

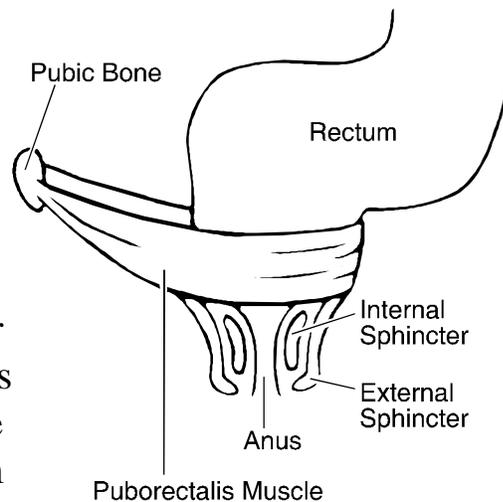
## BOWEL: HOW MUSCLES AFFECT BOWEL FUNCTION

A bowel movement is the removal of waste from the body. Muscles are an instrumental part of normal bowel function.

There are three main muscles involved:

### 1. *Internal Anal Sphincter*

- a. Involuntary small, circular muscle located in the anus
- b. Contracts most of the time to hold feces in the rectum
- c. When the rectum is full, it triggers nerves that cause it to relax and open.



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### 2. *External Anal Sphincter*

- a. Voluntary small, circular muscle located in the anus
- b. You contract it to hold the bowel movement until you reach a toilet.

### 3. *Pelvic Floor Muscle (Puborectalis section)*

- a. Voluntary U-shaped muscle that "slings" around the end of the rectum
- b. You contract it to control when feces is allowed to descend toward the anus.
- c. It works as a team with the External Anal Sphincter.

## How Muscles Affect Bowel Function (Continued)

When feces begin to fill the rectum, the Internal Anal Sphincter holds the feces in until it is full. The pressure of the feces on the wall of the rectum triggers nerves that make the Internal Sphincter relax, allowing the feces to leave the body. This is all an automatic process.

Our control over *when* a bowel movement occurs is due to use of the voluntary muscles - the External Anal Sphincter and the Pelvic Floor Muscle. You squeeze them so you can "hold it" until you reach the toilet. They also give you control over flatulence (gas). Bearing down with the abdominal muscles assists in bowel emptying.

### MUSCLE DYSFUNCTION:

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*Weakness:* Nerve and muscle changes from childbirth, treatment for cancer, surgery in the pelvis, conditions like diabetes, and aging can weaken muscles involved in controlling bowel movements. If the muscles are no longer strong enough to close the anus, *Fecal Incontinence* can develop. Its effects can vary from occasional staining of the underwear and lack of control over gas to uncontrolled emptying of the bowels.

*Muscle Spasm:* Pain from pelvic disorders such as chronic infections, poorly healing scars such as episiotomies, and irritable bowel syndrome can cause the muscles to spasm and get too tight. The muscles may not relax completely or in the right sequence (coordination) to let the feces pass out of the body in a timely manner. This is one cause of *Constipation*. A person has constipation if bowel movements occur two times or less a week, if there is a feeling of incomplete emptying, if one always has to strain, or if stools are small and hard.