Parkinson's UK

# Drug treatments for Parkinson's

---

**Treatments, therapies and side effects**

A guide on how different drugs can help manage Parkinson's symptoms

## There is no cure yet for Parkinson’s, but there are many different drugs that can help manage the symptoms.

This booklet is for people with Parkinson’s and their family, friends and carers. It gives you information about the drugs most commonly used to help manage the condition.

This booklet starts with some key practical points about the drugs used for treating Parkinson’s. There are also further details about categories of drugs and individual drugs.

At the end of this booklet there is a medication record for you to keep details of your treatment.

There is a video on how to pronounce the names of Parkinson’s drugs on our website. You can find this by going to **parkinsons.org.uk/drugs**

Choosing the right medication is always a decision you should make with a healthcare professional. You can show this booklet to your specialist, Parkinson’s nurse or pharmacist, and ask them questions about the information here.

You may also find this booklet useful when you are talking about the next steps in your treatment.

Don’t feel you need to read everything in one go.

Reading the information that you need when you need it will make this booklet more manageable and relevant for you.

This is because what works for you when starting treatment for Parkinson’s may change later on.

### Disclaimer

This booklet includes information on drug treatments for Parkinson’s that is correct at the time of going to print.

It is intended as a guide only. Always speak to your specialist, Parkinson's nurse or pharmacist if you have any questions or concerns, or are thinking of changing your drug treatment.

Our helpline can also give information and support on managing Parkinson's drugs. Call **0808 800 0303** or email **hello@parkinsons.org.uk**

# Contents

# Contents continued

# Contents continued

# Contents continued

# Contents continued

# Parkinson's drugs: An introduction

## In this section:

- How Parkinson's drugs work
- Types of Parkinson's drugs
- Branded and generic drugs
- Modified release, controlled release and prolonged release medication
- What treatment will I take and when?
- Medication is specific to you

## How Parkinson's drugs work

Dopamine is a chemical messenger made in your brain. The symptoms of Parkinson's appear when dopamine levels become too low.

This is because many of the cells in your brain that produce dopamine have stopped working. Taking dopamine as a drug doesn't work because it cannot cross the blood brain barrier. This is a barrier between your blood and brain that stops bad things like bacteria getting into your brain.

To get around this, doctors use Parkinson's medication that works in different ways. You can read about how the different Parkinson's medications work under each section.

**Most drug treatments work by doing one or more of the following things:**

- Increasing the amount of dopamine in the brain.
- Acting like dopamine by stimulating the parts of the brain where dopamine works.
- Blocking the action of enzymes that break down dopamine. Enzymes are proteins that make a chemical reaction happen.

## Types of Parkinson's drugs

**Generally speaking, there are three types of Parkinson's drugs:**

- Levodopa
- Dopamine agonists
- MAO-B inhibitors (monoamine oxidase-B inhibitors)

**In this booklet we have listed drugs information in the following order to help you see each group clearly:**

- The class or type of drug, for example levodopa.
- The generic (unbranded) name, such as co-beneldopa, which will include the active ingredients of the drug. For example, co-beneldopa is a combination of levodopa and benserazide.
- The brand name. For example, Madopar is the name that the pharmaceutical (drug) company, Roche, uses to sell co-beneldopa

Starting on page 32 of this booklet, you can read more about each specific drug.

## Branded and generic drugs

Your specialist will decide whether to prescribe you branded or generic versions of your medication.

The active ingredient of a generic drug is always the same as the branded version and lots of people won't have any problems using the generic medication.

In the UK, a generic or branded medicine needs a licence and there is a strict process for this. This means that the quality of a generic or branded version of the same medicine will be the same, and they will also act in the same way. The generic medicine must have the same amount of active ingredient as the branded product.

Once there are no longer any legal rights to the brand name, any company can make generic versions of a drug.

If you find that you react a bit differently to generic medication, talk to your specialist, Parkinson's nurse or pharmacist.

It is useful to keep the packet your medication comes in. This will help you to remember what you are taking. You can also write down the name and strength of your medication and carry this list with you for when you need it. This will be particularly useful in an emergency as it will help medical professionals to understand what medication you take.

There is a medication record for you to keep details of your treatment, at the end of this booklet.

## Modified release, controlled release and prolonged release medication

You may see that your medication is called 'modified release'. It may also be called 'controlled release' (CR) or 'prolonged release' (PR). All of these labels mean the same thing, but drug companies can choose which one to use with their drug.

These types of medication are made to release your treatment slowly to help you have more even control of your symptoms throughout the day. Another way to describe these types of medication is 'slow release'. Controlled or prolonged release medication needs to be swallowed whole with water and not chewed.

## What treatment will I take and when?

When you're diagnosed, your specialist will talk to you about your symptoms and how they affect you. You will make a joint decision about whether to start treatment straight away or wait until your symptoms cause you more problems.

If your symptoms are impacting your daily life, they may recommend you start medication. If you have very mild symptoms, you may agree to wait until symptoms become more difficult.

If your specialist decides to start you on treatment, they will give you specific times to take it which you should stick to.

You will be prescribed levodopa, a dopamine agonist or a MAO-B inhibitor. Most people are given levodopa to start with. But which medication you take depends on how much your symptoms affect you and other things like your age and your lifestyle.

Most people find they tolerate their treatment well. Your healthcare team will arrange a follow-up with you to see how your treatment is working. You will normally have a telephone or clinic review after six to eight weeks. This is when your specialist or Parkinson's nurse will:

- increase or decrease the doses
- change how often you take it
- add new drugs until your symptoms are as controlled as possible.

Before leaving the clinic you should get the contact details of your Parkinson's nurse or the phone number of the clinic in case you have any problems with side effects. See the section on side effects further on in this information.

There is a 'My medication' section for you to keep details of any side effects you have, at the end of this booklet.

## Medication is specific to you

Everyone's experience of Parkinson's is different. So your specialist, Parkinson's nurse or pharmacist will work with you to find the treatment that is best for you.

Finding the best drug, dose and timing won't happen straight away. It may take some time to get this right. Your treatment will usually change as your Parkinson's symptoms change over time. (See 'Adjusting your Parkinson's medication' on page 30).

Planning your medication routine is something that should be a joint decision between you and your healthcare professionals. If you are prescribed medication, make sure you ask about what you are taking, when to take it, and any side effects.

Your specialist, Parkinson's nurse or pharmacist should explain things clearly and write down anything important.

# Other ways to manage your Parkinson's

**Drug treatments are the main way to manage Parkinson's symptoms, but other things can help you live well with Parkinson's and continue to have a good quality of life for as long as possible.**

### In this section:

- Physical activity and exercise
- Therapies

## Physical activity and exercise

Being active is important for everyone. If you have Parkinson's, being active for 2.5 hours a week can help manage Parkinson's symptoms, and has a positive impact both physically and mentally.

It can maintain your health and lift your mood. The more physically active you are, the easier it is to live well with Parkinson's.

Just like Parkinson's, the right physical activity is different for everyone. Whatever you do to get active, it's important to do it regularly.

If you enjoy the physical activity you're doing, you're more likely to keep doing it. So find something you love and that makes you feel good.

Find out more about physical activity and exercise at **parkinsons.org.uk/exercise**

## Therapies

Therapies can complement your treatment regime by focusing on a specific issue you may have.

The three main types of therapy are physiotherapy, speech and language therapy and occupational therapy.

**Find out more:** see our information on physiotherapy, speech and language therapy and occupational therapy.

# Side effects of Parkinson's drugs

**Like any drugs, Parkinson's drugs can have side effects. This means that some things you may think are Parkinson's symptoms could be side effects of your medication.**

### In this section:

- Impulsive and compulsive behaviours
- Hallucinations and delusions
- Sleep issues
- Blood pressure changes

**Before starting any new Parkinson's medication, your specialist, Parkinson's nurse or pharmacist should explain:**

- how it works
- how to take it
- what benefits you may see
- any potential side effects.

Starting any new or different medication should be a shared decision between you and your healthcare team.

Side effects can vary from one person to another. Some side effects may happen months or years after starting the medication. Other people may never experience them.

