

Chronic Constipation

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Chronic Constipation

- Prevalence of 15%
- More common in women
- Increases with age

- Previously diagnosis was based solely on stool frequency
 - Less than 3 bowel actions per week








- Rome IV criteria (2016)
 - CC is seen as a multi-symptom complex

Rome IV criteria

- 2 or more of the following (present in last 3 months)
- Symptom onset at least 6 months prior to diagnosis
 1. Straining during >25% of defecations
 2. Lumpy or hard stools in >25%
 3. Sensation of incomplete evacuation in >25%
 4. Sensation of anorectal obstruction in >25%
 5. Manual manoeuvres (digitation) in >25%
 6. Less than 3 spontaneous bowel movements per week
- Loose stools should be rarely present without laxatives
- Rome IV criteria for IBS should not be met

Clinical assessment

- Detailed history and examination
- Lifestyle, diet and physical activity
- Defining defecation:
 - Stool diary: address under reporting
 - Bristol chart: correlates with transit

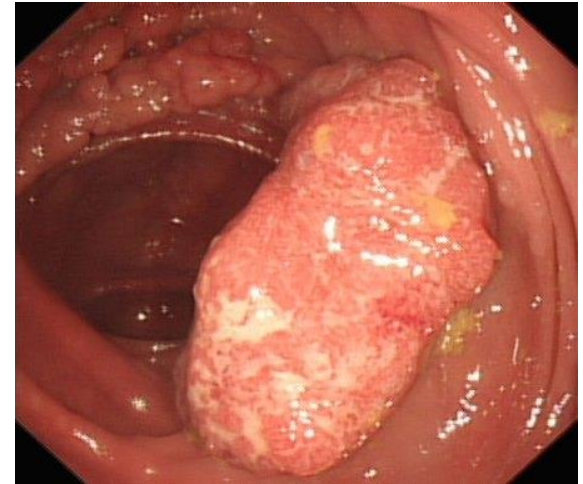
Bristol stool chart	
	Type 1 Separate hard lumps, like nuts (hard to pass)
	Type 2 Sausage-shaped, but lumpy
	Type 3 Sausage-shaped, but with cracks on surface
	Type 4 Sausage or snake like, smooth and soft
	Type 5 Soft blobs with clear-cut edges (easy to pass)
	Type 6 Fluffy pieces with ragged edges, mushy
	Type 7 Watery, no solid pieces (entirely liquid)

- Don't avoid asking about embarrassing symptoms:
 - Digitation
 - Splinting of the perineum and vaginal vault
 - Changing posture during defecation

Clinical assessment

Red flags

- New onset constipation over the age of 50
- Rectal bleeding
- LOW
- Family history of CRC or IBD
- Anaemia, abdominal or rectal mass
- These patients need further workup
- Colonoscopy



Clinical assessment

Think of 2° causes of chronic constipation

- Iatrogenic
 - Medication
 - Diet/lifestyle
- Metabolic
 - Diabetes
 - Hypothyroidism
 - Hypercalcaemia
- Psychological
 - Depression
- Structural
 - Stricture
 - Fissure
 - Rectal prolapse
 - Rectocele
- Neurologic
 - Spinal cord injury
 - Parkinson's disease
 - CVA

Further investigations

If clinically indicated

- TSH
 - FBC
 - Calcium
 - Glucose
-
- If no alarm features and no 2° cause suspected
 - Further work-up not routinely recommended
 - Yield of endoscopy, radiology & bloods is low

Lifestyle

- Increase fluid intake
- Increase physical activity (especially in the elderly)
- Increase dietary fibre (up to 30g/day)
 - Difficult to achieve with just upping fruit/vegetables
 - Add a fibre supplement in water or sprinkled on food



- Prunes work
 - RCT vs. Psyllium
 - Significantly more spontaneous BA




Attaluri A et al. Alimentary Pharmacology and Therapeutics. 2011;33:822-828

Lifestyle

- Try to defecate within 2 hours of waking up
- After breakfast
- Colon motility is strongest \pm 30 minutes after a meal
 - Facilitated by gastro-colic and duodeno-colic reflexes
- Establish a routine (same time, same place)
- Heed 'Natures call' immediately
 - The defecation reflex (the urge to defecate) slows after a few minutes and may remain quiet for hours
- No more than 15 minutes on the toilet

