

# Myths and Misconceptions About Constipation: A New View for the 2020s

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In the January 2005 issue of *The American Journal of Gastroenterology*, Müller-Lissner and Kamm (1) published “Myths and Misconceptions About Chronic Constipation” where they provided evidence-based counterarguments against popularly held fallacies regarding this common condition. Despite advancements in medical therapy for chronic idiopathic constipation (CIC) over the ensuing 2 decades, CIC continues to be a frequent reason for healthcare seeking and referral for subspecialty care. In addition, despite dissemination of knowledge to the lay public, confusion and multiple misconceptions regarding CIC definitions, outcomes, and treatments continue to persist. In this update, we address pervasive confusion and misinformation regarding CIC, with a focus on diagnostic and therapeutic principles.

## MYTH/MISCONCEPTION #1: BOWEL MOVEMENT FREQUENCY IS THE MOST IMPORTANT CRITERIA FOR ESTABLISHING A DIAGNOSIS OF CIC

It is well established that bowel movement (BM) frequency among the healthy population varies widely. The recently published National Health and Nutrition Examination Survey confirmed normative BM frequency ranges from 3 BMs/d to 3 BMs/wk (Figure 1) (2). In addition, BM form is variable in health, ranging from Bristol types 3–5 for men and 2–6 for women. Although BM infrequency of < 3 BM/wk is considered one of the symptoms of CIC, there is poor correlation between provider interpretation and patient symptom reports. A recent study demonstrated that patients fulfilling symptom-based criteria for CIC primarily complained of straining, the need to use laxatives, and hard stools rather than infrequent BMs. Only 27% of patients with self-reported CIC fulfilling Rome IV criteria for CIC considered infrequent BMs an important symptom. Although studies have consistently demonstrated that CIC is associated with female sex, older age, and lower socioeconomic status, CIC remains a commonly encountered complaint across multiple demographics (3). Therefore, it is important that providers have a broad view of CIC symptoms to adequately diagnose and manage this condition.

## MYTH/MISCONCEPTION #2: CIC AND IBS-C ARE DISTINCT CONDITIONS

One of the criteria for CIC is that there is insufficient evidence to make a diagnosis of irritable bowel syndrome with constipation (IBS-C). This implies that these disorders are categorically distinct, which is incorrect. The reader is encouraged to reframe their

thinking around these common conditions and consider them on a continuum rather than mutually exclusive disease entities. According to the Rome IV criteria, the differentiating feature between the two conditions is abdominal pain associated with abnormal bowel habits, the central tenet of IBS-C. The defecatory symptoms of the conditions are otherwise identical (Figure 2) (4). The assertion that making a specific diagnosis of CIC and IBS-C is clinically irrelevant for the individual patient is highlighted by multiple studies showing high concordance of both diagnostic labels and frequent diagnosis “switching” among patients based primarily on the severity and frequency of abdominal pain. In one study, nearly 90% of IBS-C (Rome III) patients fulfilled criteria for CIC and 43.8% diagnosed with CIC fulfilled IBS-C criteria (5). This should not be construed as a criticism of the Rome criteria as such criteria are important to facilitate clinical trial selection and endpoints. Rather, it is an admonition for clinicians to avoid being “locked into” a diagnosis of CIC or IBS-C and to treat the broader symptoms, remaining aware of alternative pathophysiology to explain these common symptoms (see Myths #4 and 5).