You can find out more about any specific side effects by reading the leaflet that comes inside the medication packet.

Below we have listed some side effects that are important for you to know about. We have also included specific side effects information within each drug type (class) section further on in this booklet.

## Impulsive and compulsive behaviours

Impulsive and compulsive behaviour is a possible side effect of some Parkinson's drugs. Dopamine agonist medication can increase the risk of developing these side effects. They're important to know about as they can be difficult to manage.

Impulsive and compulsive behaviour is when someone can't resist the urge to carry out an activity or act in a certain way - often one that gives instant reward or pleasure. This can include things like obsessive shopping, having strong sexual urges or becoming addicted to gambling. They'll quickly act on this urge without thinking about the possible negative impacts it might cause.

These behaviours can sometimes lead to legal or money problems.

Not everyone will have this side effect. Speak to your specialist or Parkinson's nurse as soon as you or your family, or the person who supports or cares for you, notices any change in behaviour.

If you are not able to get through to your healthcare professional, you can call the Parkinson's UK helpline on **0808 800 0303**. We have information on what behaviour to look out for and what to do next.

**Find out more:** see our information on impulsive and compulsive behaviours in Parkinson's.

## Hallucinations and delusions

Hallucinations and delusions can also have a big impact on daily life.

A hallucination is when you see, hear or feel things that aren't there. Delusions are unusual thoughts, beliefs or worries that aren't based on reality.

They can happen with any Parkinson's medication, but are more common with dopamine agonists. Not everyone will have this side effect and it is more common in the later stages of Parkinson's.

It's understandable that you may be worried about this type of side effect. Ask your specialist for clear information about hallucinations and delusions before starting your medication if you have any concerns.

Talking about hallucinations and delusions with your specialist will mean they can adjust your medication regime to help reduce their impact.

**Find out more:** see our information on hallucinations and delusions.

## Sleep issues

Some Parkinson’s drugs can make you very sleepy. Sometimes this happens suddenly and without warning. Make sure you know how to stay safe – if you can still drive, for example.

Sometimes it can be hard to know whether your sleep problems are part of the condition or whether they are a side effect of your Parkinson’s medication. It’s important to talk to your specialist, Parkinson’s nurse or pharmacist to find out the cause of these problems.

Find out more: see our information on driving and Parkinson’s, and sleep and night-time problems in Parkinson’s.

## Blood pressure changes

Some Parkinson’s drugs can make your blood pressure fall very quickly, making you feel dizzy or faint. Drinking more liquid can help. Your specialist, Parkinson’s nurse or pharmacist will be able to prescribe medication to ease this side effect and give you other tips, so speak to them for more advice.

**Find out more:** see our information on low blood pressure and Parkinson’s.

# Managing your medication

**We hear of many tools people with Parkinson’s use to help them remember to take their medication on time. The trick is to find a way that suits you. You can try using alarms on a digital watch or setting a reminder on a smartphone.**

### In this section:

- Pill timers
- Managing Parkinson’s medication while in hospital
- Help from your pharmacist
- Tips for managing your Parkinson’s medication

## Pill timers

A pill timer is a box that you can keep your Parkinson’s drugs in to help you remember when to take each dose. They are useful if you have to take lots of different tablets or if you have trouble remembering to take your medication.

Some are split into different times of day for you to keep all of your Parkinson’s drugs for one day together. Others are big enough to hold your tablets for a whole week, with sections for each day. Some weekly pill timers are also split into times of day.

The cost of pill timers will be based on the type and who it is made by. An occupational therapist or pharmacist can help you to choose the right one for you. **Living Made Easy** (**www.livingmadeeasy.org.uk**) provides information on a range of equipment, including pill timers and organisers, on their website. You can also call their helpline on **0300 999 0004** to speak to an adviser.

## Managing Parkinson's medication while in hospital

If you need to go into hospital, make sure that hospital staff understand you have Parkinson's and that you need your medication on time. Getting your medication on time will mean your symptoms are well controlled and that you are likely to have fewer complications from being in hospital.

Some hospitals will allow you to look after your own medication. This means you can take it yourself outside of the usual times staff give out drugs on the ward (ward round). The medication will need to be in its original packaging – blister packs or pill boxes are not used in hospitals. If you have time, contact the hospital to find out about their self-administration policy.

Our *Get It On Time* resources can help you to remind staff about the importance of getting Parkinson's medication on time in hospital.

**Find out more:** see our information on going into hospital, and our range of *Get It On Time* resources.

## Help from your pharmacist

Your community pharmacist can help you with taking your medication. It's useful to go to the same pharmacist each time so they get to know you and your Parkinson's. If you have trouble taking your medication, your pharmacist can do an assessment to see how they can help. For example, they can offer labels with larger letters, non-'click top' bottles that are easier to open or a medication reminder chart.

They may also be able to put your medication into a dosette box or dosette-style blister pack. This means that each tablet has its own section linked to the correct time and day to remind you of your dose and when to take it.

## Tips for managing your Parkinson's medication

- Try to take your medication at the same set times every day as advised by your specialist or Parkinson's nurse. Your pharmacist can also support you with your medication and dose.
- Tell your specialist, Parkinson's nurse or pharmacist straight away if you have any side effects from the drugs you take to treat Parkinson's. Don't stop taking or change the dose or timing of your Parkinson's drugs until you have spoken to your specialist or Parkinson's nurse, as this can increase your symptoms.

- Do not take two doses together to make up for a dose that you forgot to take, or take your late dose really close to your next one.
- You may want to go to your appointments by yourself or find it useful to take someone with you. Some people with Parkinson's feel it helps to have someone else at the appointment with them so that they are also aware of all the medication issues.
- Use a diary or chart to keep a record of the medication you are currently on. Update it when your specialist team starts you on a new drug, changes your drugs or adjusts the dose or number of times you take it.
- Record the dose and time you take your medication and what happened to your symptoms. This can help you decide together on how well the drug is working. You can cut out, copy and use our medication record at the end of this information, or download it from our website.
- You may want to wear MedicAlert jewellery, such as a bracelet or pendant, where you can record details about medication you take and emergency contact information. Or you can carry our medication card to help people know in an emergency that you have Parkinson's and what medication you take.

You can order our medication card from our online shop at **shop.parkinsons.org.uk**

# Other types of drugs you may take

## In this section:

- Indigestion and heartburn
- Herbal supplements
- Cold and flu remedies
- Iron tablets
- Anti-sickness drugs
- Antipsychotic medication
- Cannabis-based treatments for Parkinson's
- Adjusting your Parkinson's medication

If you have Parkinson's, then it's likely you'll have symptoms that don't just affect movement. These are known as non-motor symptoms, and include things like anxiety, pain and constipation.

Treatments for these symptoms are normally the same types of drugs that anyone might use or be prescribed. For example, you may be prescribed a drug called Movicol for constipation.

But some medication can interfere with how Parkinson's drugs work. This means that a particular drug can become weaker or stronger.

Whoever prescribes you new medication should check what you're already taking. And before you take something, it's always good to double check with your specialist, Parkinson's nurse or pharmacist whether there are any risks. This includes over-the-counter medication.

## Indigestion and heartburn

Drugs for indigestion, heartburn or an upset stomach can affect the absorption of Parkinson's medication. So don't take this type of medication in the two hours before and after your Parkinson's medication.

If you do experience heartburn or indigestion, speak with your GP, specialist or Parkinson's nurse, who can advise on treatments.

## Herbal supplements

Herbal supplements are popular and many are safe to use. However, some may affect your Parkinson's drugs. For example, St John's Wort, which is often used for anxiety or low mood, is not recommended for people with Parkinson's.

It is made up of many elements which can interact with your Parkinson's medication and cause side effects.

## Cold and flu remedies

Decongestants (medicine that can provide short-term relief for a blocked or stuffy nose) and cold remedies can stop your Parkinson's medication working properly. This includes things like Lemsip. This is especially important to remember if you are taking selegiline, rasagiline and safinamide. They can also increase the risk of side effects.

