Constipation – When it won't come out

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Definition

- Difficult, infrequent bowel movements
- 3 or fewer times per week
- Straining
- Feeling of incomplete evacuation
- Need for digital assistance
- Bloating
- Hard and lumpy stools

Diaz S, Bittar K, Hashmi MF, et al. Constipation. [Updated 2023 Nov 12]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2025 Jan
Mechanisms, Evaluation, and Management of Chronic Constipation. Bharucha, Adil E. et al. Gastroenterology, Volume 158, Issue 5, 1232 - 1249.e3

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Subtypes

- Functional Constipation

– infrequent and difficult BMs. No structural or organic cause

- Fecal incontinence

- Chronic idiopathic Constipation

- No known underlying cause
- Chronic in nature

- Secondary Constipation

- Medications
- Medical disorders
- Dietary issues
- Structural causes

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Etiology

- Primary or Idiopathic

- Normal transit constipation
- Slow transit constipation – infrequent BMs, low urge, straining, decreased colonic activity
- Pelvic floor dysfunction

- Dietary causes – fiber, water, Coffee, ETOH
- Anatomic causes – anal stenosis/atresia, anal fissure, thrombosed hemorrhoids, stricture(intestinal/anal), tumors
- Abnormal musculature – muscular dystrophy, Down syndrome, EDS
- Neurologic causes – CIPO, Hirschsprung's, Spina Bifida, Parkinson's, stroke, MS

Camacho, M., Macleod, A.D., Maple-Grødem, J. et al. Early constipation predicts faster dementia onset in Parkinson's disease. npj Parkinsons Dis. 7, 45 (2021). https://doi.org/10.1038/s41531-021-00191-w

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Etiology

- Drugs – GLP1s, anticholinergics, antidepressants, iron, Bismuth, CCBs, narcotics, Vitamin D intoxication
- Metabolic and Endocrine causes – hypokalemia, hypercalcemia, hypothyroidism, DM
- Miscellaneous – Celiac disease, Cow milk protein allergy, cystic fibrosis, IBD, Scleroderma

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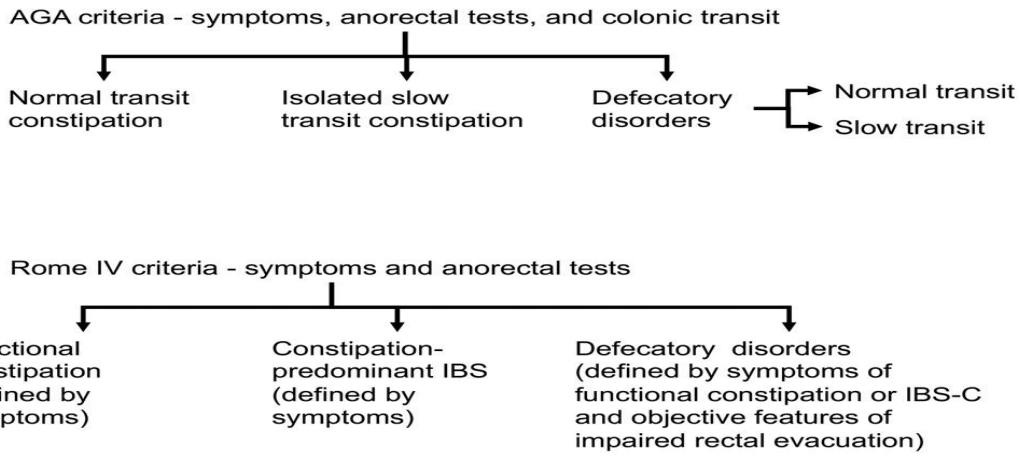
Constipation



1.Mechanisms, Evaluation, and Management of Chronic Constipation Bharucha, Adil E. et al. Gastroenterology, Volume 158, Issue 5, 1232 - 1249.e3

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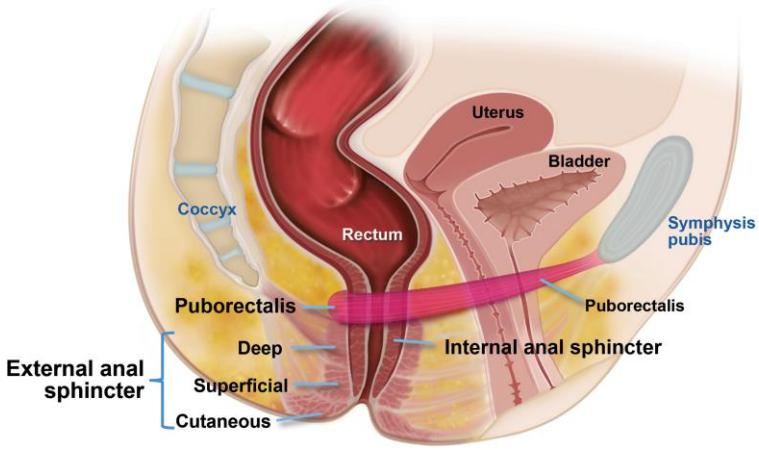
Pelvic floor dysfunction



Anorectal Disorders Rao, Satish S.C. et al. Gastroenterology, Volume 150, Issue 6, 1430 - 1442.e4

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Pelvic floor dysfunction

- Stool -> rectum (by HAPCs) -> rectal distension -> induces reflex relaxation of the IAS -> perceived as a sensation of fullness ->defecate.
- If defecation is inconvenient – desire to defecate -> voluntary contraction of the external sphincter and the puborectalis muscle ->the sensation wanes -> urgency wanes -> rectum accommodates to hold more stool.

Grimes WR, Stratton M. Pelvic Floor Dysfunction. [Updated 2023 Jun 26]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2025 Jan-. Available from: https://www.ncbi.nlm.nih.gov/books/NBK559246/

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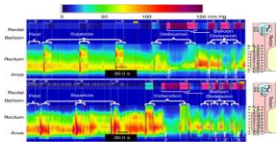
Anorectal Manometry

- Records the contractility and tone of the IAS and EAS
- Rectal sensitivity and compliance
- Reflex relaxation of the IAS in response to rectal distension
- Dynamic changes of rectal and anal pressures during simulated evacuation



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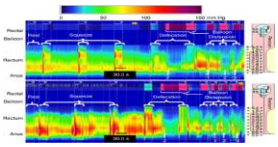
Historical perspective

- First report of ARM was in 1935 by Drs. Denny Brown and Graeme Robertson
- ARM was introduced in late 1970s
- Clinical use was much later to investigate FI and DD
- HR-ARM 2015



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Indications for ARM and BET

- Diagnose DD in patients with chronic constipation and chronic anorectal pain(levator ani syndrome)
- Identify anal weakness and rectal sensory disturbances in FI
- Hirschsprung's, megarectum – checking the reflex relaxation of the IAS in response to rectal distension
- Direct pelvic floor biofeedback therapy appropriately

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Anorectal Manometry

Assesses continence and defecatory mechanisms

1. Resting anal pressures – attributed to IAS function
2. Squeeze pressure: the strength and duration of voluntary EAS and puborectalis contraction
3. Presence of IAS inhibitory reflex
4. Threshold volume of rectal distension needed to elicit the first sensation of distension, urgency to defecate and maximum tolerable volume
5. Whether attempted defecation is accompanied by increased intraabdominal pressure and relaxation of pelvic floor muscles(normal) or by paradoxical contraction
6. Balloon expulsion test

Anorectal Disorders Rao, Satish S.C. et al. Gastroenterology, Volume 150, Issue 6, 1430 - 1442.e4

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Defecatory Disorders

- Paradoxical contraction or inadequate relaxation of pelvic floor muscles during attempted defecation.
- A/w straining, feeling of incomplete evacuation, digital facilitation

Anorectal Disorders Rao, Satish S.C. et al. Gastroenterology, Volume 150, Issue 6, 1430 - 1442.e4

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Investigations

- Anorectal manometry
- Balloon expulsion test
- Defecography – rectocele, enterocele, intussusception, rectal prolapse, megarectum; also assesses functional parameters
- Sitz marker studies

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Treatment

- Dietary and Lifestyle
- Kiwis
- Bulk forming agents
- Stimulant laxatives – minimize
- Osmotic agents – MiraLAX, MOM
- Linzess, Amitiza, Motegrity, Trulance, Ibsrela
- Movantik
- Off label – Colchicine, Pyridostigmine
- Acupuncture

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Gearry R, Fukudo S, Barbara G, Kuhn-Sherlock B, Ansell J, Blatchford P, Eady S, Wallace A, Butts C, Cremon C, Barbaro MR, Pagano I, Okawa Y, Muratubaki T, Okamoto T, Fuda M, Endo Y, Kano M, Kanazawa M, Nakaya N, Nakaya K, Drummond L. Consumption of 2 Green Kiwifruits Daily Improves Constipation and Abdominal Comfort-Results of an International Multicenter Randomized Controlled Trial. Am J Gastroenterol. 2023 Jun 1;118(6):1058-1068. doi: 10.14309/ajg.0000000000002124. Epub 2022 Dec 20. PMID: 36537785; PMCID: PMC10226473.

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Treatment

- Pelvic floor training – biofeedback therapy
  - Patient education
  - Enhance push effort
  - Train to relax pelvic floor muscles
  - Practice simulated defecation

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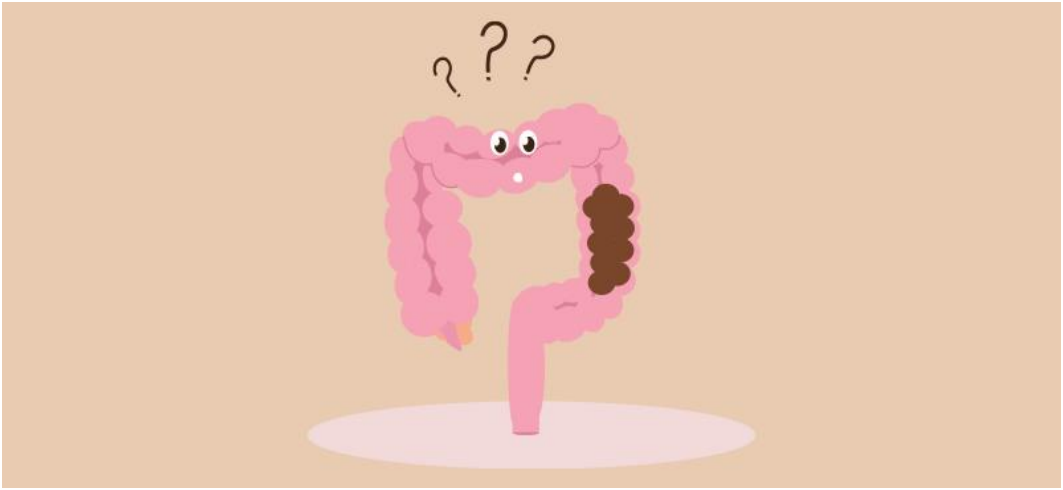
Questions



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Common causes of fecal incontinence

- Rectal hyposensitivity
- Rectal hypersensitivity
- CNS disorders – Dementia, Stroke, Brain tumors, MS, Spinal Cord lesions
- Psychiatric disorders, Behavioral disorders
- Bowel disturbances – IBS, post cholecystectomy diarrhea, Constipation and fecal retention with overflow.

***Anorectal Disorders* Rao, Satish S.C. et al. Gastroenterology, Volume 150, Issue 6, 1430 - 1442.e4**

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Fecal incontinence

- Recurrent uncontrolled passage of fecal material x 3 months
- Prevalence – 7 to 15% in community, 50 to 70% in nursing homes
- Risk factors – smoking, obesity, h/o stress urinary incontinence, anal sphincter trauma(obstetrical injury – 3rd and 4th degree lacerations, instrumentation), prior surgery – fistula, fissures, hemorrhoidectomy, anorectal carcinoma, disease burden

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