A photograph of a woman with long, dark hair, wearing a light blue tank top and shorts, sitting in a meditative pose (lotus position) on a light-colored floor. She is looking off to the side with a thoughtful expression. The background is a plain white wall with a soft shadow cast on the floor to the right.

Understanding the Prevalence and Impact of Constipation in Canada

A Special Report from the
Canadian Digestive Health Foundation

February 2014

Understanding the Prevalence and Impact of Constipation in Canada,
A Special Report from the Canadian Digestive Health Foundation
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Executive Summary

Constipation is a common condition that has an enormous and underappreciated impact on individual Canadians. While our country has a sound base of constipation expertise, there are often significant differences between physician and patient perceptions of symptoms and their effects on quality of life. There are many laxative and other treatment options available, but strong evidence to support their use in effectively treating constipation is limited to a select few. Because of gaps in knowledge, hesitation to seek care, and access to evidence-based care, many Canadians with occasional or chronic constipation fail to receive the appropriate therapy and suffer unnecessarily.

New constipation management strategies that follow Canadian consensus recommendations need to be more widely adopted in practice so more patients use laxatives that are proven to be clinically effective and have minimal side effects. Patients can then benefit from relief of symptoms, an improved quality of life, be more productive and use less health care resources over the long term. The facts and recommendations to improve care and quality of life for people suffering from constipation highlighted in this report warrant our serious attention.

Constipation Overview

- Constipation is very common and affects everyone from the young to the elderly.
- Constipation means infrequent or difficult bowel movements.
- The severity and duration of constipation varies greatly between patients. The standard diagnostic criteria for chronic functional constipation, known as the Rome III criteria, is used to diagnose patients. Many other people with symptoms of constipation that affect their quality of life don't fit these criteria but could benefit from appropriate treatment.
- People are more susceptible to constipation if they don't have enough fibre or liquid in their diets, ignore urges to have bowel movements, are aging, are pregnant, are taking certain medications such as painkillers or blood pressure drugs, or are living with a variety of medical conditions.
- Travel is a common cause of constipation.
- Constipation should be initially managed with dietary and lifestyle changes. These include eating a high-fibre diet, limiting low-fibre and processed foods, drinking plenty of liquids along with the fibre intake, exercising regularly and acting on the urge to have a bowel movement.
- If dietary and lifestyle changes do not relieve symptoms, constipation can be managed with the addition of laxatives including non-stimulant laxatives (osmotic, bulk-forming, lubricant, emollient/stool softener and lubricant laxatives); stimulant laxatives; enemas and suppositories; and prokinetic agents.
- Canadian recommendations for managing constipation as well as the American Gastroenterological Association guidelines issued in 2013 indicate that, after dietary and lifestyle changes, the first line treatment for constipation is an osmotic laxative containing

- polyethylene glycol (PEG). PEG has the strongest peer-reviewed medical evidence for short-term and long-term effectiveness compared to other non-stimulant and stimulant laxatives.
- A widely-cited study of 115 patients with constipation found that PEG 3350 was significantly better than lactulose, another osmotic laxative, at improving stool frequency, stool consistency, need for rescue medications and side effects.
 - Canadian recommendations on managing constipation found no evidence to support the long-term use of stimulant laxatives. In contrast, three longer-term clinical trials showed that PEG is safe, doesn't have side effects, and is highly effective in the management of constipation for extended periods of time.
 - Considerable benefit could be achieved for patients, in relieving constipation symptoms and improving quality of life, through adherence to the Canadian constipation management recommendations.

Prevalence

- One in 4 Canadians has symptoms of constipation.
- An estimated 27% of Canadians report constipation within the previous three months and 38% of Canadians with the previous 12 months.
- Prevalence rates for women in all age groups are almost twice as high as for men in Canada and North America.
- Chronic constipation rates are higher for people in low-income groups than high-income groups.
- The prevalence of constipation is higher than for other common conditions such as migraines, asthma, diabetes and coronary heart disease.
- Because constipation is more common among people over 65 and life expectancy is increasing, an increase in the prevalence of constipation is expected in the years ahead.
- In a 2004 study, over 63 million people in North America meet the criteria for constipation.

Impact

- People with constipation suffer from isolation and feel frustrated due to the lack of effective therapies and empathy from family and coworkers.
- Constipation is physically and mentally troublesome for many patients, and can interfere with daily living and well-being.
- People with chronic constipation have a poorer health-related quality of life than the normal Canadian population, and constipation is at a level seen in patients with diseases such as inflammatory bowel disease (IBD), diabetes, chronic allergy, rheumatological conditions, heart disease and depression.

