence of either:
 - three or more episodes of acute otitis media within six months
 - four or more episodes within one year, with one or more episodes having occurred in the previous six months.
2. **Otitis media with effusion/chronic serous otitis media** is a chronic inflammatory condition of the middle ear where there is fluid in the middle ear without signs or symptoms of acute ear infection. There is often no pain unless the TM is severely retracted. The effusion may follow resolved acute otitis media. On examination and inspection using pneumatic otoscopy and tympanometry, there is reduced TM mobility and/or opaque TM, or a visible air-fluid interface behind the TM on otoscopy. The TM is not inflamed.

The following are terms used to indicate this condition, however a diagnosis clarification would be required:

- secretory otitis media
 - glue ear
 - serous otitis media
 - middle ear effusion (MEE)
 - chronic serous effusion
 - persistent otitis media with effusion.
3. **Chronic suppurative otitis media (CSOM)** is a chronic inflammation of the middle ear and mastoid with TM perforation and painless, persistent or intermittent, discharge/otorrhea. This includes those with a surgically inserted tube through the tympanic membrane meant to prevent the development of negative pressure in the middle ear, called a tympanostomy tube. The condition usually arises following TM perforation due to acute otitis media. Bacteria enter the middle ear through the TM perforation or through a tympanostomy tube if present leading to CSOM.

Clinical features

Otitis media is one of the most common causes of conductive hearing loss. Fluctuating hearing sensitivity occurs. Perforation of the TM may result in ear drainage. Tinnitus may accompany chronic otitis media.

Generally, otitis media with an intact TM may result in minimal changes in hearing sensitivity of approximately 30 decibels (dB). There may be more of an impact on the lower frequencies up to about 1000 Hz, than on the higher frequencies. Ossicular discontinuities are associated with the maximum conductive hearing loss of approximately 60 dB.

Treatment depends on the specific conditions involved. Surgery may be required depending on the reason for the dysfunction. If there is a danger that the TM may rupture spontaneously, an incision in the TM (myringotomy) and/or insertion of tympanostomy tube may be required. If healing of a perforation does not occur, surgical repair (myringoplasty) may be performed. This procedure is one of a class of reconstructive operations called tympanoplasty.

Chronic otitis media is much more common in children than adults. When comparing males and females, there are no differences in rates of occurrence, presentation or symptoms of chronic otitis media.

Entitlement considerations

Section A: Causes and/or aggravation

For VAC entitlement purposes, the following [factors](#) are accepted to cause or aggravate the conditions included in the [Definition section](#) of this EEG, and may be considered along with the evidence to assist in establishing a relationship to service. The factors have been determined based on a review of up-to-date scientific and medical literature, as well as evidence-based medical best practices. Factors other than those listed may be considered, however consultation with a disability consultant or medical advisor is recommended.

The timelines cited below are for guidance purposes. Each case should be adjudicated on the evidence provided and its own merits.

Factors

1. **Acute otitis media (AOM)** with or without TM rupture, immediately prior to clinical onset or aggravation of chronic otitis media.
2. **Persistent perforation of TM** due to use of tympanostomy tube, immediately prior to clinical onset or aggravation of chronic otitis media.
3. **Traumatic rupture of TM** prior to clinical onset or aggravation of chronic otitis media.

Rupture of the TM may be caused from the outside with a foreign object such as a toothpick or swab. It may also be caused by indirect trauma, including blast injuries, a blow to the ear or a fall on the ear.

Note: Most perforations will heal within eight weeks without intervention, depending on the size of the perforation. Those involving over half the TM are likely to require surgical intervention.

4. **Dysfunction/obstruction of the eustachian tube** prior to clinical onset or aggravation of chronic otitis media.

The following can cause or aggravate dysfunction/obstruction of the eustachian tube:

- barotrauma
- upper respiratory tract infection
- incomplete eustachian tube maturation (usually occurs during adolescence)
- abnormal or incomplete development of the muscles that open the eustachian tube (such as in congenital cleft palate)

- obstruction of eustachian tube entrance in the nasopharynx due to allergy, nasal polyps, local malignancy or post radiation fibrosis
- swelling of adenoid tissue around the eustachian tube due to allergy or infection
- scar tissue after adenoidectomy
- degenerative neurologic and neuromuscular disease including:
 - myasthenia gravis
 - multiple sclerosis
 - Parkinson's disease.

5. Inability to obtain **appropriate clinical management** of chronic otitis media.

Section B: Medical conditions which are to be included in entitlement/assessment

Section B provides a list of diagnosed medical conditions which are considered for VAC purposes to be included in the entitlement and assessment of chronic otitis media.

- Tympanic membrane perforation
- Chronic mastoiditis
- Cholesteatoma

Section C: Common medical conditions which may result, in whole or in part, from chronic otitis media and/or its treatment

Section C is a list of conditions which can be caused or aggravated by chronic otitis media and/or its treatment. Conditions listed in Section C are not included in the entitlement and assessment of chronic otitis media. A consequential entitlement decision may be considered where the individual merits and the medical evidence of the case support a consequential relationship. Conditions other than those listed in Section C may be considered; consultation with a disability consultant or medical advisor is recommended.

- [Hearing loss](#)
- [Tinnitus](#)
- [Vertigo](#)
- Facial nerve neuropathy
- Chronic otitis externa

Note: Although the following conditions normally resolve completely, in some instances, permanent sequelae may result. Consultation with a disability consultant or medical advisor is recommended.