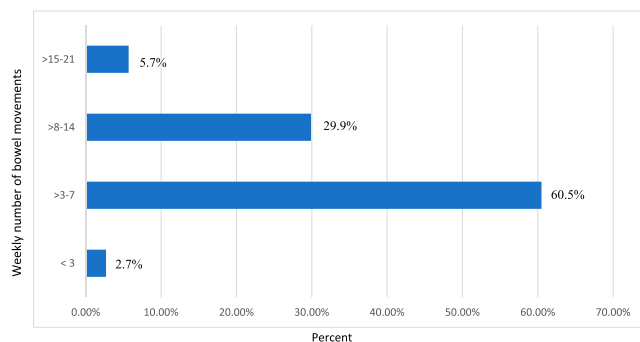
## MYTH/MISCONCEPTION #3: COLONOSCOPY IS REQUIRED FOR THE EVALUATION OF CIC

The American Society for Gastrointestinal Endoscopy recommends against the performance of colonoscopy in the initial evaluation of patients with symptoms of CIC in the absence of alarm features or suspicion of organic gastrointestinal (GI) disease (6). Patients with constipation should undergo lower GI endoscopy if they have rectal bleeding, heme-positive stool, iron deficiency anemia, weight loss, or obstructive symptoms and colonoscopy should be performed before surgery for CIC. In younger patients, flexible sigmoidoscopy may be sufficient to exclude anorectal malformations, masses, or inflammatory lesions (see Myth #9).

## MYTH/MISCONCEPTION #4: CIC IS DUE TO DELAYED COLONIC TRANSIT

CIC is a complex and heterogeneous disorder comprising slow transit, disorders of rectal evacuation including dyssynergic defecation, and by far the largest group, normal transit constipation. Clinicians should recognize that CIC pathophysiologies may coexist in individual patients, and this overlap may explain in part the lack of universal response to laxatives. Symptoms suggestive of a rectal evacuation disorder (straining, incomplete evacuation,

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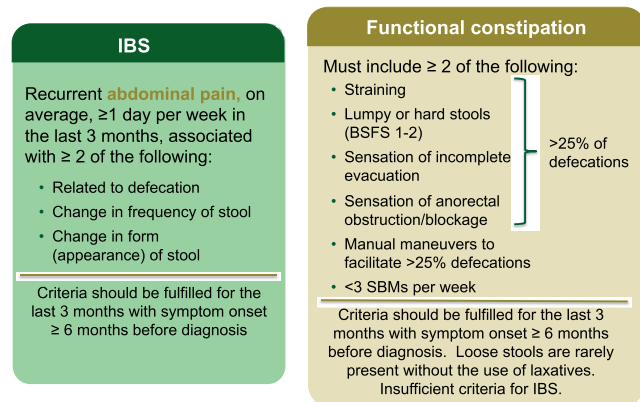


**Figure 1.** Average US population bowel movements per week.

and anorectal blockage) do not reliably predict patients with disordered defecation (7), and as many as 50% of patients with dyssynergic defecation have transit studies suggestive of slow transit (8). Failure to address these competing physiologies may account for the substantial patient dissatisfaction reported for current CIC therapies.

#### MYTH/MISCONCEPTION #5: ALL BLOATING IS DUE TO CONSTIPATION

Bloating and distention are some of the most difficult-to-treat CIC symptoms. Some patients with CIC and bloating will readily respond to facilitating effective defecation with usual treatments including laxatives and biofeedback therapy. Use of a diet restricting the intake of poorly absorbed fermentable oligosaccharides, disaccharides, monosaccharides, and polyols is a popular treatment, although overall evidence in CIC and IBS-C is limited. Small intestinal bacterial overgrowth involving methane-producing organisms has been shown to be a factor in a subset of patients with IBS-C (9). A frequently overlooked driver of bloating and distention is mismatch between gut sensory perception and volume-mediating viscerosomatic reflexes (10). Although patients without abdominal distention relax their diaphragm and contract their abdominal wall to accommodate visceral contents, patients with bloating and distention may paradoxically contract their diaphragm and relax their abdominal wall muscles, creating a visible protrusion of the anterior abdominal wall (Figure 3) (11). These patients may be more amenable to treatment with biofeedback and neuromodulators than laxatives.



