

Constipation can be small, hard stools with normal colonic muscle tone, or alternatively, normal stool with lack of muscle tone and failure to respond to the stimulus of faecal bulk.

It is important to note that severe constipation may paradoxically present with overflow diarrhoea and faecal incontinence.

### PHYSIOLOGY:

Constipation arises when the stool is propelled at a slower than normal rate through the large intestine, thereby allowing a greater amount of water to be absorbed from the stool than normal. This results in hard stools that are less easily propelled down to the rectum.

There are 4 main types of muscular gut movements: pendular and segmental movements that mix the intestinal contents, and peristaltic and vermiform movements that propel the faecal matter in the large intestine.

Three or four times a day, there is a strong peristaltic wave that propels the contents about a third of the way along the colon. This tends to come about as a result of the gastrocolic reflex, which is triggered by the arrival of food in the stomach.

The sigmoid colon acts as a storage area until defaecation, which is brought about by a mass peristaltic movement of the matter into the rectum.

## **What is Constipation?**

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This generally tends to occur after the morning meal in persons with normal eating habits. Defaecation is triggered by a spinal reflex and can be voluntarily inhibited by contracting the external anal sphincter or is facilitated by relaxing the sphincter and contracting the abdominal muscles.

In normal evacuation, the stool enters and distends the rectum, causing an involuntary reflex that relaxes the internal anal sphincter. To avoid spontaneous defaecation, reflex contraction of the external anal sphincter and pelvic floor muscles (innervated by the pudendal nerve) occurs.

The brain registers that the rectum is full and the external sphincter is then voluntarily relaxed and the rectum is evacuated with assistance from abdominal wall muscle contraction.

Prolonged gastrointestinal transit time may be caused by a diet low in fibre, physical inactivity, acute or chronic medical conditions, medications and laxative over-use.

Common medical conditions associated with constipation include IBS, diverticular disease, and hypothyroidism.