

# Parkinson's disease

Information for  
patients and carers



Leeds Centre for  
Neurosciences

The symptoms of Parkinson's appear when the levels of a chemical messenger in your brain called dopamine become too low. The cells in your brain that produce dopamine have died or are dying.

Currently there is no cure but there is lots of promising research into the causes of Parkinson's, new treatments and finding a cure.

## **What is Parkinson's?**

The diagnosis of Parkinson's is based on the presence of a number of core symptoms and a physical examination. The four common features are tremor, slowness of movement, muscle stiffness and loss of balance. There may be other symptoms affecting movement, such as hesitation when beginning to walk, small hand writing or reduced facial expression. Non-motor symptoms can also occur such as constipation and vivid dreams. These symptoms have often been present long before the change in movement becomes apparent. Each person with Parkinson's will experience a different range of symptoms and these will change over time. For some people the condition progresses quickly and in others it does not.

Regular contact with a Parkinson's specialist is recommended to ensure that your medication is tailored to relieve your individual symptoms. There are many treatments available and it is common for people to take more than one medication. Often multiple doses are needed each day.

The regimens can be complex and the Parkinson's nurse specialists are able to offer advice and support in managing your individual requirements.

## A brief guide to treatment options available for Parkinson's

- **Levodopa** is converted into dopamine in the brain. Levodopa is combined with benserazide or carbidopa, this helps the levodopa get into the brain where it's needed.
- **Co-beneldopa** (levodopa and benserazide) available as unbranded and Madopar standard release capsules and dispersible tablets and controlled release (CR) capsules.
- **Co-careldopa** (carbidopa and levodopa) available as unbranded and brand names Caramet CR tablets, Sinemet, Sinemet Plus, Sinemet CR, Half Sinemet CR tablets and Lecado CR tablets.
- **Duodopa** (levodopa and carbidopa) intestinal gel delivered through a tube into the small intestine. This is an advanced treatment used in later stage Parkinson's.
- **Co-careldopa and entacapone** available as Stalevo, Sastravi and Stanek tablet, (See also COMT inhibitors).

## Dopamine Agonists

Dopamine Agonists act like dopamine to stimulate your nerve cells.

- **Pramipexole** as unbranded tablets and Mirapexin (brand name) standard release and prolonged release tablets.

- **Ropinirole** available as unbranded tablets, Adartrel, Aimpart XL, Eppinix XL Ralnea XL, Raponer XL, Repinex XL Requip, Requip XL, Ropilynz XL, Spiroco XL prolonged release tablets.
- **Rotigotine and Neupro** (brand name) patches.

## **Apomorphine injections**

### **Available as**

- Apo-go intermittent injection pens and Apo-go pre-filled syringes used continuously with an infusion pump.

The following dopamine agonists are available but are not widely used due to the increased risk of heart problems.

- **Bromocriptine** unbranded and Parlodel tablets and capsules.
- **Cabergoline** and Cabaser tablets.
- **Pergolide** tablets.

## **Monoamine oxidase-B inhibitors (MAO-B inhibitors)**

MAOB-inhibitors can help the nerve cells make better use of the dopamine that it does have. They block an enzyme called monoamine oxidase type B which breaks down dopamine in your brain. This helps increase the amount of dopamine in your brain which can help relieve the symptoms of Parkinson's. They can be taken alone or alongside other Parkinson's medication.

- **Rasagiline** available unbranded and Azilect (brand name) once a day tablets.
- **Selegiline** available unbranded and as Eldepryl and Zelapar (brand names) once a day tablets.

- **Safinamide** (brand name Xadago).

### **COMT inhibitors**

COMT inhibitors work by blocking the enzyme that breaks down levodopa. They are taken with your levodopa. It can be used when your levodopa is not lasting long enough (end-of-dose deterioration) or the effects “wear off”.

- **Entacapone** available unbranded or as Comtess (brand name).
- **Co-careldopa and entacapone** in one tablet are available as Stalevo, Sastravi and Stanek.
- **Opicapone** (brand name Ongentys)
- **Tolcapone** available unbranded and as Tasmar.

### **Glutamate Antagonists**

It is not known exactly how this drug works but may affect how the brain reacts to certain chemicals.

#### ***Available as***

- **Amantadine and Symmetrel** in capsules and syrup.

Amantadine is not used very often in early Parkinson’s but can be used to help with dyskinesia (involuntary movements).

### **Anticholinergics**

These drugs block the action of a chemical messenger acetylcholine, this chemical helps send messages in the brain and around your body and nerves in your muscles.

These drugs can be used in younger patients and for treating tremor.

Available in liquid, syrup and tablets unbranded as orphenadrine and as Biorphen. Procyclidine unbranded and as Arpicolin, kemadrin. Trihexyphenidyl also known as Benzhexol.

## **Deep Brain Stimulation**

Deep Brain Stimulation (DBS) surgery is an option used in later stage Parkinson's to treat tremor and dyskinesia. This is not a cure and you will still need to take medication.

## **The Role of the Parkinson's Nurse Specialist Team**

- A source of help, support and information for you, your carers and health professionals.
- To provide advice over the telephone or by email and to review you either in the clinic or at home.

### ***The Nurse Specialist team will:***

- Work with your Consultant, GP and other health professionals to optimise your treatment plan.
- Provide information about medication, help when starting new treatments and advice on long term monitoring.
- Refer you to other health care professionals such as physiotherapists, the speech and swallowing team, community occupational therapists and the community matrons where appropriate.

You may be referred to the team by your Consultant, your GP or another health or social care professional. Self-referrals or referrals from a family member are also welcome.

**Contact details for the Parkinson's nurse specialist team:**

Leeds Teaching Hospitals: 0113 392 6689

Team email: [pd.nurse@nhs.net](mailto:pd.nurse@nhs.net)

## Useful contact numbers and sources of information

**Parkinson's UK - [www.parkinsons.org.uk](http://www.parkinsons.org.uk)**

**Free national confidential helpline -**

**Tel:** 0808 800 0303 **Email:** [hello@parkinsons.org.uk](mailto:hello@parkinsons.org.uk)

**Parkinson's UK local advisors provide:**

One to one information and support, liaising with health professionals, links to social services and information about benefits and how to claim them.

**Tel:** 0808 800 0303 **Email:** [hello@parkinsons.org.uk](mailto:hello@parkinsons.org.uk)

**Yorkshire and Humberside Younger Persons Support Group -**

**Tel:** 0808 800 0303 **Email:** [parkinsons.org.uk](http://parkinsons.org.uk)

**The Cure Parkinson's Trust - [www.cureparkinsons.org.uk](http://www.cureparkinsons.org.uk)**

**Tel:** 020 7487 3892 **Email:** [cptinfo@cureparkinsons.org.uk](mailto:cptinfo@cureparkinsons.org.uk)

**Carers UK - [www.carersuk.org](http://www.carersuk.org) Advice Line: 0808 808 7777**

## Driving and Parkinson's disease

When you are diagnosed with Parkinson's you are legally obliged to inform the Driver and Vehicle Licensing Agency (DVLA).

**Tel:** 0300 790 6806 **Website:** [www.dvla.gov.uk](http://www.dvla.gov.uk)



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