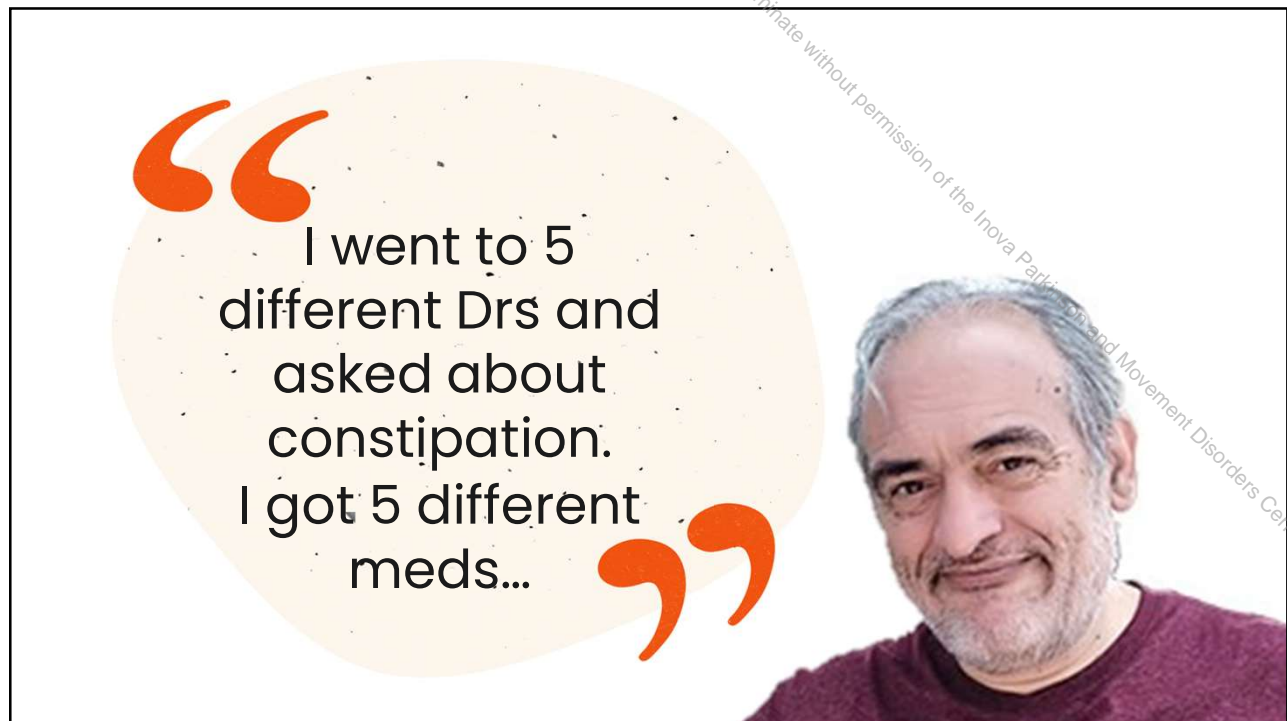


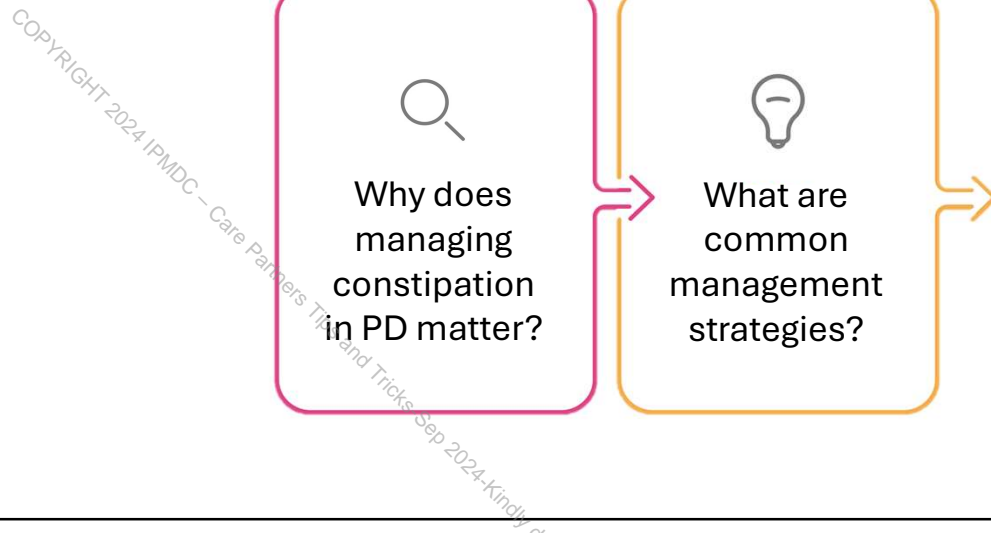


1



2

OUR GOALS



3

What is constipation?

4



Fewer than 3 bowel movts per week at least 25% of time for more than 3 months with onset at least 6 months.

- Straining to have a bowel movt
- Hard or lumpy stools
- Feeling like you can't fully empty your bowels
- Feeling like something is blocking your bowels
- Needing to use your hands to help

[ROME III functional constipation criteria]

J Gastrointestin Liver Dis. 2006;15:307-12

5



6

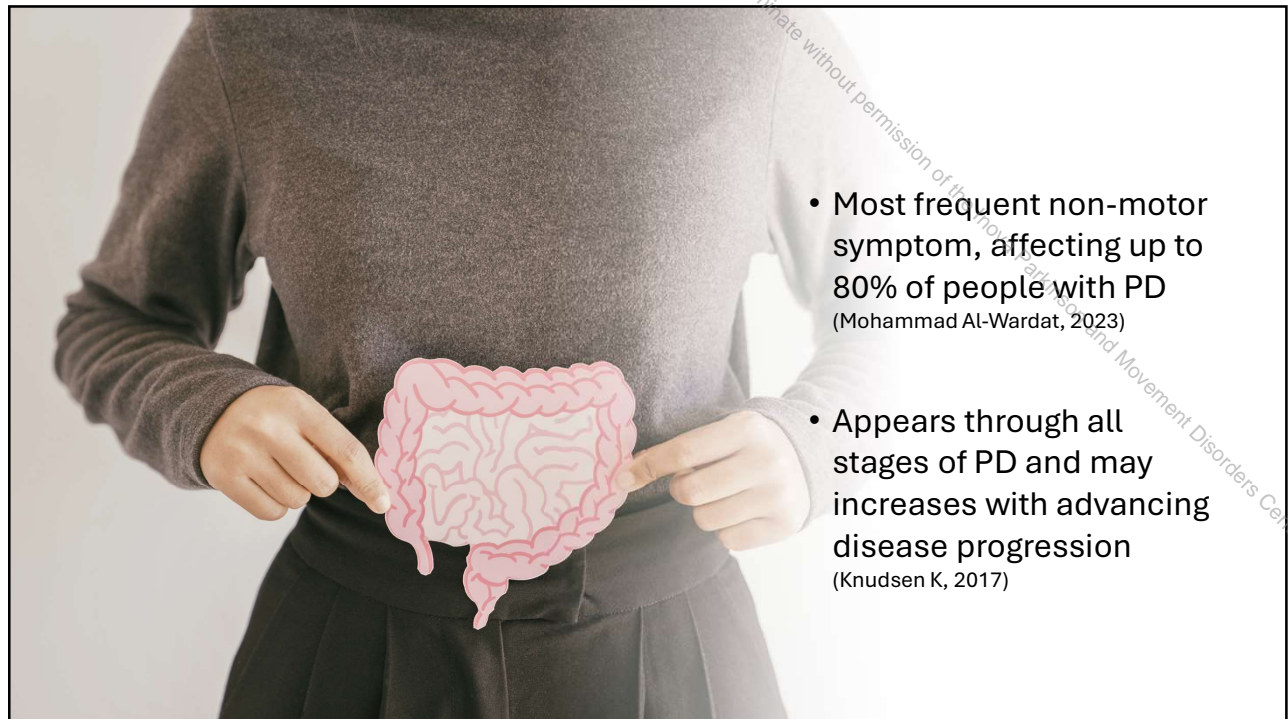
Why does managing constipation in Parkinson's matter?



Frequency



7



- Most frequent non-motor symptom, affecting up to 80% of people with PD

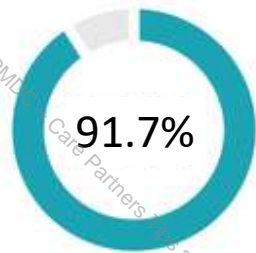
(Mohammad Al-Wardat, 2023)

- Appears through all stages of PD and may increase with advancing disease progression

(Knudsen K, 2017)

8

Have you experienced constipation as part of your Parkinson's?



44 people

Results from patient questionnaires – 50 responses

9

Why does managing constipation in Parkinson's matter?



