Parkinson's Webinar 2: Treatment Options

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PDSPN Parkinson's Disease Specialist Pharmacy Network

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Plan for Today's Webinar

- **Medications for Parkinson's Disease**
- **The Multidisciplinary Team and Non-drug management**
- **Managing the Acutely Unwell Person with Parkinson's**
- **Polypharmacy**
- **Case Studies**
- **Q&A**

Following on from **Parkinson's Webinar 1**: Diagnosis & Early Management 9/10/25

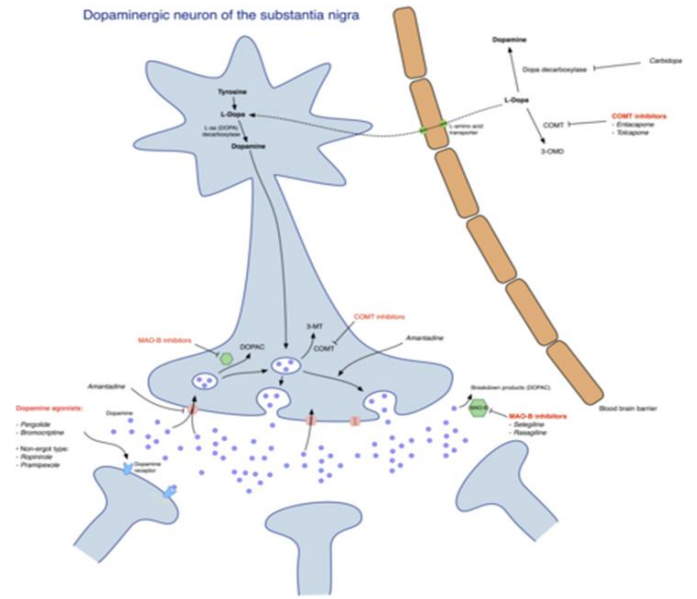
Next Webinars:

Parkinson's webinar 3: Side effects of treatment and non-motor symptoms – Thursday 22nd January 2026 1-2pm

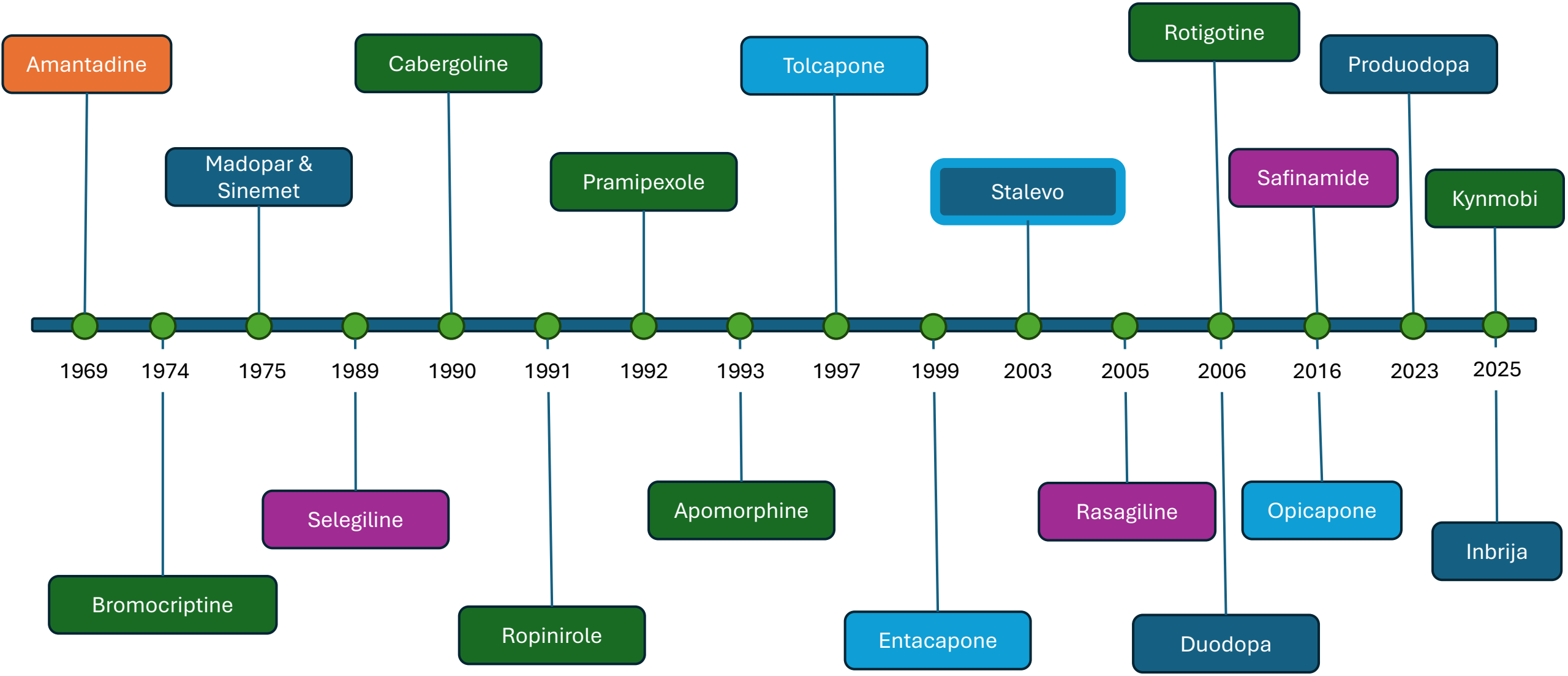
Parkinson's webinar 4: New developments in the management of Parkinson's and signposting - February 2026 (date TBC)