- People with constipation are more concerned about quality of life and disability than longevity.
- The quality of life of people with constipation improves significantly after relief of symptoms.
- Almost 30% of people with chronic constipation believe they are less productive at work or at school, and 13% miss work or school days as result of it.
- About 60% of people with constipation report impairment while at work resulting in a 21% decrease in productivity.
- Constipation leads to approximately one million physician visits each year in Canada and the mean total annual cost of health care for each constipated patient is over \$7,500.
- The annual estimated expenditure for laxatives is \$100-million annually in Canada and total annual cost for care of patients with chronic constipation in Canada is estimated to be in the billions of dollars.
- Constipation testing costs in North America amount to US\$6.9-billion annually, which does not include treatment costs.

Gaps in Care

- There is often a significant difference between the physician's perception of the patients constipation and the patient's perception of their constipation. Physicians focus more on defecation frequency and patients more concerned with ease of passage and consistency rather than stool frequency.
- The Canadian recommendations on management of chronic constipation advise that the threshold for a physician to treat constipation should be based on the patient's assessment of their symptoms and impact on quality of life.
- The severity and duration of constipation vary considerably between patients. There is a lack of a formal definition for occasional constipation, yet many Canadians experience occasional constipation that disrupts their quality of life. There is a need for an acceptable formal definition of occasional constipation and people suffering from the condition should have better access to education, information and effective treatments available to relieve symptoms and improve their quality of life.
- Many Canadians with constipation, whether chronic or occasional, are not receiving timely or effective treatment to relieve their constipation symptoms which is decreasing overall quality of life.
- The underlying cause of constipation is often unclear and it can be challenging for a physician to decide on an appropriate treatment strategy for the individual patient.
- It's important for physicians to listen closely to and interpret the patient's description of symptoms and their impact on quality of life, while patients should track symptoms and possible triggers and accurately communicate this information to physicians so they can work together to develop an appropriate and effective treatment plan.

- While 90% of Canadian family physicians routinely manage patients with constipation, the number aware of and following the Canadian recommendations on managing constipation are significantly less.
- The Canadian recommendations on treating constipation and the American Gastroenterological Association guidelines issued in 2013 indicate that the first line treatment for constipation is the osmotic laxative, PEG, which has the strongest evidence for short-term and long-term effectiveness compared to other non-stimulant and non-stimulant laxatives. Nevertheless, a significant number of patients still treat themselves, do not seek medical care and use over-the-counter stimulant laxatives.
- Almost half of patients with constipation are dissatisfied with their current treatment. The most frequently used treatment strategies are bulk-forming agents, stimulant laxatives and stool softeners, but studies show that osmotic laxatives such as PEG are most effective.
- Today, there is a critical gap between the laxative treatments that many patients receive and the osmotic laxative treatment, PEG, that has proven to be most effective and is recommended by leading medical experts in Canada, the United States and globally.
- Only about one-third of Canadians reporting constipation visited a physician for it. Patients with occasional or chronic constipation symptoms that affect their quality of life should seek out or have access to physicians to get the most appropriate evidence-based treatment from the start.
- New constipation management strategies that follow Canadian consensus recommendations need to be more widely adopted in practice so more patients use laxatives that are proven to be clinically effective and have minimal side effects.

Introduction

One in four Canadians has symptoms of constipation.¹ Constipation can affect everyone from the young to the elderly. For some people, constipation develops suddenly and lasts for a short time. For others, it may begin gradually and last for many years.

Constipation is a very common condition, which is more prevalent than other common diseases such as migraines, diabetes, asthma and coronary heart disease.² While some diseases shorten life, constipation generally erodes quality of life more than lifespan. It has a major emotional, physical, social and financial impact on individuals of all ages by seriously comprising their productivity in school and at work, participation in the workforce, diminishing their family and social life, and activities of daily living.³

The socioeconomic burden of constipation is also evidenced by the billions of dollars spent on diagnostic tests, over-the-counter (OTC) and prescription laxatives, and other medications in North America each year.²

The goals of this Report are to bring attention to barriers associated with constipation care and highlight opportunities to improve the quality of life for the many Canadians suffering from both chronic and occasional constipation. It aims to do this by revealing gaps in knowledge, increasing understanding and use of appropriate treatment options, and identifying areas of excellence in care. Improving knowledge, treatment and quality of life for patients should also help to ease the strain on our healthcare system.