## Iron tablets

You may take iron tablets if you have Parkinson's. But iron tablets can affect how much levodopa is absorbed in the body. You should aim to leave around two hours between taking iron supplements and levodopa.

## Anti-sickness drugs

Parkinson's medication can cause nausea and vomiting. Your specialist may prescribe an anti-sickness medication for a short period to prevent and treat this side effect. But some anti-sickness medication will interact with Parkinson's medication. These include metoclopramide (Maxalon) and prochlorperazine (Stemetil).

Other anti-sickness medication that is generally considered safe include cyclizine (Valoid) and 5-HT3 receptor antagonists like ondansetron.

## Antipsychotic medication

Antipsychotic medication is used to treat hallucinations and delusions when someone experiences psychosis or schizophrenia. Because antipsychotics and Parkinson's medication both affect the levels of dopamine in the brain, there needs to be a delicate balance so that symptoms of both conditions stay controlled.

Some can cause Parkinson's-like symptoms or react badly with Parkinson's drugs.

## Cannabis-based treatments for Parkinson's

When it comes to cannabis-based medicines, so far there has been a lack of clinical trials in people with Parkinson's.

This means we do not yet have enough evidence to know whether cannabis-based treatments are safe and what the benefits may be for people with the condition.

Some trials are investigating the benefits of cannabidiol (CBD) – the non-psychoactive compound found in the cannabis plant.

This is available to buy as a food supplement, but it's unclear whether it can help manage Parkinson's symptoms. Researchers are also unsure how it may interact with other Parkinson's medications. If you're thinking about taking any CBD supplements, it's best to speak to a healthcare professional first.

**Find out more:** we have information about research on cannabis-based treatments for people with Parkinson's on our website **parkinsons.org.uk**

# Adjusting your Parkinson's medication

> As time goes by, your Parkinson's medication can become less effective as your symptoms change. This isn't something to worry about as your specialist or Parkinson's nurse will work with you to find the best dose or combination of treatment so your symptoms are as controlled as possible.
>
> Before increasing your medication, your specialist or Parkinson's nurse will check you're taking the correct dose at the correct time.
>
> This is because taking your medication at the same time every day helps get the best control of your symptoms. Your diet can also affect how well your Parkinson's medication is absorbed. You can find out more about this in the section on levodopa and protein on page 36.
>
> If your medication dose is adjusted or you're prescribed a new medication, your healthcare professional will usually review your medication two to four weeks later.

> As your symptoms change, your healthcare professional will look at the maximum dose and how well you've tolerated it so far. Tolerance is how well you respond to a drug over time.
>
> All medications have a maximum dose and if your medication is increased, you may worry about reaching this limit. Even if you reach the maximum dose, there are different medications that work alongside your existing medication to help manage symptoms.
>
> Always ask your healthcare professional if there's anything you don't understand or symptoms you're worried about.

Jennifer and Nicola, Parkinson's nurses

# Levodopa

**Levodopa is the name used to describe one of the main types (classes) of Parkinson's drugs.**

**In this section:**

- How do levodopa drugs work?
- When are levodopa drugs used?
- Benefits of levodopa
- Risks and side effects of levodopa
- Other side effects
- Levodopa and protein

## How do levodopa drugs work?

Levodopa is a chemical building block that your body converts into dopamine in the brain. Levodopa already occurs naturally in your body and taking a levodopa drug treatment boosts the supply, meaning the nerve cells can make more dopamine.

## When are levodopa drugs used?

Levodopa drugs are usually prescribed for someone newly diagnosed with Parkinson's, or when mobility problems affect someone's daily life. However, this will not be the same for everyone.

Your levodopa treatment will usually start with a low dose. This will gradually be increased until your symptoms are under control.

## Benefits of levodopa

Levodopa can help treat Parkinson's symptoms because it helps to top up dopamine levels in the brain.

You may see a big improvement in your symptoms when taking it, especially with stiffness and slowness of movement.

## Risks and side effects of levodopa

Levodopa works less well over time. This means that you might need to take more of it over time.

People with Parkinson's will benefit from medications containing levodopa throughout their lifetime.

The patient information leaflet that comes with your drugs will tell you about all of the side effects that you may experience. Some possible ones include:

### 'Wearing off' and 'on/off' changes

When you take levodopa for a long time you may experience 'wearing off'. 'Wearing off' happens when the Parkinson's medication you've been taking is no longer working as effectively as it used to. Because of this, your Parkinson's symptoms may return towards the end of a medication dose, or near the beginning of the next dose. If these symptoms are affecting your day-to-day life, then your specialist or Parkinson's nurse should review your medication.

In the early stages of Parkinson’s, you may not notice when a dose of levodopa begins to wear off. But as your Parkinson’s symptoms get worse, some people find that a dose doesn’t last as long as it used to, so any changes in symptoms can become more unpredictable.

As well as having an effect on your movement, you may also experience feelings of anxiety, sleepiness, low mood or pain as your medication wears off.

If your symptoms are well controlled, this is known as the ‘on’ period, which means that your medication is working well. When symptoms return, this is known as the 'off' period.

This might mean that a person who is out for a walk would suddenly be unable to continue walking, or when seated would feel unable to get up to answer the door.

‘Off' periods usually come on gradually, but occasionally can be more sudden. When they come on suddenly, some people have compared this ‘on/off' effect to that of a light switch being turned on and off.

Your specialist or Parkinson’s nurse may suggest trying apomorphine if you are having ‘wearing off’ and ‘on/off’ changes that aren’t controlled by other Parkinson’s medication. It can be used alone but is often prescribed with levodopa or other medication.

See the section on apomorphine to find out more.

### Involuntary movements (dyskinesia)

When you’ve taken levodopa for a long time, you may get involuntary movements (dyskinesia). These are muscle movements that you can’t control. They can include twitches, jerks, twisting or writhing movements.

### Impulsive and compulsive behaviours

Impulsive and compulsive behaviours can happen with any Parkinson’s drugs. See the section on side effects of Parkinson’s drugs to find out more.

### Withdrawal symptoms with levodopa

Research has shown that withdrawal symptoms can happen when someone stops taking levodopa medication very suddenly.

It can lead to symptoms including depression, anxiety or pain. In the most serious cases, effects can lead to hospitalisation.

Withdrawal from any Parkinson’s drug needs to be done gradually, with the support of a healthcare professional. This is to avoid the risk of developing withdrawal symptoms.

### Iron tablets

When you take your levodopa medication it may help not to take any medicines or vitamin supplements with iron in them at the same time of day. Iron can mean that less levodopa gets into the parts of the body where it is needed. Talk to your specialist, Parkinson’s nurse or pharmacist for more information about this and when is best to take any iron supplements after taking your levodopa medication.

## Other side effects

**Other common side effects include:**

- nausea and vomiting
- low blood pressure (postural hypotension)
- loss of appetite
- anxiety and depression
- sleep problems
- hallucinations (seeing, hearing, feeling and smelling things that aren't there)

## Levodopa and protein

For some people with Parkinson's, protein (which is found mainly in meat, fish, eggs, cheese, beans and pulses) can cause problems with how well levodopa medications are absorbed by the body.

Because of this, you may benefit from having most of your daily protein in the evening (what's known as a protein redistribution diet). This can help the levodopa treatment work better in the daytime, when you are likely to need it more.

Protein is necessary for a healthy diet so you should not reduce the amount you eat. Talk to your specialist or Parkinson's nurse before you make any changes to what you eat.

It's also best to take levodopa medication on an empty stomach if possible. If this medication makes you feel sick, take it when eating a low protein snack, like a cracker or a piece of fresh fruit. This can help you stop feeling sick, but will still mean that your medication is absorbed properly by your body.

# Types of levodopa

**Below are the types of levodopa drugs. The generic (unbranded) names are in bold and the brand names are underneath in bullet points.**

### In this section:

- Co-beneldopa
- Taking co-beneldopa
- Co-careldopa
- Taking co-careldopa
- Benefits and risks of taking co-beneldopa and co-careldopa
- Co-careldopa (Duodopa)
- Co-careldopa and entacapone

## Co-beneldopa

**Co-beneldopa** is a type of generic levodopa medication. Madopar is the brand name for co-beneldopa.

It contains two ingredients, levodopa and benserazide. The ingredient benserazide helps levodopa get into the brain.