Frequency

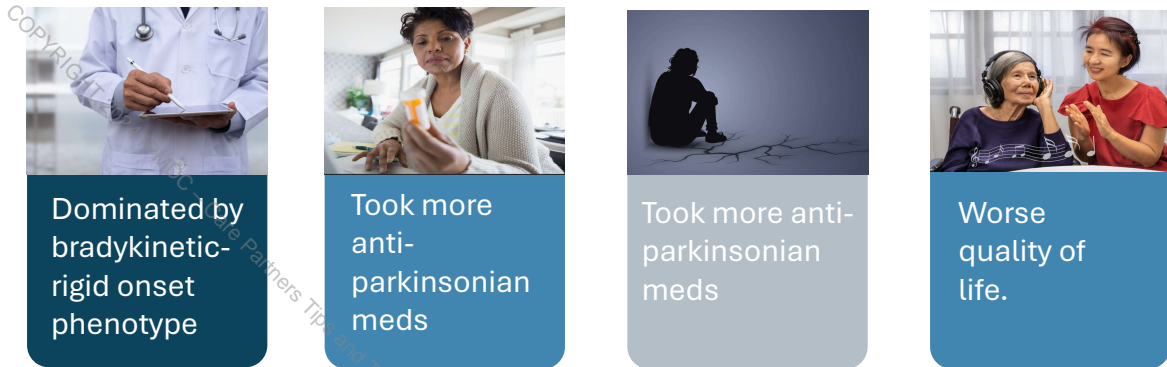


Impact on daily life



10

Compared to patients without constipation, the
people with PD with constipation reported to be:



Gan et al. BMC Neurology (2018) 18:29

11

Over the past week have you had
constipation troubles that cause you
difficulty moving your bowels?

Slight

I have been constipated. I use extra effort to move my bowels. However, this problem doesn't disturb my activity.

25.6%

Mild:

Constipation causes me to have some trouble doing things or being comfortable.

32.6%

Moderate

Constipation causes me to have a lot of trouble doing things or being comfortable. However, it does not stop me from doing anything.

27.9%

Severe

I usually need physical help from someone else to empty my bowels.

2.3%

Results from patient questionnaires

12

What are your biggest challenges in managing constipation with PD?

Traveling

Being out of my routine
(when traveling, for example)



Trying to drink more water.



Gas can sometimes
result in small emissions



Taking in enough fiber
Eating enough fruit

Trying to do it ALL and do it CONSISTENTLY -
increase fiber, hydrate
better, eat better...

The biggest
challenge is
finding
something that
works to relieve
the constipation.

Inconsistency,
unpredictability, no
one has practical
advise.

Results from patient questionnaires

13

What are your biggest challenges in managing constipation with PD?



"Timing. you cannot
fool around on your
way to the commode".



"Keep track of when I have
a bowel movement"



"Worry about interfering with
activities".



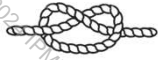
"I have severe back pain and the
only relief I get is to sit down which
is not good for my constipation
problem".

"I'm afraid of needing to use the
bathroom at work , or while with
others. I'm often unable to eat so
dinner with others is awkward".

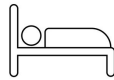
Results from patient questionnaires

14

What are your biggest challenges in managing constipation with PD?



"Feeling like I have to and then not being able to go. It's like I am tied to a bathroom".



"Affecting my sleep and causes frequent urination".



"I have to use a variety of laxatives. I never know when the laxatives will take effect".

"Balancing the dose and frequency of the Miralax to avoid overdoing the effects".

Results from patient questionnaires

15

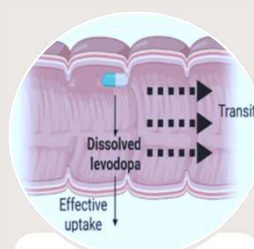
Why does managing constipation in Parkinson's matter?



Frequency



Impact on daily life



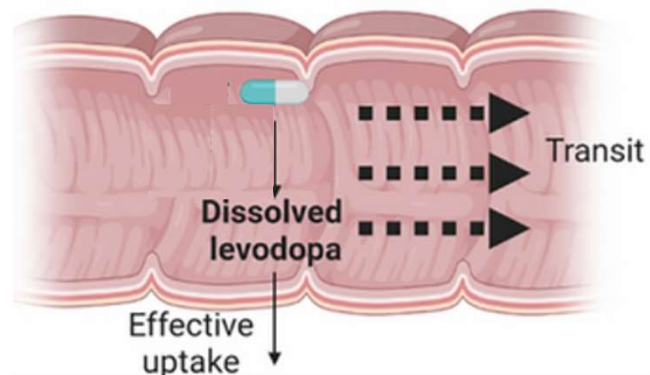
Interplay with meds absorption



16

Constipation may contribute to **delay** or a **failure** in the absorption of a levodopa dose.

- Worsen the clinical symptoms and reduce the effectiveness of the treatment ([Mozaffari et al., 2020](#); [Ogawa et al., 2012](#)).
- Increase the need for alternative routes of administration or medication adjustments ([Stirpe et al., 2016](#)).



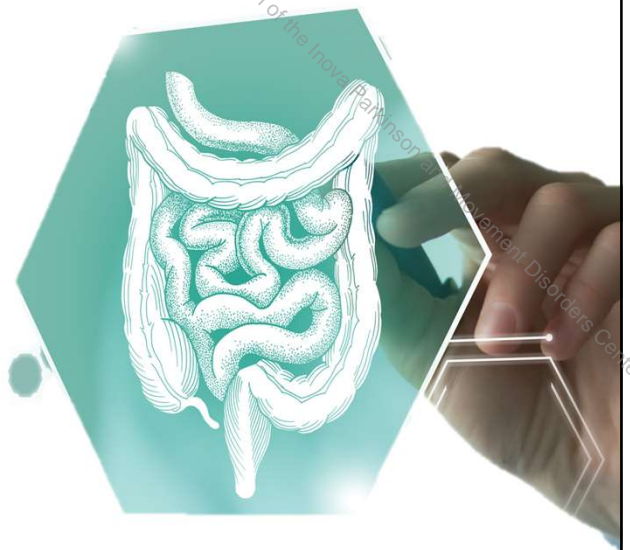
17

Review > Int Rev Neurobiol. 2017;134:811-826. doi: 10.1016/bs.irm.2017.06.003. Epub 2017 Jul 13.

Constipation in Parkinson's Disease

Fabrizio Stocchi ¹, Margherita Torti ²

Treatment of constipation = pivotal to prevent complications such as **intestinal occlusion** and to ensure **an optimal clinical response to levodopa**.



18

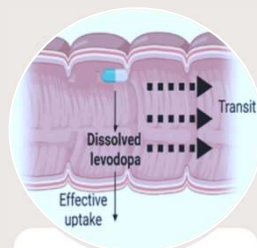
Why does managing constipation in Parkinson's matter?



Frequency



Impact on daily life



Interplay with meds absorption



Impact on pain

19



Constipation is associated with higher levels of **pain** in people who suffer from chronic pain.

(Shiro et al. 2017; Arai et al. 2018; Frazzitta et al. 2019).

20

Constipation and pain in Parkinson's disease: a clinical analysis

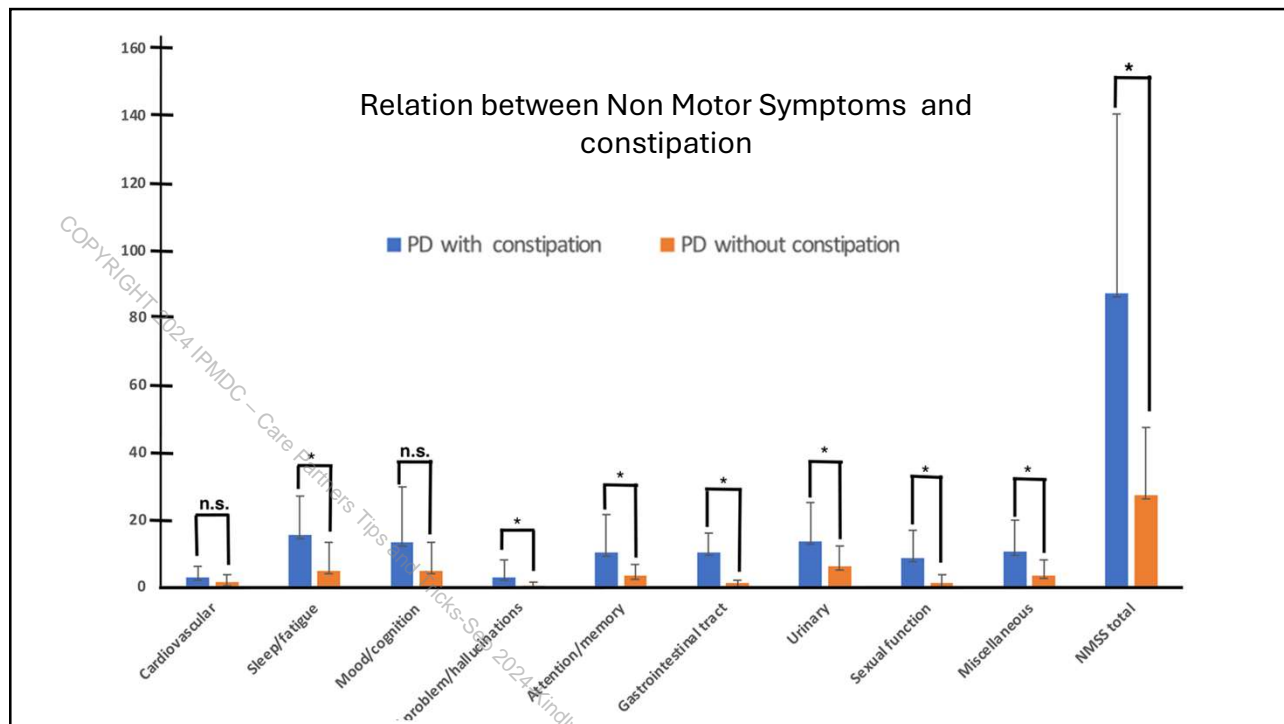
Mohammad Al-Wardat¹  · Piergiorgio Grillo^{2,7} · Tommaso Schirinzi³ · Chiara Pavese^{4,5} · Chiara Salimei⁶ · Antonio Pisani^{2,7} · Silvia Natoli⁶

Constipation is associated with **increased pain severity** and interference in people with PD, as well as specific types of pain such as fluctuation-related pain and nocturnal pain.