Treatments for Parkinson's Disease

- Levodopa preparations
  (**co-beneldopa, co-careldopa, new inhaled Inbrija®**)
- COMT inhibitors (**tolcapone**, **entacapone, opicapone**)
- Combination preparations: levodopa with carbidopa & entacapone
  (**Sastravi®, Stalevo®, Stanek®**)
- Dopamine agonists (**ropinirole, pramipexole, rotigotine**)
- MAO-B inhibitors (**rasagiline, selegiline, safinamide**)
- **Amantadine**
- **Apomorphine (new sublingual formulation Kynmobi®)**
- **Foslevodopa-Foscarbidopa (Produodopa)**
- **Duodopa**
- **Deep Brain Stimulation**



Current Available UK Parkinson's Medicines 2025



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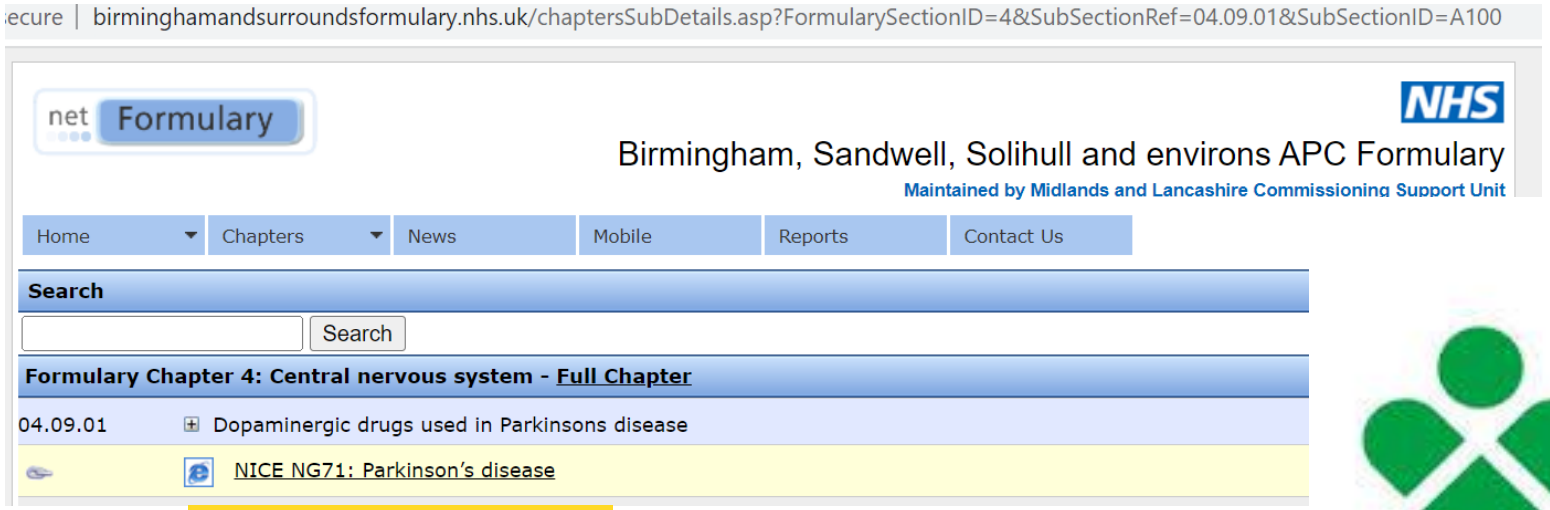
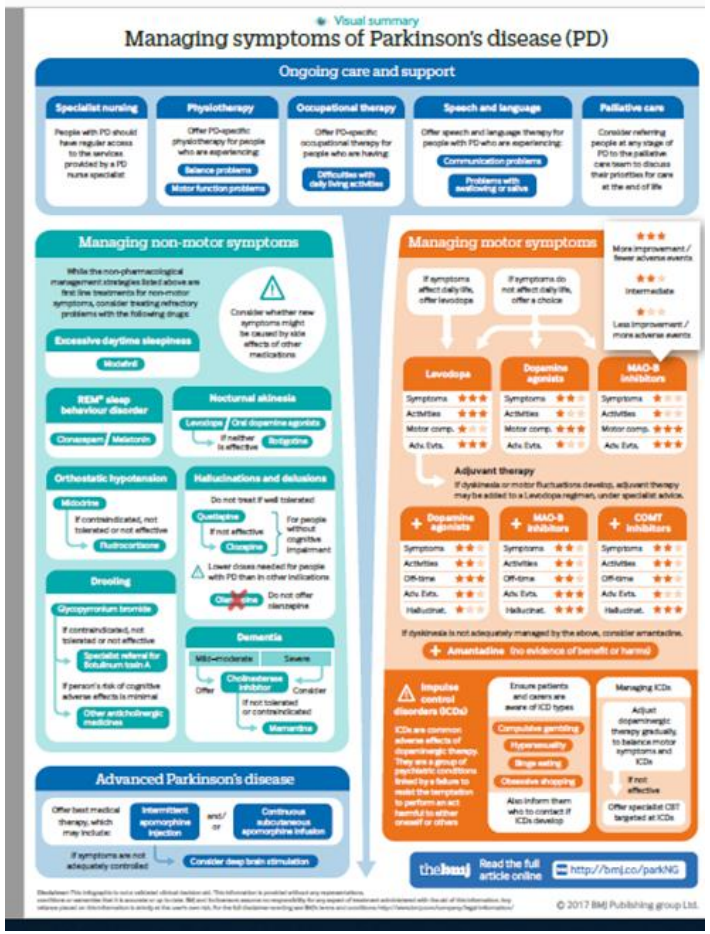
NICE Guidelines 2017