**Co-beneldopa**

- Madopar (capsules, dispersible tablets)
- Madopar CR (modified release capsules)

## Taking co-beneldopa

Below we have included the different forms of co-beneldopa (Madopar) medication and some key points on taking them.

The most up-to-date information on the drug you are taking will be on your patient information leaflet. You will find it with your medication packet. Always read it carefully before you start your treatment.

Follow the advice of your specialist or Parkinson's nurse about how to take co-beneldopa (Madopar) so that it works well for your Parkinson's.

### Co-beneldopa capsules (Madopar capsules)

Take Madopar capsules on an empty stomach so that it's absorbed properly. Take your capsules at least 30 minutes before or 60 minutes after you have eaten. A longer gap before or after you have eaten is even better.

### Co-beneldopa dispersible tablets (Madopar tablets)

These tablets are dispersible. This means they should be mixed with water to make a drink. It takes effect more quickly than capsules. This is because it doesn't need to be broken down in your stomach to release the active ingredient. It can also be used if you have trouble swallowing tablets or capsules.

You should take these tablets with water or fruit squash. It's best to take Madopar tablets on an empty stomach if possible and if you don't feel sick.

Co-beneldopa dispersible tablets (Madopar tablets) are useful if you have slowness of movement or the 'on/off' effect.

See the section on risks and side effects of levodopa on page 33 to find out more.

### Modified release co-beneldopa capsules (Madopar CR capsules)

Modified release co-beneldopa capsules (Madopar CR) let the levodopa enter your body slowly – not all at once. Taking them before you go to bed can help you feel less stiff during the night.

These capsules can also help to reduce involuntary movements (dyskinesia), which can be a side effect of levodopa medication.

Take the capsules with water. Don't break, crush or chew them.

Drugs for indigestion, heartburn, or an upset stomach can make it more difficult for your body to absorb your controlled-release capsules. So don't take this type of medication in the two hours before and after you take co-beneldopa (Madopar CR) capsules.

### Coping with sickness

As with any levodopa medication, it's best to take Madopar capsules, Madopar dispersible tablets and Madopar CR modified release capsules on an empty stomach if possible.

But this medication can sometimes make you feel sick.

If this is the case, take your medication when eating a low protein snack like a cracker or piece of fresh fruit. This will still mean that your medication is absorbed properly by your body, but can help stop you feeling sick.

## Co-careldopa

**Co-careldopa** is a type of generic levodopa medication. Sinemet, Caramet and Lecado are the branded versions of co-careldopa.

Co-careldopa contains two ingredients, levodopa and carbidopa. The carbidopa ingredient helps levodopa get into the brain. Carbidopa also helps to make sure you have fewer side effects.

**The brand names for co-careldopa include:**

**Co-careldopa**

- Sinemet (tablets)
- Sinemet Plus (tablets)
- Caramet CR (modified release tablets)
- Lecado (modified release tablets)
- Half Sinemet CR (modified release tablets)
- Sinemet CR (modified release tablets)
- Duodopa (intestinal gel)

## Taking co-careldopa

On the next page are the different forms of co-careldopa medication and some key points on taking them.

The most up-to-date information on the drug you are taking will be on your patient information leaflet. You will find it with your medication packet.

Always read it carefully before you start your treatment.

For detailed advice, you should speak to your GP, specialist, Parkinson's nurse or pharmacist about how to take co-careldopa so that it works well for your Parkinson's.

### Co-careldopa tablets (Sinemet and Sinemet Plus)

You will usually take Sinemet or Sinemet Plus three or four times a day. But this will vary, and your healthcare professional will tell you what dose is best for your Parkinson's.

### Co-careldopa modified release tablets (Lecado, Half Sinemet CR and Sinemet CR)

Co-careldopa modified release tablets let the levodopa enter your body slowly instead of all at once.

Taking it before you go to bed can help you feel less stiff during the night.

Your specialist or Parkinson's nurse can adjust your dose so your symptoms are well controlled.

Take these tablets whole. Don't break, crush or chew them, because they have been made to release your medication slowly.

## Benefits and risks of taking co-beneldopa and co-careldopa

Co-beneldopa (Madopar) and co-careldopa (Sinemet, Caramet and Lecado) are common drugs used to treat Parkinson's. Most people will experience an improvement in their symptoms.

See the section on risks and side effects of levodopa on page 33 to find out more.

## Co-careldopa (Duodopa)

Duodopa is a gel form of levodopa **(co-careldopa)** medication used for advanced and complex Parkinson's.

It is pumped through a tube that is put into the small intestine. You will need to have an operation to have this tube put in. This means your dose of medication acts more quickly.

**Duodopa gel can help reduce:**

- involuntary movements as a side effect of your medication
- motor fluctuations from your drugs 'wearing off' - when you go from having good control of your movement symptoms to having less control, which can happen at the end of your dose before your next one is due
- problems with your symptoms at night.

**When is Duodopa used?**

Duopdopa isn't suitable for everyone. But it can be a good option for when levodopa has stopped managing your symptoms.

It is most often used when Parkinson's symptoms have progressed.

## Co-careldopa and entacapone

Below we have included the branded versions of **co-careldopa** and **entacapone** medication:

- Sastravi (tablets)
- Stalevo (tablets)
- Stanek (tablets)

This means they combine the levodopa medication co-careldopa with entacapone.

For more information about this combination drug, see the section on COMT inhibitors further on page 70.

# Dopamine agonists

**Dopamine agonists is the name used to describe a type (class) of Parkinson's drugs.**

### In this section:

- How do dopamine agonists work?
- When are dopamine agonists used?
- Benefits of dopamine agonists
- Risks and side effects of dopamine agonists
- Other side effects

## How do dopamine agonists work?

Dopamine agonist drugs trick your brain into thinking they are dopamine. This means they can mimic the way dopamine works, which can reduce your symptoms.

## When are dopamine agonists used?

Dopamine agonists are generally prescribed in the earlier stages of Parkinson's. As everyone is different your specialist may prescribe them at any time if it is right for you.

Treatment with dopamine agonists has to be started carefully. The dose is gradually increased until you and your specialist are happy that your symptoms are under control.

## Benefits of dopamine agonists

### Not needing to take as much levodopa

If you are taking dopamine agonists, this may mean you can take lower doses of levodopa as your condition progresses. This can reduce the risk of involuntary movements (dyskinesia) and how much they affect you.

### Helping levodopa work better

Dopamine agonists can be taken with levodopa medication to help when levodopa wears off or doesn't work as well. This is because dopamine agonists work for longer in the body and can reduce the 'on/off' effect you may have with levodopa.

### Fewer tablets to take

Some come in a form that only needs to be taken once a day, which could mean you have to take fewer tablets. But this is only suitable for some people.

### Treating restless legs

Dopamine agonist medications can be used for people who have restless legs syndrome, also called Willis-Ekbom disease. Your specialist will decide which particular drug to prescribe if you have this.

Restless legs syndrome can be connected to Parkinson's or it can be a separate condition. You may experience tingling in your legs and you may have an urge to move them.

Check with your healthcare professional for advice on when to take dopamine agonist medication you are prescribed for restless legs syndrome.

**Find out more:** see our information on restless legs.

## Risks and side effects of dopamine agonists

### Sleepiness and fainting

Dopamine agonist drugs can make you sleepy, faint or dizzy. This is most likely to happen when you start taking them. Once you get to a stable dose, this effect often wears off.

Some people have fallen asleep suddenly, without any warning. This can happen when the amount of medication you are taking is increased, but should settle down. If this happens, it's important that you tell your specialist or Parkinson's nurse.

Your healthcare team will usually advise you not to drive while they increase your dose of this medication.

### Impulsive and compulsive behaviours and hallucinations and delusions

These side effects can happen with any Parkinson's drugs but are more common with dopamine agonists. See the section on side effects of Parkinson's drugs to find out more.

## Other side effects

The patient information leaflet that comes with your medication will tell you about all of the side effects that you may experience.

