COMMONWEALTH of VIRGINIA

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Office of Integrated Health
Health & Safety Alert/Information

Constipation: Care Management, Medications and Recognizing Bowel Obstruction

What is Constipation?

Constipation is a condition in which an individual has difficulty starting or completing a bowel movement. Constipation is generally described as having fewer than three bowel movements a week (Mayo Clinic, 2018), but may include any or all of the following:

- Straining during defecation (bowel movements).
- Lumpy, hard or marble-like stools.
- Two or less bowel movements per week.
- Painful defecation.
- The sensation of incomplete defecation of stool.
- The sensation of rectal/anal blockage, and/or difficulty passing stool that persists for several weeks or longer (Talley, 2004).

Prevalence of Constipation

Garrigues, et al. (2004) estimates that prevalence within the general public ranges between 2%-34%, with higher incidence rates noted among females, the elderly and those who have limited physical activity. A study of the prevalence of constipation in individuals with intellectual disability revealed that 50% of them have issues with constipation (Robertson, Baines, Emerson, & Hatton, 2017).

Constipation is generally categorized as either ***functional***, ***organic*** or ***chronic constipation*** (which can be a combination of both functional and organic).

Functional Constipation

Individuals are diagnosed with functional constipation when there is no anatomical/ genetic defect or medical diagnosis, which is causing the constipation, and/or there is no definitively identified organic cause. Functional constipation is usually attributed to a variety of causes that are all non-organic, and therefore can be more easily modified (Talley, 2004).

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Common Causes of Functional Constipation May Include:

- Inadequate fluid intake.
- Inadequate fiber in the diet.
- A disruption of regular diet or routine (i.e. while traveling).
- Inactivity or immobility.
- Poor body alignment that leads to poor positioning for bowel elimination.
- Absence of upright standing. (It is for this reason that standers (prone or supine) can help with functional constipation. Please consult a PT or OT for an assessment to determine if a stander might be appropriate for the individual).
- Consumption of large amounts of dairy products.
- Stress.
- Resistance to bowel movements (sometimes results from pain due to hemorrhoids).
- Overuse of laxatives (stool softeners) which can weaken bowel muscles.
- Depression.
- Eating disorders.

Prevention of Functional Constipation

Prevention and treatment to address functional constipation are similar between people with developmental disabilities and those in the general population. However, options for prevention and treatment may be exacerbated by the challenges that individuals diagnosed with DD face (Robertson, Baines, Emerson, & Hatton, 2018). The following diet and lifestyle changes may help lower the risk of functional constipation:

- Include plenty of high-fiber foods in the individual's diet, including beans, vegetables, fruits, whole grain cereals and bran. The recommended amount of dietary fiber is 20 to 35 grams per day. Be aware that a diet containing more fiber can cause significant abdominal gas and bloating (in some individuals), which may create mild abdominal discomfort (Portalatin & Winstead, 2012).
- Encourage individuals to eat fewer foods with low amounts of fiber, such as processed foods, dairy and meat products.
- Encourage individuals to drink plenty of fluids.

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- Encourage individuals to stay as active as possible and plan activities that will promote physical exercise or movement.
- Assist the individual to establish a schedule for bowel movements. Encourage a bathroom break twenty to thirty minutes after each meal.
- Allow adequate time for the individual to use the bathroom.
- Encourage proper positioning. (See the resources section for more information on positioning).
- Administer stool softeners and/or laxatives as prescribed by the individual's physician (specialist) or primary care physician (PCP).
- Track bowel movement frequency, consistency and volume on a bowel chart.

Organic Constipation

When an individual is diagnosed with organic constipation, it generally means that the individual has an identifiable condition, disorder or diagnosis that causes constipation. Individuals diagnosed with Hirshprung 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 a higher rate of organic constipation. Anal stenosis (narrowing) and anal fissures (deep grooves) are physical causes related to the diagnoses. Diets high in calcium and or low in potassium increase the incidences of this type of constipation. Eating a well-balanced diet is key in the reduction of occurrence.

Medications that May Cause Chronic (Organic) Constipation

Ask the individual's pharmacist and or their primary care physician (PCP) if the prescribed medication causes constipation. If the prescribed medication is one that likely causes constipation, ask the PCP for medical guidance, which may include dietary modifications, a consultation with a nutritionist/dietician, stool softeners and/or laxatives to reduce the occurrence of the condition. Many medications can cause chronic, organic constipation (Forootan, Bagheri & Darvishi, 2018), including the following:

- **Antidepressants,** such as the selective serotonin reuptake inhibitor fluoxetine (Prozac) or **tricyclic antidepressants** such as amitriptyline (Elavil), Tofranil (imipramine), Vivactil (protriptyline), and Pamelor (nortriptyline).
- **Opioids,** such as oxycodone (OxyContin) and hydrocodone (Vicodin), Norco, Tylox (Tylenol with codeine), Kadian, Avinza, Percodan, Demerol, Percocet, Lomotil or Dilaudid can all cause the nerves in the digestive system to "sleep" or become lethargic, which prohibits normal gastric motility and elimination.