Medication Resources



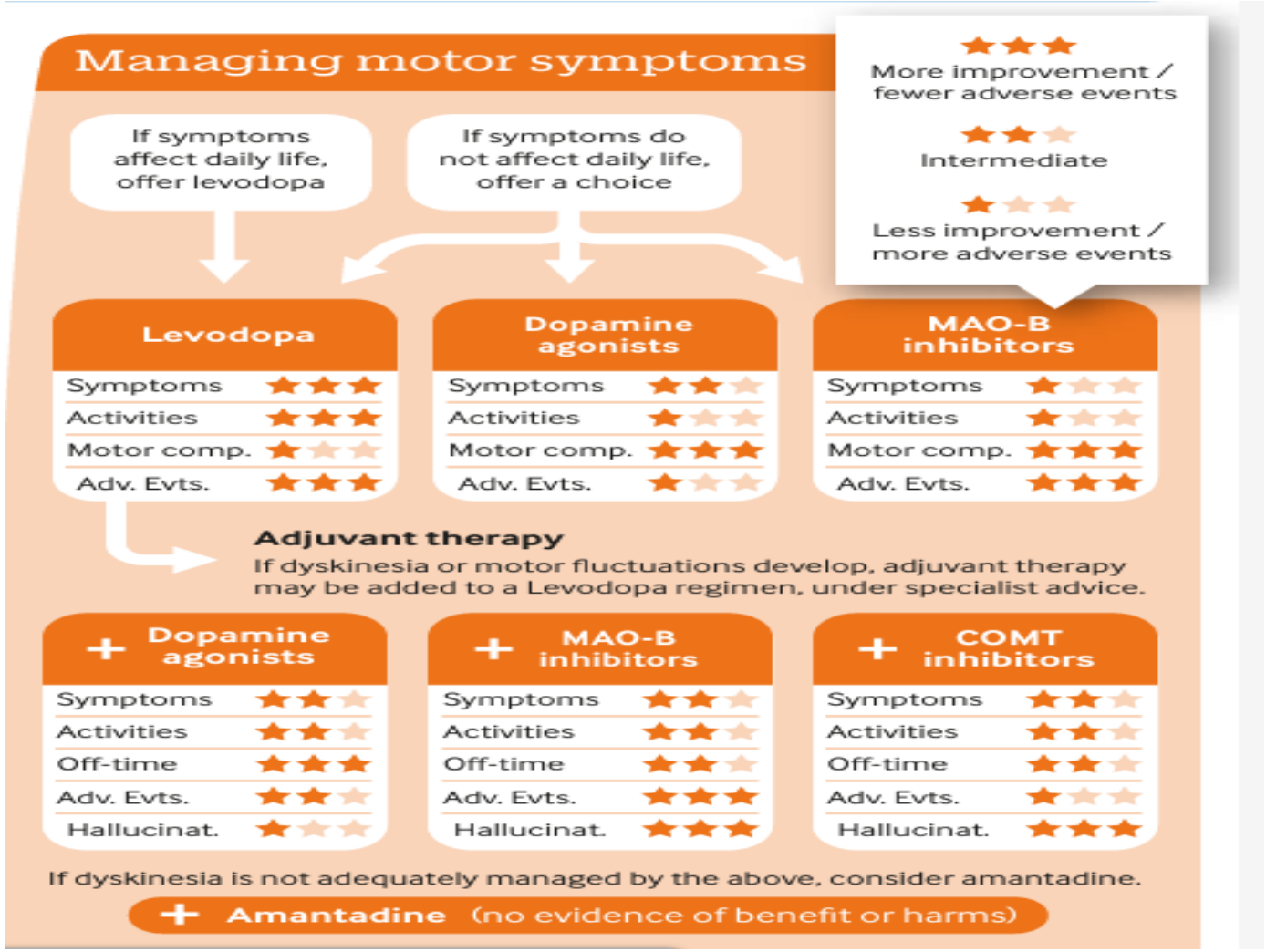
Guiding Principles

- There is no standard treatment for Parkinson's
- Symptomatic benefit only
- Several factors are considered:
  - stage of disease
  - level of functional disability
  - co-morbidities
  - current evidence
  - patient preference



Practice Guidelines ***Parkinson's disease: summary of updated NICE guidance***
BMJ 2017; 358 doi: https://doi.org/10.1136/bmj.j1951 (Published 27 July 2017)


This message
is so simple,
yet it gets forgotten.
The people living
with the condition
are the experts.
Michael J Fox
SleepingAngel.com



Practice Guidelines ***Parkinson's disease: summary of updated NICE guidance***
BMJ 2017; 358 doi: https://doi.org/10.1136/bmj.j1951 (Published 27 July 2017)