The report will include an overview of constipation, national prevalence rates and North American incidence rates, and a summary of the impact constipation has on the Canadian economy, health care, and the quality of life for those affected, and an evaluation of therapy options and use. Critical gaps in care will be identified, along with the proactive steps that can and should be taken to improve care and quality of life for the many Canadians who suffer from constipation.

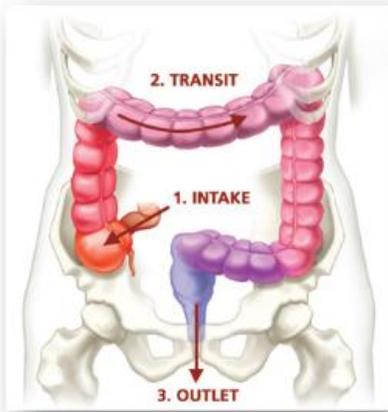
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Understanding Constipation

Constipation means infrequent or difficult bowel movements. It often occurs when digested food moves too slowly through the digestive tract. As a result, the body removes (absorbs) too much water from the stools, causing them to become hard, dry and difficult to pass.

Constipation arises when there is a problem that affects the colon in one of three key areas:



1. Intake: what is ingested (e.g., food, water, fibre)
2. Transit: how quickly stool moves through the colon
3. Outlet: how stool exits the body

People who are constipated typically have to strain to defecate and will often pass small, hard stools. They may also have a feeling that the rectum has not been completely emptied, experience abdominal discomfort or pain, have a sense that something is blocked in the rectum, experience excessive straining during bowel movements, and have a lower frequency of bowel movements than what is normal for them.

Most people don't need extensive testing to identify constipation: you know it when they have it. Still, understanding what's normal can help an individual identify constipation earlier and explain it to the doctor.

The **Bristol Stool Chart** (shown right) is a medical aid that classifies human feces into 7 categories based on shape and consistency.² Using a patient's description of their feces, doctors can better understand transit time and recommend appropriate treatment options.

Physicians will often ask patients to track their bowel patterns, food and water intake, exercise and other



Constipated		
Type 1		Separate hard lumps, like nuts (hard to pass)
Type 2		Sausage-shaped but lumpy
Normal		
Type 3		Like sausage but with cracks on its surface
Type 4		Like a sausage or snake, smooth and soft
Diarrhea		
Type 5		Soft blobs with clear-cut edges (passes easily)
Type 6		Fluffy pieces with ragged edges, a mushy stool
Type 7		Water, no solid pieces. Entirely liquid.

symptoms. This can be done using a notebook or electronically through smart phone apps such as the Canadian Digestive Health Foundation's Gi BodyGuard.

Defining constipation

The severity and duration of constipation varies greatly between patients. Chronic functional constipation, unlike occasional or short-term constipation, is defined as lasting for three months or more, with symptoms that begin at least six months before diagnosis.³ It is a long-term condition, which can persist for years and seriously affect a person's work, school, relationships and quality of life.

Chronic constipation is considered to be "functional" (see right) when there are no physiological abnormalities (such as pelvic organ prolapse or obstruction) and symptoms don't fit the diagnostic criteria of irritable bowel syndrome subtype constipation.³

To standardize the diagnostic criteria for chronic constipation, an international panel of experts on functional gastrointestinal disorders known as the Rome Committee agreed upon a definition of chronic constipation.³ In 2006, the Rome III criteria were released. This latest version of the diagnostic criteria includes both objective measures and a wider range of symptoms that people typically report, not all of which are measurable. It also allowed for occasional loose stools related to laxative use.

Severe constipation is defined as less than one bowel movement per week and it's important for people experiencing this or other "alarm" signs or symptoms to consult a family physician. Alarm symptoms are not typical constipation symptoms and may signal other, possibly more serious health issues. The doctor may need to perform specific diagnostic tests if you experience any of the following: rectal bleeding, unintended weight loss, fever, nausea, vomiting, persistent diarrhea, anemia, or abdominal pain that is not relieved by a bowel movement or that wakes you up at night.

Chronic Functional Constipation

Under the Rome III criteria, chronic functional constipation is diagnosed when a patient experiences two or more of the following symptoms fulfilled for the last 3 months with symptom onset at least 6 months prior to diagnosis:

- Straining during more than 1 out of 4 bowel movements
- Lumpy or hard stools more than 25% of the time
- Incomplete evacuation at least 25% of the time
- Sensation of anorectal obstruction/blockage for more than 1 out of 4 bowel movements
- Manual actions, such as digital evacuation or support of the pelvic floor, to facilitate at least 25% of defecations
- Fewer than 3 bowel movements in a week
- Loose stools are rarely present without the use of laxatives

All the criteria must be met for the last three months, with symptoms beginning at least six months before diagnosis.

