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A COMPREHENSIVE REVIEW OF ETIOLOGY, DIAGNOSIS, AND MANAGEMENT OF CONSTIPATION

Bhujbal Sanchita Dattatray[1], Attar Saba Had Mehrin Arif[2], Bharti Vrushali Avinash[3] Prof. Ashok Chopane[4]

1,2,3,4Dharmaraj Shaikshanik Pratishtan college of pharmacy, Walki, Ahmednagar 414006.

ABSTRACT

Constipation is a prevalent gastrointestinal disorder characterized by infrequent, difficult, or incomplete bowel movements. Its etiology is multifactorial, encompassing lifestyle factors such as low dietary fiber and fluid intake, as well as underlying medical conditions and medication side effects . The diagnostic approach begins with a comprehensive medical history and physical examination, which may be supplemented by various investigations including blood tests, imaging studies, and specialized manometry tests to identify the underlying cause. Management strategies are stepwise, commencing with lifestyle and dietary modifications as the first-line approach . Should these measures prove insufficient, pharmacological interventions, primarily with osmotic or stimulant laxatives, are considered .

KEYWORDS : *Constipation , Colonoscopy, Bowel moment , Dehydration , Pelvic floor dysfunction ,*

INTRODUCTION

Constipation is a common digestive issue that can cause irregular, difficult, and painful bowel movements. Sometimes it is severe enough to cause a blockage. The intestines may require surgery. Constipation affects millions of people worldwide, with rates ranging from 1% to 80%. Depending on the region. This variation is due to differences in how the condition is defined and diagnosed. Chronic constipation is more. It is estimated that 80% of plant species on Earth are part of the Angiosperms (flowering plants), with about 21,000 of these species used for medicinal purposes, according to the World Health Organization (WHO). There has been a growing interest in researching plants and their potential health benefits. In India, the market for medicinal herbs is particularly large. [1]

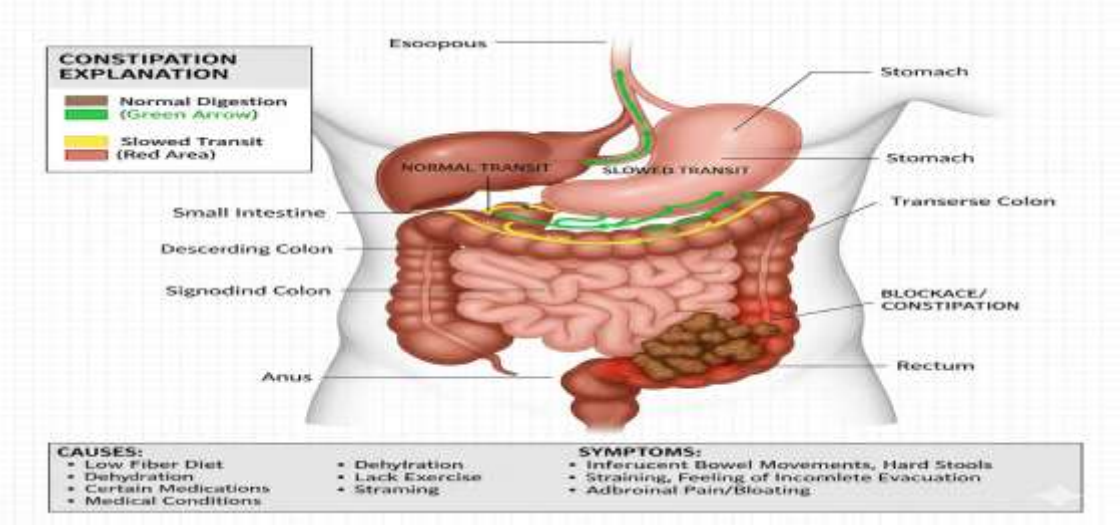


Fig- Constipation

ETIOLOGY OF CONSTIPATION

Constipation can be caused by a variety of factors, including lifestyle, medical conditions, and medication side effects. It can be broadly divided into two main categories: primary (or functional) constipation, which has no underlying medical cause, and secondary constipation, which results from an organic disease, systemic illness, or medication. [1]

1)Primary Constipation

(This is the most common type and is not caused by an underlying disease or medication)

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Low-fiber Diet
Action: Insufficient bulk makes stool slow-moving and hard.

Dehydration
Action: The colon absorbs too much water from the stool, making it dry and hard.

Lack of Exercise/Immobility
Action: Physical activity helps stimulate the intestinal muscles (peristalsis).