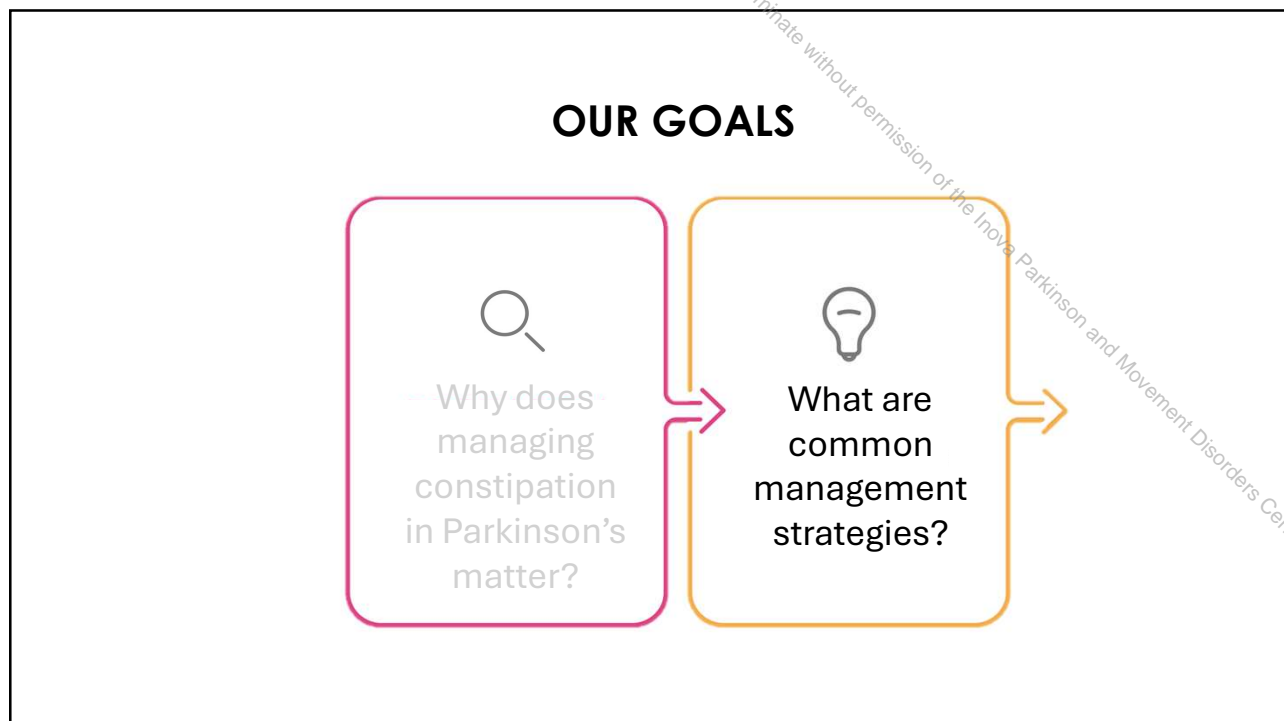
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23



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MDS COMMISSIONED REVIEW

CME Update on Treatments for Nonmotor Symptoms of Parkinson's Disease—An Evidence-Based Medicine Review**TABLE 8.** Interventions to treat autonomic dysfunction in PD

Symptom	Drug/intervention	Efficacy	Safety	Practice implications
Constipation	Macroglol/Miralax	Likely efficacious	Acceptable risk without specialized monitoring	Possibly useful
	Lubiprostone	Likely efficacious	Acceptable risk without specialized monitoring	Possibly useful
	Probiotics and prebiotic fiber	Efficacious	Acceptable risk without specialized monitoring	Clinically useful
	Abdominal massages	Insufficient evidence	Insufficient evidence	Investigational

Other helpful strategies

25

1. Medication

Both Macroglol/Miralax and Lubiprostone = “**likely efficacious**” and “**possibly useful**” for the treatment of constipation in PD.
No safety concerns.

(Ondo WG, et al. 2012)

26



“Afraid I am using too many laxatives.”


— a person with Parkinson’s from questionnaire

Laxatives can be effective for short-term constipation relief but overuse poses recognized health risks.

27

Advice from the Inova team

- 1.If needed, start a bulk laxative. We recommended psyllium husk powder.
- 2.If needed, start an osmotic laxative. We recommend starting with MiraLax (polyethylene glycol) 1/2 cap every other morning. This can be increased up to 2 caps daily as needed for a goal bowel movement of at least every other day.
- 3.If needed, start a stimulating laxative. We recommended Dulcolax (bisacodyl) which can be used as needed for constipation.



Mick B. Reedy, MD

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2. Probiotics

Probiotics and prebiotic fiber =“efficacious” and “clinically useful.” No safety concerns

Barichella M, Pacchetti C, Bolliri C, et al.
Probiotics and prebiotic fiber for constipation associated with Parkinson disease: an RCT.
Neurology 2016;87:1274-1280.

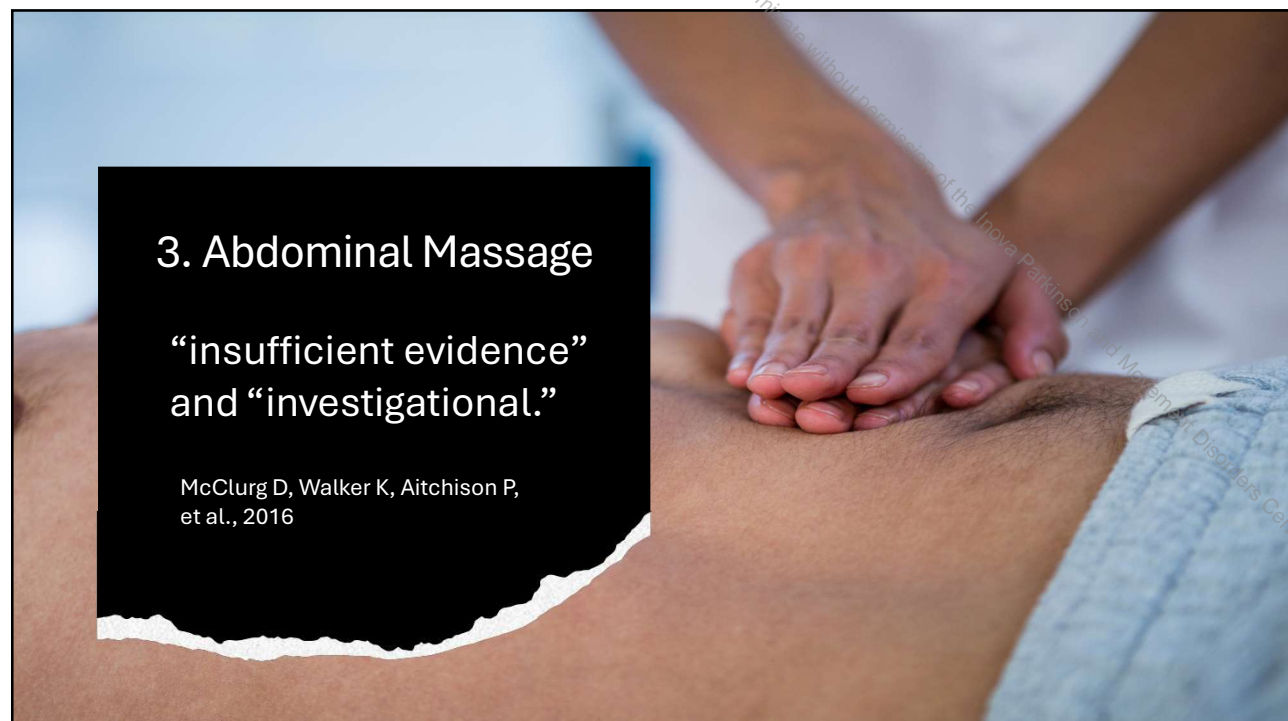
30

Efficacy and safety of probiotics in Parkinson's constipation: A systematic review and meta-analysis

Li Xie, Dongmei Chen, Xinghui Zhu and Cisong Cheng*

Department of Chinese Medicine, Chengdu University of Traditional Chinese Medicine, Chengdu, China

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32



- Ease pain and discomfort
- Lower the time it takes for waste to move through your intestines (transit time)
- Trigger muscle contraction and relaxation

Time your massage to when you would normally expect to have a bowel movement: about 30 minutes to 1 hour after eating.