**Figure 2.** Spectrum of functional bowel disorder symptoms. IBS, irritable bowel syndrome.

#### MYTH/MISCONCEPTION #6: MOST CIC CAN BE CORRECTED WITH LIFESTYLE CHANGES

We frequently see patients comfortable with taking daily medications for other chronic conditions who are hesitant to use daily laxative therapy for fear that such therapy is “unnatural” or addictive. Many of these same patients will cite inadequate fluid intake, poor dietary choices, or inadequate exercise as the real drivers of their symptoms. Although moderate physical activity and increased fluid intake may be associated with easing of CIC symptoms, most data suggest that few patients benefit from augmentation of these factors (12). Normal stool is  $\approx 74\%$  water, hard stool is  $<72\%$  water, and loose stool is  $\approx 76\%$  water. In the absence of an exogenous substrate to retain ingested water, however, additional water intake is absorbed to maintain fluid homeostasis and does not remain in the lumen of the GI tract. In the average CIC patient, we advocate framing CIC as a chronic condition that is best served with active medical therapy once it begins to impact quality of life.

#### MYTH/MISCONCEPTION #7: ALL FIBER IS CREATED EQUAL

Increasing fiber intake is an almost universal recommendation for CIC. This can take the form of dietary fibers or fiber supplementation. Patients and clinicians are faced with an array of fibers with different characteristics related to fermentability and solubility. Short-chain carbohydrates are both soluble and highly fermentable, leading to increased gas production and negligible effect on CIC. Some dietary fibers (e.g., prunes) contain sugar alcohols that exert an osmotic load to the colon to promote laxation, irrespective of fiber content. Long-chain carbohydrates have diverse characteristics related to fermentability and solubility, but only 2 forms of fiber (1): poorly fermentable, insoluble fibers promoting laxation through mechanical stimulation of fluid and mucous secretion (e.g., coarsely ground wheat bran and plastic particles) and (2) nonfermentable soluble fibers resulting in a viscous gel-matrix that retains water and resists dehydration (e.g., psyllium and ispaghula husk), have been shown to be effective for CIC. Among these fibers, nonfermentable, soluble fiber seems to be the more appropriate initial choice based on comparative studies in patients with CIC. Finely ground wheat bran has minimal mechanical effects on the colon and can actually result in harder stool with decreased water content (13). Other forms of fiber (soluble, highly fermentable nonstarch polysaccharide fiber and insoluble, nonfermentable fiber) have not shown meaningful improvement in CIC symptoms.

#### MYTH/MISCONCEPTION #8: A DAILY BM IS THE GOAL OF CONSTIPATION TREATMENT

Popular culture and anecdotal wisdom drive the fallacy that a daily BM is somehow healthier than other BM frequency and the absence of a daily BM is a frequently voiced concern in the clinic. In fact, there are a range of normal BM frequencies (see Myth #1). Current FDA clinical trial efficacy endpoints require an increase by 1 complete, spontaneous BM (CSBM) per week with a minimum of 3 CSBMs/wk to define response. CSBMs require a rescue laxative-free BM associated with a sense of complete evacuation. Many patients with CIC may be more bothered by other symptoms such as bloating, hard stool, abdominal distention, and straining. We emphasize individualized treatment plans that take into account patient preferences while correcting long-held misconceptions. Maintenance treatments for CIC should not be

