



COMMONWEALTH of VIRGINIA

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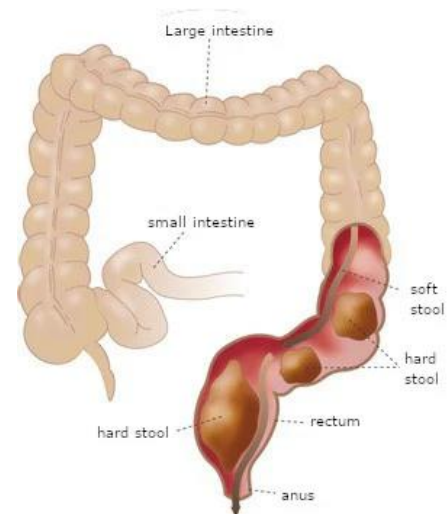
Office of Integrated Health Health & Safety Alert/Information

Part 1 - Constipation and Individuals with Intellectual and Developmental Disabilities Health & Safety Alert

Introduction

Constipation is a condition in which an individual has difficulty starting or completing a bowel movement (defecation). Constipation is typically described as having fewer than three bowel movements a week (10) (24), but may include any or all of the following:

- Straining during defecation.
- Lumpy, hard or marble-like stools.
- Painful defecation.
- Two or less bowel movements per week.
- The sensation of incomplete defecation of stool.
- The sensation of anal blockage, and/or difficulty passing stool which persists for several weeks or longer (26; 32).



Constipation can significantly affect an individual's quality of life and, if left untreated, can lead to numerous other health problems, including death. This is especially true among individuals with intellectual and developmental disabilities (IDD) who have a much higher risk of complications due to constipation than the average person (26).

Constipation can be broken down into the subgroups of functional, organic, and/or chronic constipation which is a combination of both functional and organic (26) (32). How individuals with IDD are impacted by chronic constipation including the prevalence, causes, risks, diagnosis, treatments, complications, and care considerations will be the focus of this two-part health & safety alert.

Prevalence of Constipation in the General Public

Constipation can affect anyone at any age and has many different causes (10). Constipation is the most common gastrointestinal (GI) complaint heard by primary care providers (PCP) and family practitioners (12) (32).

A stressful lifestyle, with low physical activity, depression, anxiety, certain medications and a lower economic and social status have all been linked to increasing levels of chronic constipation (12).

Prevalence rates are higher among females, the institutionalized elderly population and those who have limited physical activity and mobility (12) (10). In 2018, John Hopkins estimated that as many as 4 million people struggle with some form of constipation in the United States (15).

Prevalence of Constipation among Individuals with Intellectual and Developmental Disabilities

Individuals with IDD experience twice as much constipation as the general population and are at extremely high risk for chronic constipation. Chronic constipation is considered one of the most fatal conditions for individuals with IDD and leads to many preventable hospital admissions, and avoidable deaths (23) (2) (8).

A systematic review of research on the prevalence of constipation in the IDD population revealed issues with some form of constipation to be at, or above, 50% in 14 studies (19).

Constipation Subgroups

Functional Constipation

Individuals can be diagnosed with functional constipation when there is no physical, structural, genetic or medical diagnosis causing the constipation; meaning there is no specific identified cause (10).

Functional constipation is connected to a variety of reasons, such as dehydration, lack of fiber in the diet, and immobility which can all be adjusted to improve the condition or symptoms (17) (10).

Organic Constipation

Organic constipation means there is an identifiable condition, disorder or diagnosis causing constipation in an individual (24).

Individuals diagnosed with Hirschsprung disease, spina bifida, pseudo (false) obstruction or rectal tumors, hypothyroidism, diabetes mellitus, inflammatory bowel disease (IBD),

celiac disease and congestive heart failure (CF) all have higher rates of organic constipation (3) (14) (24).

Anal stenosis (narrowing) and anal fissures (deep grooves) are physical causes related to organic constipation. Diets high in calcium and/or low in potassium also increase the incidence of this type of constipation (24).

