

Medications in Parkinson's

Each person with Parkinson's disease will have an individualised tailored regime depending upon his/her age, physical state, level of disease etc, thus no two patients' drug regimes will be the same. Therefore the following is a rough generalised guide to therapy.

The management of Parkinson's disease is very much a multi-disciplinary team approach, in which drugs play an important role. Nurse specialists, physiotherapists, occupational therapists, speech and language therapists, social workers, psychiatrists and many other health care workers and of course carers must all play an important role in the overall management of the patient's condition in order to maximise the benefit that one gets from drug therapy.

There is a misconception out there that the drugs only last for 5 or 6 years or so. This is not necessarily true, as medications continue to work for as long as they are taken. Due to the progressive nature of the condition the dosages will have to be increased or decreased every so often depending upon the level of progression.



Levodopa

Levodopa is converted to dopamine in the brain, making it the next best thing to replacing the missing chemical.

This has been the main treatment for the past 40 years, and it is delivered in different ways depending on symptoms. It is combined with either carbidopa (Sinemet or in gel format Duodopa), or benserazide (Madopar), and carbidopa/entacapone (Stalevo) so that more of it reaches the brain.

It is easy to take, has a strong effect throughout all stages of Parkinson's on both stiffness and slowness, and is considered the "Gold Standard".

Its effect never diminishes, but over time the amount taken will probably need to be increased, because of disease progression. However, Levodopa has little effect on imbalance.

Levodopa is usually divided into 3 or 4 daily doses. It is important that if you are taking levodopa medication that it is taken at the same time every day, allowing 30-40 minutes prior to meals or 1 and a half hours after meals. This is due to the disruption in absorption caused by consuming protein with the levodopa medication. For more information see our info sheet: Diet and Parkinson's.

It is also essential that the medication is taken with plenty of fluid, and that constipation is well managed. See Information Sheet: Bladder and Bowels.

Dopamine Agonists

Dopamine agonists currently available include:

- Mirapexin (pramipexole) Regular and Once-a-Day formulations;
- Requip (ropinirole) Regular and One a Day formulations;
- Neupro (rotigotine) Transdermal one a day patch;
- Apo-go (apomorphine) rescue pen or infusion pump.

Dopamine Agonists have a similar effect to levodopa, and trick the brain into thinking it is getting dopamine, but the effect is not as strong. However they are less likely to cause "on/off" effects or dyskinesias when taken alone. They are useful in early Parkinson's and as an add-on later on.

Enzyme Inhibitors

Enzyme inhibitors work by preventing the breakdown up of levodopa before it gets to brain, or by preventing the breakdown of dopamine in the brain, allowing a longer and smoother supply of dopamine.

- COMT inhibitors: Comtess (entacapone) and Tasmar (tolcapone). Comtess combined with levodopa is also available as one tablet, Stalevo. Tolcapone is rarely used as it has potentially dangerous side effects, and the user is required to have very regular blood tests

- MAO-B inhibitors: Eldepryl (selegiline) and Azilect (rasagiline)

Side effects of COMT inhibitors include diarrhoea. If affected, notify your prescribing physician. Urine may be orange in colour – this is harmless. Side effects of selegiline can include insomnia – take before noon to avoid.

Other Medications include

- Anticholinergics such as Akineton, Kemadrin
- Symmetrel (amantadine)

These medications are usually used in the treatment of tremor and dyskinesia. Anticholinergics are not commonly used in the elderly due to their potential side effects of confusion and constipation.

TREATMENT OPTIONS

There is no standard strategy as each patient has an individualised treatment regime. Your medication regime will be based on your clinical examination and the recommendations of your doctor. It is important that you are comfortable with your treatment, and that you adhere to the specific instructions provided by the prescribing doctor.

The most common side effects of the medications used to treat Parkinson's include nausea and vomiting, dizziness, somnolence, and less commonly orthostatic hypotension, dyskinesia, and confusion, varying with the type of medication.

However, most are transient and those that remain can for the most part, with due care and careful manipulation of medication, be controlled effectively. Contact your doctor if any of these side effects are persistent.

Nausea is the most common side effect when starting on a new medication, and there the usual advice is "Start low, go slow". However, you may still need something to counteract potential nausea. Domperidone (Motilium) is the only anti-nausea medication that is recommended. Some anti-nausea medications, such as Stemetil (Prochlorperazine) or Maxalon (Metaclopramide), are contraindicated as they can make your Parkinson's symptoms worse.

Constipation can be a side effect of certain medications or it could be caused by the disease itself. It is essential that constipation is effectively managed to ensure medication is properly absorbed. Also, constipation can cause confusion

in the elderly, so it is important to rule it out as a cause for other problems, to eliminate the unnecessary changes to drugs.

Somnolence, or daytime sleepiness, can be a generally temporary side effect, but with some medication, the dopamine agonists in particular, sudden onset of sleep can occur. When starting on this type of medication, follow instructions and tell your doctor if affected. Do not drive if affected.

Orthostatic hypotension, or light-headedness upon standing, can be tackled by not standing too quickly – it is the drop in blood pressure upon standing suddenly that causes the light-headedness. For example, upon waking in the morning sit up in bed for 10 minutes before getting out of bed, then upon standing, do not walk until you are sure you are able. Taking your time is generally all that is needed.

Dyskinesias or involuntary movements, generally restless looking movements, may occur in particular when levodopa has been taken for a number of years – it varies hugely from person to person, and should not be a reason to avoid taking levodopa, which is still the most effective medication.

Confusion can be a side effect of some medication, but in general these particular medications are not used these days except where necessary. If you notice this to be a side effect of your medication you should discuss the pros and cons of continuing to take it with your doctor, but should not stop taking it unless advised.

The following treatment options are useful in complex Parkinson's. When the person with Parkinson's has motor fluctuations, new treatment options may be explored. Please note that these treatments usually involve a hospital admission to ensure optimal results.

The Apomorphine Pump

Apomorphine is a dopamine agonist which is used as a rescue drug but cannot be taken by mouth. In a pen dispenser it is easy to use (injection) and can bring you out of an "Off". When used in a pump, it delivers small amounts constantly throughout waking hours, with an option for an occasional boost if required. The doses vary from person to person.

Please note that Apomorphine does not contain any Morphine and does not have any addictive properties.

The Duodopa Pump Delivery System

Duodopa gel (Levodopa-carbidopa gel) is delivered into the gut via a PEG tube by a pump which is usually worn in a small bag with a long shoulder strap. Generally delivered 16 hours a day, this can help to eliminate "Offs" and Dyskinesias to a large degree.

Surgery- Deep Brain Stimulation

This is brain surgery where electrode wires are positioned in the brain and connected to a stimulator which delivers pre-programmed steady pulses of low voltage current that seems to restore normal movement – again to varying degrees.

The stimulator is set under the skin near the collarbone, and replaced as needed (approximately every 5 years- varying with settings).

DBS is not yet available in Ireland, so all potential candidates are referred by their Parkinson's Specialist to the UK where the assessment, surgery and follow up care will be carried out. All expenses are currently covered by the HSE on the E112 form for treatment abroad.

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DISCLAIMER – The information on these pages is not intended to be taken as advice. No changes to your treatment should be made without prior consultation with your doctor or allied health professional.

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