

When your patient has Parkinson's

Parkinson's is a progressive and fluctuating neurological condition. In Australia, it is thought that one in 500 people has Parkinson's, making it one of the most common neurological disorders. There is no known cause or cure.

Parkinson's disease occurs when cells are lost from the part of the brain that controls movement. These lost cells produce *dopamine*, a chemical messenger or Neuro- transmitter that enables people to perform smooth, co-ordinated movements by transmitting messages between nerve cells and muscles. When a high percentage of the dopamine-producing cells are lost, the symptoms of Parkinson's appear. The level of dopamine will continue to decrease slowly over many years. It is currently not known why people with Parkinson's lose dopamine-producing cells.

Parkinson's is a very individual condition. Its symptoms and the rate of progression vary from person to person.

Main Physical Symptoms

- **Slowness of movement**
Initiating movements becomes more difficult or it takes longer to perform them. Lack of co-ordination can also be a problem. This symptom is some times referred to as *Bradykinesia*.
- **Muscular rigidity or stiffness**
This is a common early sign in people with Parkinson's. Symptoms might include problems turning around, getting up from a chair, turning over in bed or making fine finger movements, such as fastening a button due to the body's rigidity. Some people find their posture becomes stooped, or their face becomes stiff, making facial expressions more difficult. Stiffness can at times be painful. Muscular stiffness can also worsen other conditions such as arthritis. In some cases, muscles can become very stiff and this is known as *Dystonia*.

- **Tremor** –
Around 70 per cent of people with Parkinson's experience a tremor. It is slightly less common in those diagnosed at a young age. The tremor may begin in one hand or arm and is more likely to occur when the affected part of the body is at rest. Tremors will usually decrease or disappear when the affected part is being used and often becomes more noticeable when a person is anxious or excited.
- **Other Symptoms**
As well as the main physical symptoms listed above, there are several others, such as tiredness and sleep problems, depression, balance issues, constipation and difficulties with handwriting and other forms of communication, such as speech and facial expression.

Some further symptoms and common terms used to describe Parkinson's Symptoms:

Dyskinesia – involuntary writhing movements caused by an erratic response to long-term drug therapy. *Dyskinesias* are a result of varying levels of Dopamine that are available.

Dystonia – painful fixed contractions of muscles.

Bradykinesia – decreasing speed and amplitude of self-paced repetitive movements e. g. slow and decreasing clapping.

'Wearing Off' – is the term used when drugs wear off before the next dose is due.

'On' – is when the drugs are working and the symptoms are treated. (Patients may suffer from *dyskinesia* when they are ON).

'Off' – is when the symptoms of Parkinson's are not controlled and a person can experience reduced mobility or immobility and require more assistance, this is often known as **freezing**.

'On/Off Phenomenon' – is when a person goes from 'on' to 'off' often quite quickly and without

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warning; like a switch being flicked.

Non Motor and Psychiatric symptoms

Depression is increasingly considered to be part of Parkinson's disease. Not only can there be a reactive depression to diagnosis, but symptoms of depression can evolve as the individual's Parkinson's develops.

Depression in Parkinson's needs to be screened for and treated carefully as many anti-depressants will worsen the symptoms of Parkinson's.

Some patients may develop dis-inhibited behaviours, or complain of an increased sex drive. The official term for this is Hyper sexuality. Developing a difficult to control urge to gamble can also occur in advanced stages of the condition or in response to some medications.

Some patients with Parkinson's can develop visual hallucinations or delusions. This can be a result of taking anti-Parkinson's medication for many years or from a condition closely related to Parkinson's called *Lewy body dementia*. Sometimes an infection or anaesthetic can exacerbate this problem.

Many people never volunteer the fact that they experience visual hallucinations, so it may be worth asking your patient if they ever see things that aren't there. Someone experiencing visual hallucinations and delusions should have their drugs reviewed, as a simple adjustments to their drug regimen by their treating specialist can reduce or eliminate this problem.

It is important to remember that someone experiencing hallucinations does not have a psychiatric illness like schizophrenia, and should always be encouraged to discuss the symptom with their treating Neurologist.

Extreme caution needs to be taken if considering treatment with psychotropic medications, as these can worsen Parkinson's symptoms.

