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The following slides were presented during the *Nancy and Bill Norton Education Series* Event at the University of Michigan Food for Life Kitchen. To view this presentation and the all videos available during this program, please visit <http://bit.ly/NES2020MI>.

1



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Constipation **Symptoms, evaluation, causes, and treatment**

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2

- **Disclosures**

- Consultant- Alnylam



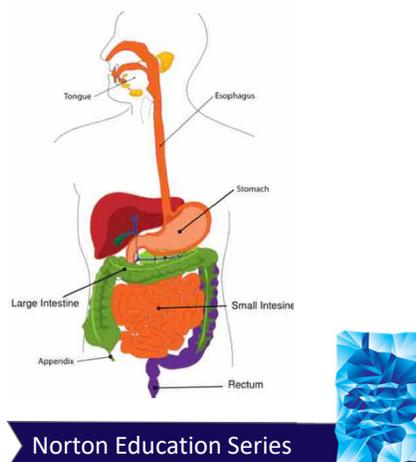
- **Aims**

- Discuss prevalence of constipation
- Review causes, symptoms, evaluation, and treatment of constipation
- Discuss general constipation tips and tricks



- **How common is constipation?**

- **Estimated prevalence around 16% in the general population**
 - range of 1-27% reported in studies
 - Lack of consistency between studies regarding constipation criteria/definition
- **Up to 30% of children**
 - 3-5% of all pediatrician visits
- **24-50% of “older adults”**
- **Increased occurrence**
 - Traveling
 - Change in diet or activity
 - Stress
 - Hormone changes



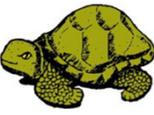
Pinto Sanchez MJ, Bercik P. Can J Gastroenterol. 2011 Oct; 25(Suppl B): 11B-15B

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5

- **Causes of Constipation**

- **Subcategories**

- Normal Transit
 - Stool lacks water or bulk
- Slow Transit
 - Colon lacks squeeze strength to push stool through
 - Can be associated with connective tissue or neuromuscular disorders
- Evacuation Disorder
 - “The exit is blocked”
 - Pelvic floor muscle disorder (dyssynergic defecation)
 - Structural (rectal prolapse, rectocele, etc.)
 - Associated with pelvic surgery/vaginal deliveries, chronic bowel symptoms

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6

- **Constipation Diagnoses**

- Chronic idiopathic constipation
- Irritable Bowel Syndrome with constipation (IBS-C)
 - Must have abdominal pain as a symptom
- Functional constipation
- Opiate-induced constipation
 - Must be associated with opiate use

....for today's talk, we are going to talk generally about constipation



- **Symptoms of constipation**

Symptom
Hard stools
Infrequent stools
Sense of incomplete evacuation
Abdominal pain/cramping
Bloating
Diarrhea (overflow diarrhea)
Fecal incontinence
Straining
Painful passage of stool

Bristol Stool Scale	
Type 1	Separate hard lumps
Type 2	Sausage-shaped, but lumpy
Type 3	Sausage-shaped, cracks on the surface
Type 4	Sausage or snake-shaped, smooth and soft
Type 5	Soft blobs with clear-cut edges
Type 6	Fluffy pieces with ragged edges, mushy
Type 7	Watery, no solid pieces. Entirely liquid



- **Evaluation**

- **"Red flag symptoms"**

- Weight loss, rectal bleeding, new onset constipation → **Colonoscopy**



- **Physical exam**

- Abdominal exam, rectal exam, joint hypermobility evaluation, thyroid evaluation



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9

- **Evaluation**

- **Testing**

- Blood tests
 - CBC (anemia), CMP (electrolyte abnormalities), TSH (thyroid dysfunction)
- Motility/pelvic floor testing
 - Anorectal manometry (evaluates pelvic floor muscles)
 - Defecography (evaluates for pelvic floor structural issues)
 - Sitz marker test, SmartPill, or scintigraphy (evaluates colon transit time)
 - Colonic manometry (evaluates colon squeezing)



- **Medications**

- Blood pressure (beta-blockers, calcium-channel blockers, diuretics)
- Pain medications/muscle relaxants
- Anti-spasmodics (hyoscyamine, dicyclomine)
- Supplements (iron, aluminum, calcium)
- Nausea medications (ondansetron)



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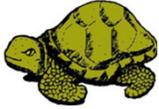


10

• Treatment



- Increase water content
 - Increase water and fiber in diet
 - Osmotic laxatives "pull"/keep water in the colon (magnesium, miralax)
 - Make the small bowel to secrete more water (lubiprostone, linaclotide, plecanatide)

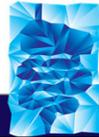


- Slow Transit
 - Exercise
 - Prokinetics (make the colon squeeze)
 - Senna, bisacodyl, prucalopride, pyridostigmine



- Evacuation Disorder
 - Pelvic floor physical therapy with biofeedback therapy
 - Surgical management or pessary for rectocele, surgery for rectal prolapse

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11

• Treatment- Choosing treatment

• Dietary and lifestyle modifications

- Increase water intake (64+ oz per day)
- Increase fiber intake (25-30 g/day)
- Exercise
- Prunes or kiwi
- Unclear benefit of probiotics, prebiotics, and synbiotics
- Diet modifications for bloating/gas may help (i.e. low FODMAP diet)



• OTC pharmacologic therapies

- Bulking agents (psyllium, fiber supplements)
- Stool softeners (docusate sodium/ Colace)
- Osmotic laxatives (PEG 3350/miralax, magnesium, lactulose)
- Stimulants (senna, bisocodyl, castor oil, cascara, aloe)
- Enemas/suppositories



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12

- **Treatment- Choosing treatment**

- **Prescription pharmacologic therapies**

- Prosecretory agents (lubiprostone, linaclotide, plecanatide)
- Prokinetic agents (prucalopride, tegaserod, mestinon)



- **Pelvic floor physical therapy**

- Pelvic floor physical therapy with biofeedback therapy



- **Other/future therapies**

- Acupuncture
- Vibrating capsule (Vibrant Capsule)



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13

- **Multi-disciplinary approach to constipation management**

- Primary care
- Gastroenterology
- Registered dietitians
- GI Behavioral Health specialist
- Pelvic floor physical therapist
- Urogynecology
- Colorectal surgery
- GI physiology lab technicians
- GI nursing



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14

- **Complications/consequences of constipation**

- Hemorrhoids
- Anal fissures
- Diverticulosis
- Pelvic floor dyssynergia



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15

- **Tips**

- Be proactive at preventing constipation before it starts, particularly if constipation tends to occur while traveling, during the winter, during menstruation, etc.
- Allow yourself enough time to have a bowel movement
- It is normal to have the urge to have a bowel movement after meals (gastrocolic reflex)
 - Try to not ignore the urge to have a bowel movement.
- Try to avoid chronic/daily use of stimulant laxatives.
- Seek medical care if new constipation occurs, chronic constipation worsens, or “red flag” symptoms develop.
- Diet, activity, and hormones often change, and so can a bowel regimen.
 - It is ok to adjust the regimen based on what the body needs during different times.



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16

- **Questions to ask your doctor**

- What's the most likely cause of my symptoms?
- Are there any tests I need to evaluate the cause of my constipation, and how do I need to prepare for them?
- What treatment do you recommend?
- If the initial treatment doesn't work, what will you recommend next?
- Do you have a dietician available I can speak to?
- Are any of my medications potentially causing constipation?



Thank you for your time and attention.

