

# What is the scope of neurological diseases in the world today?

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Globally, the burden of neurological disorders (Alzheimer's disease, Parkinson's disease, stroke, epilepsy etc) has increased substantially over the past 25 years. This problem is the topic of a recent report by the Global Burden of Disease (GBD) international project, which was published in *The Lancet*. One of its participants is Vasily Vlassov, Professor at the Faculty of Social Sciences, the Higher School of Economics.

Neurological disorders (NDs) are the leading cause of [death](#) and disability in the world today. In 2015, they ranked as the leading cause group of DALYs (disability adjusted life years), comprising 10.2 percent of global DALYs, and the second-leading cause group of deaths, comprising 16.8 percent of global deaths.

The most prevalent neurological disorders were tension-type headaches (about 1,500 million cases), migraine (about 1,000 million), medication overuse headaches (about 60 million), and Alzheimer's [disease](#) and other dementias (about 46 million cases). Between 1990 and 2015, the number of deaths from neurological disorders increased by 36.7 percent, and the number of DALYs by 7.4 percent.

One of the main reasons for the increase in neurological disorders is longer life expectancy. People live longer and, accordingly, suffer dementia more often than several decades ago, Vasily Vlassov explained. Another reason is a growing population. The more people, the more diseases are registered.

Nevertheless, considering the number of cases per 100,000 people, there is a positive tendency—age-standardized rates of deaths and DALYs caused by NDs decreased by 26 and 29.7 percent respectively between 1990 and 2015.

Stroke and communicable neurological disorders were responsible for most of these decreases, in addition to improved life standards, health care and medicine research development. "But communicable neurological disorders in low-income countries are replaced by chronic NDs in the high-income ones. Death rates are falling, while the burden of non-mortal suffering during a long life with a disease grows," said Vasily Vlassov.

The rates of cases per 100,000 people increased in such diseases as Parkinson's (by 15.7 percent), Alzheimer's (2.4 percent), [motor neuron disease](#) (3.1 percent), and brain and nervous system cancers (8.9 percent).

Neurological diseases are widespread both in high-income and low-income countries. Meanwhile, high-income countries, as well as Latin American countries have the lowest rates of DALYs (less than 3,000 per 100,000 people) and deaths (less than 100 per 100,000) due to ND. The highest rates (over 7,000 and over 280 per 100,000 people respectively) were estimated for Afghanistan and several African countries.

According to Vasily Vlassov, Russia is in the average group in terms of burden from ND, together with India and China. He believes this is due to relatively high mortality, as well as high rates of stroke.

There are substantial sex and age differences in disease prevalence rates globally. Rates of communicable NDs, stroke, and Parkinson's are higher in males than females. The main burden from communicable NDs and epilepsy falls on young age, and particularly children under 5. Headaches are more specific for people aged 25 to 49. Other [neurological diseases](#)

are more specific for the elderly.

The number of patients who will need neurological care will continue to grow in the coming decades. It is important that policy makers and health-care providers are aware of these past trends to be able to provide adequate services for the growing numbers of patients with neurological [disorders](#), the researchers concluded.

**More information:** Valery L Feigin et al, Global, regional, and national burden of neurological disorders during 1990–2015: a systematic analysis for the Global Burden of Disease Study 2015, *The Lancet Neurology* (2017). [DOI: 10.1016/S1474-4422\(17\)30299-5](https://doi.org/10.1016/S1474-4422(17)30299-5)

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