

# Nystagmus

**Nystagmus** is a rhythmic conjugated oscillating movement eyeballs. In nystagmus we describe:

- form (horizontal, vertical, diagonal),
- direction according to the fast (compensatory) component of nystagmus,
- degree (I-III),
- frequency (fast, slow),
- amplitude.

## Degrees of nystagmus

1. degree – when viewed in the direction of the fast component (nystagmus beats only to the side of the view);
2. degree – nystagmus in direct view (right, left);
3. degree – the least common, fast component against the direction of view.<sup>[1]</sup>

## Vestibular nystagmus

Vestibular nystagmus is biphasic, has two components:

- component slow, tonic (vestibular, own pathological component, stronger apparatus pushes bulbs to the weaker)
- rapid, compensatory (cortical, we see it, to the side of the hyperfunctional labyrinth x deviation)



horizontal nystagmus

The direction is given by the fast folder.

- **Horizontal** – more frequent – beats right / left;
- **vertical** – top, bottom;
- **rotatory**;
- **combination** the above mentioned species (e.g. diagonal, alternating).<sup>[1]</sup>

**Spontaneous nystagmus is always pathological** (vestibular / vestibulocerebellar lesions). Under physiological circumstances, it is caused by a reflex effort to observe the object at such an angle that it is still projected into the macular area.<sup>[1]</sup>

## Fixing nystagmus

It is **physiological**, occurs when the object is fixed in an extreme position by several eye twitches (in neurotics).<sup>[1]</sup>

## Optokinetic nystagmus

In this case, it is a *physiological* phenomenon. It can typically be observed in persons travelling in means of transport (e.g. a moving train). In general, we invoke it by rapidly alternating images in the field of view.

**Incompetence** leads to suspicion of cortical secondary occipital lesion.<sup>[1]</sup>

## Congenital nystagmus

Congenital nystagmus occurs in some eye defects (severe refractive errors, amblyopia). It is often *monophasic* - pendulum.<sup>[1]</sup>

## Nystagmus of miners

Miners nystagmus is accentuated during the transition from darkness to light.<sup>[1]</sup> This is a frequent phenomenon among miners in the 19th century.<sup>[2]</sup> It is probably also related to the toxic influence of gases (methane, carbon monoxide).

## Bruns-Stewart dissociated nystagmus

This type of nystagmus arises from the **pressure** pathological process on brain stem (**e.g. vestibular schwannoma**); To the healthy side is gentle, regular, fast, on the side of the lesion rough, irregular, slow.<sup>[1]</sup>

## Links

### Related Articles

- Vestibular apparatus
- Vestibular syndrome

- [Dizziness](#)
- [Nystagmus/PGS/diagnostics](#)

## Ref

1. SEIDL, Zdeněk - OBENBERGER, Jiří. *Neurologie pro studium i praxi*. 1. edition. Grada Publishing, 2004. ISBN 80-247-0623-7.
2. BROWNE, R C - BECK, I F. Nystagmus in otherwise normal coal-miners. *Br Med J* [online]. 1954, vol. 1, no. 4872, p. 1176-9, Available from <<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2085166/?tool=pubmed>>. ISSN 0007-1447.

## External links

- [Nystagmus \(česká wikipedie\)](#)
- [Pathologic nystagmus \(anglická wikipedie\)](#)