Bulking agents

- Ispagula husk (Fybogel)
 - Sterculia derivatives (Normacol)
 - Methycellulose (Metamucil)
- 
- Mechanism of action:
 - Retains fluid (drink it with lots of water)
 - Increases biomass which stimulates motility
 - Safe and cheap and effective
 - Can cause cramps and bloating (avoid in IBS-C)

Osmotic laxatives

- Poorly absorbable sugars which draw water into lumen
 - Lactulose (Duphalac) and Sorbitol
 - Safe and relatively cheap
- Saline laxatives: Epsom salts, Milk of Magnesia
 - Prolonged use can cause hypermagnesaemia
- Polyethylene Glycol (Go-lytely, Kleen-prep)
 - High doses are used for bowel prep
 - Short course, low dose as treatment for CIC (Movicol)
 - Not for chronic use due to electrolyte disturbances

Stimulant laxatives

- Senna (Soflax, Sennokot, Brooklax)
- Bisocodyl (Dulcolax)
 - Also available as suppositories
- Short courses
 - Difficult to discontinue
- Sodium picosulphate (Picoprep, Picolax)
 - Usually for colonoscopy bowel prep
 - Only short courses for severe constipation
 - Not for chronic use

Stool softeners

- Glycerin suppositories
- Liquid paraffin still widely used
 - Should be avoided
 - Causes anal seepage and anal irritation
 - Possibly fat soluble vitamin malabsorption
- Patients are often on a cocktail of these meds
- If still refractory and impacting on QOL
- Further workup

3 types of idiopathic constipation

Normal transit

Slow transit

Evacuation disorders

Functional outlet obstruction



Dyssynergic defecation

Normal transit

AKA functional constipation

Also seen in IBS-C

Where stool frequency & transit is often normal

- But patients subjectively think they are constipated
- Might be a perceived difficulty with evacuation
- They may perceive stools to be abnormally hard
- Misconception regarding normal bowel habits
 - 60% believe that having a daily BA is inadequate
- Psychosocial distress
 - May need to see a psychologist or dietician
 - Better treated with Anti-depressants than laxatives

3 types of idiopathic constipation

Normal transit

Slow transit

Evacuation disorders

Functional outlet obstruction



Dyssynergic defecation

Slow transit (STC)

- In isolation STC is the rarest form of CIC
- Also called colonic inertia
- A motility disorder
- Characterized by markedly increased colon transit time
- Often woman
- Abdominal distension is common
- Stool frequency much less than in NTC
- May pass stool once a week or even less
- The cause of STC remains uncertain
- No diagnostic features to determine aetiology

3 types of idiopathic constipation

Normal transit

Slow transit

Evacuation disorders

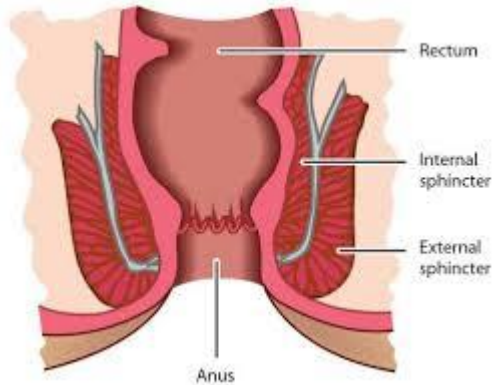
Functional outlet obstruction



Now called Dyssynergic defecation

Normal evacuation

- External anal Sphincter (EAS) and puborectalis are skeletal muscles under voluntary control

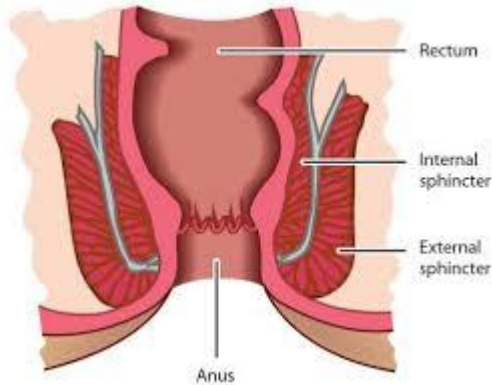


Forms a sling
Ano-rectal angle

- Stool enters the rectum
- Causes distension
- Triggers the defecatory reflex
- Which is the urge to defecate

Normal evacuation

- The act of defecation is voluntary
- External anal Sphincter (EAS) and puborectalis are key



- Once the decision is made to defecate they relax:
 1. Resulting in in a straightening of the anorectal angle
 2. Descent of the pelvic floor
 3. Opening of the anal canal

