Frequently asked questions about Parkinson’s disease
What is Parkinson’s disease?

Parkinson’s disease is a progressive nervous system disorder in which parts of the brain become damaged over time. Tremors (involuntary shaking of particular parts of the body) are common but the disorder also frequently causes stiffness or slowing of movement. Symptoms begin gradually, sometimes starting with a barely noticeable tremor in just 1 hand.

What are the symptoms of Parkinson’s disease?

Parkinson’s disease is a progressive disease, meaning symptoms worsen over time. It’s described as a movement disorder with 3 main (or “core”) features:

- Tremor – a tremor, or shaking, usually begins in a limb, often your hand or fingers, most commonly when at rest.
- Slowness of movement – over time, your movement may slow down, making simple tasks difficult and time consuming. Hand movements may become slow and less agile, it may be difficult to get out of a chair or you may drag your feet as you walk.
- Stiffness – muscle stiffness may occur in any part of your body, which can be painful and limit your range of motion.

Other movement symptoms include impaired posture (eg, stoop) and balance, loss of automatic movements such as blinking, smiling and swinging your arms when you walk, speech changes and writing changes.

Non-movement symptoms (also known as non-motor symptoms) also commonly occur in people with Parkinson’s disease and include constipation, memory problems and depression.

What are the stages of Parkinson’s disease?

Parkinson’s disease is progressive, meaning that symptoms will worsen over time. However, the disease is highly individual and affects different people in different ways, and the rate of progression varies from person to person. Not everyone with Parkinson’s disease will experience all the possible symptoms and their severity will also vary between individuals. Symptoms of Parkinson’s disease can be separated into 5 stages.

In the early stages of Parkinson’s disease (Stages 1 and 2), symptoms are mild and are unlikely to significantly affect a person’s ability to function. Stage 1 is characterised by symptoms on only 1 side of the body, including:

- Intermittent tremor (for example, in the hand)
- Rigidities and/or slow movements (for example, in a single limb).

In Stage 2, symptoms are present on both sides of the body and may include:

- Abnormal speech
- Stiffness or rigidity of trunk muscles (leading to back and neck pain)
- Stooped posture.

Sometimes, if the features (symptoms by history and signs by examination) are very mild or subtle, clinical diagnosis may not be so straightforward and only becomes clearer after more prolonged follow-up.

The middle stage of Parkinson’s disease (Stage 3) is characterised by loss of balance. Falls are common due to imbalance (postural instability); however, the person can still live independently. Symptoms from previous stages will also be present and diagnosis is straightforward.

In the advanced stages of the disease (Stages 4 and 5) symptoms become severely disabling: the person cannot live independently and requires varying levels of assistance with daily living. In Stage 4, the person may be able to walk and/or stand unassisted but might use walking aids. Constant support is required by Stage 5, characterised by confinement to bed or a wheelchair. Cognitive (thinking) problems, as well as hallucinations and delusions, may also be experienced.

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Next: How common is Parkinson’s disease?
How common is Parkinson’s disease?

More than 6 million people worldwide are estimated to have Parkinson’s disease. Symptoms often begin in people over 50 years of age, with the disease being slightly more common in men than women.

What causes Parkinson’s disease and are there any risk factors?

The exact cause of Parkinson’s disease is not known. A major aspect of Parkinson’s disease is the degeneration of brain cells that produce dopamine, a chemical (neurotransmitter) that is needed for healthy body movements. Exactly how these areas of the brain become damaged is not clear, although research has implicated a number of cellular processes including oxidative stress, inflammation and the accumulation of abnormal proteins in nerve cells.

Risk factors for Parkinson’s disease include age (people usually develop the disease around 50 years of age or older), genetics (having a close relative with Parkinson’s disease increases the chances of developing the disease), sex (men are more likely to develop the disease than women) and exposure to toxins (ongoing exposure to pesticides may slightly increase your risk of Parkinson’s disease).

Is there a cure for Parkinson’s disease?

To date, there is no cure or way to prevent Parkinson’s disease; however, research is ongoing to identify the causes of Parkinson’s disease and, from these, develop a preventive treatment or cure.

How is Parkinson’s disease diagnosed?

Currently, there is no test (eg, blood test or brain scan) to definitively diagnose someone with Parkinson’s disease. Aspects that your doctor (typically a neurologist or geriatrician) may consider to diagnose Parkinson’s disease include:

- Looking at your limbs to check for tremor, stiffness or slowness in movement, including difficulties with walking or writing/drawing
- Asking you to speak
- Checking your eye movements
- Using a specific dopamine transporter single-photon emission computed tomography (DAT-SPECT) scan (also known as a DAT scan) to help support a diagnosis of Parkinson’s disease
- Using other special brain scans to try to rule out other causes of your symptoms
- Suggesting a trial of a medication called levodopa – if your symptoms improve, it’s more likely you have Parkinson’s disease.

It can take time to diagnose Parkinson’s disease. Regular follow-up visits with neurologists trained in movement disorders are recommended to evaluate your condition over time.
How is Parkinson’s disease treated?

There is a range of treatments available to help manage the symptoms of Parkinson’s disease although they probably do not reverse or even slow the underlying neurodegenerative process taking place in the nerve cells.