The role of medication in managing Parkinson's

Drugs are the main treatment to help control the

symptoms of Parkinson's. Medication does not halt the progression of the condition.

(Surgery may be appropriate for a small number of people for whom drug therapy has not given adequate control over symptoms).

There are several categories of drugs in the treatment of Parkinson's. Patients are often prescribed medication from several of the categories listed and all must be given at specific times.

Levodopa

This replaces the missing chemical dopamine in the brain. Examples of this drug include Madopar™ or Sinemet™.

These drugs also contain an extra substance that prevents levodopa being changed to dopamine *before* it reaches the brain.

Madopar™ contains levodopa plus benserazide and Sinemet contains levodopa plus carbidopa.

There are different preparations of each drug. Madopar™ has a dispersible form which may be swallowed whole or dissolved in water. *NB Madopar capsules should NOT be broken.*

Sinemet has no dispersible form, but standard Sinemet can be crushed. (For details of controlled release (CR) options, please see MIMS or the Medication information sheets on the better Health Channel.)

In a small number of people, it appears that protein can interfere with the effectiveness of levodopa medication, reducing its absorption by the digestive system. In these cases people, may benefit from taking their levodopa 45 minutes before meals.

Dopamine Agonists (oral)

These drugs stimulate dopamine receptor sites. Examples of the drug include Cabaser™ (Cabergoline) Permax™ (Pergolide), Parlodel™ (Bromocriptine).

Requip™ (Ropinerole) may be privately imported by some patients.

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Symmetrel™ (Amantadine) is an NMDA antagonist, available as capsules or in a syrup form. It promotes the release of dopamine and allows it to stay longer at the site of action.

Combination drug therapy

A preparation called Stalevo was introduced in 2003. It is a combination drug containing levodopa, carbidopa and entacapone in one tablet.

Dopamine Agonists (injection)

Apomine™ (Apomorphine) is delivered subcutaneously by injection or pump and typically is only effective in individual's who show a response to Sinemet or Madopar. It can also cause nausea, so it is taken with domperidone.

NB: Apomine™ (Apomorphine) is not a Narcotic, and is not related to Opioid preparations in any way.

Anticholinergics

These are used to block acetylcholine in the brain.

Examples of this drug include Akineton™ (Biperiden Hydrochloride), Artane™ (benzhexol Hydrochloride) Benztrop™ and Cogentin™ (Benztropine).

COMT Inhibitors

These drugs block the enzyme catechol-O-methyl transferase (COMT), which breaks down levodopa. COMT inhibitors are prescribed to be used along with levodopa.

Examples of this drug include Comtan™ (Entacapone). Tasmart™, Tolcapone is privately imported by some patients.

MAO-B Inhibitors

Eldepryl™ /Zelapar™ (Selegiline) work by blocking the enzyme monoamine type B (MAO-B), which breaks down dopamine in the brain. Because they act as a stimulant, they are often prescribed to be taken in the morning and may keep people awake if it taken too late at night.

Some drugs may bring on Parkinson's-like

symptoms and should be avoided by people with Parkinson's unless specifically recommended by a Parkinson's specialist.

Medication not to be used by people living with Parkinson's:

- Haloperidol (Serenace Haldol)
- Chlorpromazine (Largactil)
- Metoclopramide (Maxolon)
- Perphenazine (Triptafen)
- Flupenthixol (Fluanxol/Depixol)
- Pimozide (Orap)
- Sulpiride (Dolmatil)
- Thioridazine (Melleril)
- Perphenazine (Fentazin)
- Trifluoperazine (Stelazine)
- Fluphenazine haloperidol (Moditen/Serenace/Haldol)
- Prochlorperazine (Stemetil)
- Fluphenazine with nortriptyline (Motival/Motipress)
- Tranylcypromine with trifluoperazine (Parstelin).

NB: The only oral anti-sickness drug that can be taken safely by people living with Parkinson's is Domperidone (Motilium).

This list is not exhaustive and you should always consult with your client's Doctor, Pharmacist or the Duty Worker at Parkinson's Victoria for further information.

If you require further information or would like to discuss your situation with an experienced Client Services Officer, contact Parkinson's Victoria.