

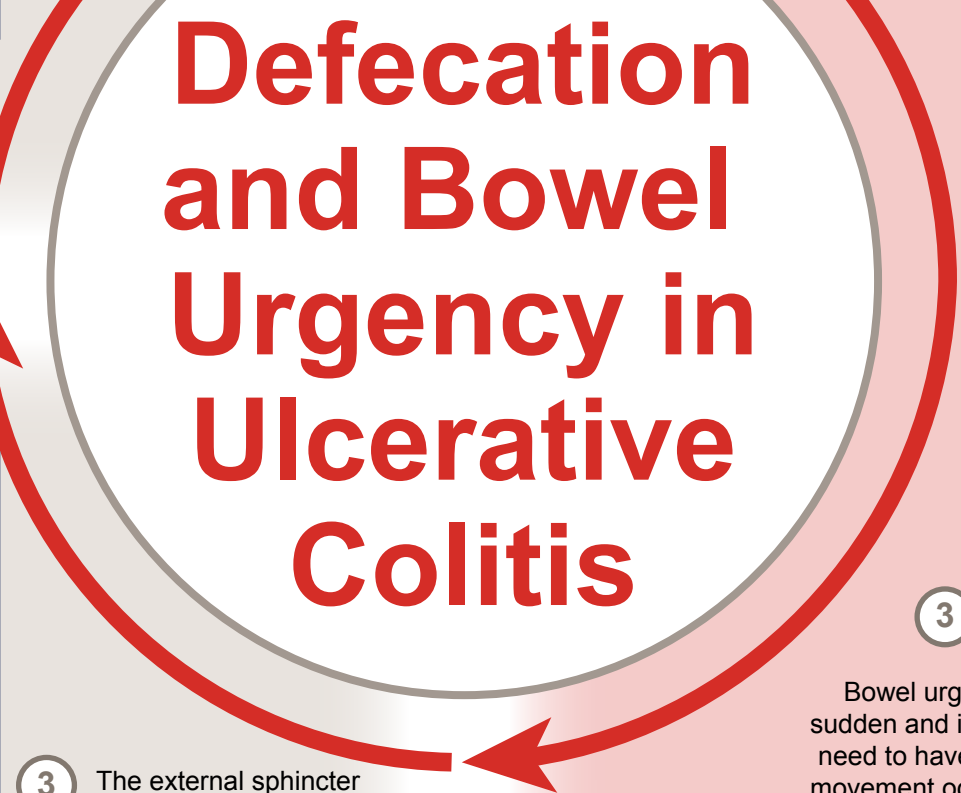
# Basal Phase

# Pre-Expulsive/Expulsive Phase

Chronic inflammation can lead to submucosal fibrosis

Start

- ③ The external sphincter exhibits a closing reflex that shuts the anal canal
- ④ Return to basal phase



① Loose stools (diarrhea) accumulate in the rectum, and bowel urgency occurs

② **Acute inflammation**  
Rectal hypersensitivity leads to increased perception of distension and increased contractile spasms of the rectum

② **Chronic inflammation**  
The rectum undergoes physical changes, including increased stiffness and narrowing  
*Anal sphincter shows signs of fatigability*

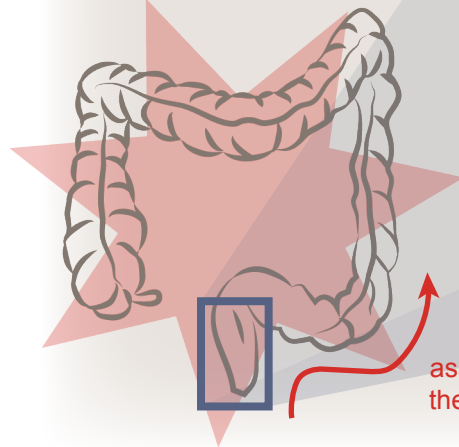
③ Bowel urgency, a sudden and immediate need to have a bowel movement occurs, and defecation cannot be deferred.

# Termination



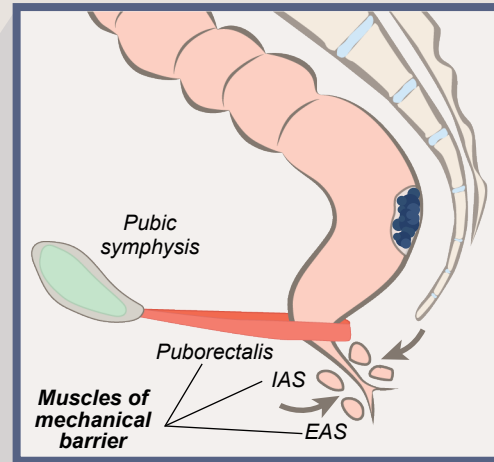
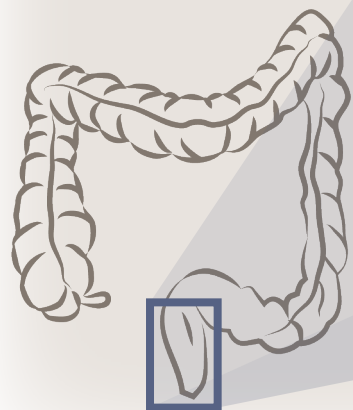
EAS: External anal sphincter; IAS: Internal anal sphincter; UC: Ulcerative colitis  
 A. Maqbool, Editor(s): Benjamin Caballero, Encyclopedia of Human Nutrition (Third Edition), Academic Press. 2013; 378-396  
 Somnath Palit; Peter J. Lunniss; S. Mark Scott Dig Dis Sci. 2012; 57:1445-1464  
 Drewes AM et al. Inflamm Bowel Dis. 2006;12:294-303  
 Rao SS et al. Gastroenterology. 1987;93:1270-1275

Colon motor function is impaired



① Semi-voluntary control (cued by the sensation of complete emptying) combines with involuntary contraction of the sphincter and pelvic floor

② Rectal pressure no longer exceeds anal pressure



**Acute inflammation** associated with UC starts from the rectum and evolves toward the colon