Dyssynergic defecation

- Incoordination of abdominal, rectal, anal and pelvic floor muscles during defecation
- Perineum has 'forgotten' how to defecate normally
- How?
 - Failure of External Anal Sphincter to relax
 - Paradoxical contraction of External Anal Sphincter
 - Failure of Puborectalis to relax
 - Inadequate Rectal propulsion force

Dysynergic defecation

Suggested by:

- Excessive straining
 - Digitation
 - Splinting of perineum or vaginal vault
 - Difficulty passing soft stools
 - May not respond to even high dose laxatives
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- Mostly acquired, behavioural disorder
 - Ignoring the urge
 - Straining
 - Psychological issues and stress

Dyssynergic defecation

- Seen in 40% of cases of chronic constipation
- Often have associated slow colon transit
 - Slow transit can be 2° to the outlet obstruction
 - May resolve with treatment of the outlet disorder
- Outlet issues must be looked for and treated first
- Laxatives will not be effective

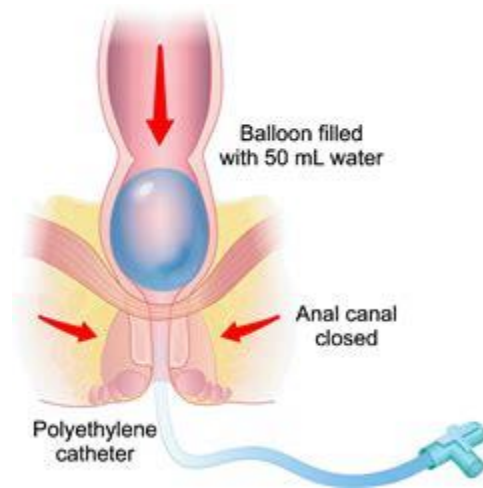
AGA guidelines *Gastroenterology* 2013;144:211-217

Chronic Idiopathic Constipation

- Tools available to assess constipation
 1. Balloon expulsion test
 2. Ano-rectal manometry
 3. Colonic Transit study

Balloon expulsion test

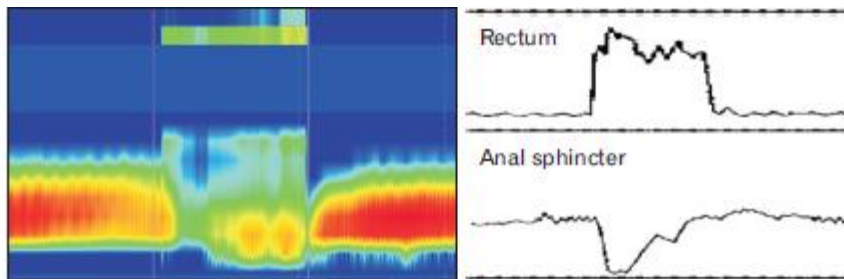
- 50 mls of water inserted into balloon in the rectum
- Ideally sit on a commode
- Normal if patient expels it within 1 minute
- Abnormal if more than 2 minutes
- This suggests an outlet problem



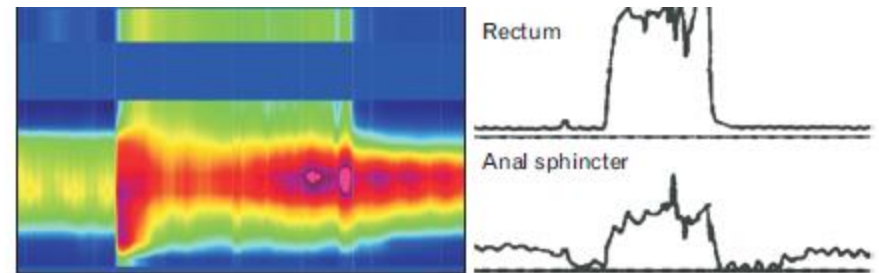
High resolution Anal Manometry

Can measure:

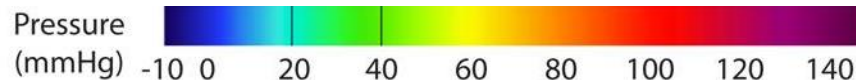
- Resting and squeezing anal sphincter pressures
- Rectal sensation
- Force of rectal contraction
- Evaluate dyssynergic defecation