**Some possible side effects include:**

- feeling sick (nausea)
- constipation
- low blood pressure (hypotension)
- headaches
- anxiety and depression
- movement problems.

# Types of dopamine agonists

**Below are the types of dopamine agonist drugs. The generic (unbranded) names are in bold and the brand names are underneath in bullet points.**

### In this section:

- Pramipexole
- Taking pramipexole
- Ropinirole
- Taking ropinirole
- Benefits and risks of taking pramipexole and ropinirole medication
- Rotigatone
- Apomorphine

## Pramipexole

**Pramipexole** is a type of generic dopamine agonist medication.

There are a number of brand names for pramipexole. These are:

- Mirapexin (tablets)
- Mirapexin (modified release tablets)
- Pipexus (modified release tablets)

## Taking pramipexole

Below we have included the different forms of pramipexole (Mirapexin) medication and information on how to take them.

The most up-to-date information on the drug you are taking will be on your patient information leaflet. You will find it with your medication packet. Always read it carefully before you start your treatment.

Follow the advice of your specialist or Parkinson's nurse about how to take pramipexole so that it works well for your Parkinson's.

Pramipexole drugs are also used to help your symptoms when your levodopa medication causes you to experience wearing off and dyskinesia. This could be motor fluctuations, or wearing off before your next dose of levodopa is due.

### Pramipexole tablets (Mirapexin)

Swallow the tablets with a drink of water. You can take your doses before or after meals.

Your specialist or Parkinson's nurse will advise you on the best dose. Usually they will give you a low dose of these tablets at first. They will increase the dose roughly every five to seven days until it is right for you and your symptoms.

You will usually take Mirapexin three times a day but your specialist or Parkinson's nurse will advise you on this.

### Mirapexin and Pipexus (modified release tablets)

You should take the tablets with a drink of water. Don’t break, crush or chew them. This is because they have been made to release the medicine slowly over the course of the day. You can take them with or without food.

Your healthcare professional will be able to advise you on the best dose. Usually you will be given these tablets on a low dose at first. This will be increased roughly every five to seven days until it is right for you and your symptoms.

You will be prescribed Pipexus or Mirapexin (modified release tablets) once a day. This can make it easier for you to remember your dose.

## Ropinirole

**Ropinirole** is a type of generic dopamine agonist medication.

There are a number of brand names for ropinirole. These include:

- Adartrel (tablets)
- ReQuip (tablets)
- Ipinnia XL (modified release tablets)
- Ralnea XL (modified release tablets)
- Raponer XL (modified release tablets)
- Repinex XL (modified release tablets)
- ReQuip XL (modified release tablets)
- Ropiqual XL (modified release tablets)

Ropinirole medication can be used as a substitute for dopamine because it can have an effect on the same nerve cells where dopamine works. Ropinirole can be used alone or with other medications to treat Parkinson’s.

## Taking ropinirole

Below are the different forms of ropinirole medication and information on how to take them.

The most up-to-date information on the drug you are taking will be on your patient information leaflet. You will find it with your medication packet. Always read it carefully before you start your treatment.

Follow the advice of your specialist or Parkinson’s nurse about how to take ropinirole so that it works well for your Parkinson’s.

### Ropinirole tablets (Adartrel, ReQuip)

You usually take ropinirole (Adartrel, ReQuip) three times a day, before bedtime (or around three hours before you go to bed). Your specialist can then increase your dose during the rest of the first week if you don’t experience side effects.

Your specialist or Parkinson’s nurse can advise you on when to take ropinirole so that it works well for your Parkinson’s. They can increase your daily dose over time until it is right for you and your symptoms.

Taking ropinirole with your meals will help to reduce any stomach issues that you may have.

**Ropinirole modified release tablets (Ipinnia XL, Ralnea XL, Raponer XL, Repinex XL, ReQuip XL, Ropiqual XL)**

Modified release tablets release your medication slowly throughout the day. This can give you more control of your symptoms. You can take these tablets with or without food. It is important that you take these tablets whole. Don't chew, crush or divide them into pieces.

At first, your specialist will prescribe you a low dose of Ipinnia XL, Ralnea XL, Raponer XL, Repinex XL, ReQuip XL, or Ropiqual XL. This will usually be once a day for the first week. Your healthcare professional can then increase your daily dose until it is right for you and your symptoms.

In some cases, eating a high fat meal can increase the time ropinirole takes to be absorbed in the body. Speak to your specialist if you think that food is causing problems when you take your medication.

Tell your doctor if you experience side effects from any of these modified release tablets. Other forms of ropinirole medication may be more suitable for you.

## Benefits and risks of taking pramipexole and ropinirole medication

Pramipexole and ropinirole medication is commonly used to treat Parkinson's. Most people will experience an improvement in their symptoms.

See the section on risks and side effects of dopamine agonists for some of the side effects you may experience.

For the full list of side effects, see the patient information leaflet that comes with your medication.

## Rotigotine

The brand name of **rotigotine** is Neupro. It is a skin patch which is applied to different areas of the skin and releases the drug slowly.

- Neupro (skin patch)

### How does the skin patch work?

Neupro is placed on your skin once at the same time every day. You should hold the patch in place for 30 seconds to allow the drug to start working. It can stay in place for 24 hours before you put on a new one.

If you forget to apply the patch at your usual time or if it falls off, put on a new one for the rest of the day.

### How can a skin patch help?

**It may be useful if you:**

- have trouble swallowing tablets
- experience 'wearing off' of your levodopa medication
- experience fluctuations in the way your levodopa medication works
- have restless legs syndrome (an uncontrollable urge to move your legs)

# Apomorphine

**Apomorphine** is a dopamine agonist. Apomorphine can come in a pen, cartridge, vial (small bottle) or an ampoule (small container).

It is injected or goes through an infusion pump. The brand names for apomorphine are APO-go® and Dacepton®.

- APO-go® PEN pre-filled disposable injection pen for intermittent injection
- APO-go® solution ampoules for injection or infusion
- APO-go® pre-filled syringe for infusion (can be used with a continuous infusion pump)
- APO-go® POD system solution for infusion cartridge (can be used with a continuous infusion pump)
- Dacepton® solution for injection in cartridge (can be used with the D-*mine*® pen)
- Dacepton® solution for infusion vial (can be used with a continuous infusion pump - the D-*mine*® pump)

From April 2025, the APO-go® pre-filled syringe for infusion will no longer be available. Your healthcare team should talk this through with you. You can then decide together the best option for taking apomorphine.

### When is apomorphine used?

Apomorphine is often used to improve symptoms quickly. It may be helpful if:

- your symptoms are hard to predict because of the 'on/off' effect of your medication
- drugs you take by mouth (oral drug treatments) are no longer working as well or have stopped working

### How does apomorphine work?

Apomorphine injections are taken with a pen that you can inject up to 10 times a day. It usually works within four to 12 minutes.

The D-*mine*® pen is a brand of reusable pen with cartridges to refill. The APO-go® PEN is a pre-filled disposable pen.

If you need more than 10 injections a day, you may be changed to a continuous infusion of apomorphine.

Continuous infusion is when medication is delivered non-stop into your body via a small battery-driven pump. The D-*mine*® Pump is a brand of continuous infusion pump used with Dacepton® apomorphine products. The pump connects to a fine tubing with a small needle at the end, which goes under the skin.

**Find out more:** see our information on apomorphine.

# MAO-B inhibitors

**MAO-B inhibitors is the name used to describe a class (category) of Parkinson's drugs.**

### In this section:

- How do MAO-B inhibitors work?
- When are MAO-B inhibitors used?
- Benefits of MAO-B inhibitors
- Risks and side effects of MAO-B inhibitors
- Other side effects

## How do MAO–B inhibitors work?

MAO–B inhibitors can help your nerve cells make better use of the dopamine that they have.

Monoamine oxidase type B is an enzyme (a protein which makes a chemical reaction happen). It breaks down dopamine that is not being used by your brain. MAO-B inhibitors stop this enzyme so that more dopamine becomes available to treat your symptoms.

MAO-B inhibitors take two to three weeks to work.

