



## What is Constipation Anyway?

By: W. Grant Thompson, M.D., F.R.C.P.C., Emeritus Professor of Medicine, University of Ottawa, Ontario, Canada

Notions of bowel habit lie in the eyes of the beholders. Constipation is one of the most difficult gut symptoms to define. Patients, physicians, and physiologists have different views of the condition. The difficulty lies in the many, but variably present, features of constipation. Since more than 98% of people have at least 3 bowel movements per week, fewer is often invoked as abnormal. Many manage happily with fewer, while others within that range are decidedly uncomfortable with what they believe is constipation.

Thus frequency of defecation in isolation cannot be considered an indicator of constipation. The consistency or form of the stool, the effort required to expel it, and the accompanying abdominal discomfort and distension are at least as important. Physiologists would require some measure, such as the gut transit time, to distinguish normal from constipation; physicians grapple with definitions such as the Rome criteria for functional constipation: "...a group of functional disorders which present as persistent difficult, infrequent or seemingly incomplete defecation." The word functional implies the absence of a known cause, and the multifaceted nature of constipation is captured through diagnostic criteria (Table 1).

**TABLE 1**  
**Rome III Diagnostic Criteria\* for Functional Constipation**

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

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

Longstreth et al, Gastroenterology, April 2006

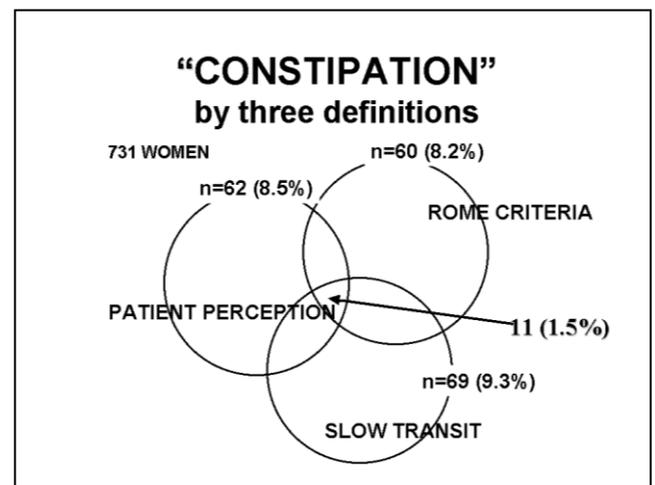
### Acute Versus Chronic Constipation

Most of us experience constipation from time to time. Illness, inactivity, travel, medications, and other circumstances may conspire to produce tardy, reluctant, hard stool often accompanied by straining and abdominal discomfort or even pain. For most people these transient symptoms are unimportant, a part of life. For some, abrupt onset of constipation may be the first sign of a bowel disease such as obstruction (e.g., tumor, adhesion) or inflammation (e.g., diverticulitis, Crohn's disease). Abrupt onset of constipation that persists, is extraordinarily painful, and is accompanied by fever, bleeding, or vomiting should be promptly reported to a doctor. This article will be confined to chronic, day-to-day constipation that has persisted for many years, perhaps since childhood.

### Views of Constipation

Constipation appears differently to different people. In a random sample, 731 English women were asked about their bowel habits. Using 3 definitions of constipation – as reported by the patient, physician opinion (Rome I criteria), and an estimate of gut transit time, about 8.5% had constipation, but only 1.5% had constipation by all three definitions (Figure 1).

FIGURE 1



### The Patient's View

Individuals may report constipation if they sense something is amiss, or if they are uncomfortable. Our ancestors were persuaded of the importance of daily bowel movements, and even today parents become alarmed if their offspring miss an opportunity. However, many live happily with less than one bowel movement a day. Hard stools may be passed with much effort, particularly if they are small. Feelings of fullness or

distension can reinforce the view that the gut requires emptying. Yet as we shall see, these symptoms do not necessarily imply constipation in a physiologic sense.

#### The Physician's View

Physicians question patients to make a diagnosis, and on the basis of this they recommend treatment. In the case of constipation, symptoms vary and are imprecise. The difficulty is compounded by the lack of an objective sign of constipation. Occasionally, hard or even impacted stool may be detected in the rectum by physical examination of the anus and rectum or by x-ray. Usually there is no corroborating evidence. For these reasons there are attempts to identify constipation through the use of diagnostic criteria. These are the best estimates of experts who devise them through consultation, debate, and some data. The best known of these are the Rome criteria (Table 1). Note the inclusion of several constipation manifestations with a minimum of two required to make the diagnosis. Note too, that the diagnosis presumes that a structural cause or stricture is absent, and that the condition is chronic and persistent. Irritable bowel syndrome (IBS) can also cause constipation, but IBS always manifests abdominal pain and the constipation comes and goes, often alternating with diarrhea.