Normal
Pressure drops on bearing down



Paradoxical sphincter contraction
Anal pressure increases

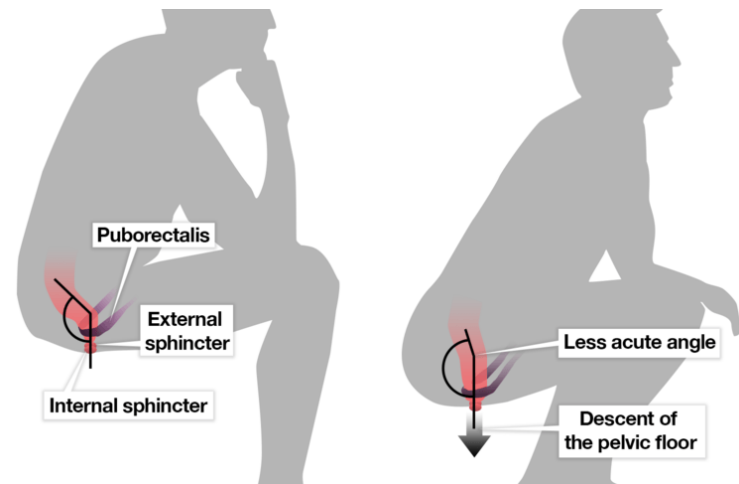


Biofeedback

- The best treatment for Dyssynergic defecation
 - Multiple methods and protocols
 - All involve re-learning how to defecate normally
 - Voluntary relaxation of the EAS
 - Voluntary relaxation of pubo-rectalis
1. Manometry: by watching the screen patients can learn how to relax muscles
 2. Physiotherapy: pelvic floor biofeedback

Besides Biofeedback

- Suppositories (Bisacodyl)
- Placing a footstool in front of the toilet
- Lean forward
- Simulates squatting
 - Reduces anorectal angle
 - Aids descent of pelvic floor




- This is how humans have evolved to defecate
- Flushing toilet only became popular 300 years ago
- Unnatural position

Defecography

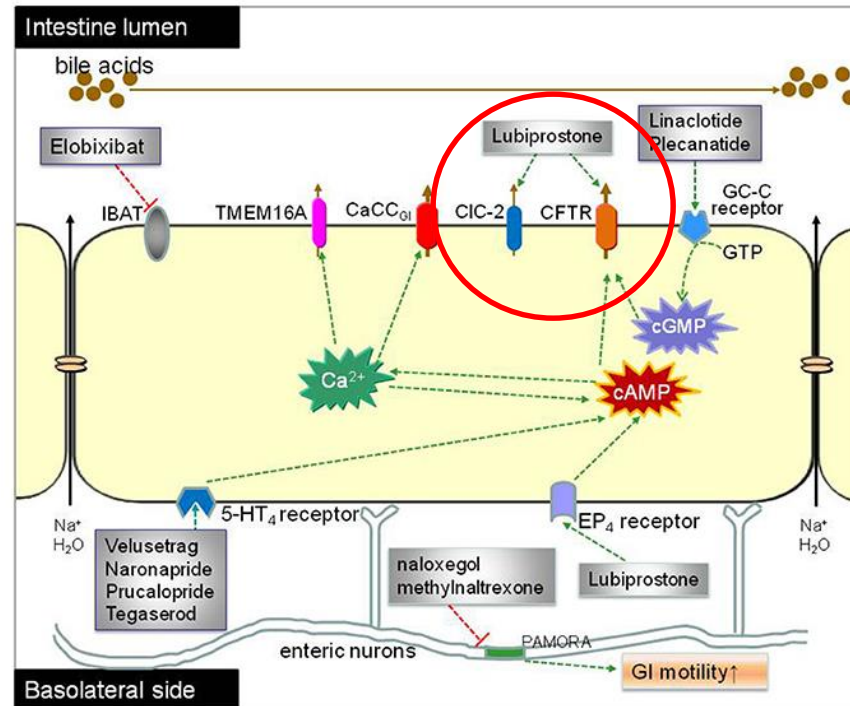
- If Balloon Expulsion or manometry is inconclusive
- Can do defecography
- Obtain real time images at various stages of defecation
 1. MRI
 2. Barium
- Can confirm dyssynergic defecation
- Will also identify mechanical issues
- Rectocoeles
- Rectal prolapse

