

SUN LIFE

MIND & BODY

Did you know...

Parkinson's Disease also robs you of your ability to sing. Linda Ronstadt, a multiple Grammy award singer who began with the Stone Poneys in the '60s, was diagnosed with the disease in 2012. Today, she can't sing a note.

Parkinson's disease: Not just tremors

Robin Williams' suicide last month shocked millions of fans – not only because of his death, but because it turned out he was in the early stages of Parkinson's disease and had been battling severe depression.

What is it?

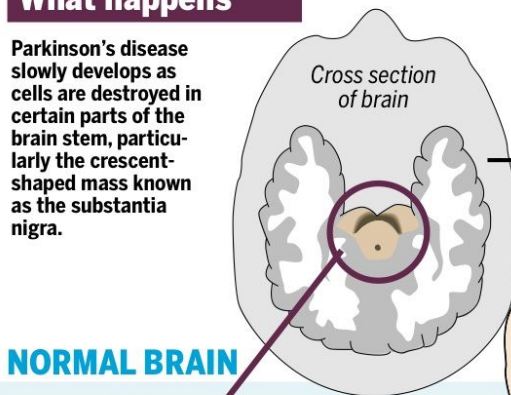
Parkinson's disease is a progressive disorder of the nervous system that affects movement and is most commonly known by its tell-tale hand tremors.

Effects on mood

According to the National Parkinson Foundation, more than half of those who suffer from Parkinson's also have clinical depression. The neurochemicals and pathways in the brain impacted by the disease are also integral in mood control, which can have a devastating effect on someone's outlook on life.

What happens

Parkinson's disease slowly develops as cells are destroyed in certain parts of the brain stem, particularly the crescent-shaped mass known as the substantia nigra.



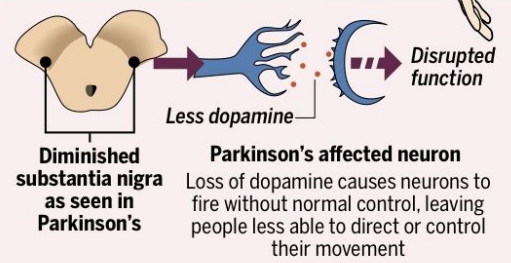
Substantia nigra

Produces dopamine, which is essential for coordination of movement

Normal neuron in the brain

Brain functions, particularly eye movement, motor planning, reward-seeking, learning and addiction work normally

PARKINSON'S BRAIN



"We actually believe that (depression) is part of the disease itself. It's related to the brain dysfunction in Parkinson's disease."

– Dr. Irene Richard, a neurology professor at the University of Rochester in N.Y.

Symptoms can include:

★ **"Cardinal" symptoms** (primary clinical symptoms by which a diagnosis is made)

- Cognitive impairment
- Mood disorders (depression and anxiety)
- REM Sleep Disorder (individuals act out their dreams)
- Hyposmia (loss of smell)
- Speech and swallowing problems, drooling
- Reduced facial expression
- Low blood pressure when standing
- Constipation
- ★ **Bradykinesia** (slowness of movement)
- ★ **Rigidity** (unusual stiffness in a limb or other body part)
- ★ **Resting tremor**
- ★ **Postural instability** (problems standing or walking, or impaired balance and coordination)
- Unexplained pains

Risk factors

The exact cause is unknown, although research points to a combination of genetic and environmental factors:

Age

Risk ordinarily begins in middle-to-late life and continues to increase with age. It's rare that young adults will develop the disease.

Heredity

Having more than one close relative with Parkinson's increases the chance of developing the disease.

Sex

Men are more likely to develop the disease than women.

Toxin exposure

Long-term herbicide/pesticide exposure slightly increases the risk.

Parkinson's disease can't be cured, but medications can help control symptoms. In some cases, surgery to implant an electrode in the brain (similar to a pacemaker) may help.

More than **100,000** Canadians are estimated to have Parkinson's disease

The average age of diagnosis is **60 years**

The disease is named after the English doctor James Parkinson, who published the first detailed description in *An Essay on the Shaking Palsy* in 1817.

Sources: Reuters wire stories; michaeljfox.org; parkinson.ca; mayoclinic.org; Wikipedia