

*This Medicines Information Leaflet is produced locally to optimise the use of medicines by encouraging prescribing that is safe, clinically appropriate and cost-effective to the NHS.*

## Guidelines for prescribing and administering Duodopa® in Parkinson's Disease

**P**arkinsons disease is a progressive neurological disorder, affecting approximately 145,000 people in the UK<sup>1</sup>, and is primarily caused by degeneration of dopamine-producing neurons in the basal ganglia. Patients can experience symptoms affecting both motor (tremor, bradykinesia and rigidity) and non-motor (cognitive dysfunction, mood disorders, gastrointestinal dysfunction etc.) function. In some cases, symptoms can significantly affect quality of life and lead to severe disability. In the early stages of Parkinson's disease levodopa and dopamine agonists usually provide effective symptomatic relief from motor symptoms. However, after time, these treatments may become less effective in controlling symptoms and patients may experience refractory motor fluctuations. At this point patients are reviewed by a Consultant-led multidisciplinary team in Movement Disorders and considered for a step up in therapy.

Duodopa® is licensed in patients with advanced levodopa-responsive Parkinson's disease who experience severe motor fluctuations including wearing-off symptoms associated with significant loss of function, and

hyperkinesia (dyskinetic movements) with their current oral regimen, causing poor quality of life.

### DUODOPA® FORMULATION

Duodopa® is levodopa and carbidopa formulated into an intestinal gel which is administered through a pump via a PEG-J tube directly into the jejunum. The specialist PEG-J is inserted for the administration of Duodopa® only, it should not be used for enteral feed or other medication.



The gel is formulated in a plastic cassette which is connected to the pump.

The cassette must be stored in a fridge before connection (between 2-8°C) and kept in the outer carton to protect it from light. Once in use, the cassette of gel can be used for up to 24 hours outside of the

fridge. If any gel remains after 24 hours this must be discarded. Cassettes are single use only and must not be re-used once opened.<sup>2</sup>

### INITIATION OF DUODOPA®

Duodopa® should only be initiated by specialists according to the pathway (see [Parkinsons Intranet page](#)).

Generally, Duodopa® runs for approximately 16 hours per day during waking hours (occasionally over 24 hours depending on patient symptoms). Sometimes enteral medications will continue alongside Duodopa® depending on symptoms and the therapy is titrated according to response, circumstances, patient wishes and expectations.

### CONTINUATION OF DUODOPA®

After initial titration, patients receive a supply of Duodopa® on discharge from hospital. Subsequent supplies are ordered through their Homecare provider which the neuroscience pharmacy team organise.

Patients are also discharged with 2 weeks of a rescue oral regimen i.e. '**rescue stock**' to use in the event of a pump failure or adverse effect which requires Duodopa® to be stopped. Typically, this reflects their pre-Duodopa® regimen and is prescribed by the Movement Disorder team.

### MANGEMENT AS INPATIENT

Duodopa® should be prescribed on admission to hospital and is a 'category 2'

time critical medication; patient harm may be caused if the medication is delayed or omitted. Duodopa® must never be stopped abruptly unless under the advice of a Parkinson's disease specialist due to the risk of neuroleptic malignant syndrome on abrupt withdrawal of the drug. This includes pre-, peri- and post-operatively.



### Duodopa® is a time critical medicine

Problems with prescribing, administration or stock requests should be dealt with urgently to prevent delays or omissions in doses

### History taking


Establishing and documenting an accurate and current medication history is essential. This information can be obtained via the patient, a relative, an up-to-date Duodopa® booklet/passport, their GP record; recent clinic letters or specialist Parkinson's Disease nurse/consultant.

- Current doses and/or infusion rates and timings?**  
Document for both Duodopa® and the patient's rescue regimen for if the pump fails/they are not able to continue their Duodopa®.
- Equipment and supplies**  
Ensure the patient has brought in all necessary equipment with them, including (if relevant): medication cassettes, pump, connectors and syringes.
- Back up regimen**

Patients should have a documented plan of what to do in case of pump failure and have a backup medication regimen (with details of 'rescue stock') on EPR.

## Prescribing

Prescribers should utilise the EPR

 Duodopa (Co-careldopa) Intestinal Gel PowerPlan when prescribing. Specific dose information, such as infusion rates, dose ranges and timings, should be endorsed in the "special instructions" box. The dose or rate should not be altered unless instructed by a specialist.

## Administration

[Training videos](#) and [further information, including step-by-step guides](#), are available via the [OUH Parkinson's Intranet Page](#).

## Storage and Expiry

Duodopa® cassettes are single use only and expire 24 hours after opening/removed from fridge. Cassettes must be kept refrigerated before use (2-8°C) and kept in their outer packaging to protect them from light.

## Missing or broken equipment

OUH does not stock Duodopa® cassettes or equipment; this is supplied directly to patients through their Homecare provider. If drug or equipment is required, please request that patient's family bring in supplies or the Homecare provider is contacted. If Duodopa® cassettes or equipment cannot be obtained, contact the OUH Parkinson's team urgently and initiate the patient's emergency back-up regimen.

## Supply on discharge

OUH cannot supply Duodopa® cassettes; patients should continue to obtain supplies of medication via their usual Homecare provider. Patients may require top up of emergency oral '**rescue stock**' if this is used during their admission.

## SIDE EFFECTS

**PEG-J tube site complications** – blockages, tube displacement or dislodgement are complications resulting in admission or OP review. Patient/nurses to provide stoma care. Discuss with Parkinson's nurse team.

**Gastrointestinal side effects e.g. nausea/vomiting** – avoid anti-emetics which are contraindicated or cautioned in Parkinson's disease (e.g. metoclopramide).

**Impulse control disorders, dopamine dysregulation syndrome, sudden on-set sleepiness or dyskinesia** – seek advice from Parkinson's specialist.

## SURGERY

**Elective surgery:** patient will have discussed their surgery with the Parkinson's team prior to them being admitted – they will have a plan on EPR of how to manage their Parkinson's medication during their admission.

**Emergency surgery:** Duodopa® could be administered pre, peri and postoperatively for all surgery as it administers usually less than 10mls per hour.

However, if a patient is having gastrointestinal surgery the surgeon and the Parkinson's team should be contacted for advice.

See the [PD peri-op guideline](#) for more information.

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**Useful Resources:**

OUH Parkinson's Disease Intranet Site

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**References:**

1. Parkinson's UK website. Available from: <https://www.parkinsons.org.uk/> [accessed 25/04/2023]
2. Summary of Product Characteristics Duodopa intestinal gel. AbbVie Ltd. Electronic Medicines Compendium. Last updated: 04/01/21
3. Joint Formulary Committee. British National Formulary (online) London: BMJ Group and Pharmaceutical Press. Available from: <http://medicinescomplete.com>

**USEFUL CONTACTS**

<b>AbbVie Duodopa® Technical Helpline</b>	08004584410
<b>OUH Specialist Parkinson's Nurse: Mabel Eghaghe</b>	01865 234048 Mobile: 07900036020 <a href="mailto:mabel.eghaghe@ouh.nhs.uk">mabel.eghaghe@ouh.nhs.uk</a>
<b>OUH Specialist Parkinson's Nurse Administrator office:</b>	01865 231295
<b>OUH Parkinson's Team</b>	See Parkinson's Disease Intranet page
<b>Out of Hours Neurology registrar on call</b>	Via OUH switchboard