Occasional constipation may be defined as a short-term condition that may temporarily interrupt an individual’s usual bowel routine that results in infrequent, irregular bowel movements described as Type 1 or Type 2 in the Bristol Stool Chart. It may be brought on by lifestyle changes including travel, poor diet, illness or medication.

Many Canadians experience occasional constipation and irregularity which can disrupt their work, school, relationships and quality of life. One of the limitations of the formal definition of chronic functional constipation is that the diagnostic criteria do not account for many Canadians who live with occasional constipation. Although 27.2% of Canadians surveyed reported constipation, only 16.7% and 14.9% had functional constipation according to the formal criteria.¹

It is important that people suffering from occasional constipation be recognized by physicians as having a condition that can disrupt daily life. Patients need to have better access to education resources and effective treatments to relieve symptoms and improve their quality of life.

Acute constipation requires urgent assessment if it does not respond promptly to simple OTC measures or is associated with symptoms of bowel obstruction such as severe worsening of abdominal pain, nausea and vomiting because a serious medical illness such as bowel obstruction or colon tumour may be the underlying cause. Severe cases of constipation also can lead to fecal impaction which can cause short and long term damage to the colon. Impaction requires removal of the impacted stool by a health care professional and treatment to prevent future fecal impactions.

Common causes of constipation

Some people are more susceptible to constipation for the following reasons:

- Insufficient fibre in the diet
- Diets that are high in fats or processed foods
- Not enough liquids (though liquids that contain caffeine or alcohol can worsen symptoms by causing dehydration)
- Ignoring the urge to have a bowel movement
- A lack of physical activity
- People often become constipated when traveling because their normal diet and daily routine are disrupted
- Aging may affect bowel regularity because a slower metabolism results in less intestinal

Constipation when travelling

Travel is a common cause of constipation for people. The following may explain this condition:

- Changes in food and drink consumption
- Interruption of sleep patterns
- Air in airplanes tends to be dry and access to fluids is not always easy
- Tendency not to move around during long plane, train or car trips
- Tendency to avoid public washrooms and toilets in strange hotels
- Being in the presence of many people which may affect your normal time for having a bowel movement
- New food or exposure to microbes may alter the normal flora of the gut and cause upset or gastroenteritis, resulting in diarrhea, followed by constipation due to dehydration

- activity and muscle tone
- During pregnancy women may become constipated due to hormonal changes or because the uterus compresses the intestine
- Psychological factors such as stress or anxiety
- Eating disorders
- Certain medications such as painkillers containing opioids, blood pressure drugs, iron or calcium supplements
- Medical conditions such as underactive thyroid, diabetes, multiple sclerosis, irritable bowel syndrome (IBS), spinal cord injuries, colon cancer, Parkinson’s disease and stroke

Preventing constipation

- Eat a high-fibre diet with lots of fruits, vegetables, beans and whole-grain cereals and breads, aiming to consume 20 to 30 grams of fibre daily
- Limit low-fibre foods, such as ice cream, cheese and processed foods, and foods that are high in fat and sugar
- Drink plenty of liquids along with the fibre and limit caffeine intake
- Exercise regularly to help stimulate intestinal function, aiming for 30 minutes of moderate exercise each day
- Don’t ignore the urge to have a bowel movement - delaying allows more water to be absorbed from stool resulting in it being drier and harder to pass

Treating constipation

The goals of constipation treatment are to eliminate symptoms and improve quality of life. If, after identifying the causes of constipation and addressing these and dietary and lifestyle changes do not relieve constipation, there are a range of therapeutic options that may provide relief. These include over-the-counter and prescription treatments including non-stimulant and stimulant laxatives. Most therapies have some side effects that should be considered when assessing their effectiveness in relieving constipation. These treatments are reviewed in detail below.

