PARKINSON’S DISEASE
A progressive neurological condition brought on by the loss of brain cells that produce dopamine.

**Symptoms**
- Tremors
- Slowed movement
- Loss of voluntary movement
- Rigidity
- Stilted gait
- Loss of sense of smell
- Gastrointestinal problems
- Cognitive impairment
- Difficulty sleeping
- Fatigue

**What causes Parkinson’s?**

**Familial inheritance 10%**

There is no confirmed cause for 90% of cases, but scientists believe it may be a combination of genetic, epigenetic and environmental factors. These triggers create a cascade effect, leading to the death of dopamine-producing cells.

**Unknown cause 90%**

Parkinson’s disease is named for Dr. James Parkinson, an English surgeon who first described the “shaking palsy” in 1817.

**7-10 Million**

people around the world have Parkinson’s.

**50%**

or more of dopamine-producing cells may be damaged or die before hallmark symptoms appear.

**Aging**

is the biggest risk factor for Parkinson’s. Most people are diagnosed after age 60.

**10-20%**

of people with the disease are diagnosed before age 50, in the midst of their working years.

**Diagnosis**

There is no definitive method to diagnose Parkinson’s disease. Developing one could allow for earlier diagnosis and, potentially, intervention once new treatments are available.

**Biomarkers**

are biological characteristics, such as a protein, hormone or genetic signature, that are indicative of a normal process or a disease. Finding biomarkers for Parkinson’s will help scientists and physicians study, understand and better diagnose the disease.

**Treatment**

There are no therapies that slow or stop disease progression or repair damage, but scientists are hard at work looking for such treatments. Current options only manage symptoms:

- **Levodopa** replaces lost dopamine in the brain. Over time, it may become less effective and cause side effects.

- **Surgery**
  During deep brain stimulation surgery, doctors implant a tiny generator in the chest and electrodes in the brain. Small doses of electricity help some people with Parkinson’s mitigate symptoms.

**Impeding progression**

Slowing or stopping Parkinson’s, especially before symptoms become apparent, is crucial to improving quality of life and giving people with the disease more symptom-free years.

**The future of treatment**

How do we get there?

- **Research**
  A better understanding of what’s occurring on a molecular level in Parkinson’s helps scientists develop potential new ways to diagnose and treat the disease.

- **Drug repurposing**
  Drugs developed and approved to treat other diseases may also be effective in Parkinson’s. This approach saves time and money while getting potential therapies into clinical trials faster.

- **Clinical trials**
  Before becoming an approved therapy, all new drugs must first be tested for safety and effectiveness in humans through rigorous clinical trials.

- **Repairing the brain**
  Scientists are investigating ways to fix the damage caused by Parkinson’s to restore lost brain function.