## When are MAO–B inhibitors used?

A MAO–B inhibitor can be used on its own in early Parkinson's when your motor symptoms, which affect movement, are mild. It can also be used with other drugs at any stage. Later on it can help with motor fluctuations (when you go from having good control of your movement symptoms to having less control).

## Benefits of MAO–B inhibitors

### You don't need to start gradually

Many drug treatments for Parkinson's have to be started gradually, with the dose slowly being increased over time. This is not the case for most MAO-B inhibitors.

### Helping levodopa work well

When you have been taking levodopa for a while, you may find that its effects wear off too quickly. A MAO–B inhibitor can help.

Taking a MAO–B inhibitor may also mean you can take less levodopa and leave more time between doses.

## Risks and side effects of MAO–B inhibitors

### Antidepressants

If you're taking some types of antidepressant, you might not be able to take MAO–B inhibitors. This is because when they are taken together these drugs can raise blood pressure to a dangerous level.

Your specialist can advise you on how to take antidepressants alongside your Parkinson's medication.

**Decongestants or cold remedies**

These can affect some types of MAO–B inhibitors. If you need to use them, check with your pharmacist to find out which one is safe for you to use.

**Worse levodopa side effects**

Involuntary movements (dyskinesia) and sickness may get worse because MAO–B inhibitors strengthen the effects of levodopa. If this happens, your specialist or Parkinson's nurse can reduce your dose of levodopa.

**Impulsive and compulsive behaviours**

This medication can cause impulsive and compulsive behaviours.

Impulsive and compulsive behaviours can happen with any Parkinson's drugs. See the section on side effects of Parkinson's drugs to find out more.

**Increased risk of low blood pressure**

Eating foods rich in tyramine while taking high doses of MAO-B inhibitors can cause a sudden increase in blood pressure. Tyramine-rich foods can include cured meats, strong or aged cheeses and pickled foods. Speak to your specialist or Parkinson's nurse if you have any concerns.

## Other side effects

Ahe patient information leaflet that comes with your medication will tell you about all of the side effects that you may experience.

**Some of the possible side effects include:**

- headaches
- constipation
- dry mouth
- an urgent need to pass urine
- aching joints
- indigestion
- flu-like symptoms
- depression

# Types of MAO-B inhibitors

**Below are the types of MAO-B inhibitor drugs. The generic (unbranded) names are in bold and the brand names are underneath in bullet points.**

### In this section:

- Rasagiline
- Taking rasagiline
- Selegiline
- Taking selegiline
- Safinamide
- Taking safinamide
- Benefits and risks of rasagiline, selegiline and safinamide

## Rasagiline

- Azilect (tablets)

**Rasagiline** is a type of generic MAO-B inhibitor medication. Azilect is the brand name.

## Taking rasagiline

Rasagiline can be taken on its own. It can also be taken with levodopa to help stop motor fluctuations (when you go from having good control of your movement symptoms to having less control). This happens at the end of your dose or before your next one is due.

You will take rasagiline once per day, which can be helpful if you prefer to take fewer doses. You can take it with or without food.

## Selegiline

- Eldepryl (tablets)

**Selegiline** is a type of generic MAO-B inhibitor medication. Eldepryl is the branded version of selegiline.

## Taking selegiline

You will usually take Eldepryl tablets once per day. However there is also the option of taking one in the morning and then one at lunchtime. Your specialist team can advise you on the best time to take Eldepryl for your Parkinson's.

Eldepryl tablets can delay the need to take levodopa which is helpful as levodopa can work less well over time.

Eldepryl can also be taken with levodopa to help stop motor fluctuations (when you go from having good control of your movement symptoms to having less control). This can happen at the end of your dose before your next one is due.

## Safinamide

**Safinamide** is a type of generic MAO-B inhibitor medication. Xadago is a brand name for safinamide.

- Xadago (tablets)

Safinamide medication is taken as an addition to your regular dose of levodopa medication. It can also be taken with other medication if your Parkinson's symptoms have got worse. This helps reduce motor fluctuations (when you go from having good control of your movement symptoms to having less control).

## Taking safinamide

You will take safinamide (Xadago) once per day with water and with or without food. This can be helpful if you prefer to take fewer doses. This option may not be suitable for everyone. Your specialist or Parkinson's nurse can advise you when to take safinamide (Xadago) medication.

## Benefits and risks of rasagiline, selegiline and safinamide

Rasagiline (Azilect) and safinamide (Xadago) are commonly used to treat Parkinson's and most people will see improvement in their symptoms. Selegiline (Eldepryl) is not used as much now.

See the section on the risks and side effects of MAO-B inhibitors to find out more.

For all side effects, see the patient information leaflet that comes with your medication.

# COMT inhibitors

**COMT inhibitors is the name used to describe a type (class) of Parkinson's drugs.**

## In this section:

- How do COMT inhibitors work?
- When are COMT inhibitors used?
- Benefits of COMT inhibitors
- Risks and side effects of COMT inhibitors
- Other side effects

## How do COMT inhibitors work?

Levodopa can boost the supply of dopamine in your brain. COMT inhibitors can block an enzyme (a protein which makes a chemical reaction happen) that breaks down levodopa medication. This helps it to work more effectively.

## When are COMT inhibitors used?

COMT inhibitors do not help to manage the symptoms of Parkinson's on their own – they have to be used with levodopa.

Your specialist might prescribe them if your dose of levodopa is not working for long enough.

It will also help your levodopa medication to work more smoothly in controlling your symptoms.

## Benefits of COMT inhibitors

### Helping levodopa work smoothly

COMT inhibitors can help when levodopa is not working for long enough and starts to wear off between doses. They can help to reduce your 'off' time, when you have more trouble with your Parkinson's symptoms. And they increase the amount of 'on' time, when your symptoms are more controlled.

If you take levodopa for a long time, you may experience end of dose motor fluctuations when your symptoms are poorly controlled before your next dose is due. If this happens you can take COMT inhibitors with your levodopa medication to ease this issue.

### Taking less levodopa

In many cases, you will be able to take a lower dose of levodopa and less often.

## Risks and side effects of COMT inhibitors

### Coloured urine and diarrhoea

COMT inhibitors will colour your urine a bright reddish orange colour, but this isn't harmful.

You may experience diarrhoea weeks or months after starting co-careldopa and entacapone (Stalevo, Sastravi, Stanek). If this happens, get in touch with your specialist or Parkinson's nurse for advice.

**Worse levodopa side effects**

COMT inhibitors strengthen the effects of levodopa. This can make involuntary movements (dyskinesia) and sickness worse.

If this happens, your specialist or Parkinson's nurse can reduce your dose of levodopa.

**Impulsive and compulsive behaviours**

This medication can cause impulsive and compulsive behaviours, which can happen with any Parkinson's drugs.

See the section on side effects of Parkinson's drugs to find out more.

## Other side effects

The patient information leaflet that comes with your medication will tell you about all of the side effects that you may have.

**Some of these side effects include:**

- sleeping problems
- loss of appetite
- dizziness
- fainting
- falls
- hallucinations
- headaches
- confusion
- dry mouth
- chest pain
- sleepiness

If you are allergic to peanuts or soya, make sure you tell your specialist and Parkinson's nurse as you may not be able to take some COMT inhibitors.

# Types of COMT inhibitors

**On the next page are the types of COMT inhibitor drugs. The generic names are in bold and the brand names are underneath in bullet points.**

**See the section on names of Parkinson's drugs at the start of this booklet to find out more.**

### In this section:

- Entacapone
- Taking entacapone
- Co-careldopa and entacapone
- Taking co-careldopa and entacapone
- Tolcapone
- Opicapone
- Taking opicapone
- Benefits and risks of entacapone, co-careldopa and entacapone, and opicapone

## Entacapone

- Comtess (tablets)

**Entacapone** is a COMT inhibitor drug used to manage the symptoms of Parkinson's. The brand name of entacapone is Comtess.

If you've had Parkinson's for some time and your symptoms get worse between each dose of medication, you may be prescribed entacapone (Comtess). It works to increase how well the levodopa medication you are taking works and stops it from being broken down in the body.