Types of treatment

Osmotic laxatives: These non-stimulant laxatives are the preferred medicinal treatment for occasional or chronic constipation. They gently bring water into the colon and subsequently increase the frequency of bowel movements and the ability for stool to pass through more easily. Some common examples are lactulose which uses a sugar molecule to draw water into the colon; PEG (polyethylene glycol) with electrolytes and PEG 3350 without electrolytes (Lax-A-Day®, Magna-Lax®, RestoraLAX®) which uses PEG to draw water into the colon; and magnesium containing laxatives, such as Phillips’[®] Milk of Magnesia[®], which uses magnesium to draw water into the colon. Potential side effects of

osmotic laxatives may include abdominal bloating, cramping and flatulence for lactulose; and electrolyte abnormalities that may occur with prolonged use of magnesium laxatives. PEG and PEG 3350 osmotic laxatives have limited adverse effects except diarrhea when taken to excess. Using PEG on a daily basis has been shown to be effective at treating constipation for extended intervals of time by normalizing bowel frequency, decreasing straining and improving stool consistency. The daily use of PEG is well tolerated, safe and does not have significant side effects.

Bulk-forming laxatives: These non-stimulant laxatives contain fibre, which increases fecal bulk and brings water into the intestine to soften the stool. Commonly used bulk-forming laxatives are Metamucil[®], methyl cellulose (Citrucel[®]) and calcium polycarbophil (Equalactin[®], Mitrolan[®], Konsyl Fiber[®], FiberCon[®]). Potential side effects include bloating, flatulence and abdominal pain; mechanical obstruction if not enough fluids are taken; and, calcium and iron malabsorption as the fibre binds to these elements in the intestine.

Lubricant laxatives: These non-stimulant laxatives, such as Rougier mineral oil heavy or Lansoöl laxative jelly, make the stool greasy, allowing it to move more easily through the intestine. Potential side effects include causing deficiencies in vitamins A, D, E and K as the mineral oil prevents the absorption of these vitamins.

Emollients and stool softeners: These non-stimulant laxatives soften the stool by reducing surface tension and allowing intestinal fluids to penetrate the fecal mass. They contain a wetting agent that helps water penetrate and mix with the stool so it becomes softer and easier to pass. Some examples are docusate sodium (Colace[®], Soflax[®]) and docusate calcium (Surfak[®], equate[®] Docusate Calcium). Overall their efficacy is limited to mild constipation. Potential side effects include abdominal cramping and electrolyte depletion.

Stimulant laxatives: These laxatives stimulate the nerves and muscles of the intestine and induce bowel movements by increasing the contraction of muscles in the intestines to make the stool pass more quickly through the colon. Common examples of stimulant laxatives include Senokot[®] (sennosides), ex-lax[®] (sennosides), Smooth Move[®] Senna (senna), Dulcolax[®] Pico Perles (sodium picosulfate), Dulcolax[®] (bisacodyl), AIM Cascara Sagrada™ (cascara), Biovea's aloe vera juice. They can be effective when used on a short-term basis (one or two days) but experts agree they cause significant side effects including diarrhea, dehydration and intestinal cramping. Regular use of stimulant laxatives will decrease the tone and “feeling” in the large intestine, which in turn reduces the strength of intestinal wall contractions so that it is more difficult to complete a bowel movement successfully. This is called “lazy bowel syndrome.” When this happens, patients can become even more constipated and then dependent on using stimulant laxatives to complete bowel movements. This is a horrible complication and should be avoided. Stimulant laxatives should never be taken over the long term. In addition, overuse or abuse of stimulant laxatives can cause fluid depletion, hypokalemia (low potassium) and metabolic alkalosis, a pH imbalance in which there is too much bicarbonate in the blood.⁴

Enemas and suppositories: Enemas expand or irritate the rectum, which stimulates the colon to contract and eliminate stool. These are especially useful when the stool is hardened and blocked (impacted) in the rectum. They are meant for occasional use and can disrupt the balance of fluids and electrolytes in the body if used regularly. Suppositories also trigger bowel movements by stimulating or “irritating” the rectum. Commonly used products include equate® Enema and Rougier glycerin suppositories.

Prokinetic agents: These are prescription medications, such as prucalopride (RESOTRAN™), which stimulate the movement and contraction of the bowel to increase the speed with which stool travel through the bowel. Prokinetic agents increase stool frequency to assist in relieving constipation. These medications have been shown in clinical trials to increase the number of bowel movements, reduce the severity of symptoms and improve disease-related quality of life in some patients who were severely constipated and did not respond to previous treatment with laxatives.⁵ Prokinetic agents are prescription agents and should require a physician’s careful review and assessment of the patient’s constipation. Indeed, they are meant to be used in refractory cases of chronic constipation.

Recommendations for Treating Constipation

Constipation should be initially managed by addressing the common causes (see above) and implementing dietary and lifestyle changes, which include eating a high-fibre diet, drinking plenty of liquids along with fibre intake, exercising regularly, and acting on the urge to have a bowel movement rather than ignoring it.