Causes of Chronic Constipation

There are many causes of chronic constipation which may include:

- Inadequate fluid intake which leads to dehydration.
- Inadequate fiber in the diet.
- Inactivity or immobility.
- Excessive amounts of caffeine in the diet.
- Sitting for long periods of time, absence of upright standing.
- Poor body alignment leading to poor positioning for bowel elimination.
- Resistance to bowel movements, sometimes resulting from painful defecation.
- Overuse of laxatives which can weaken bowel muscles.
- Depression.
- Eating disorders.
- Stress and anxiety.
- Age.
- A disruption in an individual's regular routine affecting diet (i.e. while traveling).
- Specific health related condition.
- Hemorrhoids or rectal tears.
- Family history of constipation.
- Certain medications (10) (24).



Signs and Symptoms of Chronic Constipation

Each individual experiences symptoms of constipation differently however the most common signs and symptoms include:

- Abnormal cramps.
- Bloating.
- Heart burn.
- Inability to pass flatus (gas).
- A loss of appetite.
- Nausea.
- Vomiting.
- Unexplained weight loss.
- Rectal bleeding (11) (6) (10).

Diagnosing Chronic Constipation

In order to diagnose constipation a primary care physician (PCP) will usually do a complete history and physical. This typically includes a family history and the individual's medical history, a physical exam, lab work, and/or other tests to determine the underlying cause and identify possible complications (11) (32) (10).

A complete history and physical of the individual might include:

- Time frame of symptoms.
- Current bowel habits.
- Consistency of stool.
- Stool size.
- A list of current medications.
- Results of any previous colonoscopies.
- History of any surgeries.
- Medical conditions.
- Current diet.
- Family history of GI issues (11) (32) (10).

A digital exam of the individual's peri-anal and anal area is done to determine the strength of pelvic floor muscles, and to assess for damage to the area as a result of straining and pushing to defecate (11) (32).

Tests Used to Diagnose Chronic Constipation

- **Blood tests:** a complete blood count (CBC), a basic chemo panel containing electrolytes, glucose, calcium, urine and thyroid function tests may be conducted initially to check for an underlying condition such as low thyroid levels (hypothyroidism) (11) (32) (24).
- **Abdominal ultrasound:** to view the intestinal tract.
- **Abdominal x-ray:** to view the intestinal tract.
- **Abdominal CT:** to view the intestinal tract.
- **Barium enema:** a lower GI test to examine the rectum, the large intestine, and the lower part of the small intestine. A fluid called barium is given into the rectum as an enema. A barium enema shows narrowed areas, blockages, and other problems (15).
- **Endoscopy or Flexible Sigmoidoscopy:** to examine the rectum and or sigmoid colon.
- **Colonoscopy:** to examine the rectum and entire colon.
- **Anorectal Manometry (ARM):** to evaluate the anal sphincter muscle function.
- **Magnetic Resonance Imaging (MRI):** to evaluate the colon and intestinal tract.
- **Colonic Transit Study using a wireless motility capsule (WMC):** to assess the whole gut and stool transit time (11) (32).

Chronic Constipation in Individuals with Intellectual and Developmental Disabilities (IDD)

Many individuals with IDD experience physical and sensory delays, and ongoing emotional distress which affects the GI tract and results in some form of constipation. It is considered rare for an individual with IDD not to have some form of constipation (13) (2).

- The physical and sensory impairments which accompany intellectual and developmental disabilities has been directly connected to a delayed sensation to defecate (26) (8).
- An individual might not understand the bodies physical sensations which signals the need to defecate, and/or holds back the need to defecate due to anxiety resulting in increased constipation along with other serious GI problems (26) (8).

Chronic constipation can seriously impact an individual's quality of life and has been linked to increased physical and mental distress including anxiety, pain, discomfort, and social isolation (13).

Some common issues which increase the risk of constipation for individuals with IDD are:

- Low physical activity levels or complete immobility.
- Administration of psychotropic and anti-seizure medications.
- Eating diets high in processed foods.
- Consuming high amounts of caffeinate beverages.
- Polypharmacy (13) (2).