Colon transit study

If no dyssynergic defecation

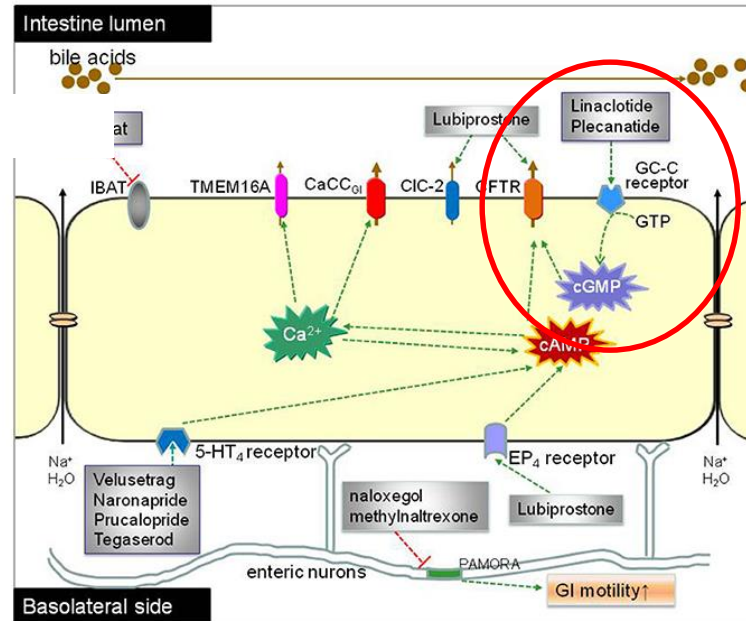
- 24 radio-opaque markers ingested
 - AXR on day 6: >20% retention is abnormal
 - No markers: normal transit constipation
 - Throughout colon: slow transit
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- Severe refractory STC may require surgery
 - Colectomy with ileo-rectal anastomosis
 - Contraindicated in NTC or if an outlet obstruction
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- Available drugs in South Africa been around for years
 - Any new agents for STC?

Lubiprostone



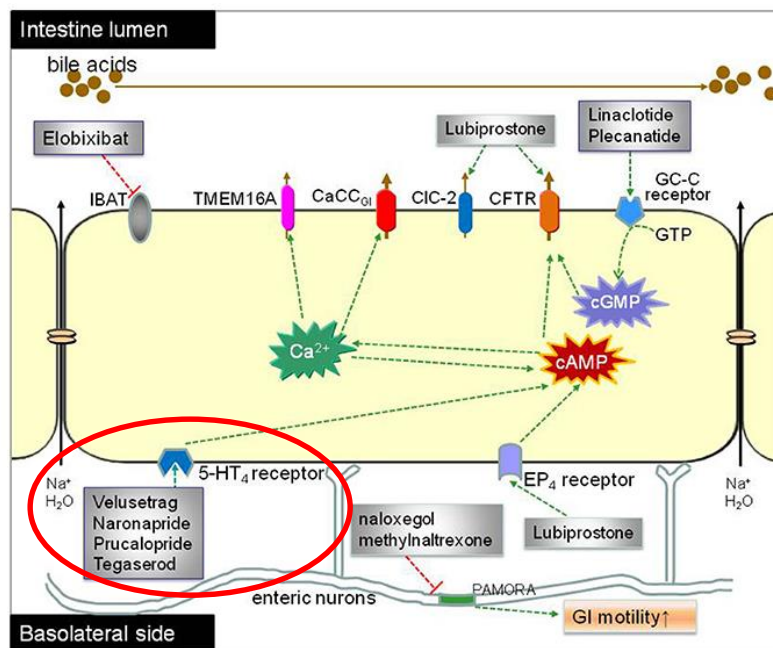
- Activates CFTR and CIC-2 chloride channels
- Increases fluid secretion into lumen
- Increases transit

Linaclootide and Plecanatide



- Activate Guanylate cyclase-C receptor
- Causes elevation of intracellular cGMP levels
- Opens the CFTR chloride channel
- Stimulates intestinal fluid secretion and transit

Prucalopride



- A highly selective agonist of 5-HT₄ receptors
- Increases colonic motility
- Normalises stool frequency

Take home messages

- Constipation means different things to different people
- Listen to your patients to find out what the issues are
- Look for red flags and exclude secondary causes
- No need for extensive work up
- Lifestyle modification 1st
- Try to use laxatives sparingly and only when required
- Further workup if refractory and impacting on QOL
- Dyssynergic defecation needs to be ruled out first
- Biofeedback is key to treating this
- New drugs on the horizon
- STC refractory to all therapies may require surgery