When dietary and lifestyle changes do not relieve symptoms, the evidence from clinical experience, guidelines and studies clearly indicates that physicians should recommend that patients be treated with gentler non-stimulative laxatives first and consider using stimulant laxatives sparingly, in the short-term, only if non-stimulant laxatives fail to provide relief.

The recommendations on managing chronic constipation by a Canadian consensus group of gastroenterologists in 2007 advised that osmotic laxatives be used to treat constipation if improvement in symptoms with increased fibre intake doesn’t occur rapidly or rapidly enough to meet the patient’s expectations.¹ The Canadian recommendations found no evidence to support the long-term use of stimulant laxatives.

Internationally, the 2010 World Gastroenterology Organization (WGO) Guidelines gave PEG a Level 1 recommendation with grade A evidence for treating constipation. These guidelines recommended that, in a step-up algorithm to treating constipation, the second step (after dietary and lifestyle measures) was to add osmotic laxatives, such as PEG or lactulose.² The third step was to add stimulant laxatives, enemas or prokinetic drugs, with the caution that stimulant laxatives “should only be taken occasionally.”

According to the University of Alberta's Department of Gastroenterology Chronic Constipation Protocol recommendations, management of chronic constipation requires a step-by-step approach that begins with a history and physical and digital rectal examination to detect potentially reversible secondary causes - such as Parkinson's, multiple sclerosis, drug-induced metabolic abnormalities, inadequate intake or decreased mobility or "red flags". Where red flags such as rectal bleeding, weight loss, iron deficiency or palpable mass (abdominal/rectal) are identified, the patient should be referred to a gastrointestinal specialist for further investigation.

When there are no red flags, the next step is to determine the constipation type: pelvic floor dysfunction, slow transit or constipation associated with irritable bowel syndrome (IBS-C). Patients with pelvic floor dysfunction use manual maneuvers to defecate and often strain with each bowel movement and feel blocked; these patients should be referred to a pelvic floor specialist for assessment. Patients with slow transit generally have infrequent urge to defecate and constipation associated with irritable bowel syndrome has pain as a dominant symptom; both of these types of constipation can be treated as outlined below.

Management of slow transit constipation and IBS-C can be slow to resolve and relapses are frequent. Treatment should begin with daily fibre supplementation, starting small and increasing slowly, and drinking plenty of liquids along with the fibre intake. If constipation symptoms are not relieved, the next step is to initiate osmotic laxatives: PEG, Milk of Magnesia or lactulose in a two month trial. If symptoms are not relieved in response to osmotic laxatives, the next step is to initiate treatment with a prokinetic agent. Stimulant laxative and enemas should only be used for rescue therapy of breakthrough symptoms during in a well-controlled osmotic laxative program. If there is no response to this treatment program, the patient should be referred to a gastroenterologist.

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Prevalence

Constipation is very common: one in four Canadians has symptoms of constipation.¹ The condition can affect everyone from the young to the elderly.

In a survey of the Canadian population, 27.2% of people reported constipation within the previous three months and 38% within the previous 12 months.¹ Constipation was highly prevalent (number of reported cases) among adults in all age groups: 26.4% for 18-34 years; 28.4% for 35-49 years; 26.3% for 50-64 years; 27.4% for 65 years and older.¹ According to formal criteria for constipation, constipation rates were 16.7% and 14.9%.¹ In a 2004 study, 63 million people in North America meet the criteria for constipation.²

Regardless of the definitions used for constipation, the prevalence rates for women are almost twice as high for women as men in all age groups in Canada and in North America.³ Results from a 2008 international survey also showed that the prevalence of constipation was much higher among women than men in the United States, United Kingdom, France, Germany, Italy, Brazil and South Korea.⁴ A 2012 northern Norwegian population-based study confirmed that constipation affects substantially more women than men.⁵

Constipation prevalence rates are similar for all patients in all age groups up to 65 to 70 years in Canada and in North America. The risk of developing chronic constipation increases for people over age 65. The prevalence rate for those over the age of 65 ranges between 30% and 40%.⁶

Chronic constipation rates are also higher for people in low-income groups than in high-income groups.² Among people with chronic constipation, over 40% experience symptoms for at least four years and about 20% suffer from constipation for a decade or more.⁷

The prevalence of constipation is higher than for other common conditions such as migraines, asthma, diabetes and coronary heart disease.⁶

There are relatively few statistics about the incidence (number of new cases) of chronic constipation. In a population-based study in the United States, the cumulative incidence of chronic constipation over a 12-year period was 17%, or about one in six.⁸ Age and gender were key factors affecting incidence rates. Among those under 50 at the beginning of the study, the incidence rate was 18.3% for women vs. 9.2% in men. In those over 70 years of age, the incidence rate was more similar for men and women with 25% for women and 20.6% for men.

