

# Criteria for diagnosis of Vestibular Migraine

- A. At least five episodes fulfilling criteria C and D
- B. A current or past history of 1.1 *Migraine without aura* or 1.2 *Migraine with aura*<sup>1</sup>
- C. Vestibular symptoms<sup>2</sup> of moderate or severe intensity<sup>3</sup>, lasting between 5 minutes and 72 hours<sup>4</sup>
- D. At least half of episodes are associated with at least one of the following three migrainous features<sup>5</sup>:
  - 1. headache with at least two of the following four characteristics:
    - a) unilateral location
    - b) pulsating quality
    - c) moderate or severe intensity
    - d) aggravation by routine physical activity
  - 2. photophobia and phonophobia<sup>6</sup>
  - 3. visual aura<sup>7</sup>
- E. Not better accounted for by another ICHD-3 diagnosis or by another vestibular disorder<sup>8</sup>.

# Criteria for diagnosis of probable vestibular migraine

- A. At least 5 episodes with vestibular symptoms of moderate to severe intensity, lasting between 5 min to 72 hours
- B. Only one of the criteria B and D for VM is fulfilled (migraine hx or migraine features during the episode)
- C. Not better accounted for by another ICHD-3 diagnosis or by another vestibular disorder

# Criteria for diagnosis of Meniere's disease

## Definite MD

- A. Two or more spontaneous episodes of vertigo each lasting 20 minutes to 12 hours
- B. Audiometrically documented low- to medium-frequency sensorineural hearing loss in one ear, defining the affected ear on at least one occasion before, during or after one of the episodes of vertigo
- C. Fluctuating aural symptoms (hearing, tinnitus or fullness) in the affected ear
- D. Not better accounted for by another vestibular diagnosis

# Criteria for diagnosis of Meniere's disease

## Probable MD

- A. Two or more episodes of vertigo or dizziness, each lasting 20 minutes to 24 hours.
- B. Fluctuating aural symptoms (hearing, tinnitus or fullness) in the affected ear
- D. Not better accounted for by another vestibular diagnosis

From: Lopez-Escamez, JA, Carey J, Chung W, Goebel J, Magnusson M, Mandalà M, Newman-Toker D. Diagnostic criteria for Menière's disease. *Journal of Vestibular Research* 25 (2015) 1–7.

# Criteria for the diagnosis of Persistent Postural-Perceptual Dizziness (PPPD)

*All five criteria must be fulfilled to make the diagnosis.*

A. One or more symptoms of dizziness, unsteadiness, or non-spinning vertigo are present on most days for 3 months or more.

1. Symptoms last for prolonged (hours-long) periods of time, but may wax and wane in severity.
2. Symptoms need not be present continuously throughout the entire day.

B. Persistent symptoms occur without specific provocation, but are exacerbated by 3 factors: 1. Upright posture, 2. Active or passive motion without regard to direction or position, and 3. Exposure to moving visual stimuli or complex visual patterns.

C. The disorder is precipitated by conditions that cause vertigo, unsteadiness, dizziness, or problems with balance including acute, episodic, or chronic vestibular syndromes, other neurologic or medical illnesses, or psychological distress.

1. When the precipitant is an acute or episodic condition, symptoms settle into the pattern of criterion A as the precipitant resolves, but they may occur intermittently at first, and then consolidate into a persistent course.
2. When the precipitant is a chronic syndrome, symptoms may develop slowly at first and worsen gradually.

D. Symptoms cause significant distress or functional impairment.

E. Symptoms are not better accounted for by another disease or disorder.

# Diagnostic criteria for bilateral vestibulopathy

## A. Chronic vestibular syndrome with the following symptoms

1. Unsteadiness when walking or standing plus at least one of 2 or 3
2. Movement-induced blurred vision or oscillopsia during walking or quick head/body movements and/or
3. Worsening of unsteadiness in darkness and/or on uneven ground

## B. No symptoms while sitting or lying down under static conditions

## C. Bilaterally reduced or absent angular VOR function documented by

- bilaterally pathological horizontal angular VOR gain  $<0.6$ , measured by the video-HIT
- reduced caloric response<sup>6</sup> (sum of bithermal max. peak SPV on each side  $<6^\circ/\text{sec}$ )
- reduced horizontal angular VOR gain  $<0.1$  upon sinusoidal stimulation on a rotatory chair (0.1 Hz,  $V_{\text{max}} = 50^\circ/\text{sec}$ ) and a phase lead  $>68$  degrees (time constant  $<5$  sec)

## D. Not better accounted for by another disease

# Diagnostic criteria for probable bilateral vestibulopathy

- A. Chronic vestibular syndrome with the following symptoms
  1. Unsteadiness when walking or standing plus at least one of 2 or 3
  2. Movement-induced blurred vision or oscillopsia during walking or quick head/body movements<sup>2</sup> and/or
  3. Worsening of unsteadiness in darkness and/or on uneven ground
- B. No symptoms while sitting or lying down under static conditions
- C. Bilaterally pathological horizontal bedside head impulse test
- D. Not better accounted for by another disease

# Oscillopsia diagnosis algorithm -- When does the oscillopsia occur?

Modified from Bronstein (2004).

1. During movements of the head? -- Absent vestibulo-ocular reflex: bilateral loss of vestibular function  
Postmeningitic; Ototoxicity; Idiopathic; Miscellaneous
  
2. Triggered by movements of the head
  - Positional nystagmus: brainstem-cerebellar disease
  
- 3. At rest (not significantly associated to movement)
  - Paroxysmal
    - Sound-induced: Tullio phenomenon (superior canal dehiscence)
    - Vestibular paroxysms
    - VIIIth nerve: vestibular paroxysmia
    - Vestibular nuclear lesions
    - Ocular flutter
    - Microflutter
    - Voluntary nystagmus
    - Monocular: superior oblique myokimia
  - Continuous
    - Nystagmus (brainstem-cerebellar lesion)
      - ✓ Pendular
      - ✓ Down/upbeat
      - ✓ Torsional
    - Pseudonystagmus (head tremor + absent vestibulo-ocular reflex)