## Taking entacapone

The most up-to-date information on the medication you are taking will be on your patient information leaflet. You will find it with your medication packet. Always read it carefully before you start your treatment.

Ask your specialist for detailed advice about how to take entacapone so that it works well for your Parkinson's. Below we have included information on how to take entacapone (Comtess) medication:

- You should take entacapone (Comtess) tablets at the same time as your co-beneldopa or co-careldopa levodopa medication.
- Entacapone increases how well your co-beneldopa or co-careldopa levodopa medication works. But too much levodopa can cause side effects. So when you start taking entacapone, your specialist or Parkinson's nurse may need to adjust the amount of levodopa that you take.

- You can take your entacapone medication with or without food.
- When you take your entacapone (Comtess) tablets it may help not to take any medicines or vitamin supplements with iron in them. Iron can mean that less entacapone gets into the parts of the body where it is needed. You may be able to take medicines or vitamin supplements with iron in them two to three hours after taking entacapone. Talk to your specialist, Parkinson's nurse or pharmacist for more information about this.

## Co-careldopa and entacapone

Below we have included the branded versions of **co-careldopa** and **entacapone** medication:

- Sastravi (tablets)
- Stalevo (tablets)
- Stanek (tablets)

Sastravi, Stalevo and Stanek are branded versions of co-careldopa and entacapone medication. This means they combine the levodopa medication co-careldopa with entacapone.

The entacapone helps to make the levodopa part of the drug stronger, which helps to control your symptoms.

Using this combination drug also means that it's easier for people to take.

## Taking co-careldopa and entacapone

You may be prescribed co-careldopa and entacapone (Stalevo, Sastravi and Stanek) if levodopa medication alone is not able to control motor fluctuations you experience at the end of your dose. (This is when you go from having good control of your movement symptoms to having less control.)

The maximum dose of Stalevo, Sastravi and Stanek medication is usually seven to 10 tablets, depending on the strength you are prescribed.

Your specialist can advise you on when to take your medication and exactly how much to take.

## Tolcapone

- Tasmar (tablets)

With **tolcapone** (brand name Tasmar), there is a risk of serious liver damage. Because of this, you will need regular blood tests to check the health of your liver.

The risk of serious liver damage is rare. But tolcapone is only used if you can't take entacapone or opicapone, as no risk of liver damage has been seen with these drugs. Because of this we have not included further information about tolcapone here.

# Opicapone

- Ongentys (tablets)

**Opicapone** (brand name Ongentys) is a type of COMT inhibitor medication. Opicapone strengthens your levodopa medication to make it work better than when it is taken alone.

# Taking opicapone

The most up-to-date and complete information on your specific drug will be on your patient information leaflet that comes with your medication packet. Always read it carefully before you start your treatment.

For detailed information you should follow the advice of your specialist about how to take opicapone (Ongentys) so that it works well for your Parkinson's.

You should take opicapone once a day at bedtime. You should do this at least one hour before or after your levodopa medication.

Because opicapone is taken with levodopa to make it work well and reduce side effects, your healthcare professional may need to adjust the amount of levodopa you take. You should discuss this with them.

# Benefits and risks of entacapone, co-careldopa and entacapone, and opicapone

Entacapone (Comtess), co-careldopa and entacapone (Sastravi, Stalevo and Stanek), and opicapone (Ongentys) are commonly used to treat Parkinson's. Most people will see their symptoms improve.

See the section on the risks and side effects of COMT inhibitors to find out more.

For all of the side effects, see the patient information leaflet that comes with your Ongentys medication.

# Produodopa

## In this section:

- How Produodopa is given
- Who can have Produodopa?

Produodopa is a new treatment for Parkinson's. It can help some people with advanced Parkinson's who are having severe motor fluctuations that are not well enough controlled by the treatments they are currently taking.

Motor fluctuations are when you go from having good control over your symptoms to having less control. This change can happen slowly or quickly.

Produodopa is made up of two ingredients, foslevodopa and foscarbidopa. Foslevodopa is broken down into levodopa in the body and increases the amount of dopamine in your body, in the same way that levodopa tablets do.

Foscarbidopa helps make foslevodopa work better, and also reduces its side effects.

## How Produodopa is given

Produodopa is delivered through a syringe, which is connected to a small pump. The syringe is attached to a cannula (a fine plastic tube) that goes under the skin.

You carry the pump in a special vest that has a pocket, or a small pouch.

The pump delivers a steady dose of Produodopa 24 hours a day to help manage symptoms day and night.

## Who can have Produodopa?

Produodopa is licensed as a treatment for people with advanced Parkinson's who are having severe motor fluctuations.

There are guidelines to help Parkinson's doctors and nurses decide which people with Parkinson's might benefit from Produodopa and who can have it on prescription.

You can talk to your healthcare team about whether Produodopa is the right treatment for you. They will make the final decision based on your symptoms and current treatments.

Produodopa is an NHS-approved treatment for Parkinson's. It will be available through standard Parkinson's services. But as it's only recently been approved in the UK, many hospitals are yet to set up a Produodopa service. At the moment, it's mostly available in specialist hospitals (neuroscience centres).

Find out more about Produodopa on our website.

# Lecigon

Lecigon is a new drug treatment available for people with advanced Parkinson's. As of 2024, Lecigon has been approved for use in England and Wales.

Lecigon is a gel containing levodopa, carbidopa and entacapone. It is an infusion of Parkinson's medication. This means that a small pump delivers the gel through a tube that is put into the intestine. You will need to have an operation to have this tube put in.

It can help medication to work more effectively, reducing side effects, motor fluctuations and ‘off’ periods. Motor fluctuations are when you go from having good control of your movement symptoms to having less control. ‘Off’ periods are when your medication wears off and your Parkinson’s symptoms return.

Like all advanced treatments, it's not suitable for everyone.

You can find updated information about Lecigon on our website.

# Amantadine

**Amantadine is the only glutamate antagonist drug that is prescribed to treat Parkinson’s. It is an unbranded form of Parkinson’s medication, which comes in the form of capsules and syrup.**

### In this section:

- When is amantadine used?
- Benefits of amantadine
- Risks and side effects of amantadine
- Other side effects

## When is amantadine used?

Amantadine isn’t used as much as other Parkinson’s medication, and is usually given with other drug treatments. It is not usually prescribed on its own.

There isn’t much evidence that amantadine can improve tremor and other motor (movement) symptoms of Parkinson’s. But it can be used to treat involuntary movements (dyskinesia) if other Parkinson’s medication has not been effective.

Amantadine is often prescribed when other medication is no longer working as well, but it can be used at all stages of Parkinson’s. It is started at a lower dose and the amount is stepped up gradually.

## Benefits of amantadine

National guidelines say there is not enough scientific evidence to support this drug as a first choice in early Parkinson's.

But for some people, later on, amantadine may reduce involuntary movements (dyskinesia) caused by other Parkinson's drugs, without making Parkinson's symptoms worse. It can also have a slight stimulant effect, which may be a benefit if you struggle with feeling tired.

Amantadine can also help to reduce stiffness you may have in your muscles.

## Risks and side effects of amantadine

### Limited effect on Parkinson's

Amantadine is not a first choice for the treatment of Parkinson's and it may have only a mild effect.

Over time, people can become used to this medication and amantadine can work less well.

### Impulsive and compulsive behaviours

This medication can cause impulsive and compulsive behaviours.

Impulsive and compulsive behaviours can happen with any Parkinson's drugs. See the section on side effects of Parkinson's drugs to find out more.

## Other side effects

People who use amantadine as a treatment for their Parkinson's find that it improves their symptoms, particularly when other Parkinson's drugs are causing issues.

For all side effects, see the patient information leaflet that comes with your amantadine medication.