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Impact

Health and quality of life

The emotional impact of constipation in terms of the stigma, shame, silence, self-blame and powerlessness to control can make patients feel even more affected by the condition than from the physical symptoms alone. People are often too embarrassed to talk openly about constipation to friends, family and physician and how it affects them.

Patients often become isolated and are worried because eating may precipitate symptoms.¹ They are often fearful that their symptoms will relapse, and feel frustrated because of the lack of effective therapies and empathy from family and co-workers.¹ In general, people with chronic constipation are more concerned about quality of life and disability than longevity.¹

Patients with chronic constipation have a significantly decreased quality of life compared with the normal Canadian population and people with no functional constipation.² Several studies have shown that constipation is physically and mentally troublesome for many patients and can interfere with daily living and well-being, especially in older age groups.¹

People with chronic constipation have a significantly impaired health-related Quality of Life (HRQoL), similar to patients with diseases such as inflammatory bowel disease, diabetes, chronic allergy, asthma, rheumatoid arthritis and psoriatic arthritis.^{1,3,4} A large-scale international study of patients in France, Germany, Italy, the United Kingdom, South Korea, Brazil and the United States showed that people with constipation have a much lower health-related quality of life than non-constipated people and was comparable to people with chronic conditions such as heart disease and depression.⁵

Several studies have shown that once constipation is relieved, patients have substantial improvement in their quality of life.¹

Productivity

Constipation results in a major loss of productivity. Almost 30% of people with chronic constipation believe that they were less productive at work or at school, and 13% missed work or school days.¹ Nearly 10% were late or had to leave work or school because of these symptoms. About 60% of people with constipation reported impairment while at work resulting in a 21% decrease in productivity.⁴

Chronic sufferers who worked or attended school lost 2.4 productive days per month due to their symptoms. A recent National Health and Wellness Survey reported that people with constipation missed more work due to health, 9.08% vs. 5.2% than non-constipated people.¹

Economic burden

Constipation leads to approximately one million physician visits each year in Canada.⁶ Constipation testing costs in North America amount to US\$6.9-billion, which doesn't include treatment costs.¹ The total annual cost is over \$7,500 for health care provided to each constipated patient.⁴ The annual estimated expenditure for laxatives is \$100-million in Canada.⁴ The total annual cost of care for patients with chronic constipation in Canada is estimated to be in the billions of dollars.⁴

Canada is the 9th largest market in the world for over-the-counter laxatives and in 2008 it represented 2.63% of the world market.⁷ Since 2003, the Canadian laxative market has increased by 1.73 times and the annual increase in spending is US\$7.4-million.⁷

People who believe they are constipated are likely to seek relief either by using over-the-counter laxatives (often stimulant-laxative) or by visiting their doctor. The health care costs of constipation are substantial and surpass the costs of irritable bowel syndrome.¹ Since constipation occurs more frequently in people over age 65 and life expectancy is increasing, an increase in the prevalence of constipation, its impact on quality of life and a greater social and economic burden can be expected in the years ahead.

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Gaps in Care

Only about one-third of Canadians reporting constipation visited a physician for it.¹¹ Women are much more likely to receive care for constipation than men, although the gap decreased with age.¹² Because people who suffer from constipation may be embarrassed and reluctant to talk about or seek care for their bowel issues, some may not visit physicians and get effective relief.¹²

Quality of life is affected for those afflicted with occasional or chronic constipation. Patients can reduce suffering due to constipation by educating themselves about and being proactive in discussing symptoms and a treatment plan with physicians who can recommend the most appropriate treatment. Appropriate treatment will result in symptom relief, increased productivity at work and school, improved quality of life, and decreased need for health care resources over the long-term.

Once constipation is diagnosed healthcare workers tend to minimize the situation, while patients' concerns about the condition increase.² Physicians often fail to acknowledge that this is a significant problem that affects many aspects of their quality of life, even though the effects on quality of life are comparable to other chronic diseases such as irritable bowel disease, diabetes, chronic allergy, asthma, rheumatoid arthritis or psoriatic arthritis, and heart disease.^{2,3}

The Canadian recommendations on treatment of chronic constipation advise that the threshold for a physician to treat constipation should be based on the patient's assessment of their symptoms and on the impact of their symptoms on quality of life.³ The decision to treat constipation should not be guided or limited to a definition based on bowel movement frequency of three times a week.