Optimising Levodopa Therapy

Improve consistency of absorption

Review medications

Some medications you are on might contribute to slowing the gastric emptying

Constipation

Treat constipation to ensure regular and good bowel motions

Medication timing

Taking doses one hour before or after meals

Frequency

Small doses

Use smaller doses more frequently

Type of therapy

Modified release

Consider the use of modified release preparations

A Perfect Storm

- Non specialist healthcare professionals lack exposure and confidence
- One size doesn't fit all
- Complex medication regimens
  - Multiple formulations
  - Side effects are common
  - Timing is important
  - Neurodegenerative
  - Elderly population with comorbidities

Available Oral Levodopa Preparations

Ref: https://bnf.nice.org.uk

Drug & Formulation	Available Strengths				
Co-Beneldopa (Madopar®)					
Dispersible Tablets	12.5/50		25/100		
Capsules	12.5/50		25/100	50/200	
Controlled Release Capsules			25/100		
Co-Careldopa (Sinemet®)					
Tablets	12.5/50	10/100	25/100		25/250
Controlled Release Tablets			25/100	50/200	

Most commonly used strengths

Available Co-Careldopa and Entacapone Combination Preparations

Ref: https://bnf.nice.org.uk

REMEMBER! Entacapone dose is always 200mg

Available Strengths of Stalevo, Sastravi and Stanek Tablets
50mg/12.5mg/200mg
75mg/18.75mg/200mg
100mg/25mg/200mg
125mg/31.25mg/200mg
150mg/37.5mg/200mg
175mg/43.75mg/200mg
200mg/50mg/200mg

Parkinson's Exercise Recommendations

Parkinson's is a progressive disease of the nervous system marked by tremor, stiffness, slow movement and balance problems.

Exercise and physical activity can improve many motor and non-motor Parkinson's symptoms:

Aerobic Activity

3 days/week for at least 30 mins per session of continuous or intermittent at moderate to vigorous intensity

TYPE: Continuous, rhythmic activities such as brisk walking, running, cycling, swimming, aerobics class

CONSIDERATIONS: Safety concerns due to risks of freezing of gait, low blood pressure, blunted heart rate response. Supervision may be required.

Strength Training

2-3 non-consecutive days/ week for at least 30 mins per session of 10-15 reps for major muscle groups; resistance, speed or power focus

TYPE: Major muscle groups of upper/lower extremities such as using weight machines, resistance bands, light/moderate handheld weights or body weight

CONSIDERATIONS: Muscle stiffness or postural instability may hinder full range of motion.

Balance, Agility & Multitasking

2-3 days/week with daily integration if possible

TYPE: Multi-directional stepping, weight shifting, dynamic balance activities, large movements, multitasking such as yoga, tai chi, dance, boxing

CONSIDERATIONS: Safety concerns with cognitive and balance problems. Hold on to something stable as needed. Supervision may be required.

Stretching

>2-3 days/week with daily being most effective

TYPE: Sustained stretching with deep breathing or dynamic stretching before exercise

CONSIDERATIONS: May require adaptations for flexed posture, osteoporosis and pain.

See a physical therapist specializing in Parkinson's for full functional evaluation and recommendations.

Safety first: Exercise during on periods, when taking medication. If not safe to exercise on your own, have someone with you.

It's important to **modify and progress** your exercise routine over time.

Participate in **150 minutes** of moderate-to-vigorous exercise per week.

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Parkinson's Foundation

Helpline: 800.473.4636/Parkinson.org

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PD Specific Exercise Groups

- PD warrior https://pdwarrior.com/
- Reach your peak https://www.reachyourpeakonline.com
- Neuro heroes https://www.neuroheroes.co.uk
- PD Ballet https://www.ballet.org.uk/project/dance-for-parkinsons/
- Nordic walking groups

English National Ballet

REACH YOUR PEAK

NEURO HEROES

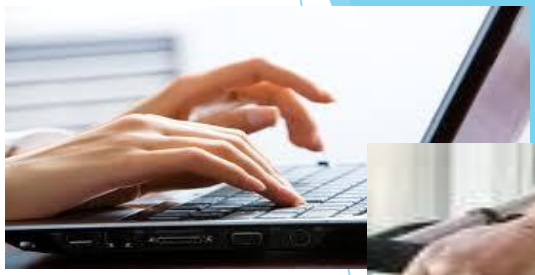
PD WARRIOR

How can OT help?

Enabling **independence**

optimising performance of daily activities

Enabling you to do the things you want and need to do.



Exercises, strategies or **compensatory**

methods to reduce the impact of symptoms

- Fatigue management
- Freezing or fluency (internal cues)
- Memory problems (cognitive rehab)
- Fine motor tasks (7 hand exercises)

Adaptive equipment or modifications to the home or work environments

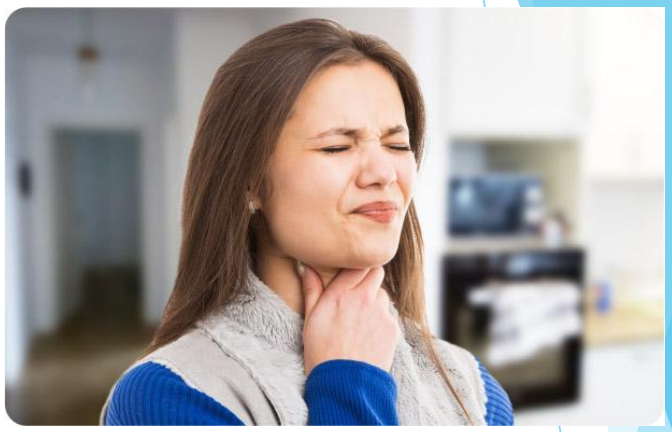
- Lighting
- Limit obstacles, make more fluent
- Small aids to help grip, weighted cutlery

