

Neurological Disorder: An Overview

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Perspective

Any condition of the nerve system is referred to as a neurological disorder. A variety of symptoms can be caused by structural, metabolic, or electrical abnormalities in the brain, spinal cord, or other nerves. Paralysis, muscle weakness, poor coordination, loss of feeling, convulsions, disorientation, pain, and altered states of awareness are some of the symptoms. There are numerous neurological disorders, some of which are relatively common but many of which are uncommon. Neurological examinations can be used to assess them, and they can be investigated and treated in the fields of neurology and clinical neuropsychology. Preventive measures, lifestyle changes, physiotherapy or other therapy, neurorehabilitation, pain management, medicines, procedures performed by neurosurgeons, or a specific diet are all examples of interventions for neurological illnesses. In 2006, the World Health Organization projected that neurological illnesses and their sequelae (direct effects) affect up to one billion people globally, citing health inequities and societal stigma/discrimination as key contributors to disability and suffering.

Causes

Despite being surrounded by strong membranes, encased in the bones of the skull and spinal vertebrae, and chemically segregated by the blood-brain barrier, the brain and spinal cord are extremely vulnerable if they are compromised. Nerves are usually found deep beneath the skin, yet they can still be damaged. Electrochemical and structural disturbance can cause individual neurons, brain circuits, and nerves to malfunction. Neuroregeneration is assumed to be rare in the brain and spinal cord, but it may occur in the peripheral nervous system, allowing it to overcome or work around lesions to some extent.

Genetic illnesses, congenital anomalies or disorders, infections, lifestyle or environmental health problems such as malnutrition, brain damage, spinal cord injury, nerve injury, or gluten sensitivity are some of the more common causes of neurological problems (with or without intestinal damage or digestive symptoms). Metal poisoning, in which metals build up in the body and impair biological processes, has been linked to neurological issues, at least in the case of lead. Another physiological system that interacts with the nervous system could be the source of the neurological issue. Cerebrovascular illness, for example, is caused by problems with the blood arteries that nourish the brain (cardiovascular system); autoimmune disorders are caused by the body's own immune system; and lysosomal storage diseases, such as Niemann-Pick disease, can induce neurological deterioration.

People with unexplained neurological symptoms, particularly peripheral neuropathy or ataxia, should be evaluated for an underlying celiac disease, according to the National Institute for Health and Care Excellence. Current testing methodologies can't identify a neural cause in a significant fraction of cases of neurological symptoms, and such "idiopathic" disorders can lead to a

variety of beliefs about what's going on. Neurological illnesses linked to mutant DNA repair genes have been documented in a number of cases. Inadequate DNA damage repair can result in cell death and neuron loss, as well as changes in the pattern of epigenetic alterations essential for optimal neuronal function.

The principal area affected, the primary type of dysfunction involved, or the primary type of causation can all be used to classify neurological illnesses. The most basic distinction is between problems of the central nervous system and disorders of the peripheral nervous system. The following overlapping categories are listed in the Merck Manual for brain, spinal cord, and nerve disorders.

According to the cerebral lobe, there is brain injury:

- Damage to the frontal lobe
- Damage to the parietal lobe

Types of brain dysfunction include:

- Aphasia is a type of aphasi (language)
- Dysgraphia is a type of dysgraphia that affects (writing)
- Dysarthria is a type of dysarthria that affects (speech)

A neurological examination can help determine how neurological injury and disease affect brain function in terms of behaviour, memory, and cognition to some level. This is a specialty in behavioural neurology. Neuropsychological examination is also used in clinical neuropsychology to precisely diagnose and track abnormalities in mental functioning, which commonly occurs after a brain injury or neurological impairment.

Alternatively, a problem may be discovered first through irregularities in mental functioning, with additional evaluation revealing an underlying neurological disorder. The difference between diseases treated in neurology and mental disorders handled in the other medical speciality of psychiatry, or other mental health professions such as clinical psychology, can be blurry at times. In practise, instances may appear to be of one type but are determined to be of the other. Neuropsychiatry is the branch of medicine that deals with mental illnesses caused by diseases of the neurological system.

Idiopathic neurological symptoms - disorders for which no cause can be determined - are one area that can be debated. In some circumstances, it can be determined, perhaps by excluding any recognised diagnosis, that symptoms are caused by higher-level brain/mental activity rather than symptoms originating in the location of the nervous system from which they appear to originate. "Functional" seizures, sensory numbness, "functional" limb weakness, and functional neurological impairment are all classic instances ("functional" in this context is usually contrasted with the old term "organic disease").

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