- Meningitis
- Subdural abscess
- Cerebral abscess

Links

Related VAC guidance and policy:

- [Hearing Loss – Entitlement Eligibility Guidelines](#)
- [Tinnitus - Entitlement Eligibility Guidelines](#)
- [Vertiginous Disorders – Entitlement Eligibility Guidelines](#)
- [Pain and Suffering Compensation – Policies](#)
- [Royal Canadian Mounted Police Disability Pension Claims – Policies](#)
- [Dual Entitlement – Disability Benefits – Policies](#)
- [Establishing the Existence of a Disability – Policies](#)
- [Disability Benefits in Respect of Peacetime Military Service – The Compensation Principle – Policies](#)
- [Disability Benefits in Respect of Wartime and Special Duty Service – The Insurance Principle – Policies](#)
- [Disability Resulting from a Non-Service Related Injury or Disease – Policies](#)
- [Consequential Disability – Policies](#)
- [Benefit of Doubt – Policies](#)

References as of 22 January 2025

Australian Government, Repatriation Medical Authority. (2003). *Statement of principles concerning acoustic neuroma, reasonable hypothesis, No 1 of 2003.*

[SOPs - Repatriation Medical Authority](#)

Australian Government, Repatriation Medical Authority. (2003). *Statement of principles concerning acoustic neuroma, balance of probabilities, No 2 of*

2003. [SOPs - Repatriation Medical Authority](#)

Australian Government, Repatriation Medical Authority. (2022). *Statement of principles concerning acoustic neuroma, reasonable hypothesis, No 62 of 2022*. [SOPs - Repatriation Medical Authority](#)

Australian Government, Repatriation Medical Authority. (2022). *Statement of principles concerning acoustic neuroma, balance of probabilities, No 63 of 2022*. [SOPs - Repatriation Medical Authority](#)

Berkow, Robert and Andrew J. Fletcher, eds. *The Merck Manual of Diagnosis and Therapy*. 16th ed. New Jersey: Merck, 1992.

Biswas, R., Genitsaridi, E., Trpchevska, N., Lugo, A., Schlee, W., Cederroth, C. R., Gallus, S., & Hall, D. A. (2022). Low evidence for tinnitus risk factors: A systematic review and Meta-analysis. *Journal of the Association for Research in Otolaryngology*, 24(1), 81–94. <https://doi.org/10.1007/s10162-022-00874-y>

Fauci, Anthony S. and Eugene Braunwald, et al, eds. *Harrison's Principles of Internal Medicine*. 14th ed. Montreal: McGraw-Hill, 1998

Flint, P. W. (Ed.). (2021). *Cummings otolaryngology: Head and neck surgery* (Seventh edition). Elsevier.

Hallowell Davis and S. Richard Silverman. *Hearing and Deafness*. 4th ed. Montreal: Holt Rineheart and Winston, 1978, pp 107 - 111.

Kliegman, R. M., Toth, H., Bordini, B. J., & Basel, D. (Eds.). (2022). *Nelson Pediatric Symptom-Based Diagnosis E-Book*. Elsevier Health Sciences

Limb, C., Lustig, Lawrence, & Durans, Marlene. (2023). *Acute Mastoiditis in Adults*. UpToDate.

Liu, X., & Yan, D. (2007). Ageing and hearing loss. *The Journal of Pathology*, 211(2), 188–197. <https://doi.org/10.1002/path.2102>

McCormack, A., Edmondson-Jones, M., Somerset, S., & Hall, D. (2016). A systematic review of the reporting of tinnitus prevalence and severity. *Hearing Research*, 337, 70–79. <https://doi.org/10.1016/j.heares.2016.05.009>

Newby, Hayes A. and Gerald R. Popelka. Audiology. 6th ed. New Jersey: Prentice Hall, 1992, pp 71 - 80

Paparella, Michael and Donald A. Shumrick, et al, eds. Otolaryngology Vol II Otology and Neuro-Otology. 3rd ed. Chapter 45. Philadelphia: W. B. Saunders, 1991.

Poe, D. & Corrales, C. E. (n. d.). Eustachian Tube Dysfunction. Retrieved November 30, 2023 from

Rosenfeld, R. M., Shin, J. J., Schwartz, S. R., Coggins, R., Gagnon, L., Hackell, J. M., Hoelting, D., Hunter, L. L., Kummer, A. W., Payne, S. C., Poe, D. S., Veling, M., Vila, P. M., Walsh, S. A., & Corrigan, M. D. (2016). Clinical Practice Guideline: Otitis Media with Effusion (Update). *Otolaryngology--head and neck surgery : official journal of American Academy of Otolaryngology-Head and Neck Surgery*, 154(1 Suppl), S1–S41. <https://doi.org/10.1177/0194599815623467>

Von Pritchett, C. (2023). Otitis Media with Effusion (OME). *DynaMed*.
<https://www.dynamed.com/condition/otitis-media-with-effusion-ome/alerts>

Wald, E. (2023). Acute mastoiditis in children. *UptoDate*.

World Health Organization. (2019). *International statistical classification of diseases and related health problems* (11th Revision). <https://icd.who.int/>

Yong, J., & Wang, D.-Y. (2015). Impact of noise on hearing in the military. *Military Medical Research*, 2(1), 6. <https://doi.org/10.1186/s40779-015-0034-5>

Zanon, A., Sorrentino, F., Franz, L., & Brotto, D. (2019). Gender-related hearing, balance and speech disorders: A review. *Hearing, Balance and Communication*, 17(3), 203–212. <https://doi.org/10.1080/21695717.2019.1615812>