People with Parkinson’s disease have low brain dopamine concentrations. Medications aimed at increasing or substituting dopamine in the brain may help to manage symptoms such as stiffness, slow movements and tremor. The majority of patients with Parkinson’s disease experience significant improvement in their movement-related symptoms after beginning medication treatment. However, the benefits of drugs frequently diminish or become less consistent over time, although the medications usually continue to provide some benefit even in the long term.

In some cases of later-stage Parkinson’s disease, surgery may be advised. **Deep brain stimulation (DBS)** can stabilise medication fluctuations, reduce or halt involuntary movements (dyskinesia), reduce tremor, reduce rigidity and improve slowing of movement. Pump infusions of medication (apomorphine or levodopa) may also provide similar benefit to DBS. Although they may provide sustained benefit for Parkinson’s disease symptoms, like conventional Parkinson’s disease medications, these device-aided treatments do not provide a cure and do not halt progression of the underlying neurodegenerative process.

Your doctor may also recommend lifestyle changes, especially ongoing aerobic exercise. In some cases, physical therapy that focuses on balance, strength/endurance training and stretching is also important. A speech–language pathologist may help improve your speech problems and provide management of swallowing issues.

Are there any side effects from Parkinson’s disease medication?

Different Parkinson’s disease medications have different profiles of potential side effects. It’s important that you discuss your specific medications and their potential side effects with your doctor or pharmacist. Some of the side effects that you may experience include:

- Wearing off (your medication may wear off so you experience symptoms before you take your next dose)
- Hallucinations and delusions
- Involuntary movements (dyskinesias)
- Sleepiness and fainting
- Impulsive and compulsive behaviour (for example, gambling or binge eating)
- Discoloured urine and diarrhoea
- Headaches
- Indigestion/gastric symptoms such as nausea.

It’s important to remember that some things you think are symptoms of Parkinson’s disease may actually be side effects of your medication.

What are impulsive and compulsive behaviours, and how can I manage them?

Impulsive and compulsive behaviours cause someone to act in a certain way and are usually repetitive behaviours. These behaviours are usually not symptoms of Parkinson’s disease but instead they are side effects of some treatments that are used to treat the symptoms of Parkinson’s disease by increasing levels of dopamine in the brain. They can range in severity, with more severe impulsive and compulsive behaviours described as an **impulse control disorder**.

Impulse control disorders include:

- Addictive gambling
- Obsessive shopping
- Hypersexuality
- Hoarding
- Binge eating – inability to control your appetite so you eat large amounts of food in a short space of time. Weight gain occurs with binge eating
- Obsessive cleaning
- Obsessively handling or sorting objects (also known as “punding”).

It should be noted that not everyone who receives these treatments (in fact, only a minority) will develop impulsive or compulsive behaviours. If you do notice any of the symptoms above, it’s important that you notify your doctor as soon as possible.
Do any Parkinson's disease medications have drug interactions?

Some Parkinson's disease drugs do have interactions with other drugs. Monoamine oxidase B (MOA-B) inhibitors, a class of Parkinson's disease medication, can potentially interact with some types of antidepressants and decongestants. It's important to speak to your doctor and/or pharmacist about the medications you are taking to identify any potential drug interactions.

What is deep brain stimulation?

DBS is usually given to patients who have previously responded to medication, such as levodopa. A device is implanted during a surgical procedure that delivers electrical pulses to the brain, helping to decrease the motor symptoms of Parkinson's disease.

How can allied health therapies help people with Parkinson's disease?

There is a range of therapy options for helping people with Parkinson's disease manage their symptoms.

- Physiotherapy can help with movement problems, as well as your posture, and can help you work on your strength and balance too.
- Speech and language therapy can help with speech issues that you may have, such as speed or volume of speech, as well as any swallowing problems.
- Occupational therapy can help you with everyday tasks that are becoming more difficult. They can provide materials and equipment that help you around your house.

What is the outlook for people with Parkinson's disease?

Most people respond well to treatments and have a usual to near-usual life expectancy with mild to moderate disability. For those who do not respond well to treatments, they may become more severely disabled as their symptoms progress over time.

What can I do to help manage my symptoms?

Exercising regularly is a good way to relieve yourself of muscle stiffness and to help you improve your mood and manage your stress levels. Research has also shown that exercise can slow symptom progression and is a simple way to help you manage your symptoms. Eating a balanced diet is also important, so that you provide your body with the required nutrients and vitamins to help you stay healthy.

Lexicon

- **Deep brain stimulation (DBS)**. A surgical method of treatment that involves implanting electrodes in the brain. It is used to improve the motor symptoms of Parkinson’s disease via continuous brain stimulation.
- **Impulse control disorder**. This is a severe form of impulsive and compulsive behaviours and can be observed in different forms, such as addictive gambling or binge eating.
- **Neurotransmitter**. A neurotransmitter is a chemical messenger that carries, boosts and balances signals between neurons, or nerve cells, and other cells in the body. These chemical messengers can affect a wide variety of both physical and psychological functions including heart rate, sleep, appetite, mood, motivation and fear.
- **Dopamine transporter single-photon emission computed tomography (DAT-SPECT)**. A type of scan that can detect deficits of dopamine levels in the brain.