**Some of the other possible side effects you may experience with amantadine include:**

- feeling nervous or anxious
- blurred vision, fainting, confusion or dizziness. These symptoms may be linked to low blood pressure when changing position (postural hypotension). Also, If you have these side effects, it is not safe to drive or use machinery.
- headaches, poor concentration
- hallucinations, delusions and paranoia
- movement problems
- sleep problems
- fast or irregular heartbeat (this can be linked to swelling in the feet or ankles, known as oedema)
- loss of appetite and weight loss
- dry mouth
- nausea and vomiting
- sweating
- problems with speech
- skin reactions

# Anticholinergics

**Anticholinergics is the name used to describe a type (class) of Parkinson's drug.**

**In this section:**

- How do anticholinergics work?
- When are anticholinergics used?
- Benefits of anticholinergics

## How do anticholinergics work?

Anticholinergics block a chemical messenger called acetylcholine which is found in your brain and body. It helps to send messages in the brain, as well as from your nerves to your muscles.

In Parkinson's the effect of acetylcholine is stronger. This can lead to part of the brain becoming overactive and you may have a tremor. Reducing the effect of acetylcholine can help to treat tremor.

## When are anticholinergics used?

Anticholinergics are rarely used to treat Parkinson's. They might help with some Parkinson's symptoms but can make others worse. Anticholinergics are not a first choice for the treatment of Parkinson's.

They can be used in younger people with a noticeable tremor. But older people who take anticholinergics are more likely to experience side effects such as confusion and hallucinations.

If you take them for a number of years, they can be quite difficult to stop and some people experience withdrawal symptoms.

## Benefits of anticholinergics

### Improving Parkinson's symptoms

Some anticholinergics may help with tremor with some Parkinson's symptoms when other medication is no longer working.

**Anticholinergics may help with:**

- rigidity
- slowness of movement
- tremor
- speech and writing difficulties
- gait (the way you walk)
- sweating
- involuntary (uncontrolled) movements of the eyes
- feeling depressed

### Improving sialorrhoea and drooling

Anticholinergics can help control saliva in your mouth, if you experience drooling or produce too much saliva (sialorrhoea).

UK guidelines suggest that you should be referred to a speech and language therapist before your specialist prescribes any medication for drooling, where possible. If this doesn't happen, you could speak to your Parkinson's nurse about a referral for speech and language therapy.

Injections of botulinum toxin (Botox) into the salivary glands may also help control problems with saliva. It's important to discuss this with your specialist, as this treatment may have side effects, such as causing your mouth to be too dry. Clinical guidelines list Botox as a treatment option for people with Parkinson's experiencing drooling, so it should be available for you on the NHS but may not be available in all areas.

**Find out more:** see our information on eating, swallowing and managing saliva in Parkinson's.

# Types of anticholinergics

**Below are the types of anticholinergic drugs. The generic (unbranded) names are in bold and the brand names are underneath in bullet points.**

### In this section:

- Procyclidine
- Trihexyphenidyl

## Procyclidine

- Kemadrin (tablets)

**Procyclidine** is also available as unbranded tablets, oral solution and solution for injection.

## Trihexyphenidyl

**Trihexyphenidyl** is available as unbranded tablets, oral solution and syrup.

# Medication Record

| My Details | Useful Contacts |
|---|---|
| Name | GP name and phone number |
| Date of birth | Parkinson’s nurse name and phone number |
| Address | Consultant specialist name and phone number |
| Phone number and email | In case of emergency contact |
| Email | In case of emergency contact |

| Apomorphine | DBS |
|---|---|
| Name and phone number of the person who administers my pump is | I have a DBS unit. The serial number is |
| Flow rate and start stop time of my pump is | My DBS nurse and phone number is |
| Apomorphine devices that I use are<br>(Name of syringe, needle pen, vial, cartridge) | My DBS specialist and phone number is |

## Medication Record

| Date | Medication name | Dose | Times of doses | Notes |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

# More information and support

## Reporting a side effect

The **Medicines and Healthcare Products Regulatory Authority (MHRA)** is the government body that makes sure that drugs work and are safe. It is keen to receive feedback about medication side effects.

To report a side effect, you should complete a **Yellow Card** form, available from your pharmacist, GP, specialist or via the **Yellow Card information service** on **0808 100 3352**.

You can also complete this form online, or download and print it from **yellowcard.mhra.gov.uk**.

Speak to your pharmacist, GP, specialist or Parkinson’s nurse if you need any help filling in this form.

You can also report any side effects from your Parkinson’s medication directly to your GP, specialist or Parkinson’s nurse.

## Parkinson’s UK information and support

Whatever your journey with Parkinson’s, you’re not alone.

From the moment you or someone you care about is diagnosed, we have information and support for you.

**Speak to one of our friendly expert advisers, including specialist Parkinson's nurses, care advisers, and benefits and employment advisers**. We’ve got information and advice on all aspects of living with Parkinson's.

**Get help managing your diagnosis**. Our information packs, webinars, courses and support groups can help you and your loved ones understand your Parkinson's diagnosis and better manage your symptoms.

**Read our up to date, reliable health information**. Our website, booklets and magazines can help you better understand Parkinson's. They're full of tips and advice on managing your condition and supporting a loved one.

**Find ways to get active, stay active and live well with Parkinson's**. Whatever your fitness level, we'll help you find the right activities for you.

**Connect with other people with Parkinson's, families, friends and carers**. Across the UK, in your local area or online. We'll help you meet others who understand what you're going through, because they're going through it too.

## Find out more

- Call our helpline on **0808 800 0303** or email **hello@parkinsons.org.uk** to speak to an expert adviser.
- Visit **parkinsons.org.uk/information-and-support** to read our information or find support that's local to you.
- Call **0330 124 3250** or visit **parkinsons.org.uk/order-print-booklets** to order free printed information.

## Thank you

Thank you very much to everyone who contributed to or reviewed this information:

Dr Janine Barnes

Neurology Specialist Pharmacist
The Dudley Group NHS Foundation Trust

Jennifer Dawber

Parkinson's Nurse
Lancashire Teaching Hospitals NHS Trust

Shelley Jones

Consultant Pharmacist Neurosciences
King's College Hospital NHS Foundation Trust

Nicola Mason

Parkinson's Nurse
Lancashire Teaching Hospitals NHS Trust

Miriam Parry

Parkinson's Disease Nurse Consultant
Parkinson's Foundation Centre of Excellence
King's College Hospital NHS Foundation Trust

Claire Soper

Community Parkinson's Nurse Specialist
Royal Devon University Healthcare NHS Foundation Trust

Louise Trout

Specialist Parkinson's Practitioner
Torbay and South Devon NHS Foundation Trust

Thanks also to our information review group and other people affected by Parkinson's who provided feedback.

All of our information is checked by experts and other people with Parkinson's, so you know it's information you can trust.

## Feedback

If you have any comments or feedback about our information, please call **0800 138 6593**, email **feedback@parkinsons.org.uk**, or write to us at Parkinson's UK, 50 Broadway, London, SW1H 0BL.

If you'd like to find out more about how we put our information together, or be part of the team that reviews our health content, please contact us at **healthcontent@parkinsons.org.uk** or visit our website at **parkinsons.org.uk/health-content**.

## Can you help?

At Parkinson's UK, we are totally dependent on donations from individuals and organisations to fund the work that we do. There are many ways that you can help us to support people with Parkinson's.

If you would like to get involved, please contact our Supporter Care team on **0800 138 6593** or visit our website at **parkinsons.org.uk/donate**.

Thank you.

These pages have been left intentionally blank.

INFOB1012
Drug treatments for Parkinson's

# We're Parkinson's UK, the charity that's here to support every Parkinson's journey. Every step of the way.

Free confidential helpline **0808 800 0303**
Monday to Friday 9am to 6pm,
Saturday 10am to 2pm (interpreting available)
Relay UK **18001 0808 800 0303** (for textphone users only)
**hello@parkinsons.org.uk | parkinsons.org.uk**

Parkinson's UK, 50 Broadway, London SW1H 0DB

Trusted Information Creator
Patient Information Forum

**Last updated: January 2025. Next review due 2028 | Order code: INFOB1012**
Parkinson's UK is the operating name of the Parkinson's Disease Society of the United Kingdom.
A charity registered in England and Wales (258197) and in Scotland (SC037554).
1/25 (10520)

Registered with FUNDRAISING REGULATOR