Support and advice regarding work:

- Advocating on your behalf to your employer regarding adjustments required to enable you to maintain your work role

Swallowing symptoms

- Gradual unplanned weight loss
- Avoiding certain foods/ drinks
- Drooling saliva
- Feeling food is caught in the throat
- Coughing episodes
- Choking episodes



Ask for a referral to the speech and language therapist

If Eating and Drinking Enough Becomes More Difficult:

People living with Parkinson's may experience symptoms that affect nutritional status. For example:

- **Appetite** reduction and early satiety
- Dyskinesia - increased **energy expenditure**
- **Practical challenges** with preparing and eating food, prolonged mealtimes
- Dysphagia / impairment in **swallow** function
- Altered **saliva** production
- **Constipation** – reduced mobility, slower gut transit
- **Mood** and psychological impact
- More difficulty **eating out**
- Poor **mobility**
- **Medication** side effects including nausea

It may be challenging to maintain weight and keep well nourished

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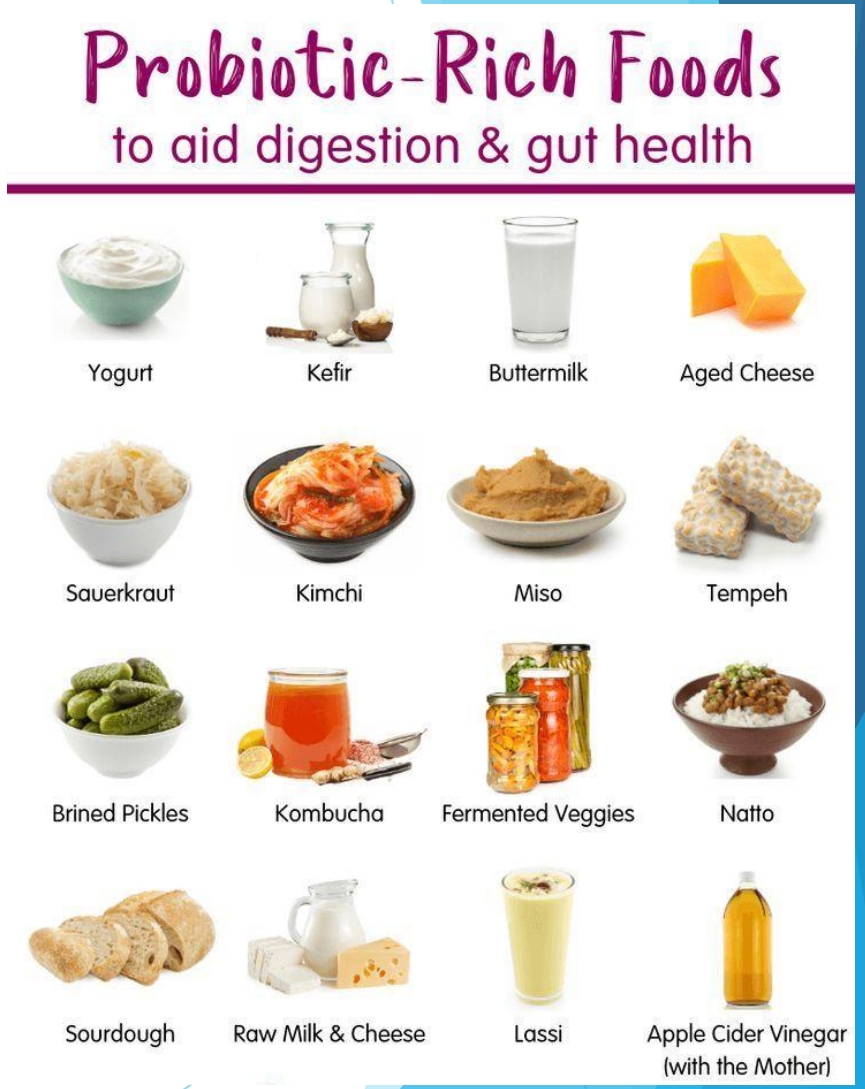
Dietary Management of Constipation



Considering protein when taking Levodopa containing medications

- **Protein competes** with the absorption of levodopa, so can affect how well it reaches the brain
- Manipulating protein intake may increase response to levodopa and reduce unpredictable motor fluctuations
- **Try taking your medication 30-60 minutes before you eat a meal**
- It may help to **spacing high protein foods** throughout the day and having more of them in the evening
- High protein foods include: meat, fish, eggs, beans, cheese, yoghurt, milk, nuts
- **IMPORTANT TO NOTE:** Protein is an **important** nutrient – avoid reducing overall protein intake, but rather redistribute the time you eat high protein foods (BDA 2021)

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People with Parkinson's Group Education Evening Clinic by the King's Parkinson's MDT

British Dietetic Association (2021) 'Best practice guidelines for dietitians on the management of Parkinson's :https://www.parkinsons.org.uk/professionals/resources/best-practice-guidelines-dietitians-management-parkinsons

King's College London

Hospital Admissions

- People with Parkinsons (PwP) and parkinsonian syndromes are more likely to be hospitalised than people who do not have parkinsons