33



4. Dietary changes

34



Mediterranean Diet Adherence in People With Parkinson's Disease Reduces Constipation Symptoms and Changes Fecal Microbiota After a 5-Week Single-Arm Pilot Study

Carley Rusch^{1,2*}, Matthew Beke^{1,2}, Lily Tucciarone¹, Carmelo Nieves Jr.¹, Maria Ukhanova³, Massimiliano S. Tagliamonte⁴, Volker Mai³, Joon Hyuk Suh⁵, Yu Wang⁵, Shannon Chiu², Bhavana Patel², Adolfo Ramirez-Zamora² and Bobbi Langkamp-Henken¹

¹ Food Science and Human Nutrition Department, University of Florida, Gainesville, FL, United States, ² Department of Neurology, Norman Fixel Institute for Neurological Diseases, University of Florida, Gainesville, FL, United States, ³ Department of Epidemiology, Emerging Pathogens Institute, University of Florida, Gainesville, FL, United States, ⁴ Department of Pathology, Immunology and Laboratory Medicine, Emerging Pathogens Institute, University of Florida, Gainesville, FL, United States, ⁵ Food Science and Human Nutrition Department, Citrus Research and Education Center, University of Florida, Lake Alfred, FL, United States

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- Compared to people with PD without constipation, people with constipation reported lower daily water intake.
Gan et al. BMC Neurology (2018) 18:29.
- Consider warm water or liquids in the mornings.
- Drink water and beverages without caffeine.

Increase fluid intake - hydration

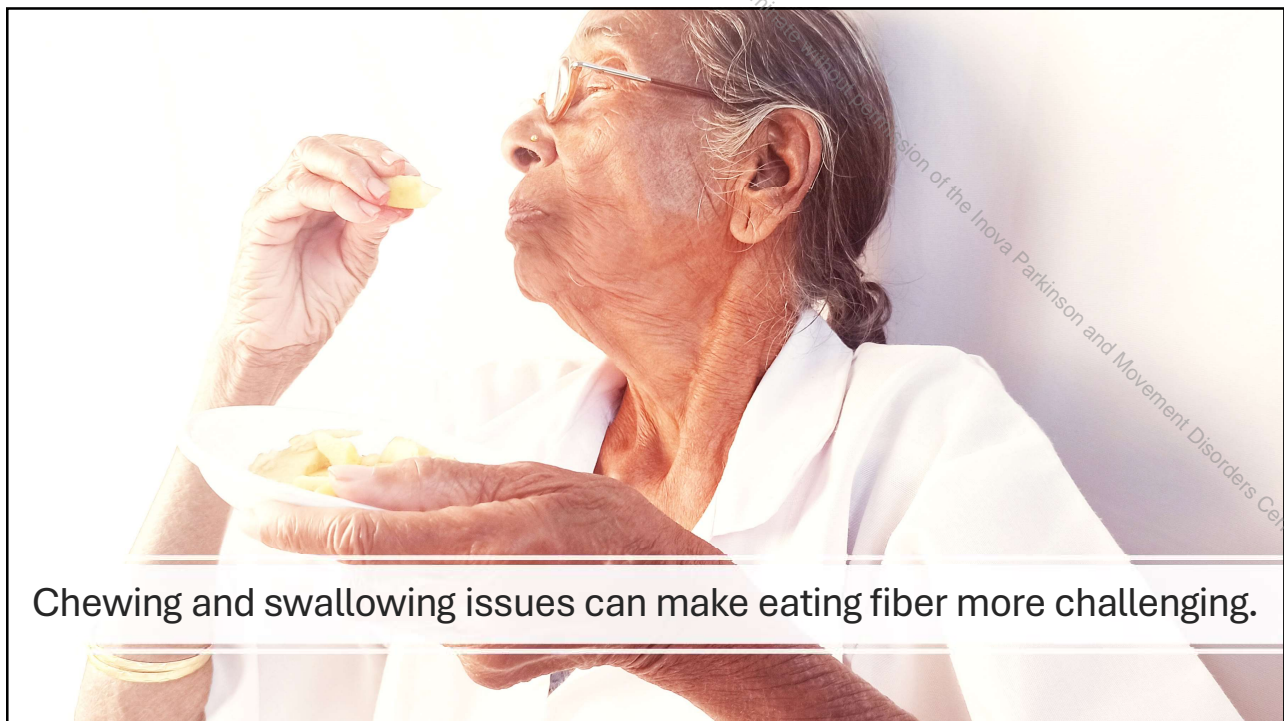
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Have smaller meals throughout the day.

41

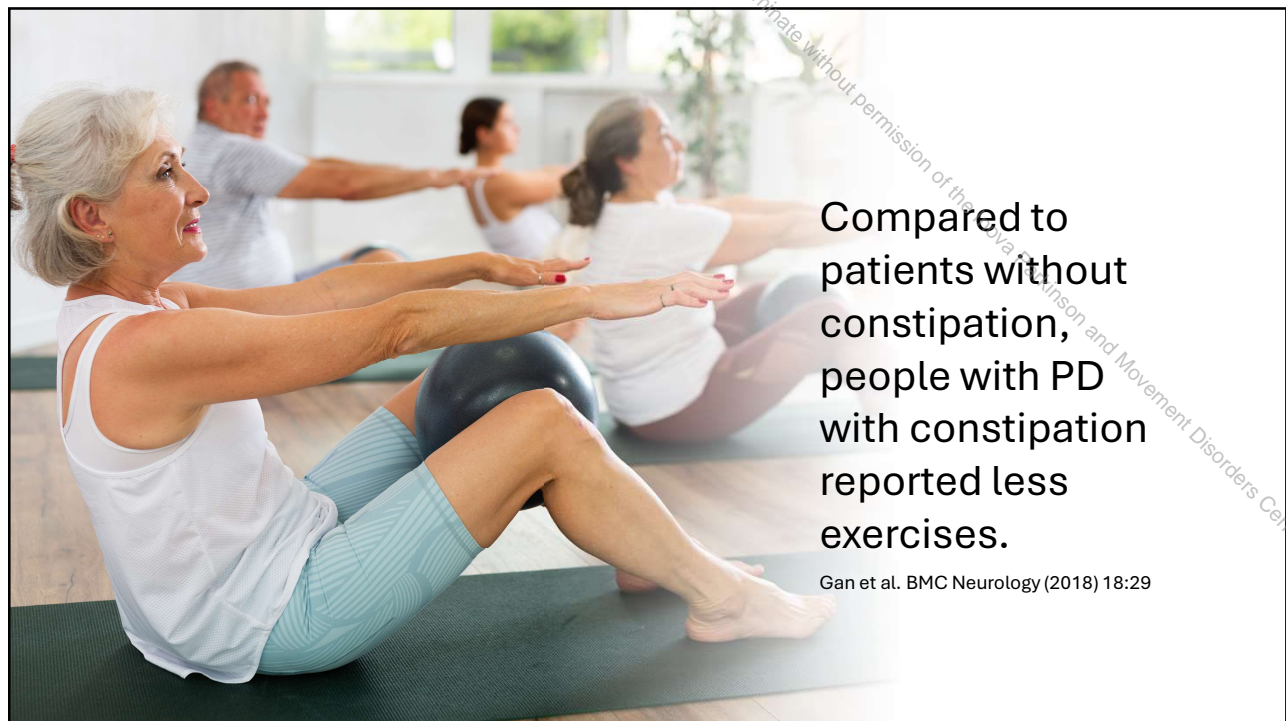


Chewing and swallowing issues can make eating fiber more challenging.