Some common co-morbid disorders which elevate risk of constipation for individuals with IDD are:

- Neuromuscular abnormalities cause impaired gastrointestinal motility (the movement of food through the digestive system) (4) (19).
- Neurological disorders such as multiple sclerosis, Parkinson disease, stroke, spina bifida, and autonomic neuropathy (11).
- Endocrine and metabolic disorders such as diabetes mellitus, hypercalcemia, porphyria, hypothyroidism, and hyperthyroidism (11) (19).
 - Metabolic disorders can cause constipation by disrupting the normal nerve signals and muscle contractions in the digestive tract (19).
- Spinal cord injuries – quadriplegia, or paraplegia (27).
- Traumatic brain injuries (1).
- Genetic disorders with a neurodevelopmental component such as:
 - Down Syndrome.
 - Williams Syndrome.
 - Turner's Syndrome.
 - Noonan's Syndrome.
 - Rett Syndrome.
 - Prader-Willi Syndrome and others (18).

Medications and Constipation

Constipation is a common side effect of many different types of medications. If you are unsure if a particular medication causes constipation, ask the pharmacist or primary care physician (PCP) or review the medication's common side effects in a published drug reference book, a reputable online reference such as the [National Library of Medicine's Medline Plus](#) or the [Mayo Clinic's Drug and Supplements website](#), or in the electronic health record (EHR) (12) (10) (24).

Certain medications have common side effects which can cause chronic constipation (Forootan et al., 2018), to include the following classes of drugs:








- **Anticholinergics** - diphenhydramine (Benadryl), Doxylamine (Unisom), and Hyoscyamine (Anaspaz).
- **Antidepressants** - fluoxetine (Prozac), paroxetine (Paxil), fluvoxamine (Luvox), citalopram (Celexa), escitalopram (Cipralex) and sertraline (Zoloft).
- **Antihistamines** - diphenhydramine (Benadryl), chlorpheniramine (Chlor-Trimeton), and hydroxyzine (Vistaril).
- **Anti-nausea medications** - bismuth subsalicylate (Pepto-Bismol), ondansetron (Zofran), prochlorperazine (Compazine), promethazine (Phenergan).
- **Diuretics** - bumetanide (Bumex), furosemide (Lasix), chlorothiazide (Diuril), chlorthalidone (Thalitone), spironolactone (Aldactone, CaroSpir).
- **Opioids** - oxycodone (OxyContin®), hydrocodone (Vicodin®), morphine, codeine, fentanyl.
- **Non-steroidal anti-inflammatory drugs (NSAIDs)** - Aspirin, ibuprofen (Advil, Motrin, Vicoprofen), naproxen (Aleve Naprosyn, Anaprox), diclofenac (Voltaren, Cataflam, Flector).
- **Urinary incontinence medications** - oxybutynin (Ditropan XL, Gelnique, Oxytrol), tolterodine (Detrol, Detrol LA), fesoterodine (Toviaz).
- **Iron supplements** - ferrous sulfate (Fer-In-Sol, Slow FE, Feosol, Mol-Iron, Feratab), Hemocyte, Fergon, Fer-In-Sol.

If a prescribed medication, and/or any combination of medications, are likely the cause of constipation, ask the PCP for guidance, which may include dietary modifications, a consultation with a nutritionist/dietician, repositioning to include spending time standing and/or increasing activity levels, along with administering laxatives (12) (2).

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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)

Resources

Download a Stool Diary (National Institute of Diabetes and Digestive and Kidney Diseases, n.d.): https://www.niddk.nih.gov/-/media/Files/Weight-Management/Stool_Diary_508.pdf

Download a Bristol Stool Chart (Lewis & Heaton, 1997) to use as a reference here: <https://www.nice.org.uk/guidance/cg99/resources/cg99-constipation-in-children-and-young-people-bristol-stool-chart-2>

Check out Johns Hopkins' (Lee & Johns Hopkins Medicine, 2019), "Constipation: Causes and Prevention Tips" article here: <https://www.hopkinsmedicine.org/health/conditions-and-diseases/constipation-causes-and-prevention-tips>

U.S. Department of Agriculture (USDA) and the Department of Health and Human Services (HHS) Dietary Guidelines of Americans 2020 – 2025: https://www.dietaryguidelines.gov/sites/default/files/2020-12/Dietary_Guidelines_for_Americans_2020-2025.pdf

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To the best of the OIHSN Nursing Team's knowledge the information contained within this alert is current and accurate. If the reader discovers any broken or inactive hyperlinks, typographical errors, or out-of-date content please send email to communitynursing@dbhds.virginia.gov to include the title of the Health & Safety alert with specifics details of concern.