- Average length of stay is between 2 days and 14 days longer than people of similar age without Parkinsons

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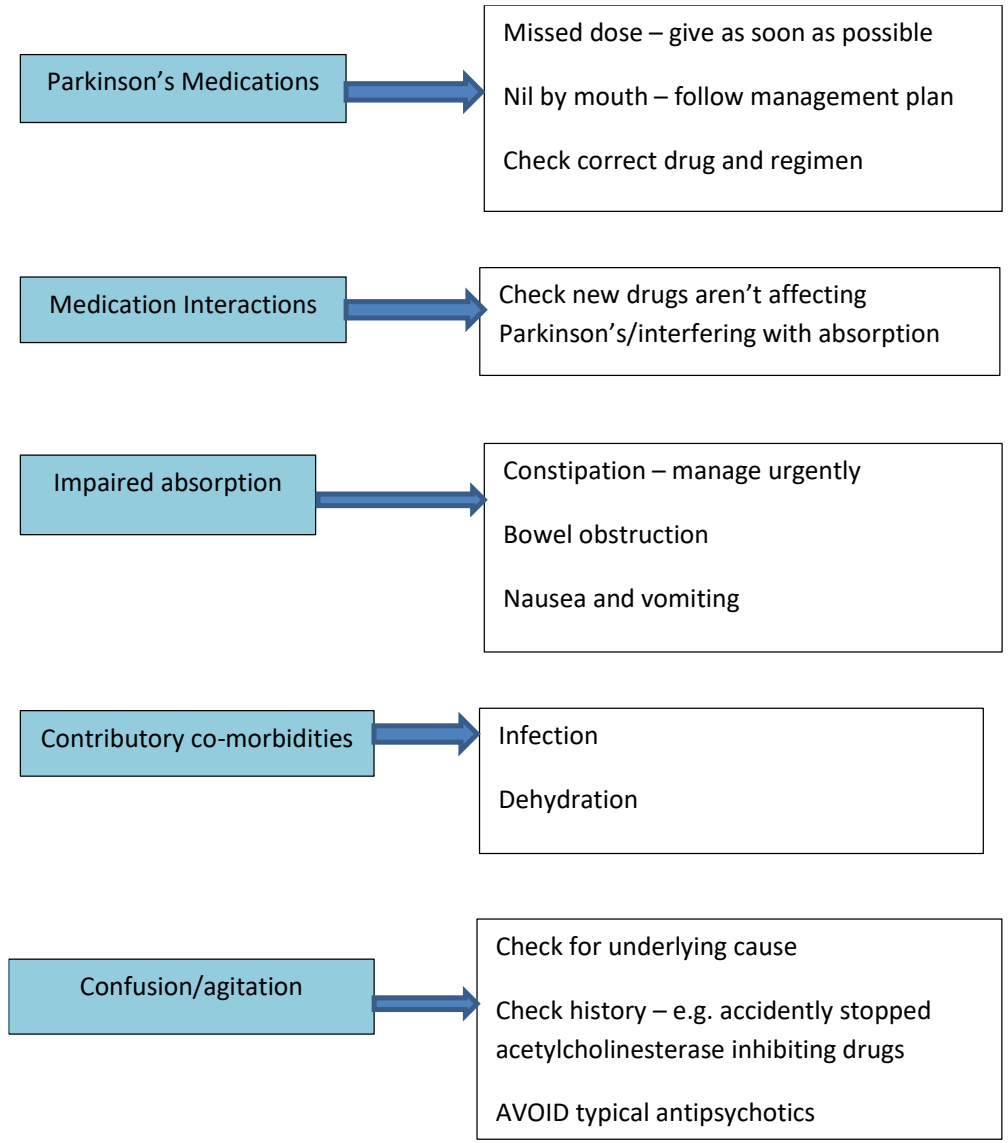
Common Factors Influencing an Acutely Unwell PwP and Management Strategies



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Emergency management of patients unable to manage usual PD medication

Treat underlying conditions which may affect Parkinson's

Dysphagia Screen (by SLT or nurse trained to complete swallow screen)

Able to tolerate NG/NJ/PEG
(And safely able to use)

Levodopa
- Give co-beneldopa as dispersible.
- Give co-careldopa by crushing and dispersing normal tablets.
- Controlled release preps can NOT be given. To adjust, multiply levodopa dose by 0.7
- For combination levodopa and entacapone products, omit entacapone and give equivalent co-careldopa dose.

Dopamine Agonists
- Controlled release preps can NOT be given via NG/NJ/PEG.
- Pramipexole: convert to TDS regime and can crush, consider rotigotine.
- Ropinirole: convert to TDS regime, can be crushed and dispersed.

MAO-B/COMT inhibitors
- May be safely omitted for 24 hours but then should be reviewed
- Selegiline is available as liquid/melt
- Entacapone can crush
- Rasagiline, tolcapone, opicapone – no suitable preparation available

Glutamate Antagonist
- Amantadine is available as liquid.

Unable to tolerate NG/NJ/PEG
- Refer to specialist as a priority.
- Consider a rotigotine patch.

Swallowing Difficulties
If unable to swallow, consider using liquid/ dispersible products as per NG/NJ/PEG advice

NBM before surgery
See guidelines for surgical patients below.
Seek advice from PROKARE or on-call neurology SpR.

