



National
Neuroscience Institute
SingHealth



Parkinson Society Singapore

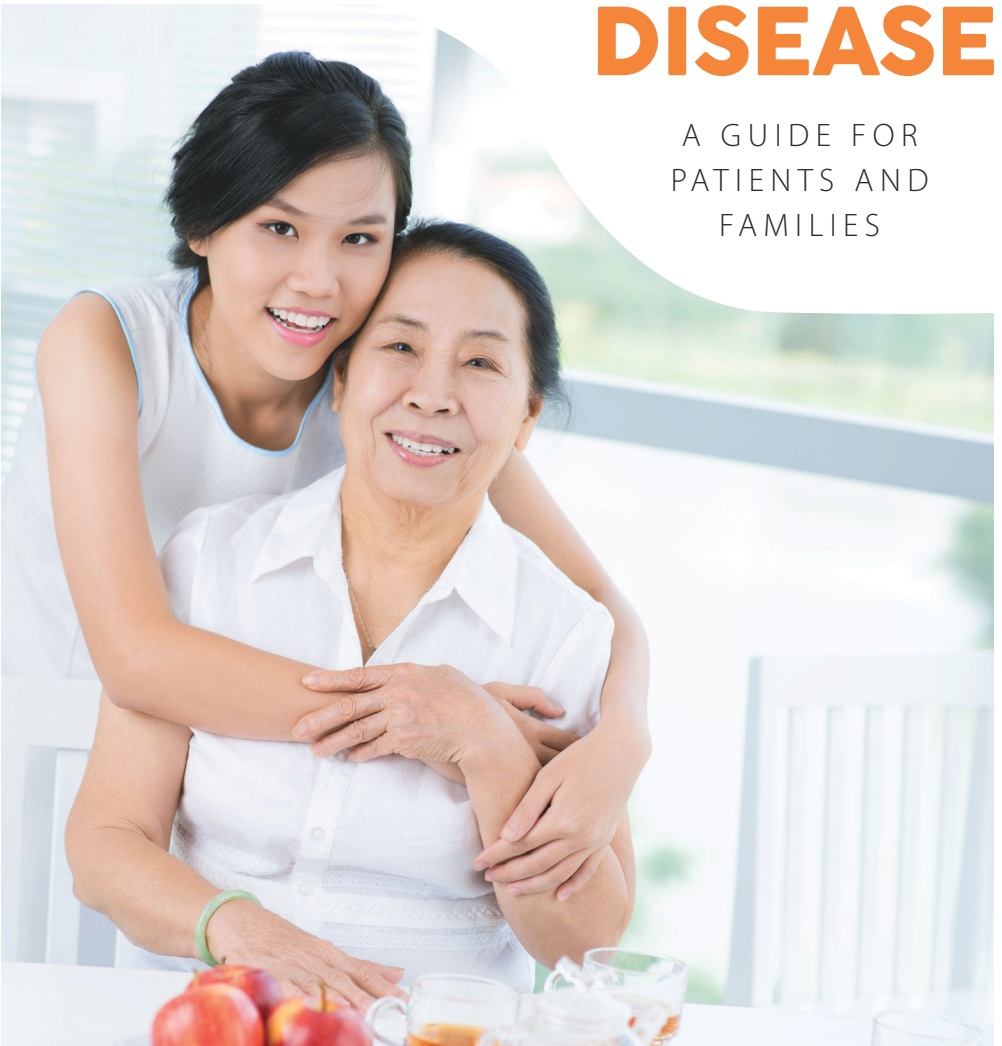
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Parkinson's
Foundation

PARKINSON DISEASE

A GUIDE FOR
PATIENTS AND
FAMILIES



PARKINSON DISEASE

A GUIDE FOR PATIENTS AND FAMILIES



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WHAT IS PARKINSON DISEASE?

Parkinson disease (PD) is a neurodegenerative disorder, which results in brain changes that worsen over time. The disorder affects movements: causing slowness, stiffness and/or uncontrollable shaking of the arms and legs which can affect your daily life.



3 out of every 1,000 people aged 50 years and above have PD.



2nd most common neurodegenerative disorder. As the population in Singapore ages, more people will be diagnosed with PD.

As with many other conditions of the brain, there is no cure for PD. However, therapies, medications and surgery (for advanced PD) can control your symptoms and help you live better.

WHAT CAUSES PARKINSON DISEASE?

PD develops when the brain does not produce enough of a chemical called dopamine. Dopamine acts as a messenger from the brain to control movements. It is made deep inside the brain, in a small area known as the substantia nigra. When these cells die, less dopamine is produced. This causes problems with movement that worsen over time.

