

Parkinson's Disease: A Neurodegenerative Disorder in Older Adults

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DESCRIPTION

Parkinson's disease is a neurological disorder that causes unintentional movements like shaking, stiffness, balance and coordination problems. The formation of Lewy bodies may be a marker for protective mechanisms against age-related nervous system dysfunction and degeneration. Mild parkinsonian symptoms, which are associated with reduced function, may be present in older people. These could be caused by an age-related decline in dopaminergic activity, incidental Lewy body disease, degenerative pathologies (early Parkinson's disease and Alzheimer's disease), or vascular pathology the dopaminergic neurons of the substantia nigra, which are associated with Parkinson's disease motor symptoms, and try to understand how ageing puts these neurons at risk to the point where a small difference in protein metabolism or mitochondrial function can push the cells over the edge, leading to catastrophic cell apoptosis and many of the symptoms seen in Parkinson's disease. Parkinson's disease is a multifactorial disorder involving the interaction of ageing, genetics, and environmental factors. This has implications for the development of appropriate animal models of Parkinson's disease that take into account all of these factors. Converging pathways are likely to include mitochondrial dysfunction, impaired autophagy, oxidative stress, and neuroinflammation, all of which are linked to the accumulation and spread of misfolded -synuclein and neurodegeneration. Understanding the mechanisms involved in the onset and progression of Parkinson's disease may lead to potential therapeutic targets for preventing or altering the course of the disease.

Parkinson's disease affects the brain. The substantia nigra is a section of the brain. It contains brain cells (neurons) that

produce dopamine, a messenger chemical. This dopamine is used to send messages to the basal ganglia, a brain area that aids in fine-tuning movement.

The basal ganglia communicate with other areas of the brain that control movement by sending signals to the rest of the body and instructing it on how and when to move. The basal ganglia are important in regulating the brain's movement control centres. The neurons in the substantia nigra are damaged or die in Parkinson's disease. They can't produce as much dopamine as they should. The substantia nigra cannot send messages to the basal ganglia without dopamine. As a result, the basal ganglia cannot send messages to the brain's movement centres. This is why people (mostly old age adults) with Parkinson's disease move slowly and have tremors.

CONCLUSION

Parkinson's disease causes certain nerve cells (neurons) in the brain to gradually degrade or die. Many of the symptoms are caused by a loss of neurons that produce dopamine, a chemical messenger in your brain. When dopamine levels fall, atypical brain activity occurs, resulting in impaired movement and other Parkinson's disease symptoms. Gene's specific genetic changes that can cause Parkinson's disease have been identified by researchers. However, except in rare cases where multiple family members have Parkinson's disease, these are uncommon. Certain gene variations, on the other hand, appear to increase the risk of Parkinson's disease, albeit with a relatively low risk of Parkinson's disease for each of these genetic markers. Triggers in the environment Toxins or environmental factors may increase the risk of developing Parkinson's disease later in life, but the risk is small.

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