

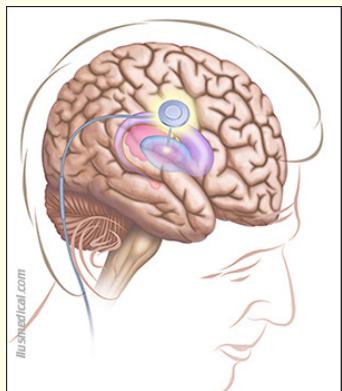
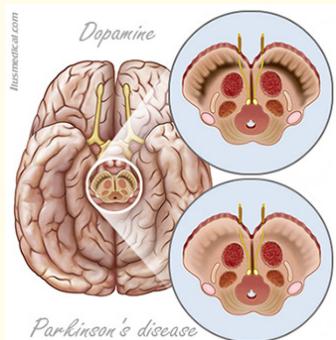
Research and Progress in Parkinson's Disease

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Parkinson's disease is a chronic neurodegenerative disorder primarily affecting the motor system. This disease is characterized by the progressive degeneration of dopaminergic neurons in the brainstem, where dopamine is produced (Figure 1,2).

**Figure 1:** Estimulador cerebral Parkinson.**Figure 2:** La sustancia negra en Parkinson.

Dopamine is an essential neurotransmitter that plays a crucial role in the coordination and control of movement. The loss of these neurons leads to a dopamine deficiency, which causes this disease's characteristic motor symptoms.

The most common symptoms of Parkinson's disease include resting tremors, muscle rigidity, slow movements, and balance problems. In addition to these symptoms, non-motor symptoms such as sleep disturbances, cognitive problems, and mood changes may also occur. These alterations may vary from person to person.

The exact cause of Parkinson's disease is not yet known. Although Parkinson's disease has no cure, treatments are available to help alleviate symptoms and improve patient's quality of life. The most common treatment is the administration of drugs that increase dopamine levels in the brain or mimic its effects.

Technological advances in Parkinson's disease

Research continues on Parkinson's disease. Various strategies are being explored, ranging from gene therapy to deep brain stimulation. Deep brain stimulation is a surgical procedure in which electrodes are implanted in some regions of the brain to electrically stimulate this area and restart neuronal activity. This technique has shown significant benefits in the control of motor symptoms in some Parkinson's patients (Figure 3).

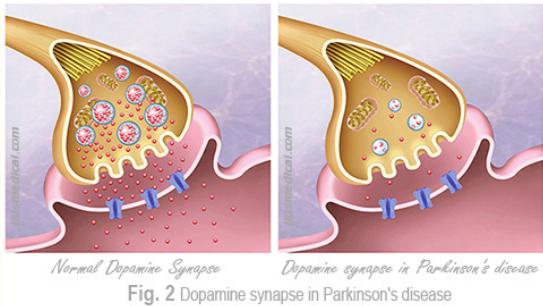


Fig. 2 Dopamine synapse in Parkinson's disease

Figure 3: Sinapsis Dopamina en Parkinson.