DO NOT STOP PD THERAPY.
Co-beneldopa, co-careldopa and rotigotine patches are available in the emergency drug cupboard.
Contact neurology pharmacist (in hours) or on-call neurology SpR for further advice.
Always check usual dose regime with patient/family. Return to usual medication routine as soon as possible. Refer to Parkinson's Specialist Nurse via usual routes.
For more information refer to full guideline.

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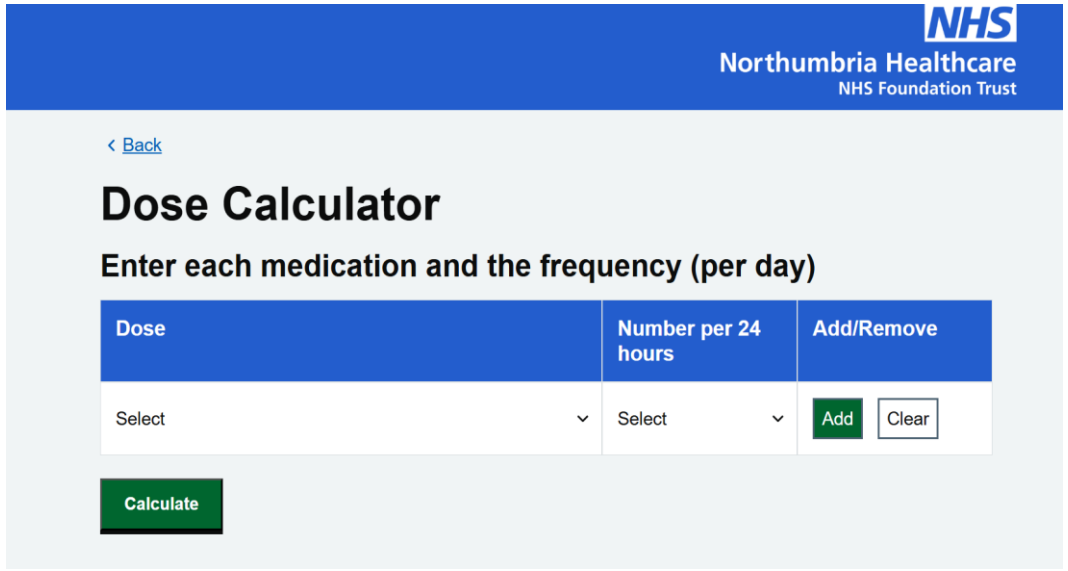
Key Messages

- **Do Not** Suddenly stop anti-parkinsonian medication including Apomorphine – this can be life threatening
- **Do Not** Prescribe dopamine antagonists e.g. Haloperidol, prochlorperazine (Stemetil), metoclopramide (Maxalon), promethazine (Phenergan)
- **Do** Treat / investigate infection, dehydration, constipation (frequent cause of admission)
- **Do** Correct poor adherence to medication (often a cause of falls & deterioration)
- **Do** If NBM follow Emergency NBM protocol
- **Do** Contact the Parkinson's Nurse and / or treating consultant early in admission

Levodopa Conversions



Movement Disorders
Official Journal of the International Parkinson and Movement Disorder Society

Research Article | Open Access

Levodopa Dose Equivalency in Parkinson's Disease: Updated Systematic Review and Proposals

Stefanie T. Jost PhD, Marie-Ann Kaldenbach, Angelo Antonini MD, PhD, Pablo Martinez-Martin MD, PhD, Lars Timmermann MD, Per Odin MD, PhD, Regina Katzenschlager MD ... See all authors

First published: 05 May 2023 | https://doi.org/10.1002/mds.29410 | Citations: 198

Polypharmacy – Where to Start?

- Group medications by indication
- Talk to patients and carers about what they are actually taking! (SDM)
- Consider timeline of prescribing – would you start this medicine now?
- Use tools to help with medication review;

  e.g. STOPP/START, Scotland Polypharmacy Toolkit etc
- GP Evidence website https://gpevidence.org/
- Consider medico-legal aspects
- Be Brave!

https://thehealthinnovationnetwork.co.uk/programmes/medicines/polypharmacy

Case Study 1

Mr ST, a 35-year-old man, develops a worsening tremor of his right hand and has difficulty running on a treadmill at his local gym as his right leg will not keep up.

