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To:
Compassionate Allowances Program Office
Social Security Administration

From:
Joel Wallskog, MD
Co-Chairman, React19
Email: joel.wallskog@react19.org
Cell: 262-893-6077

Proposed Condition Name

Tinnitus with Neurological Sequelae

Alternate Names

- Subjective Tinnitus with Neurologic Complications
- Central Auditory Processing Dysfunction with Tinnitus
- Neurogenic Tinnitus
- Tinnitus Associated with Central Nervous System Pathology

Summary

Tinnitus with neurological sequelae is a chronic and often disabling condition characterized by the perception of sound without an external auditory stimulus, accompanied by measurable neurological deficits such as cognitive dysfunction, sensory hypersensitivity, autonomic dysregulation, or motor impairment [1,2].
Unlike benign or idiopathic tinnitus, this form involves underlying central or peripheral nervous system injury, often following infections, autoimmune disease, toxic exposures, or trauma [2,3].

In these cases, the tinnitus is not simply an isolated auditory complaint—it is a symptom of a broader neurological disorder that may include vestibular dysfunction, neuropathic pain, balance disturbances, and impaired concentration, resulting in significant functional limitations [3,4].

Description of Condition

Pathophysiologically, tinnitus with neurological sequelae involves abnormal neuronal firing patterns in the auditory pathway (cochlea, auditory nerve, brainstem nuclei, auditory cortex) and maladaptive neuroplastic changes in associated brain networks [2].
In cases with neurological sequelae, additional CNS or cranial nerve pathology amplifies and sustains these aberrant patterns, creating a persistent and distressing perception of sound and accompanying sensory, motor, or autonomic disturbances [3].

Diagnostic Testing

Audiologic Testing:

- Pure-tone audiometry (baseline and follow-up hearing thresholds)
- Tinnitus matching and loudness discomfort level testing

Neurological Assessment:

- Comprehensive neurological examination for motor, sensory, and reflex abnormalities
- Vestibular function testing (videonystagmography, posturography)
- Cognitive testing (MoCA, neuropsychological assessment) in cases with memory or concentration deficits

Imaging:

- MRI of brain and internal auditory canals to evaluate for demyelination, space-occupying lesions, or microvascular compression
- Functional MRI (fMRI) or positron emission tomography (PET) in research settings to evaluate altered central auditory processing

Additional Testing:

- Brainstem auditory evoked potentials (BAEPs)
- Laboratory testing for autoimmune markers, infections, or metabolic causes if clinically indicated

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Physical Findings

- Possible abnormal cranial nerve findings (CN VIII, CN VII involvement)
- Abnormal gait or balance
- Hyperacusis (heightened sensitivity to sound)

- In severe neurological cases: tremor, muscle weakness, sensory loss, or dysautonomia

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ICD-10 Codes

- **H93.19** — Other subjective tinnitus
- **H93.11** — Tinnitus, right ear
- **H93.12** — Tinnitus, left ear
- **H93.13** — Tinnitus, bilateral
- **G93.49** — Other encephalopathy (for associated neurological sequelae)
- **G62.9** — Polyneuropathy, unspecified (if peripheral nerve involvement present)

Onset

Onset may be acute (following head injury, viral infection, or loud noise exposure) or subacute/chronic (following autoimmune, vascular, or demyelinating events). Neurological sequelae may develop concurrently or progressively after tinnitus onset [1,3].

Course / Progression

- Persistent tinnitus often worsens with stress, fatigue, or environmental noise exposure
- Neurological sequelae may progress, leading to chronic disability in ambulation, cognition, or sensory processing
- In some cases, symptoms stabilize but remain severe and disabling despite treatment [2,4]

Treatment

Symptom-Targeted Interventions:

- Sound therapy or tinnitus retraining therapy (TRT)
- Cognitive behavioral therapy (CBT) to mitigate distress and improve coping

Neurological Sequelae Management:

- Vestibular rehabilitation for balance deficits
- Neuropathic pain medications (gabapentin, pregabalin, duloxetine)
- Management of associated conditions (autoimmune disorders, migraines, dysautonomia)

Assistive Measures:

- Hearing aids with tinnitus-masking features
- Noise generators for home and work environments

Despite multidisciplinary care, a significant proportion of patients experience persistent, debilitating symptoms affecting work capacity, social function, and activities of daily living [3].

Rationale for Compassionate Allowance

- Severe functional limitations in both auditory and neurological domains
- Chronicity and poor prognosis despite evidence-based interventions
- Objectively documentable neurological impairments beyond subjective tinnitus perception
- Significant socioeconomic burden due to work incapacity and need for long-term medical care

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Submitted by:
Joel Wallskog, MD
Co-Chairman, React19
Email: joel.wallskog@react19.or
Cell: 262-893-6077

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Heather Hudson

National Vaccine Injury Advocate

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Brianne Dressen

Co-Chairman, React19

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