We do not know why these brain cells die. However, research is ongoing in Singapore and around the world to discover the cause.



WHO GETS PARKINSON DISEASE?

PD affects people all over the world. The older a person is, the higher his or her chance of developing the disorder.

The average age that a person starts to experience symptoms is 65 years. Ten percent of cases occur in people younger than 40 years. The risk of PD is higher for people who have close relatives that developed PD before 50 years of age.

Genetic and environmental factors also contribute to a person's risk of developing PD.

WHAT ARE THE SIGNS AND SYMPTOMS?

Major symptoms affect movement and include:

- Uncontrolled shaking of the arms/legs (tremor)
- Slowing of movements (bradykinesia)
- Stiffness in the arms/legs/body (rigidity)
- Unsteadiness when walking (postural instability)



Other symptoms that may occur in the early stages include:

- Poor sense of smell
- Constipation
- Drooling
- Aches and cramps
- Low blood pressure
- Sleep problems

TIP Tell your doctor or nurse if you have any of these symptoms.

HOW IS PARKINSON DISEASE DIAGNOSED?

There is no simple test to diagnose PD. A detailed check by a neurologist is needed to confirm the diagnosis and rule out other disorders that can cause similar symptoms. Investigations may be performed to exclude similar disorders.

TIP A neurologist is a doctor who specialises in conditions of the brain, muscle and nerve.

HOW IS IT TREATED?

There is currently no cure for PD. However, treatments are available to help you manage your symptoms and improve your daily life. PD affects people in different ways. Your doctor will recommend to you a treatment plan based on your age, symptoms, stage of disease and other medical conditions.

THERAPIES

PD can affect different parts of your body, so it is important to have a multi-disciplinary team of experts who can provide coordinated care.

The team can include:

- **Neurologist** – assesses patients and prescribes medications
- **PD Specialist Nurse** – assists in assessments, education, and provides advice and support
- **Physiotherapist** – recommends exercises to improve walking, posture, balance
- **Occupational Therapist** – helps in the management of daily activities and routines
- **Speech Therapist** – helps in the management of swallowing and speech problems
- **Dietitian** – provides dietary advice
- **Medical Social Worker** – offers counselling and financial assistance

TIP Speak to your doctor or nurse if you require support in any of these areas.

MEDICATIONS

These are commonly used to treat symptoms of PD include:

- Dopamine agonists (Bromocriptine, Piribedil, Pramipexole, Ropinirole, Rotigotine)
- Levodopa (Madopar®, Sinemet®/Credanil®)
- Monoamine oxidase inhibitors (Selegiline/Rasagiline)
- COMT inhibitors (Entacapone)
- Benzhexol
- Amantadine

TIP Always take your medication on time. Symptoms can worsen if you miss your medications.

Every medication has side-effects. These side-effects usually improve after your body adjusts to the medications.

Common side effects include:

- Feeling sick (nausea)
- Vomiting
- Dizziness
- Sleepiness

Treatment is personalised and medications that work for one patient may not be suitable for another. Your medication will change over time as your condition progresses. After some years of treatment, you may develop disease complications. These could include medications wearing off in shorter durations or jerky body movements that you are unable to control (dyskinesias).

TIP Tell your doctor or nurse if you have any of these problems so they can adjust your medications.

For certain patients, surgery may be an option.

DEEP BRAIN STIMULATION

When medications no longer control the symptoms well, Deep Brain Stimulation (DBS) may be advised for suitable patients.

Electrodes are inserted deep into the brain and connected to a battery. The battery is placed under the skin near the chest and produces a current to stimulate the brain and improve movement.

DBS is not suitable for all people living with PD. Your multi-disciplinary team will assess and advise if you are suitable for the procedure.



LIVING WITH PARKINSON DISEASE

PD affects each person differently and symptoms can vary throughout the day. Eating healthily, managing stress and keeping your body and mind active can help you feel better.

You may gradually become stiffer and slower in your movements. However, the symptoms can also be improved with medications, regular exercise and physiotherapy. Over time, increased care and attention are needed because you may be more prone to falls due to poor balance. When this occurs, balance training with a physiotherapist is recommended.



MANAGING DAILY ACTIVITIES

Due to symptoms, you may experience difficulties in various types of activities:

- Self-care (e.g. eating, dressing, toileting and showering)
- Household chores (e.g. cooking, laundry and cleaning)
- At work (e.g. writing, typing)
- Driving
- Walking and leisure activities

Other symptoms which may affect daily activities include:

- Difficulty remembering information
- Difficulty planning and multi-tasking
- Fatigue
- Low mood

However, with advice and support, you can manage your symptoms to improve your quality of life. Some ways to manage your symptoms include:

- Scheduling activities based on the medication routine and planning for activities during your “on” periods
- Pacing your activities to manage tiredness
- Using assistive devices such as built-up utensils and modified pens and to help with eating and writing.