Ignoring the Urge to Defecate
Action: Stool remains in the rectum longer, and more water is absorbed.

Disorders of Defecation (Pelvic Floor Dysfunction)
Action: Difficulty coordinating the muscles needed to push out the stool
(e.g., Anismus).

2. Secondary Constipation
(Caused by an underlying medical condition, medication, or structural issue)

A. Medications

- **Common Examples:**
  - Opioid pain relievers
  - Certain Antidepressants (e.g., tricyclics)
  - Certain Blood Pressure medications (e.g., Calcium channel blockers)
  - Iron or Calcium supplements
  - Some Antacids (containing Aluminum or Calcium)

B. Systemic or Metabolic Conditions
Examples:

- Hypothyroidism (Underactive thyroid)
- Diabetes Mellitus
- Hypercalcemia (High calcium levels)
- Pregnancy (due to hormonal changes and physical pressure)
- Neurological disorders (e.g., Parkinson's disease, Spinal cord injury)

C. Structural/Gastrointestinal Issues
Examples:

- Irritable Bowel Syndrome (IBS)
- Colorectal Cancer (causes a blockage)
- Strictures or Scarring in the colon

EPIDEMIOLOGY

Constipation is a common condition worldwide, with prevalence rates ranging between 2% and 27% in the general population, depending on diagnostic Criteria and study populations. It is more common in females, most likely due to hormonal influences on gut motility, and it disproportionately affects Reduced colonic transit is seen in the elderly due to decreased physical activity, polypharmacy, and comorbidities. Constipation occurs frequently. [2] [3]

PATHOPHYSIOLOGY OF CONSTIPATION

The pathophysiology of constipation is complex and poorly understood. It is the result of a complex interaction of factors affecting the gastrointestinal tract, nervous system, and pelvic muscles. Common contributors include decreased colonic motility, delayed stool transit, impaired rectal sensation, and ineffective pelvic floor muscle coordination during defecation. [3] [2]
These issues can be caused by a number of factors, including:

- Low fiber diet
- Poor eating habit
- Lack of fluid intake
- Caffein abuse
- Drinking excessively
- Medication

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- Sedentary lifestyle
- Endocrine disorder (hypothirodism)
- Neurologic disease (neuropathy)

CAUSES OF CONSTIPATION

Constipation has a wide range of causes that can be broadly categorized into primary and secondary factors . Primary causes relate to issues with colon function, while secondary causes are linked to lifestyle, medications, and underlying health conditions . [4] [5]

1. **Primary Causes**
   Primary, or functional, constipation is not caused by an underlying disease but by issues with how the colon functions .
- **Normal-Transit Constipation** This is the most common type, where stool moves through the colon at a normal speed, but patients find it difficult to evacuate .
- **Slow-Transit Constipation** Characterized by infrequent bowel movements and reduced urgency, this condition is more common in women and involves impaired muscle activity in the colon .
- **Pelvic Floor Dysfunction** This involves a lack of coordination in the pelvic floor muscles, which are crucial for defecation . Patients may experience prolonged straining, a sensation of incomplete evacuation, or need to apply pressure to the perineum to pass stool .

2. **Secondary Causes**
   Secondary constipation is a result of external factors or other health problems .

- **Lifestyle and Diet**
  Dietary and lifestyle habits are the most common factors contributing to constipation .
- **Diet** Inadequate intake of dietary fiber and fluids, as well as excessive consumption of coffee, tea, or alcohol, can lead to constipation .
- **Lack of Physical Activity** A sedentary lifestyle can contribute to constipation, as physical activity helps stimulate the colon . Abdominal wall muscles play a key role in defecation, and weak muscles can impair this process .
- **Changes in Routine** Life changes such as pregnancy, aging, travel, or ignoring the urge to have a bowel movement can disrupt normal bowel habits . [4] [5] [2]

Medications

Many prescription and over-the-counter medications can cause or worsen constipation

- **Pain Relievers** Opioid pain medications are a major cause of constipation .
- **Supplements** Iron and calcium supplements can contribute to constipation .
- **Other Medications** A variety of other drugs, including certain antacids, antidepressants, diuretics, and medications for high blood pressure or seizures, can also cause constipation .

Medical Conditions

Various health problems can lead to constipation by affecting the digestive system's nerves, muscles, or hormones .

