



Constipation

It is normal to have a bowel movement (defecate) anywhere from three times a day to three times a week, as long as the stool (fecal matter) is soft and comfortable to pass. A person experiencing constipation has hard or lumpy stool, which is difficult to pass. Chronic constipation affects 15-30% of Canadians, and is commonly found in young children and the elderly, occurring more frequently in females than in males.

Transit time is the duration between when food enters the mouth and when leftover waste finally passes out as stool. A meal could take anywhere from 12-72 hours to travel through the digestive tract. Each person is unique; a normal bowel movement pattern for one person may be very different from those of family members or friends. Some individuals have an irregular pattern, never knowing what to expect. Usually, before food enters the colon, most of the nutrients have been absorbed into the body and the colon's role is to remove water. If someone has a long transit time, meaning food passes slowly through the colon, then too much water is absorbed, hardening the stool.

Factors that can contribute to constipation, often by altering transit time, include:

- medication side-effects (e.g., some narcotics, antidepressants, codeine, calcium or iron supplements, and medications that affect the nervous system),
- diseases in which there is a physiological change to some tissue or organ of the body (e.g., radiation therapy, inflammatory bowel disease, colon cancer, diabetes, stroke, hypothyroidism, or Parkinson's disease),
- functional disorders, such as irritable bowel syndrome, intestinal obstructions or strictures resulting from surgery, and
- diet and lifestyle choices, such as consuming a diet too low in fibre and fluid, insufficient physical activity, and chronic use of laxatives, suppositories, or enemas.

Symptoms/Complications

The increased length of time during which stool remains in

the colon causes increased pressure on the bowels, leading to abdominal cramping and bloating. Bowel movements may occur infrequently, resulting in hard, lumpy, dry stool, looking like either many small pellets or one solid, hard, sausage-shaped piece. Rectal pressure or fullness, bloating, abdominal pain, and a sensation of incomplete evacuation are common symptoms of constipation. The slowdown in the digestive tract may also cause poor appetite, back pain, and general malaise.

Most complications result from the intense straining needed to pass stool. These include hemorrhoids, anal fissures, diverticular disease, bright red streaks on the stool (rectal bleeding), and a condition in which the rectal wall pushes out through the anus (rectal prolapse). Ask for our pamphlet on *Hemorrhoids*, if you need more information on this topic.

Diagnosis

A panel of experts developed the main diagnostic criteria for functional constipation, and update them regularly. Below are the current, Rome III, diagnostic criteria*.

1. Must include two or more of the following:
 - Straining during at least 25% of defecations
 - Lumpy or hard stools in at least 25% of defecations
 - Sensation of incomplete evacuation for at least 25% of defecations
 - Sensation of anorectal obstruction/blockage for at least 25% of defecations
 - Manual manoeuvres to facilitate at least 25% of defecations (e.g., digital evacuation, support of the pelvic floor)
 - Fewer than three defecations per week
2. Loose stools are rarely present without the use of laxatives
3. Insufficient criteria for irritable bowel syndrome (IBS)

**Criteria fulfilled for the last 3 months with symptom onset at least 6 months prior to diagnosis*

A physician may order a number of tests, including blood analysis, to check for abnormal levels of such things as thyroid hormone, electrolytes, or glucose, and a stool sample to examine for hidden (occult) blood. Other tests include a sigmoidoscopy or colonoscopy, which are examinations with an instrument that allows a physician to see the inside of the rectum and colon. Colorectal screening is recommended in persons older than 50 years of age.

It is important to differentiate between temporary (acute) constipation and chronic constipation, as the treatments and recommendations may differ.

Management

Always check with your health care provider before making major changes, to be sure these actions won't interfere with other conditions you might have.

Dietary and Lifestyle Modifications

Diet

Eating regular well-balanced meals and snacks with high-fibre content, as outlined in *Canada's Food Guide*, available from Health Canada, and maintaining an adequate fluid intake, is the recommended approach to prevent and manage constipation. (For more information on fibre, contact our office.)

Exercise

Exercise helps to move food through the colon more quickly. Aerobic exercise, such as brisk walking, accelerates your heart and breathing rates, and helps to stimulate the natural contractions of intestinal muscles.