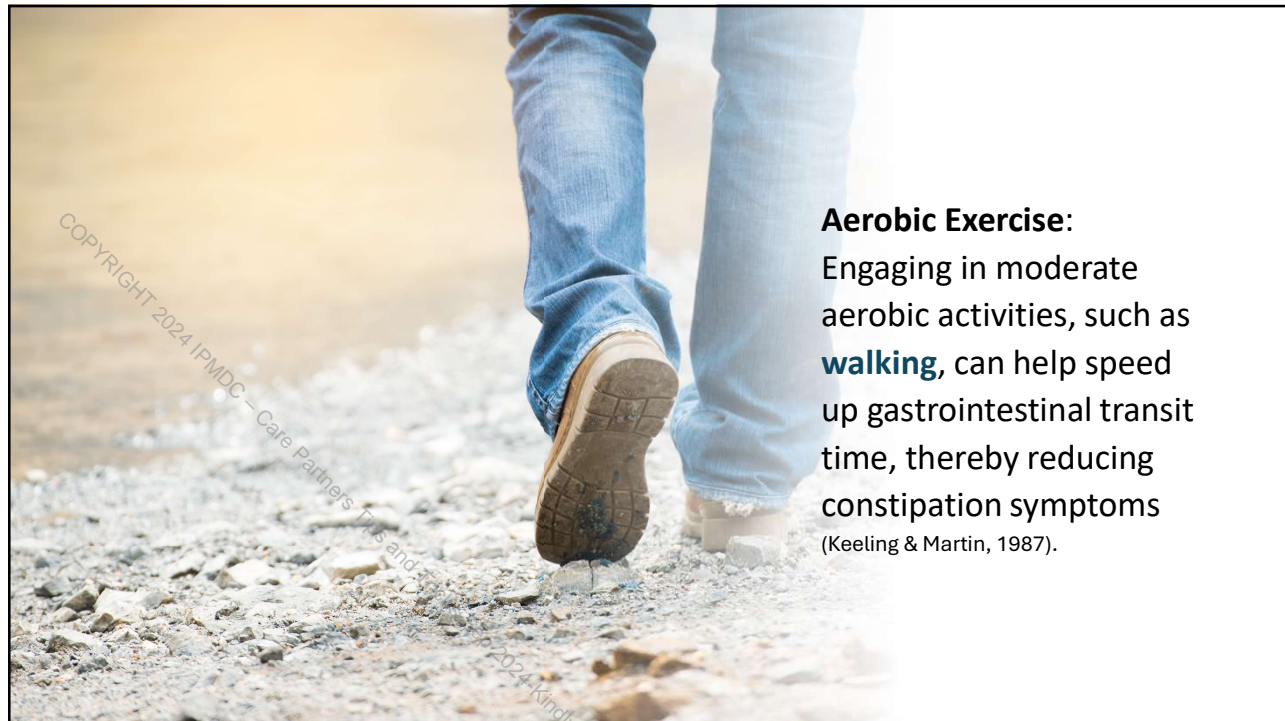
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44



Aerobic Exercise:

Engaging in moderate aerobic activities, such as **walking**, can help speed up gastrointestinal transit time, thereby reducing constipation symptoms (Keeling & Martin, 1987).

45



6. Create routines when possible

46



Creating good bowel routines and habits

- **Don't avoid the urge to pass stool.**
- Temporary lifestyle changes like **traveling** increase risk.
- **Keep a schedule** for passing stool.

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7. Improve how you take a bowel movement

48

Consider how you take a bowel movement

- Squat when you take a bowel movement
- Drink warm water in the mornings
- Stretching or reaching, and breath deeply
- Try to reduce anxiety as it can make it difficult to relax the body
- Involve a caregiver or family member when needed



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Squatty Potty and Variations

https://www.amazon.com/gp/product/B01MQUEYX8/ref=ppx_yo_dt_b_search_asin_title?ie=UTF8&th=1

50



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52

It can be embarrassing to talk about bowel problems, but there is always some tricks someone might know.



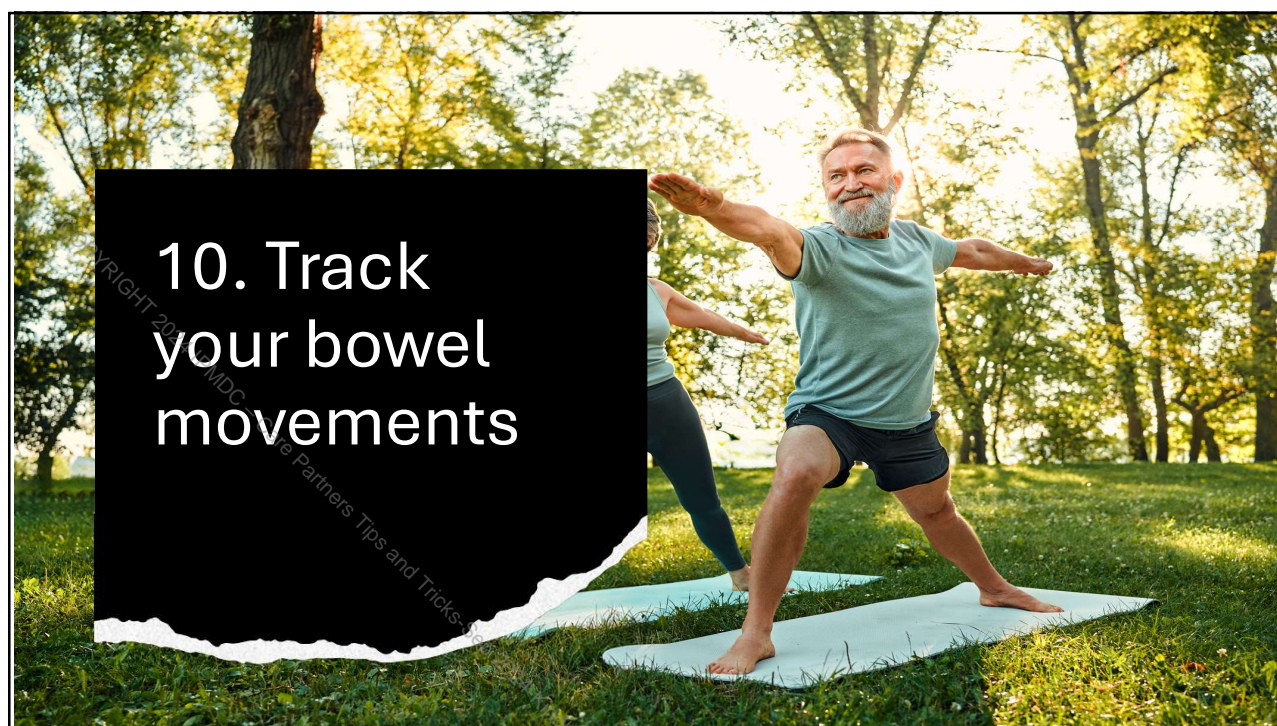
53

How often do you communicate with your healthcare provider about constipation?

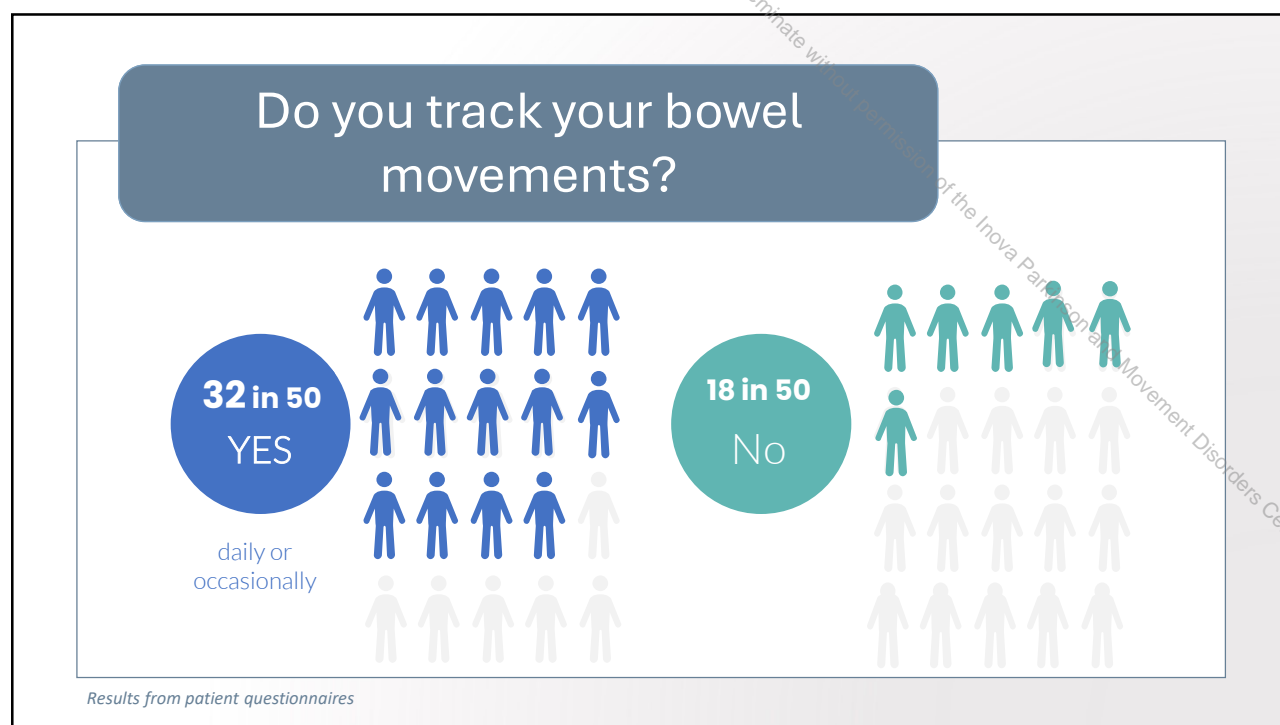
- 6 ● Regularly - at every visit (and in-between using my chart)
- 11 ● Occasionally - I have in previous sessions but not at every visit
- 18 ● Rarely - We have discussed it one two times in the past, but not recently
- 9 ● Never
- 1 ● Recent but not in the past
- 1 ● treated by gastroenterologist