- **Blockages** Obstructions in the colon or rectum, such as tumors or strictures, can block the passage of stool .
- **Neurological Disorders** Conditions that affect the brain and spine, such as Parkinson's disease, multiple sclerosis, and stroke, can interfere with the nerves that control bowel movements .
- **Hormonal and Metabolic Issues** Conditions like diabetes and hypothyroidism can affect metabolism and hormones, leading to constipation .
- **Digestive Tract Disorders** Celiac disease, irritable bowel syndrome (IBS), and inflammatory bowel disease can also be underlying causes. [5] [4]

SYMPTOMS OF CONSTIPATION

Constipation is a common gastrointestinal condition characterized by infrequent bowel movements and difficulty passing stool. Understanding the various symptoms is important for early recognition and management of this condition.

Main Symptoms

The primary indicators of constipation include:

Bowel Movement Changes: A person experiences fewer than three bowel movements per week, which is considered the defining criterion for constipation. Bowel movements become infrequent and stool accumulates in the intestines for extended period.

Stool Consistency: The stool becomes hard, dry, lumpy, or dense like pellets.

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Difficulty During Defecation: Passing stool becomes uncomfortable and requires significant straining effort. According to clinical diagnostic criteria, straining occurs during more than 25 percent of defecation attempts in constipation cases.

Incomplete Evacuation: Patients report a persistent sensation that not all stool has been expelled from the bowel. They may feel that the rectum or anus is blocked, even after a bowel movement.

Associated Symptoms
Beyond the core symptoms, constipation frequently causes additional discomfort:

Abdominal Symptoms: The buildup of stool creates pressure and distension in the abdomen, leading to bloating, cramping, and abdominal pain. This discomfort can significantly affect daily activities and overall comfort levels.

Gastrointestinal Complaints: Patients may experience loss of appetite, nausea, vomiting, and excessive gas or frequent burping. These symptoms result from the prolonged presence of waste material in the digestive tract.

CHRONIC CONSTIPATION
When a patient experiences at least two of the main symptoms for three months or longer, the condition is classified as chronic constipation. This distinction is important for determining appropriate treatment approaches and prognosis.

Potential Complications
If untreated or prolonged, constipation can develop into more serious complications:

Tissue Damage: Excessive straining during bowel movements can cause anal fissures (small tears in the anal tissue) and hemorrhoids (swollen blood vessels around the anus). Both conditions cause pain and may result in rectal bleeding.

Internal Blockages: Fecal impaction occurs when hard stool becomes compacted in the colon and cannot be passed naturally. Rectal prolapse, where tissues of the rectum protrude through the anal opening, can also develop.
Systemic Effects: In severe cases, prolonged constipation may lead to bowel obstruction, urinary retention, stercoral perforation (rupture of the bowel), and significantly impaired quality of life.

MANAGEMENT OF CHRONIC CONSTIPATION
1. Lifestyle Modifications
Lifestyle and behavioral interventions are the first-line management approach.

Dietary fiber: Increase intake to 20–35 g/day (e.g., whole grains, fruits, vegetables).
Soluble fibers (psyllium) are preferred over insoluble ones (bran) for better tolerance and efficacy.

Hydration: Adequate fluid intake (at least 1.5–2 L/day, if not contraindicated).

Physical activity: Regular exercise improves bowel motility.

Toileting habits: Encourage regular toilet time after meals and proper positioning
(e.g., footstool to flex hips).

2. Pharmacological Therapy
If lifestyle changes fail, medications are used stepwise:

A. Bulk-forming Agents
Examples: Psyllium, methylcellulose, calcium polycarbophil.
Mechanism: Increase stool bulk and water retention. [6] [7] [8]

B. Osmotic Laxatives
Examples: Polyethylene glycol (PEG), lactulose, magnesium hydroxide.
Mechanism: Draw water into the colon to soften stools. [7] [6] [8]

C. Stimulant Laxatives
Examples: Bisacodyl, senna.

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Mechanism: Stimulate colonic motility and secretion.
Used intermittently; avoid long-term use unless necessary.

D. Stool Softeners
Example: Docusate sodium.
Limited evidence for chronic constipation.

E. Secretagogues and Prokinetic Agents (for refractory cases)
Lubiprostone: Activates chloride channels → increases intestinal fluid.
Linaclotide / Plecanatide: Guanylate cyclase-C agonists → increase chloride and bicarbonate secretion.
Prucalopride: Selective 5-HT_4 agonist → enhances motility. [6] [8] [7]

DIAGNOSIS OF CONSTIPATION
1.Medical History & Symptoms Check
The doctor will ask about your bowel movements, diet, lifestyle, and any medications you're taking.
They'll also check for any serious symptoms (like blood in the stool or unexplained weight loss).
2.Colon Cancer Screening
If needed, doctors may test early to check for colon cancer, especially in older adults or those at risk.
3.Medication Adjustment and Treatment - If certain medications are causing constipation, your doctor may change them. They might also recommend fiber. Supplements or mild laxatives (such as polyethylene glycol, sodium picosulfate, or bisacodyl) can help.
4. Colonoscopy (Only If Required) - This test is performed if there are any warning signs, such as rectal bleeding, anemia, or a family history of colon cancer. A small A camera is used to see inside the colon.
5.Anorectal Manometry (ARM) - This test determines how well the muscles in your rectum and anus function.