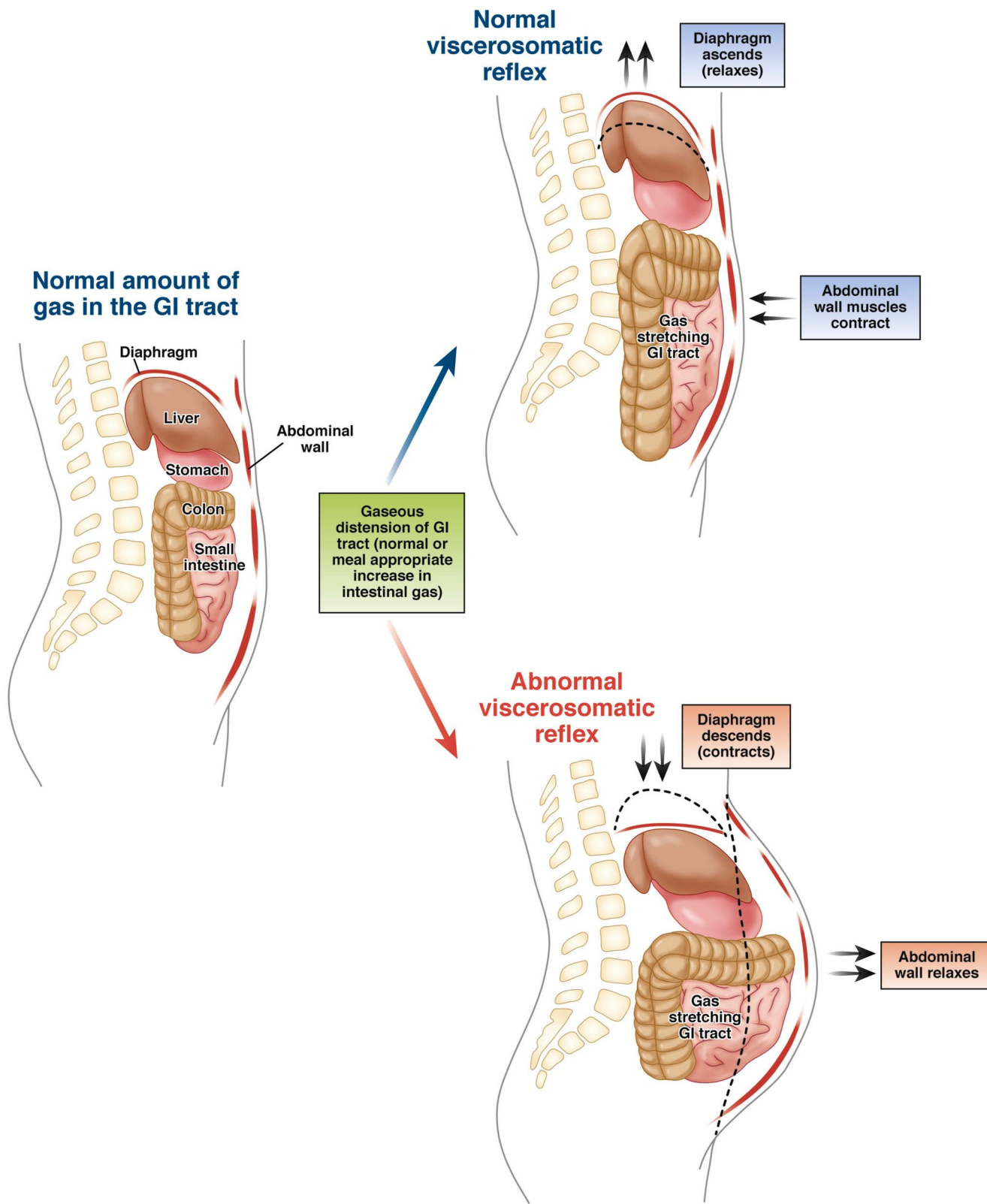
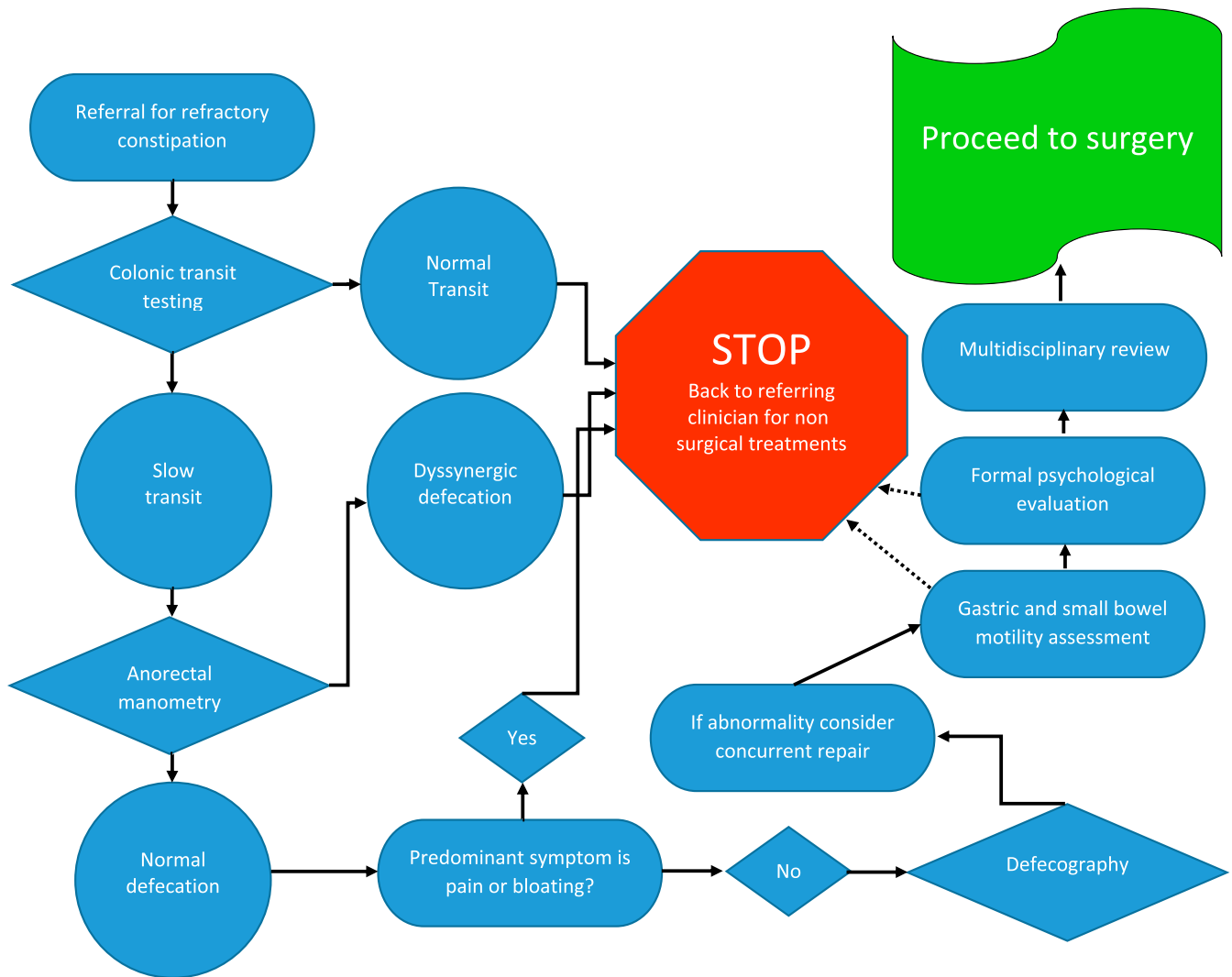