Modified utensils

Consult your occupational therapist if you experience difficulties with daily living. He or she can help you live more independently. The occupational therapist can also make home visits to recommend home equipment to help you move around safely. These would reduce the risk of falls or physical injuries.

Examples include:

1. Assistive home equipment to ensure safety
2. Visual cues to manage walking issues



Grab bar



Non-slip floor mat



Wall mounted shower seat





LIVING WITH PARKINSON DISEASE

COMMUNICATION

You may notice changes in your speech such as slurring and unclear speech (dysarthria). This is because PD can affect the movements for speech production. Voice training with a speech therapist can help you speak louder and more clearly.

SWALLOWING

PD can also affect the muscles involved in swallowing, causing changes or difficulty with chewing, eating or swallowing (dysphagia). They can occur at any time and include:

- Drooling
- Coughing/choking on food and drinks
- Difficulty swallowing pills

These difficulties can cause discomfort while eating or drinking and may cause health problems such as pneumonia. Swallowing therapy and management by a speech therapist can help you swallow more efficiently and safely.

COUNSELLING

Being diagnosed with PD is a serious life change, and it is natural to worry about the future. You will probably have 'good' and 'bad' days. Feeling sad, discouraged, and irritable is understandable. Try to be kind to yourself on days when you feel fed up or frustrated.



Do not be afraid to ask for help or advice. Sharing your worries with family and friends and joining local support networks can help you cope. A counsellor can also provide individual or family counselling to help you adjust to the changes in daily living brought about by PD.

If you start to experience more intense feelings such as persistent sadness or withdrawal, you could be suffering from depression. Depression is common among people living with PD, with at least 50 percent having some form of depression.



Signs of depression include:

- Sleep disturbances
- Problems concentrating
- Weight loss or gain
- Feeling worried often
- Irritability
- Panic attacks

TIP Tell your doctor or PD nurse if you have any of these problems.

SOCIAL SUPPORT AND COMMUNITY RESOURCES

Getting help and support will help you manage your condition. These organisations in Singapore provide social support, education and training for you and your caregivers.



Parkinson Society Singapore (PSS)

Parkinson Society Singapore supports

People with Parkinson (PwP) and caregivers holistically through their Parkinson journey. The society was founded in 1996 by a group of doctors and caregivers and opened Singapore's first community-based Parkinson Centre in 2013 to provide the much-needed support beyond hospitals.

PSS offers a wide range of therapeutic programmes, social and recreational activities to help PwP live better with Parkinsons, including physiotherapy, yoga, Tai Chi, kickboxing, Chinese calligraphy and vocal classes. PSS also provides information, training and support to PwP, caregivers and community partners.

For more information, contact us at:

PARKINSON SOCIETY SINGAPORE (PSS)

Located near
Bishan MRT!

Block 191, Bishan Street 13,
#01-415, Singapore 570191
Tel: 6353 5338

Email: info@parkinson.org.sg

Website: www.parkinson.org.sg

PARKINSON SUPPORT GROUPS

National Neuroscience Institute (at Tan Tock Seng Hospital)

Neuroscience Clinic, Level 1
11 Jalan Tan Tock Seng
Singapore 308433
Tel: 6357 7138
Email: enquiry@nni.com.sg



www.nni.com.sg

National Neuroscience Institute (at Singapore General Hospital)

Learning Space
Block 6 Level 1
Outram Road, Singapore 169608
Tel: 9295 3331
Email: neurocare@sgh.com.sg



www.sgh.com.sg

HELPLINES

SAGE Counselling Centre

1 Jurong West Central 2
#06-04, Jurong Point Shopping
Centre Singapore 648886
Tel: 6354 1191
Hotline: 1800 555 5555



www.sagecc.org.sg

Samaritans of Singapore (SOS)

Hotline: 1800 221 4444



www.sos.org.sg

TOUCH Caregivers Support

Tel: 6804 6555



www.touch.org.sg/about-touch/our-services/touch-caregivers-support-homepage

OTHER USEFUL RESOURCES

To cope with the challenges ahead, it is important to find out as much as you can about your condition. Here are some websites that may be useful in your search for more information.



National Neuroscience Institute

www.nni.com.sg/patient-care/conditions-treatments/parkinson-disease-and-movement-disorders



National Institute of Neurological Disorders and Stroke

www.ninds.nih.gov/Disorders/All-Disorders/Parkinsons-disease-Information-Page



Parkinson's Foundation

www.parkinson.org