DIAGNOSIS CRITERIA
To be diagnosed, a patient must experience two or more of the following :
- Straining during more than 25% of defecations.
- Lumpy or hard stools (Bristol Stool Form Scale Type 1-2) for more than 25% of defecations.
- A sensation of incomplete evacuation for more than 25% of defecations.
- A sensation of anorectal obstruction or blockage for more than 25% of defecations.
- Use of manual maneuvers (e.g., digital evacuation) to facilitate more than 25% of defecations.
- Fewer than three spontaneous bowel movements per week.
- Additionally, loose stools are rarely present without the use of laxatives, and there are insufficient criteria for a diagnosis of Irritable Bowel Syndrome (IBS) . [9] [10] [11]

Role of Colonoscopy and Alarm Features
Further investigation with a colonoscopy is not routine for all patients with constipation but is recommended if "alarm features" are present . [12] These red flag symptoms, which may suggest an underlying organic disease, include :
- Hematochezia (rectal bleeding)
- Unexplained weight loss
- Anemia
- A significant and abrupt change in bowel habits
- A strong family history of colorectal cancer
- Advanced and Specialized Testing
- For patients whose symptoms do not resolve with first-line lifestyle and laxative treatments, recent guidelines outline several advanced diagnostic tests to determine the underlying cause .
- **Anorectal Manometry:** This test assesses the pressures and coordination of the anal sphincter and rectal muscles during rest, squeezing, and pushing to identify a defecatory disorder like pelvic floor dyssynergia . [12]
- **Colonic Transit Studies:** The most common method involves swallowing a capsule with radiopaque markers and taking X-rays several days later to see how quickly they move through the colon. This helps diagnose slow-transit constipation . Colonic scintigraphy is another, more advanced option available at specialized centers .
- **Defecography (Barium or MRI):** This imaging test visualizes the anorectal anatomy during defecation to identify structural problems such as large rectoceles (a bulge of the rectal wall) or intussusception (internal rectal prolapse). [12] [10] [11]

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REMEDIES OF CONSTIPATION

1. **Dietary remedies**
2. **Herbal and natural laxative**
3. **Lifestyle remedies**

DIETARY REMEDIES

Increase Fiber Intake Eating more high-fiber foods is a primary remedy for constipation . Soluble, non-fermentable fiber like psyllium can be particularly helpful . [13] [14] [15] High-fiber foods include:

- Fruits like apples, pears, and oranges .
- Vegetables such as broccoli, carrots, and spinach .
- Whole grains, including oatmeal, quinoa, and whole wheat bread .
- Legumes like beans, lentils, and chickpeas .
- Nuts and seeds such as almonds, chia seeds, and flax seeds .
- **Stay Hydrated** Drinking plenty of water and other fluids is essential to help fiber work effectively and to soften stool . It is recommended to drink at least eight glasses of water per day . [13] [14]
- **Consume Probiotic Foods** Foods containing beneficial bacteria, such as sauerkraut, may help reduce constipation .

Herbal and Natural Laxatives

- **Ginger** This spice can help reduce pressure on the lower intestines .
- **Senna** An herb that acts as a stimulant laxative, often consumed as a tea .
- **Triphala** An Ayurvedic herbal remedy made from three fruits, it functions as a mild laxative .
- **Lemon Water** The citrus in lemon can sometimes stimulate the colon, and warm lemon water is a popular morning remedy .
- **Castor Oil** This has been traditionally used for quick relief, but it's best to consult a doctor before regular use .
- **Aloe Vera Juice** This can soothe the intestines and improve the consistency of bowel movements .
- **Ghee and Milk** A traditional Indian remedy involves mixing ghee with milk to help with constipation . [13] [14] [15]

LIFESTYLE REMEDIES

Adjusting daily habits can also play a crucial role in preventing and relieving constipation . [15]