#### The Physiologist's View

Physiologists study the workings of the gut. In order to be satisfied that constipation is truly present they seek to measure gut function and determine boundaries between normal and abnormal. The simplest of these is to measure *gut transit time*. The commonest method is to have the subject swallow a number of tiny, but x-ray detectable, markers and track their progress through the gut. The presumption is that truly constipated patients will have a prolonged gut transit. The success of treatment might be confirmed by repeating the test. Other tests use radioisotopes to follow stool progress, and still others measure the contractions of the colon or the possibility of obstruction to defecation by the abnormal contraction of pelvic muscles that obstructs fecal flow.

#### A Practical View

Such testing is not practical for routine clinical practice, and there are many debates about the definition of a normal test. However there is one method that could be used by patients, physicians, and physiologists all. *The Bristol Stool Form Scale* is shown in Table 2. As described in the caption, hard stools (type 1) represent the slowest transit, while loose watery stools (type 7) are those of rapid transit and diarrhea. Difficult or infrequent passage of type 1 or 2 stools provides a rule of thumb for constipation on which we can all agree.

#### Summary

Constipation is a common disorder with many features, no one of which is an adequate indicator on its own. One must consider not only the frequency of bowel movements, but also their consistency, and the effort required to expel them. In the absence of alarm symptoms such as bleeding, anemia, fever, and weight loss, chronic persistent constipation is likely to be a functional disorder and is best described by the Rome criteria. It must be distinguished from irritable bowel syndrome. If onset is recent, one should consider diseases that obstruct or inflame the colon and rectum. Occasionally special tests may reveal damage to the muscles or nerves of the gut, or a disorder of defecation. Fiber, bowel training programs, and the use, as directed by a

physician, of osmotic laxatives or enemas help many people. Functional constipation is of unknown cause and, provided that the use of laxatives is not excessive, it has no significant complications.

**TABLE 2**  
**Bristol Stool Form Scale**

<b>Type 1</b>		Separate hard lumps like nuts (difficult to pass)
<b>Type 2</b>		Sausage shaped but lumpy
<b>Type 3</b>		Like a sausage but with cracks on surface
<b>Type 4</b>		Like a sausage or snake, smooth and soft
<b>Type 5</b>		Soft blobs with clear-cut edges (passed easily)
<b>Type 6</b>		Fluffy pieces with ragged edges, a mushy stool
<b>Type 7</b>		Watery, no solid pieces (entirely liquid)

#### References

- Thompson WG. Chapter 16, p259-267 *Gut Reactions* Perseus Press, 1989.
- Thompson WG. Constipation: A physiological approach. *Canadian Journal of Gastroenterology* 2000; 14, suppl D. 155D-162D.
- Thompson WG. et al. Functional bowel disease and functional abdominal pain. *Gut* 1999;45suppl2:43-47.
- Probert CSJ, Emmett PM, Cripps HA, Heaton KW. Evidence for the ambiguity of the term constipation: the role of irritable bowel syndrome. *Gut* 1994;35: 1455-58.

#### Articles of Related Interest

- Constipation, Colonic Inertia and Colonic Marker Studies*, IFFGD Fact Sheet No. 159.
- Strategies for Establishing Bowel Control*, IFFGD Fact Sheet No. 302.
- Thompson WG. *Understanding the Irritable Gut: The Functional Gastrointestinal Disorders*. Degnon Associates, McLean VA, 2008.
- Disorders Related to Excessive Pelvic Floor Muscle Tension*, IFFGD Fact Sheet No. 109.
- Biofeedback & Bowel Disorders: Teaching Yourself to Live Without the Problem*. IFFGD Fact Sheet No. 112.

Opinions expressed are an author's own and not necessarily those of the International Foundation for Functional Gastrointestinal Disorders (IFFGD). IFFGD does not guarantee or endorse any product in this publication nor any claim made by an author and disclaims all liability relating thereto.

This article is in no way intended to replace the knowledge or diagnosis of your doctor. We advise seeing a physician whenever a health problem arises requiring an expert's care.

IFFGD is a nonprofit education and research organization. Our mission is to inform, assist, and support people affected by gastrointestinal disorders. For more information, or permission to reprint this article, write to IFFGD, 700 W. Virginia St., #201, Milwaukee, WI 53204. Call toll-free (In the U.S.): 888-964-2001 or 414-964-1799. Visit our websites at: [www.iffgd.org](http://www.iffgd.org) or [www.aboutconstipation.org](http://www.aboutconstipation.org).