Results from patient questionnaires

54



55

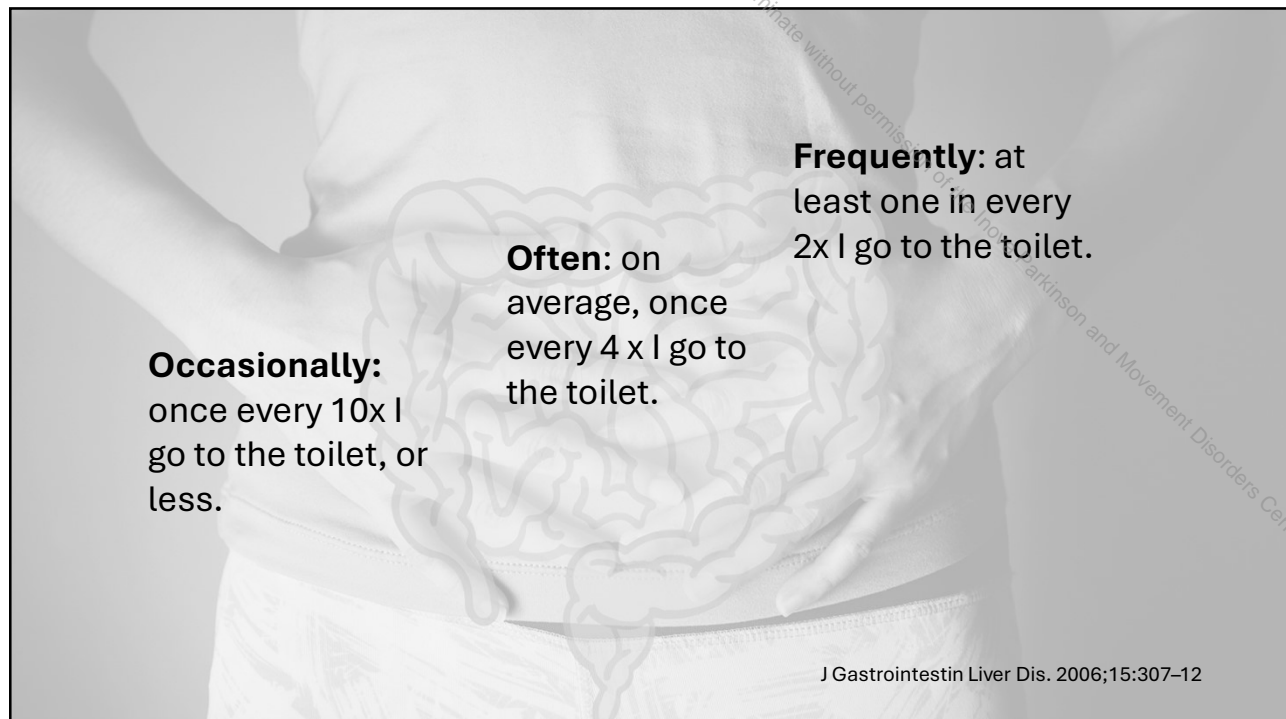


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	Problem 1 Constipation	Problem 2	Problem 3
Novelty (new or present in previous consultation)			
Frequency			
Notes:			

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Occasionally: once every 10x I go to the toilet, or less.

Often: on average, once every 4 x I go to the toilet.

Frequently: at least one in every 2x I go to the toilet.

J Gastrointestin Liver Dis. 2006;15:307-12

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	Problem 1 Constipation	Problem 2	Problem 3
Novelty <small>(new or present in previous consultation)</small>			
Frequency			
Severity			
Notes:			

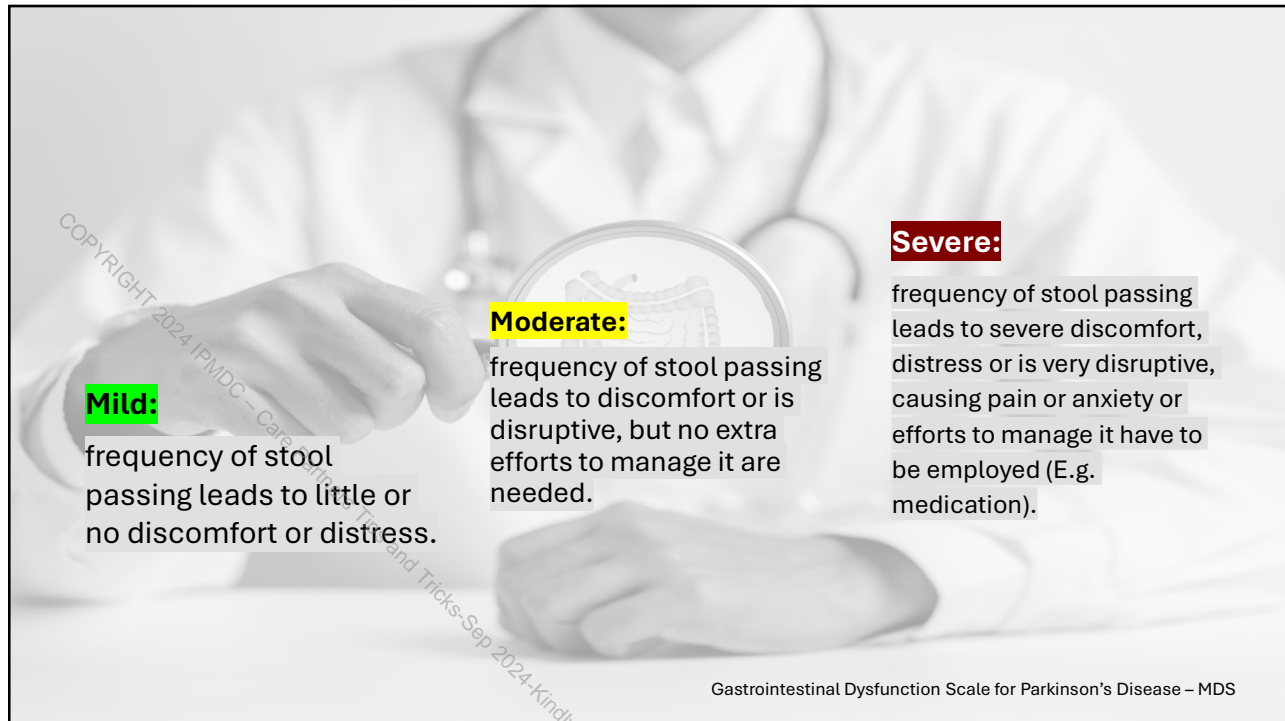
59



SEVERITY

How do I know how severe it is?

60



Mild:
frequency of stool passing leads to little or no discomfort or distress.

Moderate:
frequency of stool passing leads to discomfort or is disruptive, but no extra efforts to manage it are needed.

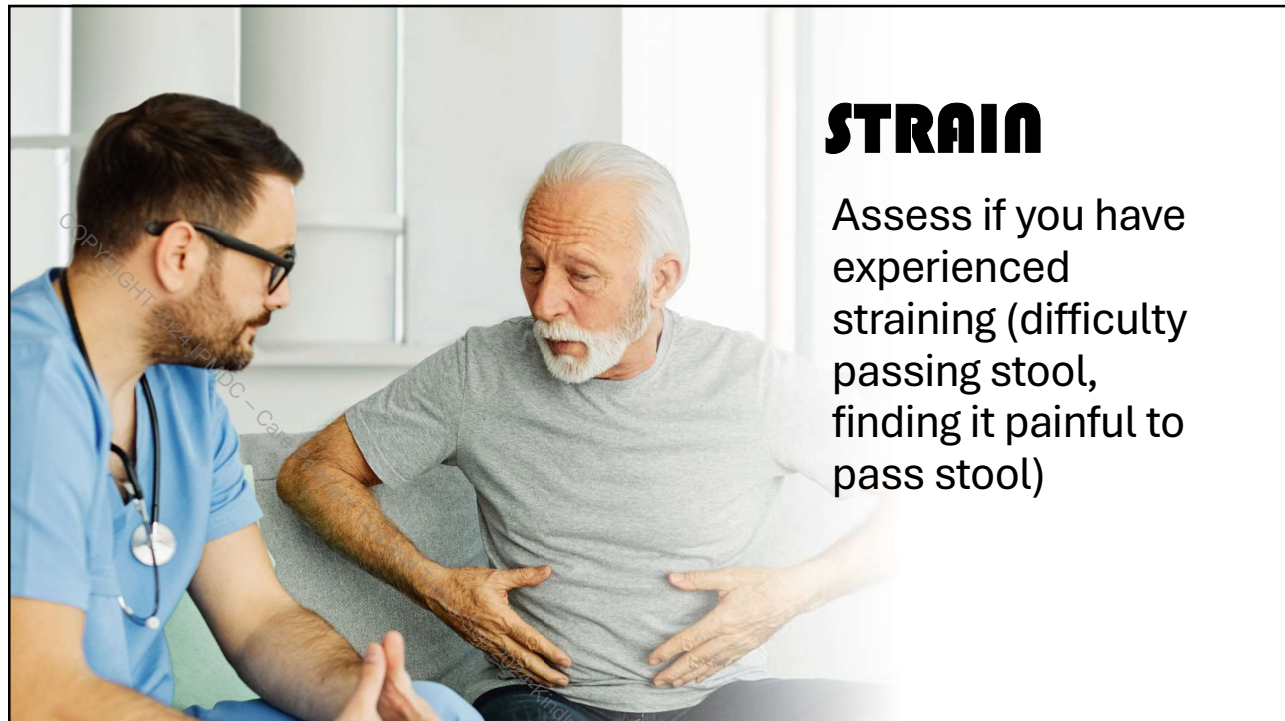
Severe:
frequency of stool passing leads to severe discomfort, distress or is very disruptive, causing pain or anxiety or efforts to manage it have to be employed (E.g. medication).