- **Regular Exercise** Physical activity can help stimulate the muscles in the intestines, promoting bowel movements . Even light exercise like walking or yoga can be beneficial . [14]
- **Establish a Routine** Going to the bathroom at the same time each day can help regulate bowel movements . It is also important not to ignore the urge to have a bowel movement
- **Proper Sleep** Getting enough sleep is a potential factor in preventing constipation .
- **Mindful Eating** Chewing food thoroughly and eating at regular mealtimes can aid digestion and prevent constipation. [15] [13]

CONCLUSION

Constipation represents a common clinical condition that necessitates a structured, stepwise management strategy emphasizing patient safety and symptomatic relief. The overarching therapeutic objective is to alleviate discomfort and establish a predictable pattern of passing soft, well-formed stools without undue straining.

Initial management prioritizes non-pharmacological interventions, particularly lifestyle and dietary modifications. Patients are encouraged to increase dietary fiber and fluid intake, engage in regular physical activity, and adopt consistent toileting practices to reinforce healthy bowel habits.

When conservative measures prove inadequate, pharmacological therapy is introduced. First-line options typically involve safe, over-the-counter agents such as bulk-forming laxatives or osmotic preparations like polyethylene glycol (PEG), which demonstrate both efficacy and long-term safety. In cases of refractory or chronic constipation, newer prescription agents—including linaclotide, lubiprostone, and prucalopride—may be considered. Importantly, clinicians must exclude or address secondary causes of constipation prior to initiating symptomatic treatment to ensure appropriate and effective care.

REFERANCES

1. *Karhale A, Kashid S, Kolhe R, Naik C, Shelke T. Constipation: a comprehensive review of pathophysiology, diagnosis of management. Int J Res Publ Rev. 2025;6(5):13300-7.*
2. *Roma E, Adamidis D, Nikolara R, Constantopoulos A, Messaritakis J. Diet and chronic constipation in children: the role of fiber. J Pediatr Gastroenterol Nutr. 1999;28(2):169-74.*

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3. *Pagano G, Tan EE, Haider JM, Bautista A, Tagliati M. Constipation is reduced by beta-blockers and increased by dopaminergic medications in Parkinson's disease. Parkinsonism Relat Disord. 2015;21(2):120-5.*
4. *Diaz S, Bittar K, Hashmi MF, Mendez MD. Constipation. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2025.*
5. *Diaz S, et al. Constipation. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2025.*
6. *Ford AC, Moayyedi P, Lacy BE, Lembo AJ, Saito YA, Schiller LR, et al. American College of Gastroenterology monograph on the management of irritable bowel syndrome and chronic idiopathic constipation. Am J Gastroenterol. 2014;109 Suppl 1:S2-26. DOI: 10.1038/ajg.2014.187*
7. *Lembo AJ, Glickman S, Johanson J, V-Gascón M, St-Pierre C, McVey D, et al. Elobixibat for chronic idiopathic constipation. N Engl J Med. 2023;389(14):1312-24. DOI: 10.1080/17474124.2018.1522248*
8. *Lacy BE, Mearin F, Chang L, Chey WD, Lembo AJ, Simren M, et al. ACG Clinical Guideline: Management of Chronic Idiopathic Constipation. Am J Gastroenterol. 2021;116(7):1335-50.*
9. *Manabe N, Ohkubo H, Ogasawara N, Ogino H, Kakimoto K. Evidence based on clinical guideline for chronic constipation. Digestion. 2024;1:62-89.*
10. *Nam YS, Pikarsky AJ, Wexner SD, Daniel N, Weiss EG, Nogueras JJ, et al. Reproducibility of colonic transit study in patients with chronic constipation. Dis Colon Rectum. 2001;44(7):86-92. DOI: 10.1007/BF02234827*
11. *Rao SS, Ozturk R, Laine L. Clinical utility of diagnostic tests for constipation in adults: a systematic review. Am J Gastroenterol. 2005;100(12):2776-85. DOI: 10.1111/j.1572-0241.2005.41845.x*
12. *Corsetti M, et al. Chronic constipation in adults: Contemporary perspectives and clinical challenges. 2: Conservative, behavioural, medical and surgical treatment. 2021;7:14070. DOI: 10.1111/nmo.14070*
13. *Meacham J. Soluble, non-fermentable fiber like psyllium can be particularly helpful. 2024 Jan 19.*
14. *McCallum K. Fruits like apples, pears, and oranges. 2023.*
15. *Greenwald HS. Triphls lemon water ghee Doctor-Approved Home Remedies for Constipation. 2025.*