Nystagmus Video Library: Table of Contents

These videos accompany the Classification of Vestibular Signs and Examination Techniques: Nystagmus and Nystagmus-like Movements, a consensus document of the Committee for the International Classification of Vestibular Disorders of the Bárány Society. Eye movement recording data from actual patients are demonstrated through video simulation examples. More examples may be added as data becomes available.

1.1. Physiologic endpoint nystagmus

This normal subject demonstrates low-velocity nystagmus during extreme leftward and rightward gaze that beats in the direction of gaze, typical of physiologic endpoint nystagmus.

2.1.1. Spontaneous peripheral vestibular nystagmus

In this patient with left Meniere’s disease, spontaneous, binocular, conjugate, jerk nystagmus beats in a single plane and direction (right-beating) regardless of gaze position. With visual fixation removed, it obeys Alexander’s law: present in straight ahead gaze, increasing intensity when looking toward the fast phase direction in rightward gaze, and almost disappearing but still right-beating when looking toward the slow phase direction in leftward gaze. This would be considered a “third degree” vestibular nystagmus with fixation removed. During visual fixation, the right-beating nystagmus is significantly suppressed but still present in straight ahead gaze, again increasing in rightward gaze but disappearing in leftward gaze (thus considered “second degree” vestibular nystagmus during fixation). Since this example is due to a left-sided vestibular disorder, the right-beating nystagmus would be considered an inhibitory type of spontaneous peripheral vestibular nystagmus (2.1.1.1.).

2.1.2.2.1. Downbeat nystagmus

Two examples of downbeat nystagmus recorded from subjects with (A) vestibular migraine, during an episode of acute vertigo, and (B) spinocerebellar ataxia.

2.1.2.2.2. Upbeat nystagmus

Upbeat nystagmus recorded in center gaze position from a subject with vestibular migraine during an episode of acute vertigo.

2.2.1. Gaze-holding nystagmus

In a subject with a symptomatic Chiari malformation, leftward and rightward gaze evokes nystagmus that beats in the direction of gaze (bilateral gaze-evoked nystagmus). This is referred to as gaze-holding nystagmus when due to impairment of the neural integrator.
2.3.1.1. Posterior semicircular canal benign paroxysmal positional nystagmus

In this subject with right posterior semicircular canal BPPV due to canalolithiasis, after a 2 second latency in the right Dix-Hallpike position, a burst of upbeat and torsional nystagmus with the upper pole of the eye beating toward the right ear is elicited and lasts for 12 seconds.

2.3.1.2. Horizontal semicircular canal benign paroxysmal positional nystagmus

This subject exhibits the geotropic form of horizontal semicircular canal BPPV attributed to left canalolithiasis. With the unaffected right ear down, a paroxysm of right-beating horizontal positional nystagmus is seen. With the affected left ear down, a higher velocity paroxysm of left-beating horizontal positional nystagmus is seen.

2.3.1.3. Central positional nystagmus

Two examples of central positional nystagmus: (A) A patient with vestibular migraine exhibits spontaneous left-beating direction-fixed horizontal central vestibular nystagmus (2.1.2.1.1.) in the upright position and then develops direction-changing horizontal geotropic positional nystagmus with either ear down. (B) A patient with a superior cerebellar arteriovenous malformation exhibits persistent downbeat nystagmus in either Dix-Hallpike position.