



By: Baharak Moshiree MD MSc, Mackenzie Jarvis PA-C, DMs, Atrium Health, Wake Forest, Digestive Health-Morehead Medical Plaza; Marissa Lombardi, International Foundation for Gastrointestinal Disorders



International Foundation for Gastrointestinal Disorders (www.iffgd.org)

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Definitions

Parkinson's disease (PD) is a movement disorder that occurs when the brain does not produce enough dopamine. Symptoms usually develop slowly and get worse over time. Typically, PD starts on one side of the body and overtime affects both sides. As symptoms continue to develop, people living with PD may have trouble walking, talking, or doing simple tasks. There is no specific test to diagnose PD. A healthcare provider carefully reviews a persons' medical history and does an exam to check balance and coordination. This will then allow the healthcare provider to give a correct diagnosis.

Dopamine is a chemical that is used by the nervous system to send messages between nerve cells.

Constipation is commonly described by the passing of hard pellet-like bowel movements (BMs). Constipation can also include BMs that happen less often, or three (3) or fewer time in a week. People often have difficulty or straining when passing a BM, feel unable to completely empty during a BM, or the feeling that they need to go but are not able to have a BM.

Parkinson's disease (PD) and Constipation Overlap

Most people experience constipation from time to time. For millions of Americans, constipation symptoms do not last long. For others, constipation is a daily problem that has continued for many years. Some people begin having constipation as a child, while some develop it later in life. Research has shown that up to 70% of people living with PD have constipation. Often constipation may begin up to 15 years before someone is diagnosed with PD.

The relationship between PD and constipation likely is caused by changes in the chemical signaling between the gastrointestinal (GI) tract and the central nervous system (brain and spinal cord). This signaling is the way the body allows the brain and GI tract to communicate with each other. Chronic constipation can result from different types of pelvic floor disorders in PD patients. Pelvic floor muscles are more commonly known as the body's "core" muscles. This includes the muscles that control when people pass urine and BMs. These muscles extend from the

tailbone to the front of the body. These disorders occur when those muscles within the lower abdomen do not work properly.

These can include:

- **Obstructive defecation** – The inability to empty bowels properly.
- **Dyssynergia** – Muscles in the lower GI tract do not contract well or work together properly, causing the bowels to not move correctly.
- **Neuromuscular dysfunction of the colon** – This causes stool to move slower than normal through the colon.

Diagnostic Tests for Constipation

The following tests can be done to decide the type or source of constipation. A healthcare provider will determine which test may be right for you by reviewing medical history and considering your current state of health. These tests are commonly used to diagnose constipation in all people, even those who are not living with Parkinson's disease. These tests can also evaluate fecal incontinence (the unintentional passing of stool), which is found in around 25% of people with constipation.

- **Digital rectal**

examination - Your healthcare provider uses a gloved, lubricated finger to check for anything unusual in the lower rectum.

The **rectum** is the final section of the large intestine where bowel movements are stored before being emptied.

- **Wireless Motility Capsule** – This is a piece of equipment in the form of a pill that is swallowed and then travels through the GI tract. This collects information on the acidity, pressure, temperature, and time the GI tract takes to move foods through and empty.

- **Anorectal Manometry** - A small flexible tube, called a catheter, with a balloon on the end is inserted through the anal opening into the rectum. The balloon is then slowly inflated, causing the nerves and muscles in the rectum and anus to squeeze. The contractions and relaxations of the rectum and anal sphincter are recorded.

The **anus** is the opening at the end of the GI tract which includes the anal sphincter.

The **anal sphincter** controls the closing and opening of the anus to allow bowel movements to pass through.

- **Balloon Expulsion Testing** – This can identify slow transit constipation and dyssynergia by inserting a small balloon attached to a catheter into the rectum. The balloon is then filled with water and the patient tries to push it out. This helps the healthcare provider see how the muscles would work during a BM.

Treatment of Constipation with Parkinson's Disease (PD)

The most effective way to treat constipation in all people, including patients with PD, is to identify and treat the specific cause of the constipation. Effective treatment begins with:

- Lifestyle modifications
 - **Dietary modifications** including food intake, fiber, and increased water intake.
 - **Physical activity** may be increased or modified.

IFFGD's **Dietitian Listing** is a resource that allows you to search for a dietitian that is in your area or treats a specific condition.

<https://www.iffgd.org/resources/dietitian-listing.html>

- Prescription medications (such as lubiprostone or linaclotide, plecanetide, and others) – These help to release water into the digestive system, making BMs easier to pass.
- Over the counter (OTC) medications
 - **Osmotic laxatives** (such as polyethylene glycol and lactulose)- work with water in the digestive tract to make passing a BM easier.
 - **Stimulate laxatives** (such as bisacodyl and senna)- stimulate the GI tract to help move BMs.
- **Pelvic floor therapy** – This strengthens the coordination of muscles involved in passing a BM.
- **Biofeedback** – Involves the use of electrical stimulus to train and increase the ability of the rectum and anus to feel pressure or other senses.

All the options above treat specific types of constipation and should be thoroughly discussed with a healthcare provider before beginning a treatment. Pelvic floor therapy and biofeedback can improve constipation symptoms in some patients but may not be an effective option for people with dementia.

Conclusion

The occurrence of constipation with Parkinson's disease (PD) can lead to a significant impact on daily living and a lessened quality of life for patients. Nearly all patients with PD are impacted by some degree of GI symptoms as PD can lead to symptoms in all areas of the GI tract (such as esophagus, stomach, small bowel, colon, and rectum). These symptoms must be evaluated and treated to ensure optimal quality of life and overall disease management. It is important to fully discuss all symptoms with your healthcare provider.

For more information on common gastrointestinal concerns with Parkinson's disease please view the following publications available on these conditions in IFFGD's publication library:

- Parkinson's Disease and GI Motility (401)
- Parkinson's Disease and SIBO (403)
- Parkinson's Disease and Gastroparesis (404)
- Parkinson's Disease and Dysphagia (405)

About IFFGD

The International Foundation for Gastrointestinal Disorders (IFFGD) is a 501(c)(3) nonprofit education and research organization. We work to promote awareness, scientific advancement, and improved care for people affected by chronic digestive conditions. Our mission is to inform, assist, and support people affected by gastrointestinal disorders. Founded in 1991, we rely on donors to carry out our mission. Visit our website at: www.iffgd.org.

IFFGD

537 Long Point Road; Suite 101
Mt. Pleasant SC, 29464

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