Figure 3. Physiology of bloating (ref. [11]). Reprinted with permission with permission from Elsevier. GI, gastrointestinal.

targeted to result in a daily BM as a sign of treatment success and may actually worsen symptoms. Rather, clinicians should strive to understand previous patient baselines and discuss goals of

therapy directed toward baseline restoration. Less than daily BMs with improvement in other symptoms is acceptable for many patients.



**Figure 4.** Algorithm when considering colectomy for CIC. CIC, chronic idiopathic constipation.

#### MYTH/MISCONCEPTION #9: SURGERY IS CURATIVE FOR CIC

Although colectomies for CIC are increasing, most experts have limited enthusiasm for this treatment option. In carefully selected patients with CIC due to colonic inertia and no evidence of pelvic floor dysfunction, colectomy can be a difficult but necessary decision. Surgical candidates should be evaluated by an experienced multidisciplinary team with screening to exclude those with other than pure slow transit constipation and psychological comorbidities (Figure 4). When the patient is primarily bothered by bloating or abdominal pain or has significant psychiatric overlay, surgical management of CIC unlikely to be successful (14). In addition, patients with severe colonic dysmotility may have concomitant gastric or small bowel dysmotility that may diminish benefit from colectomy (15). Our own experience suggests that the same group of patients most likely to advocate for a surgical “fix” are those least likely to be appropriate candidates.

#### CONFLICTS OF INTEREST

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