Part 1: Constipation Quiz/Evaluation

Name: _____ Date: _____

Email Address: _____

Quiz:

1. Constipation is typically described as...
 - a. Two or less bowel movements per week.
 - b. Having fewer than five bowel movements in a month.
 - c. Difficulty starting or completing a bowel movement.
 - d. A & C.
2. Constipation may also include:
 - a. Straining during defecation.
 - b. Lumpy, hard or marble-like stools.
 - c. The sensation of incomplete defecation of stool.
 - d. All of the above.
3. What are the subgroups of constipation?
 - a. Fictional and Organizational.
 - b. Practical and Structural.
 - c. Organic and Functional.
 - d. Fantastic and Natural.
4. Individuals in the general population who are at the highest risk for constipation are:
 - a. Older people living in long-term care facilities.
 - b. Women.
 - c. People who sit most of the time.
 - d. All of the above.
5. Individuals with IDD experience _____ as much constipation as the general population.
 - a. About.
 - b. Twice as much.
 - c. Half as much.
 - d. None of the above.
6. A diagnosis of functional constipation means:
 - a. No physical, structural, genetic or medical causes for the constipation.
 - b. An identifiable condition, disorder or diagnosis is causing the constipation.
 - c. The diagnosis means they have chronic constipation.
 - d. None of the above.
7. A few of the general underlying causes of chronic constipation are:

a. Low fiber diets.	d. Medication side-effects.
b. Dehydration.	e. Family history.
c. Low levels of physical activity.	f. All of the above.
8. Common signs and symptoms of chronic constipation include:
 - a. Heart burn, bloated stomach, abdominal cramps, nausea, and vomiting.
 - b. Fever, vomiting stool, increased heart rate.
 - c. Edema in the feet and hands, red blistered rash, and nausea.
 - d. None of the above.

Part 1: Constipation Quiz/Evaluation

Name: _____ Date: _____

Email Address: _____

9. Many individuals with IDD experience _____, _____, and _____ which affects the GI tract and results in some form of constipation.
 - a. Joy, happiness and so much fun.
 - b. Physical, sensory delays, and emotional distress.
 - c. Anxiety, behavioral issues, and mental health distress.
 - d. None of the above.
10. Why do individuals with IDD have twice as much chronic constipation than the general population?
 - a. Physical and sensory impairments connected to a delayed sensation to defecate.
 - b. They take higher amounts psychotropic and anti-seizure medications.
 - c. Diets high in processed foods and low activity levels or complete immobility.
 - d. All of the above.
11. Neurodevelopmental syndromes which might increase risk of constipation in an individual with IDD are:
 - a. Down syndrome.
 - b. Williams syndrome.
 - c. Turner's syndrome.
 - d. All of the above.
12. Some common co-morbid disorders which elevate risk of constipation for individuals with IDD are:
 - a. Multiple sclerosis.
 - b. Hypothyroidism.
 - c. Spinal cord injuries
 - d. All of the above.

Evaluation:

1. Was the information presented in this Health & Safety Alert helpful?
 - a. Yes
 - b. No
2. Will you use this Health & Safety Alert information to train other staff?
 - a. Yes
 - b. No
3. Will you attend the Regional Nursing Meeting to obtain the Continuing Nursing Education (CNE) unit for this Health & Safety Alert?
 - a. Yes
 - b. Yes, but I would have attended the meeting regardless
 - c. No
 - d. No, I am not a nurse
4. What topic(s) would you like to have presented in a Health & Safety Alert for CNE's?

5. Other Comments:
