Constipation:
A Multidisciplinary Approach

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We have not used artificial intelligence in the development of this presentation.

Objectives

- At the conclusion of this activity, learners will be able to:
  - Explain epidemiology and pathogenesis of functional constipation
  - Identify relevant treatment strategies to manage this condition including dietary, medications and behavioral modification
  - Apply this information to the treatment of children in general pediatric practice
  - Identify indications to refer for subspecialty treatment and possible motility evaluation

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Functional Constipation

- The most common cause of constipation in pediatrics
- Two peaks: toilet training and the start of school
- Triggering events – trauma, illness, or lack of “safe bathrooms”
- “Too busy to sit”
- Look for the signs

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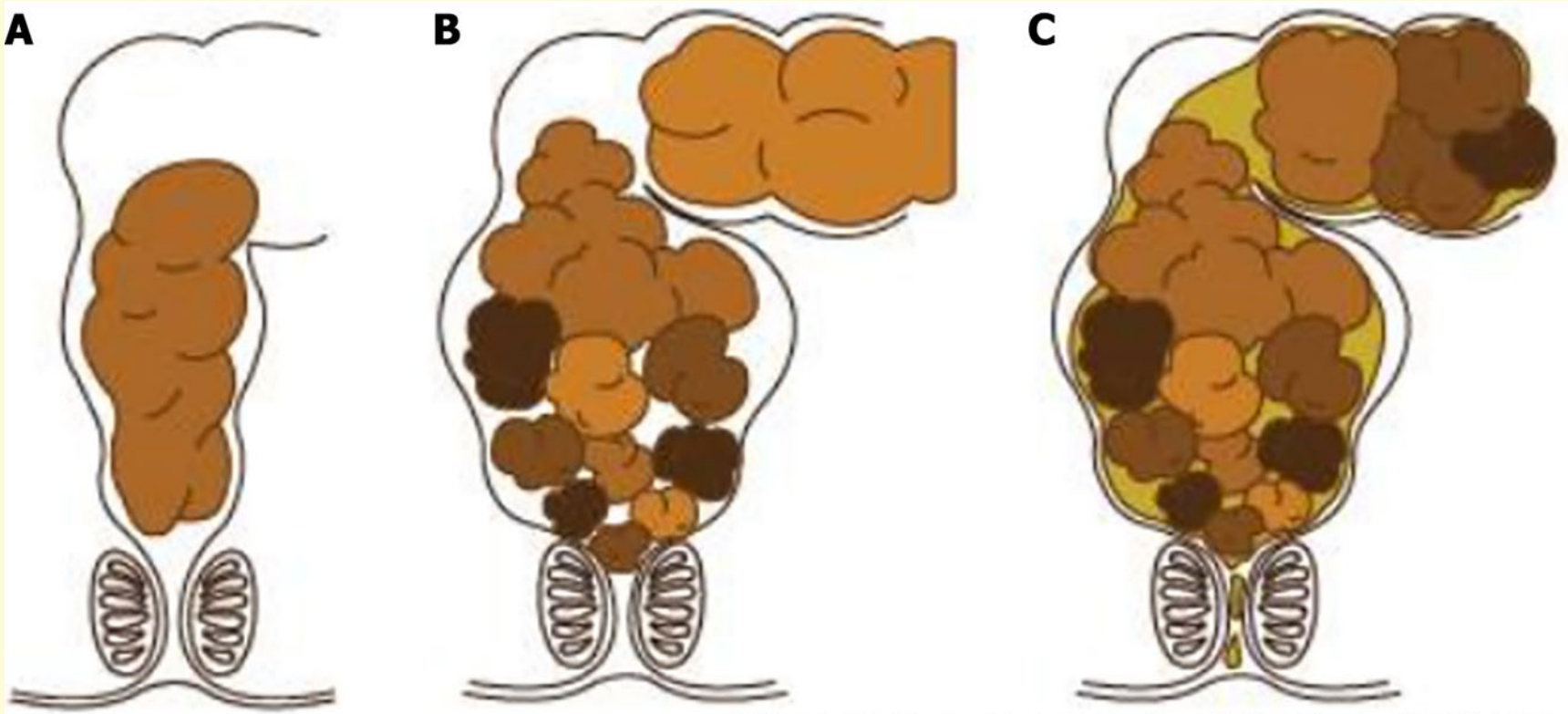
“The BIG one” and encopresis



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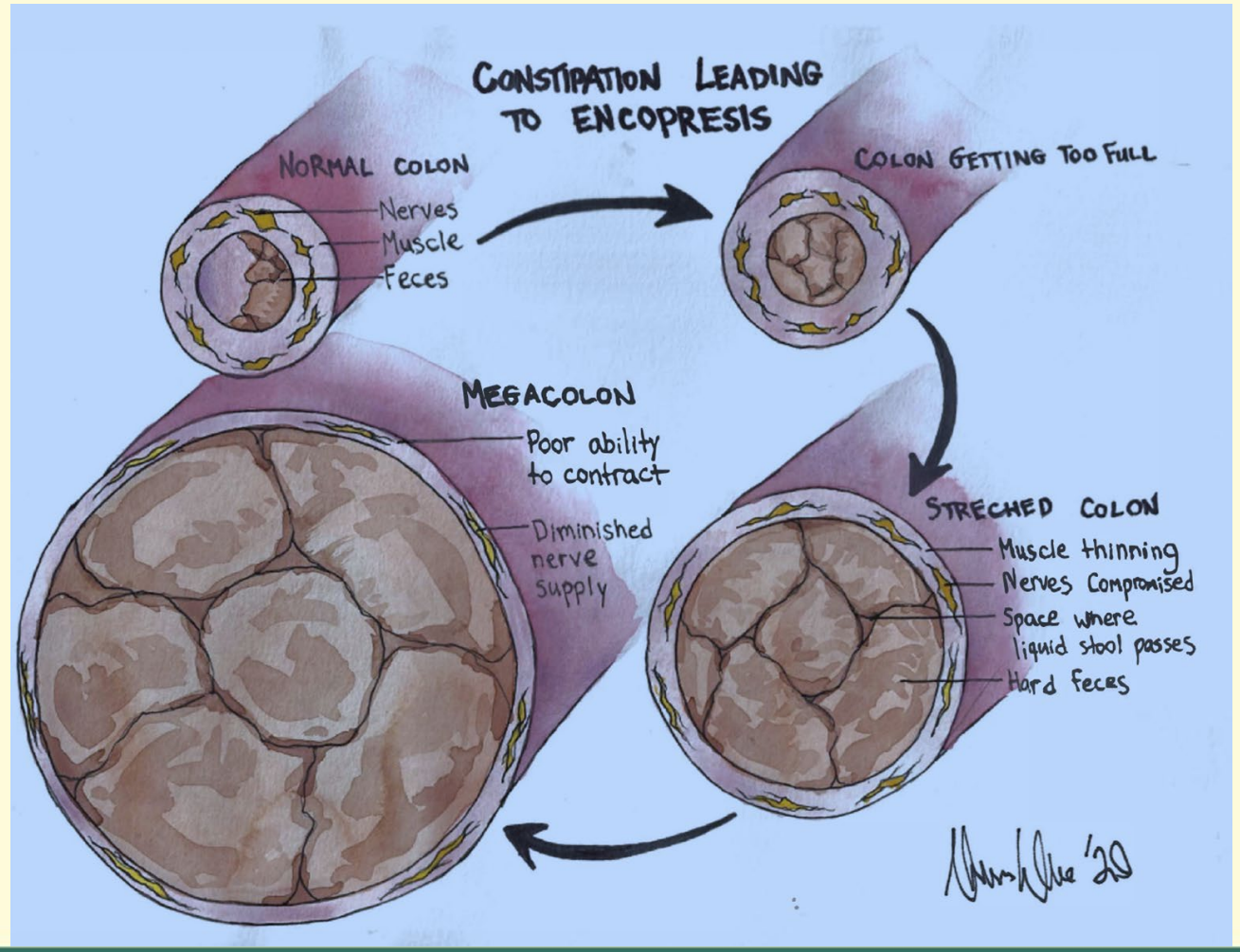
They just can't feel it!



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Rome IV Criteria– Functional Constipation

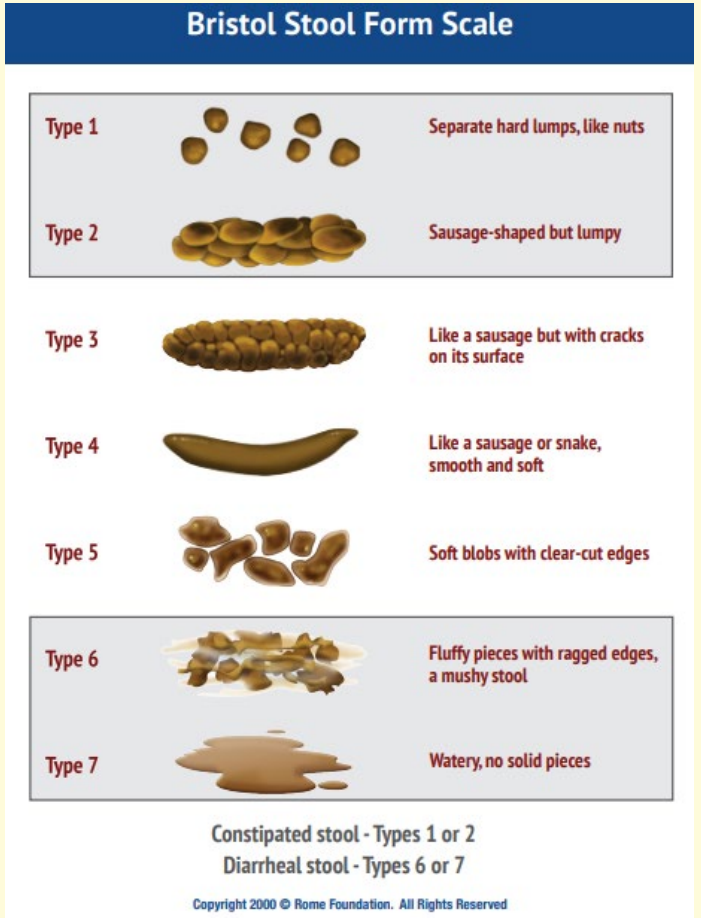
1. Must include **two or more** of the following:**
2. Straining during more than ¼ (25%) of defecations
3. Lumpy or hard stools (Bristol Stool Form Scale 1-2) more than ¼ (25%) of defecations
4. Sensation of incomplete evacuation more than ¼ (25%) of defecations
5. Sensation of anorectal obstruction/blockage more than ¼ (25%) of defecations
6. Manual maneuvers to facilitate more than ¼ (25%) of defecations (e.g., digital evacuation, support of the pelvic floor)
7. Fewer than three spontaneous bowel movements per week
8. Loose stools are rarely present without the use of laxatives
9. Insufficient criteria for irritable bowel syndrome

¡ *Criteria fulfilled for the last 3 months with symptom onset at least 6 months prior to diagnosis

**For research studies, patients meeting criteria for opioid-induced constipation (OIC) should not be given a

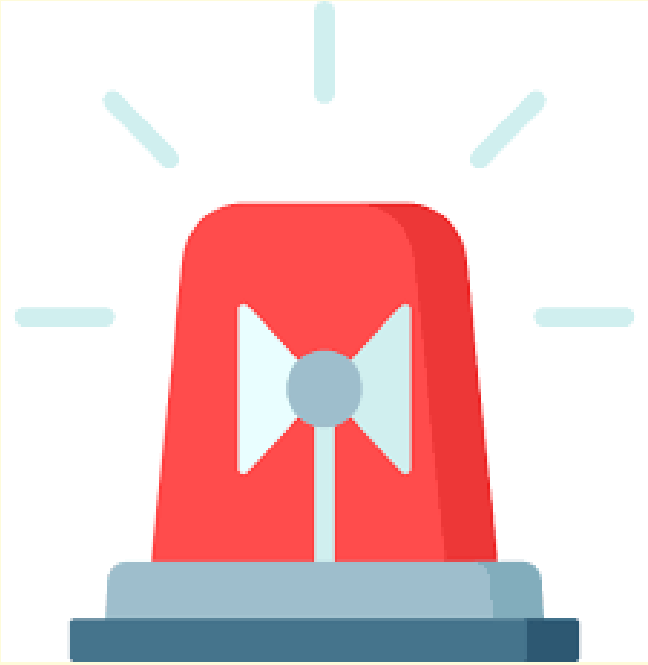
diagnosis of FC because it is difficult to distinguish between opioid side effects and other causes of constipation.

However, clinicians recognize that these two conditions may overlap.



Alarm signs

- Constipation since infancy
- Blood mixed within stools
- Growth failure
- History of anatomic malformation
- Sacral abnormalities including tufting



Utility of Abdominal X Ray for Diagnosis

- NASPGHAN and Rome IV criteria both state no utility in X-Ray
- Often high variability in interobserver reliability in interpretation
- Often over or under diagnosis of other causes of abdominal pain
- Exceptions made for patients with unreliable history or unable to perform DRE
- One study cited 54.8% of PCPs using them as routine evaluation
- Most cited reason was to confirm diagnosis
- **Studies show DRE has more sensitivity in diagnosing impaction and history/Rome Criteria has more than sensitivity with constipation**

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Five Things Physicians and Patients Should Question

2

Avoid referral to pediatric gastroenterology for children with functional constipation without attempting standard, guideline-based laxative strategies if alarming or "red flag" signs are absent.

Polyethylene glycol (PEG) is a safe, evidence-based therapy for children with functional constipation. Lactulose is also an acceptable first-line alternative laxative. Maintenance treatment with one of these osmotic laxatives should continue for at least 2 months. All symptoms of constipation should be resolved for at least 1 month before discontinuation of treatment. Treatment should be decreased gradually. Alarming or "red flag" signs that should alert the medical provider to a possible underlying condition responsible for the constipation include items such as: constipation starting in infants <1 month of age, delayed passage of meconium, severe abdominal distention, failure to thrive, and sacral abnormalities (see reference 1 for complete list).

Treatment Guidelines - JPGN, 2014

CLINICAL GUIDELINE

CME

Evaluation and Treatment of Functional Constipation in Infants and Children: Evidence-Based Recommendations From ESPGHAN and NASPGHAN

M.M. Tabbers, C. DiLorenzo, M.Y. Berger, C. Faure, M.W. Langendam, S. Nurko, A. Staiano, Y. Vandenplas, and M.A. Benninga

Medications

Osmotic laxatives - softeners

- Polyethylene glycol
- Magnesium
- Lactulose

- Linaclotide
- Amitiza

Stimulant laxatives - pushers

- Senna
  - Senna leaf extract
- Sodium docusate

- Suppositories
- enemas

How to mix polyethylene glycol

- Understand the “cap”
- 6-8 oz of clear liquid per cap
- Mix at room temperature, serve cold
- Empower the child to pick their beverage
- Juice, sports drinks, powdered drink mixes

Other recommendations

- Adequate fluid intake
- Age appropriate diet with fiber
- No use for routine use of pre or probiotics
- Physical activity

Cleanouts

- Palpable fecal masses or suspected severe fecal impaction
- At home or in hospital if needed
- High volume of osmotic laxatives
  - Up to 10 oz of magnesium citrate, twice or 10 caps of Miralax
- Clear liquid diet
- Goals for completion

Maintenance bowel regimen

- Fluid and fiber
- Osmotic laxatives
- Consider use of stimulant
- Behavioral modification

Toilet Posture - Knees High and Hips Open

Tools used to open the pelvic floor

- Deep breaths out of the mouth
- Haaaaa and SSSSSS

Structured toilet sits

- Good positioning
- Right times- 20 minutes after eating, first thing in the morning and when returning home from school
- No more than 5-10 minute at a time
- Focused and without distraction

Anticipatory Guidance – Prepare for Setbacks

- Symptoms wax and wane
- Setbacks happen – illness, medication changes, changes in routine
- Empower families to dial treatment up and down
- Repeat cleanouts
- Care team is available to help with resets

Refractory cases

- Reassess – Compliance vs Other Etiology
- When to refer to gastroenterology
- When to consider pediatric motility
- Other resources – psychology and pelvic floor physical therapy

In Conclusion

- Challenging problem
- Requires coordination of medications and behavioral modification
- Do not hesitate to refer if having challenges – refractory cases and additional attention is needed

Which of these is not a common time for functional constipation to present?

A. Starting School
B. Initiation of Solids
C. Birth
D. Potty Training

A 4 year old who just started school presents to your office with hard, infrequent stools every 2-3 days with abdominal pain that is relieved after stooling. Which of these is not an appropriate treatment course?

A. Miralax and dietary/behavioral changes
B. Miralax and Senna
C. Daily Probiotics
D. Lactulose and GI referral

Which of these medications is the most recently FDA approved medication for the treatment of functional constipation?

A. polyethylene glycol
B. lactulose
C. linaclotide
D. inulin

Action Items

- Don’t hesitate to try osmotic or stimulant laxatives
- Start constipation treatment plans with a cleanout
- Refer to GI or motility for additional resources

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References and additional reading (1-2 slides)

- Tabbers, M.M., et al. “Evaluation and treatment of functional constipation in infants and children.” *Journal of Pediatric Gastroenterology and Nutrition*, vol. 58, no. 2, 2014, pp. 258–274, https://doi.org/10.1097/mpg.0000000000000266.
- Drossman, Douglas A., et al. *Rome IV: Functional Gastrointestinal Disorders: Disorders of Gut-Brain Interaction*. Rome Foundation, 2016.
- Duhamel, Thomas R. *The Ins and Outs of Poop: A Guide to Treating Childhood Constipation: Includes a Six-Step Program for Kids Who Withhold or Soil*. Maret Publishing, 2018.

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