Physiotherapy

Pelvic dysfunction physiotherapy may include bowel retraining, electrical stimulation, and posture correction.

Medication Therapy

If constipation does not improve with diet and lifestyle changes, then there are supplements and medications available.

Bulk Forming Agents

These are made of indigestible fibre, which absorbs and retains fluid and helps to form a soft, bulky stool (e.g., Metamucil®, Prodiem®). While not quick-acting, they are safe for long-term use. Add these to your diet gradually and increase your fluid intake at the same time.

Enemas

An enema involves insertion of a liquid, usually water, into the rectum via the anus. Typically, after holding the liquid in place for a few minutes, there is an intense urgency to move the bowels.

Stool Softeners

These products work by holding water in the stool (e.g., Colace®). They are safe for long-term use and for pregnant women and the elderly.

Lubricants

Lubricant laxatives coat the colon and stool in a waterproof film, allowing it to remain soft and slip easily through the intestine, usually within 6-8 hours. Don't use these products for longer than a week, as some have been shown to cause vitamin deficiencies and medication interactions. An example of a lubricant laxative is mineral oil. Not recommended for pregnant women or for persons who have difficulty swallowing.

Stimulants

These laxatives increase muscle contractions to move food along the digestive tract more quickly (e.g., Ex-lax®, Dulcolax®, castor oil, senna tea, and Senokot®). Use only for very short-term situations and under the recommendation of a physician or pharmacist, because repeated use could cause the digestive tract to become stimulant reliant. Not recommended for pregnant women.

Hyperosmotics

Osmotic laxatives encourage bowel movements by drawing water into the bowel from nearby tissue (intestinal lumen), thereby softening stool. Some of these laxatives can cause electrolyte imbalances if they draw out too many nutrients and other substances with the water. They can increase thirst and dehydration. There are four main types of hyperosmotics:

- **Saline** laxatives are salts dissolved in liquid; they rapidly empty all contents of the bowel, usually working within 30 minutes to 3 hours. Examples of saline laxatives are citrate salts (e.g., Royvac®), magnesium preparations (e.g., Phillips'® Milk of Magnesia), sulfate salts, and sodium phosphate. Not intended for long-term use or for pregnant women.
- **Lactulose** laxatives are sugar-like agents that work similarly to saline laxatives but at a much slower rate, and are sometimes used to treat chronic constipation. They take 6 hours to 2 days to produce results.
- **Polymer** laxatives consist of large molecules that cause the stool to hold and retain water. They are usually non-gritty, tasteless, and are well tolerated for occasional constipation. Results can be expected within 6 hours, but it can take longer

depending on the dose. An example of a polymer laxative is polyethylene glycol (e.g., PegaLAX®).

- **Glycerine** is available as a suppository and mainly has a hyperosmotic effect, but it may also have a stimulant effect from the sodium stearate used in the preparation. Glycerine is available through several manufacturers.

Enterokinetics

Prucalopride succinate (Resotran®) works by targeting the serotonin (5-HT4) receptors in the digestive tract to stimulate motility (muscle movement) and has Health Canada approval for the treatment of chronic idiopathic constipation in women for whom laxative treatment has failed to provide relief. Resotran® usually produces a bowel movement within 2-3 hours and then spontaneous complete bowel movements typically begin occurring within 4-5 days of starting treatment. Side effects may include nausea, diarrhea, abdominal pain, and headache, mostly following the initial dose and then subsiding with ongoing treatment.

Guanylate cyclase-C agonist

Linaclotide (Constella®) works by increasing intestinal fluid secretion, which helps ease the passage of stool through the digestive tract, relieving associated symptoms, and has Health Canada approval for the treatment of chronic idiopathic constipation in men and women. In clinical trials, Constella® showed a statistically significant improvement compared with placebo for complete spontaneous bowel movements. The results occurred within the first week, often on the first day, of dosing and were sustained over the 12-week treatment period. Diarrhea is the most commonly noted side effect.

Outlook

Constipation can occur for many reasons, so treatment often requires trial and error. An individual may experience a short bout of constipation and return to a normal routine, or it may be an ongoing health issue. With diet and lifestyle changes, and the proper use of supplements and medications, most forms of constipation are manageable. If your bowel habits change drastically for no apparent reason, be sure to consult your physician.



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