

## Disorders of Nervous System:-

The disorders of nervous system is caused by sclerosis

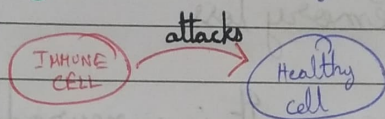
Sclerosis:- It is the hardening or scarring of nerve tissues.  
It is caused from damage/injury to neurons

In context, "sclerosis" indicates that normal, healthy tissues has been replaced by scar tissues, which can disrupt normal neural functioning.

Common cause of Neural Disability:- Multiple sclerosis

Multiple sclerosis:- It is an autoimmune disease that affects CNS

(\*) Autoimmune disease:- It is a condition where the body's immune system mistakenly attacks healthy cells, tissues and organs.



In case of multiple sclerosis (MS), the body's immune system mistakenly attacks the protective covering of neurons called myelin

Symptoms:-

- vision problems
- cognitive impairment
- coordination difficulties

In MS, the sclerosis refers to the hardening of tissue where myelin has been destroyed, replacing it with scar tissues that delay/hinders normal nerve signalling.

Immune cells responsible for this attack:- T cells along with B cells & macrophages



## Types of Diseases (Neural Diseases) :-

- 1) Alzheimer's Disease :- It is a neurodegenerative disease that involves progressive damage to neurons in the brain.

In this disease, abnormal protein deposits (such as ~~am~~ amyloid plaques) accumulate in the brain and interfere with neural function.

- ⊛ Over time, it causes ~~loss of cholinergic~~ neuronal functions.  
Cholinergic → uses acetylcholine (ACh) as the primary neurotransmitter

These neurons are involved in wide range of physiological and cognitive functions crucial for both CNS & PNS.

Symptoms :-

- Cognitive decline
- Memory loss

- 2) Parkinson's Disease :- It is a neurodegenerative disease that involves gradual degeneration of nerve cells in the substantia nigra of the brain.

→ This part of the brain plays a key role in controlling movement.

In this disease, reduction of dopamine over time takes place, where dopamine → neurotransmitter that helps regulate motor control and coordination.

- ⊛ Over time, it causes rigidity and incoordination interfering with mobility leads to ~~loss of dopaminergic~~ neuronal functions  
→ dopamine neurotransmitter

Symptoms :-

- Tremors/Shaking
- Postural Instability
- Dementia