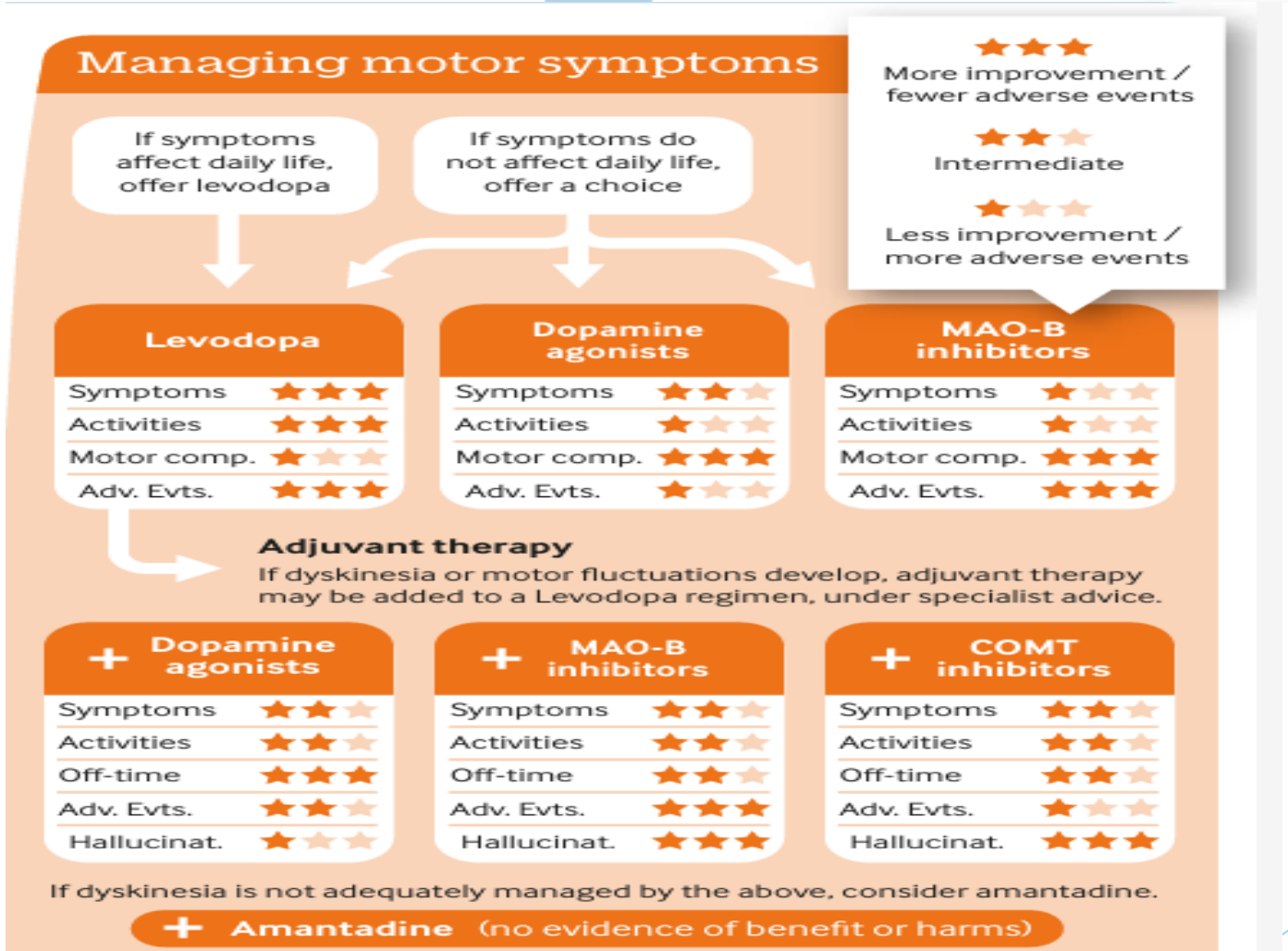
His father developed PD in his early 70s.

On examination he has a bilateral tremor more on the right than the left and does not swing his right arm when walking. He has no other major deficits and no significant medical history.

He is diagnosed with Parkinson's Disease by a consultant neurologist.

What are his treatment options?


Ongoing care and support
Specialist nursing
People with PD should have regular access to the services provided by a PD nurse specialist
Physiotherapy
Offer PD-specific physiotherapy for people who are experiencing:
Balance problems
Motor function problems
Occupational therapy
Offer PD-specific occupational therapy for people who are having:
Difficulties with daily living activities
Speech and language
Offer speech and language therapy for people with PD who are experiencing:
Communication problems
Problems with swallowing or saliva
Palliative care
Consider referring people at any stage of PD to the palliative care team to discuss their priorities for care at the end of life


Managing motor symptoms
More improvement / fewer adverse events
Intermediate
Less improvement / more adverse events
If symptoms affect daily life, offer levodopa
If symptoms do not affect daily life, offer a choice
Levodopa
Symptoms
Activities
Motor comp.
Adv. Evts.
Dopamine agonists
Symptoms
Activities
Motor comp.
Adv. Evts.
MAO-B inhibitors
Symptoms
Activities
Motor comp.
Adv. Evts.
Adjuvant therapy
If dyskinesia or motor fluctuations develop, adjuvant therapy may be added to a Levodopa regimen, under specialist advice.
+ Dopamine agonists
Symptoms
Activities
Off-time
Adv. Evts.
Hallucinat.
+ MAO-B inhibitors
Symptoms
Activities
Off-time
Adv. Evts.
Hallucinat.
+ COMT inhibitors
Symptoms
Activities
Off-time
Adv. Evts.
Hallucinat.
If dyskinesia is not adequately managed by the above, consider amantadine.
+ Amantadine (no evidence of benefit or harms)

Case Study 2

- Mr TC, Male, Age 80
- Lives in a Care Home
- Parkinson's Disease (newly diagnosed)
- Mostly bedbound – hoisted out for a few hours each day
- DVT 2015 & Feb 2023
- BP 111/72 mmHg
- Long Term Catheter

- Apixaban 2.5mg – 1 BD
- Colecalciferol 800 units – 1 OM
- Folic acid 5mg – 1 OD
- Ibuprofen 5% gel – Apply TDS PRN
- Lactulose – 15mL BD PRN
- Omeprazole 20mg - 1 OD
- Paracetamol 500mg – 2 QDS PRN
- Senna - 2 ON PRN

What are his treatment options for Parkinson's Disease?

Thank You for Listening!

Any Questions?