Gastrointestinal Dysfunction Scale for Parkinson's Disease – MDS

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	Problem 1 Constipation	Problem 2	Problem 3
Novelty (new or present in previous consultation)			
Frequency			
Severity			
Impact of or on Meds			
Strain			
Notes:			

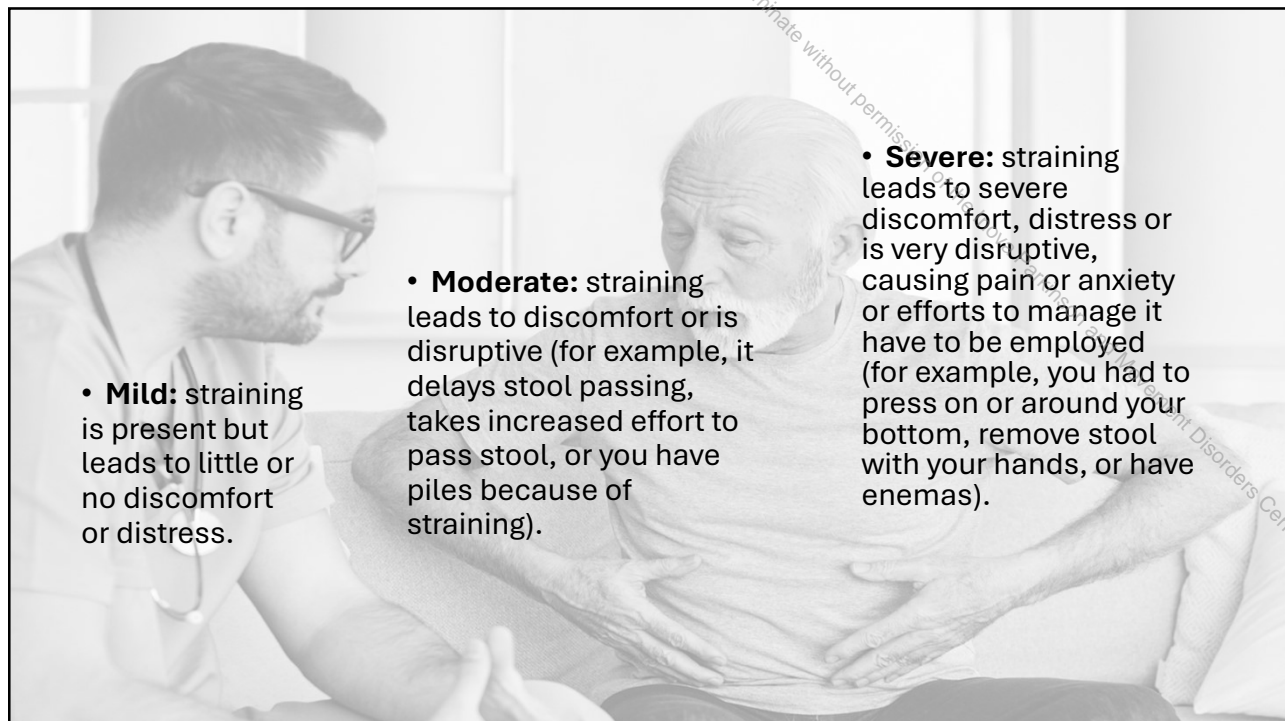
62



STRAIN

Assess if you have experienced straining (difficulty passing stool, finding it painful to pass stool)

63



• **Mild:** straining is present but leads to little or no discomfort or distress.

• **Moderate:** straining leads to discomfort or is disruptive (for example, it delays stool passing, takes increased effort to pass stool, or you have piles because of straining).

• **Severe:** straining leads to severe discomfort, distress or is very disruptive, causing pain or anxiety or efforts to manage it have to be employed (for example, you had to press on or around your bottom, remove stool with your hands, or have enemas).

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	Problem 1 Constipation	Problem 2	Problem 3
Novelty (new or present in previous consultation)			
Frequency			
Severity			
Impact on medication			
Strain			
Abdominal Pain			
Notes:			

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Abdominal PAIN

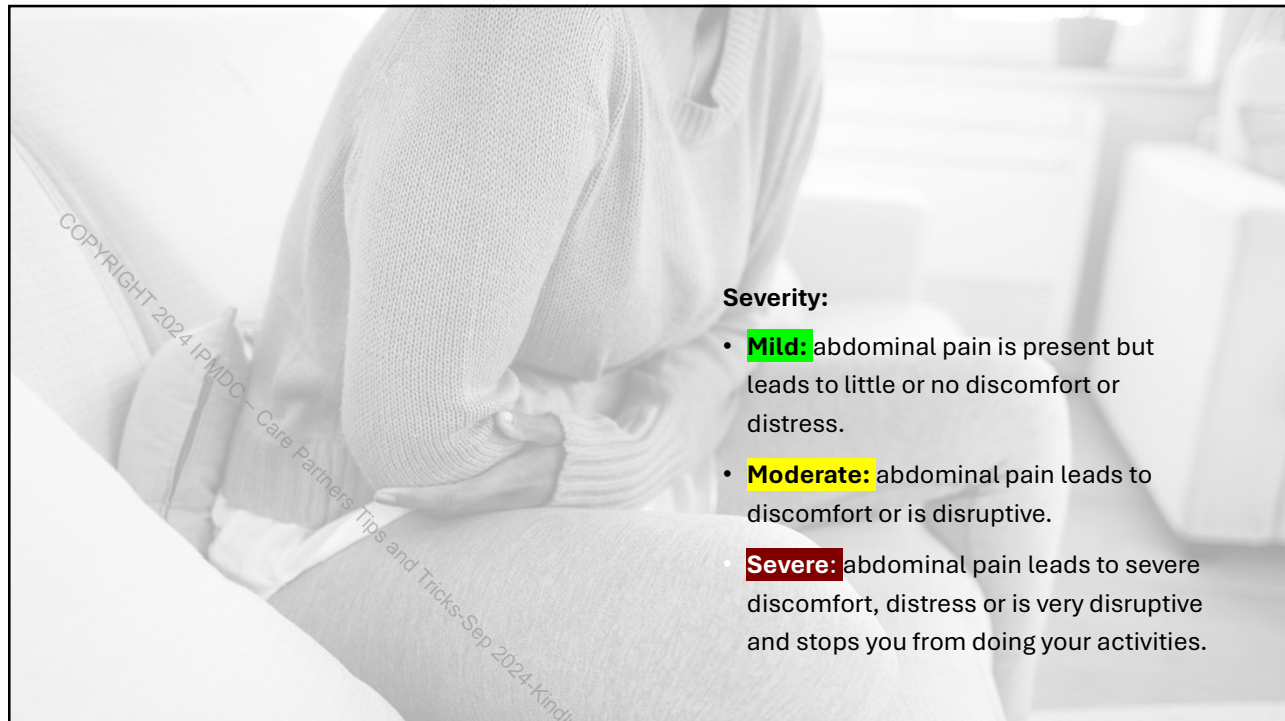
Frequency:

Occasionally: less than once a week.

Often: on average, once a week.

Frequently: at least twice a week.

66



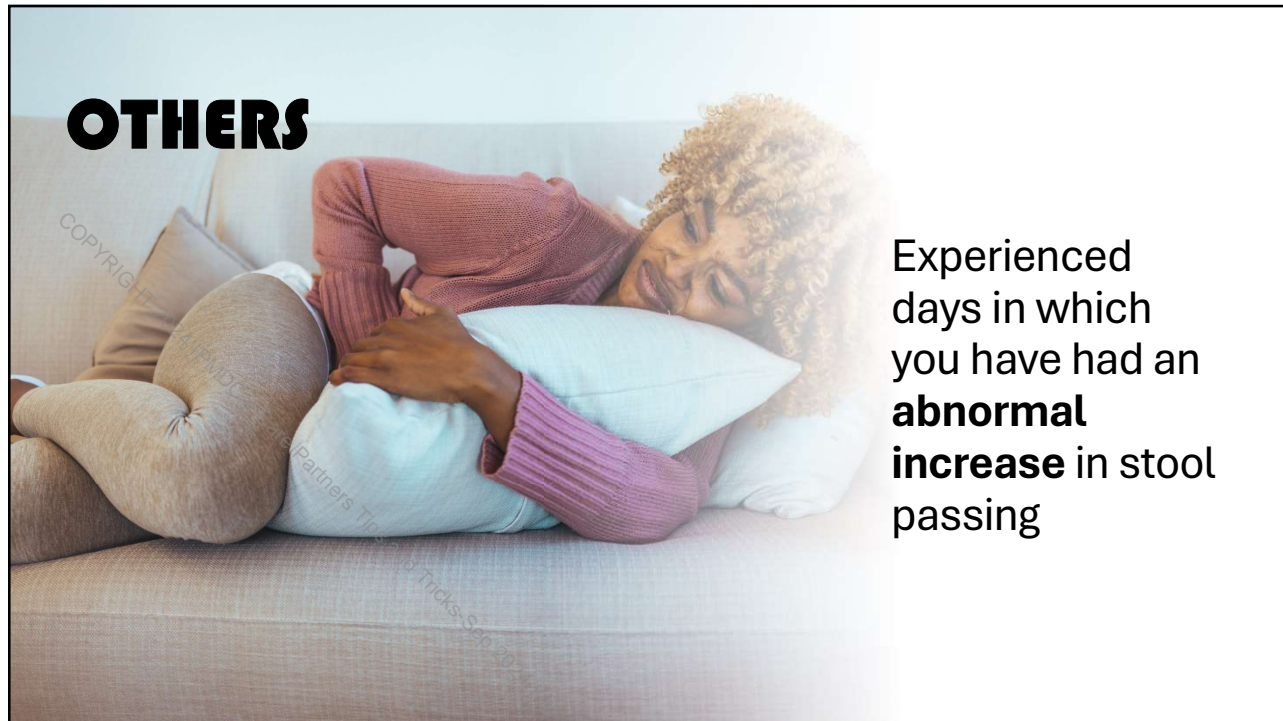
Severity:

- **Mild:** abdominal pain is present but leads to little or no discomfort or distress.
- **Moderate:** abdominal pain leads to discomfort or is disruptive.
- **Severe:** abdominal pain leads to severe discomfort, distress or is very disruptive and stops you from doing your activities.

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	Problem 1 Constipation	Problem 2	Problem 3
Novelty (new or present in previous consultation)			
Frequency			
Severity			
Impact on medication			
Strain			
Abdominal Pain			
Others (weight, swallowing, diet changes)			
Notes:			

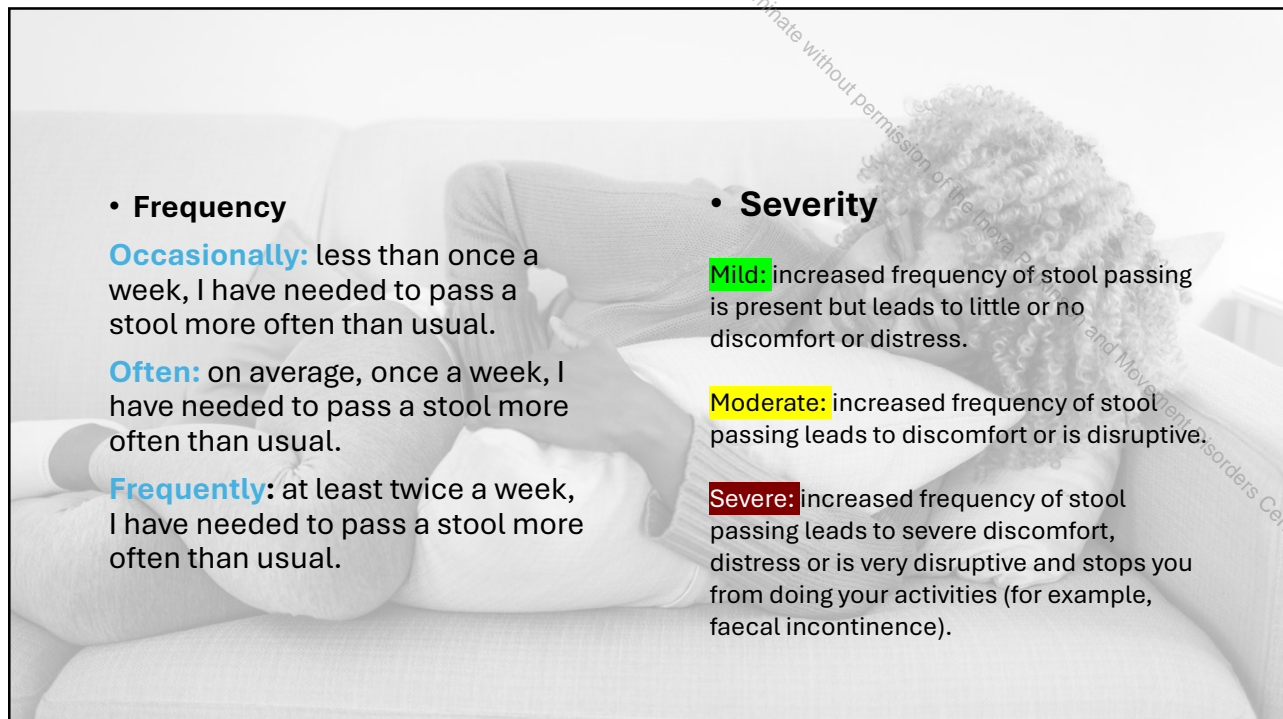
68



OTHERS

Experienced days in which you have had an **abnormal increase** in stool passing

69



- **Frequency**

Occasionally: less than once a week, I have needed to pass a stool more often than usual.

Often: on average, once a week, I have needed to pass a stool more often than usual.


Frequently: at least twice a week, I have needed to pass a stool more often than usual.
- **Severity**

Mild: increased frequency of stool passing is present but leads to little or no discomfort or distress.

Moderate: increased frequency of stool passing leads to discomfort or is disruptive.

Severe: increased frequency of stool passing leads to severe discomfort, distress or is very disruptive and stops you from doing your activities (for example, faecal incontinence).

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Assess have you experienced involuntary **weight loss**

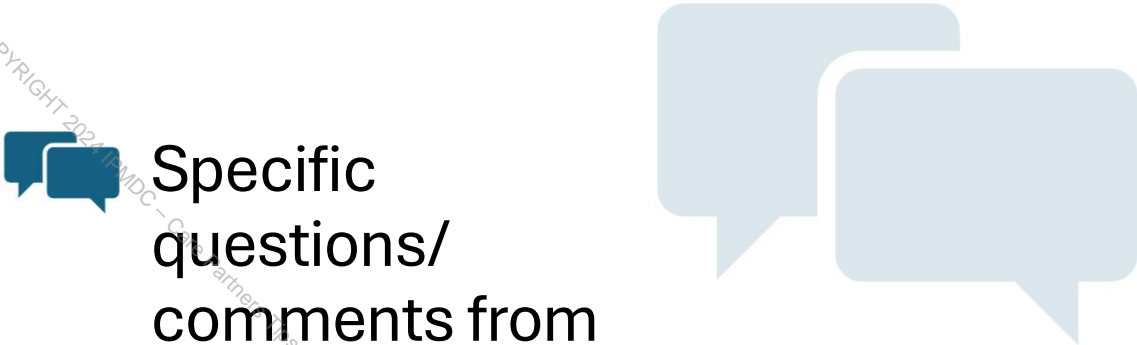
Quantity:

- Less than 10% of my body weight.
- On average, 10% of my body weight.
- More than 10% of my body weight.

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	Problem 1 <i>Constipation</i>	Problem 2	Problem 3
Novelty (new or present in previous consultation)			
Frequency			
Severity			
Impact on medication			
Strain			
Abdominal Pain			
Others (weight, swallowing, diet changes)			
Factors that make it worse			
Factors that make it better			
Carepartner opinion			
Notes:			


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Specific questions/ comments from questionnaires

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“Is it ok to eat prunes
and/or drink prune juice on
a daily basis?”

Daily consumption of prunes or prune juice in moderate amounts is safe and provides digestive, cardiovascular, and bone health benefits. However, excessive consumption may lead to increased flatulence.

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“Can we take too many stool softeners or Milk of Magnesia, etc.?”

While stool softeners and Milk of Magnesia can be effective short-term remedies for constipation, their excessive use may lead to dependency, electrolyte imbalances, and gastrointestinal problems. It's important to follow medical advice regarding their appropriate use.

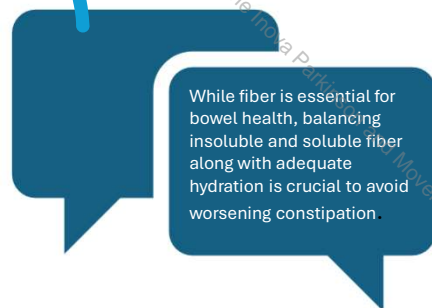


75

“The more salads I eat, the worse is my constipation”.

- Certain factors related to salads and their ingredients might actually contribute to worsening constipation like:
 - eating vegetables high in insoluble fibers (lettuce, cucumbers & tomatoes) which will require increasing water intake.
 - using certain high-fat salad dressings may slow down digestion
 - eating raw vegetables, especially in large amounts, can be harder to digest than cooked ones

While fiber is essential for bowel health, balancing insoluble and soluble fiber along with adequate hydration is crucial to avoid worsening constipation.



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“What is the best over-the-counter for constipation?”

- Depends on the cause of constipation and personal preference.
- Consult a healthcare provider to determine the underlying cause and best treatment choice for you.
- Macrogol, probiotics, and fiber supplements are among the best OTC options for managing constipation in Parkinson's.



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Thank you for coming

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