There is no formal definition for occasional constipation. Nevertheless, constipation that is experienced intermittently can be unpredictable and disrupt work, school, relationships and quality of life. It is important that people suffering from occasional constipation have access to the education, information and effective treatments available to relieve symptoms and improve their quality of life. Many Canadians with constipation, whether it's chronic or occasional, may not be getting effective or timely treatment and relief of symptoms, whereas their social and family life, productivity and overall quality of life would improve substantially after relief of symptoms.²

The nature of the underlying causes for constipation is often unclear and it can be challenging for physicians to identify the cause of constipation and decide on an appropriate treatment strategy for the individual patient.³ Furthermore, the wide range of treatment options available to physicians and patients can be perplexing.³

Some laxative treatments for constipation have been proven to be effective and safe, while other laxatives that are widely used have insufficient evidence or a lack of evidence to support their use.³ There are also adverse effects with many widely used stimulant laxatives and traditional approaches to managing constipation may worsen constipation symptoms in some patients.⁴

Since almost 90% of Canadian family physicians surveyed routinely manage patients with constipation, there has been for many years a strong and widespread need for clear guidelines to help physicians optimally manage and treat those who suffer from the condition.³ The Canadian recommendations on the treatment of constipation issued in 2007 meet this need by providing a graded treatment approach to optimize care based on the best available evidence.³

Both the Canadian recommendations and the official recommendations of the American Gastroenterological Association issued in 2013 clearly indicate that the first line treatment, along with increasing fibre intake, is the osmotic laxative, PEG, which has the strongest evidence for short-term and long-term effectiveness compared to other non-stimulant and stimulant laxatives.^{3,5,6} Nine controlled trials in over 500 patients conclusively showed PEG normalizes bowel frequency and improves stool consistency, and helps patients stop using stimulant laxatives.³ Three longer-term clinical trials also showed that PEG is safe, without significant side effects, and is effective for up to six months.³

Almost half of patients are dissatisfied with their current treatment of constipation. They are dissatisfied with ineffective relief of bloating, lack of predictability, ineffective relief of multiple symptoms and ineffective relief of constipation.⁸ The most frequently used treatments are bulk-forming agents, stimulant laxatives and stool softeners, which have weaker evidence to support their use for the management of constipation than the osmotic laxative PEG.⁹

There is often a gap between the laxative treatments that patients receive and the laxative treatments that are proven, in controlled studies, to be most effective. The consensus for best-evidence treatments needs to be more broadly translated into practice. Patients who suffer from constipation and lifestyle changes that don't effectively relieve symptoms should consult with a physician about starting with a first line treatment that is proven to be effective, safe and have minimal side effects.

The new constipation management recommendations and guidelines provided by a consensus group of leading Canadian gastroenterologists, the American Gastroenterological Association and the World Gastroenterology Organization provide clear direction for optimal and effective treatment. There is a need to ensure that the recommendations are carried out in practice and that patients receive this evidenced-based treatment from physicians to relieve symptoms and improve their quality of life.

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Summary

Constipation affects Canadians of all ages and can have a significant impact on self-esteem, family and social life, and overall quality of life. It impairs productivity thereby impacting our economy and comes with a significant cost to the health care system in physician visits, diagnostics and care.

Canada has a sound base of constipation expertise. New constipation management strategies that follow Canadian consensus recommendations need to be more widely adopted in practice so more patients use laxatives that are proven to be clinically effective and have minimal side effects. Constipation may be managed by increasing fibre intake, drinking enough fluids, exercising and maintain good toilet habits. When constipation persists after making positive lifestyle changes, patients need to consult with their physician about the most effective therapies to treat and relieve their symptoms. These may include laxatives, enemas, suppositories and prokinetic agents.

There are often significant differences between physician and patient perceptions of symptoms and their effects on quality of life. The result of these barriers in communication and understanding is that many patients fail to receive the appropriate therapy at the appropriate time and suffer unnecessarily over extended periods of time. Patients can play a role in controlling constipation by taking proactive steps to prevent and treat this common but debilitating condition. To ensure that physicians have the most accurate information and provide the best care, patients need to confidently report their health status completely, concisely and accurately. Working collaboratively, patients and health professionals can reduce the prevalence and impact of constipation, maximize health and improve quality of life.