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- **Calcium-channel blockers**, such as diltiazem (Cardizem). These drugs relax the smooth muscles in blood vessels to lower blood pressure. In addition, they can also cause the nerves in the digestive system to "sleep" or become lethargic, which prohibits normal gastric motility and elimination.
- **Anticholinergics,** a large class of medications found in many over-the-counter and prescription medications. These include treatments for urinary incontinence, such as oxybutynin (Ditropan), and allergies, such as diphenhydramine (Benadryl). These medications block the effects of acetylcholine, a chemical that helps the muscles move. This effect prohibits normal gastric motility and elimination.
- **Diuretics**, such as hydrochlorothiazide and Lasix (furosemide) work by helping the body get rid of extra salt and water. However, these medications also "steal" water from your stool and can leave it hard and dry, which makes defecation more difficult.
- **Iron supplements** such as FeroSul (ferrous sulfate), Ferate (ferrous gluconate), Ferric citrate, Ferric sulfate, and the brand names Fer-In-Sol, Slow Fe and Feratab can all cause constipation. Liquid iron supplements, (such as the brand Feosol), may cause less constipation in some individuals.
- **NSAIDs** (non-steroidal anti-inflammatory drugs) are one of the most-prescribed medications for treating conditions such as arthritis. NSAIDs are also prescribed to reduce fever, inflammation, and mild to moderate pain. Aspirin, Motrin, Advil (ibuprofen), Aleve, Naprosyn (naproxen) and Celebrex (celecoxib) are all commonly prescribed NSAIDs.
- **Antihistamines** are often prescribed to reduce symptoms of allergies. Common over-the-counter (OTC) antihistamines include: Chlor-Trimeton (chlorpheniramine), Unisom (diphenhydramine or doxylamine), Vicks QlearQuil Nighttime Allergy Relief (diphenhydramine), Claritin (loratadine), Benadryl (diphenhydramine), Allegra (fexofenadine), Zyrtec (cetirizine) and Xyzal (levocetirizine).
- **Urinary incontinence medications** such as Ditropan, Ditropan XL (oxybutynin), Detrol, Detrol LA (tolterodine), Enablex (darifenacin), Myrbetriq (mirabegron) and Flomax (tamsulosin).
- **Anti-nausea medications** such as Zofran (ondansetron), Reglan (metoclopramide), Emend (aprepitant, fosaprepitant), Tigan (trimethobenzamide), Marinol (dronabinol), and Syndros (dronabinol).
- **Opioid pain relievers** such as Vicodin, Norco, and Tylenol with codeine, Oxycontin, Morphine or Dilaudid are all likely to cause constipation.

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Signs and Symptoms of Chronic Constipation (Organic or Functional)

- Passing fewer than three stools a week and/or fewer bowel movements than usual.
- Painful or difficult bowel movements, which could include straining and grunting while attempting to pass stool.
- Stool or stool smearing in the individual's underwear.
- Spending extended periods of time on the toilet trying to pass stool.
- Refusing to eat or drink.
- Hard, dry, or large stool.
- A hard, protruding abdomen.
- Vomiting digested food that smells like feces.
  - ★ **This can also be a symptom of a bowel blockage/obstruction. If this occurs, the individual should be taken to the Emergency Room immediately.**
- Abdominal pain, cramping, bloating and/or complaints of stomach discomfort.
- Loose stool or watery diarrhea around point of impaction.
- Increase in seizure frequency.
- Increase in self-injurious behavior.
- Sleepiness, lethargy or agitation.
- Increase in behaviors.

Acute Complications of Chronic Constipation (Functional or Organic)

Acute constipation may cause closure of the intestine, which may result in surgery (Forootan, Bagheri, & Darvishi, 2018). The following conditions can also be a result of acute constipation:

- Hemorrhoids.
- Rectal bleeding.
- Anal fissures (tears in skin around the anus).
- Rectal prolapse (the large intestine detaches inside the body and pushes out of the rectum).
- Fecal impaction (hard, dry stool is stuck in the body and unable to be expelled naturally).
- Diverticulitis.

Diagnosing Constipation (Functional or Organic)

In order to diagnose constipation a primary care physician (PCP) may do a physical exam of the individual, order lab tests, and/or write an order for bowel monitoring.

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Questions for Caregivers

A PCP (or medical specialist) will likely ask the following questions before making a diagnosis or developing treatment options.

- What is the individual's normal bowel habits?
- How long has the individual had difficulty with bowel movements?
- When was the last time the individual had a bowel movement?
- Is the individual passing gas?
- Does the individual complain about abdominal or rectal pain when defecating/having a bowel movement?
- Does the individual grimace or appear to be in pain when they are defecating/having a bowel movement?
- Is the individual taking any medications that may cause constipation?
- Does the individual have any conditions, disorders or a diagnosis that may cause or contribute to constipation?
  - ★ ***Always* contact the individual's primary care physician (PCP) if the individual has not had a bowel movement in 3 days.**

Tests to Diagnose Constipation (Functional or Organic)

- A general physical exam.
- A digital rectal exam.
- Blood tests. The primary care physician (PCP) might check for an underlying condition such as low thyroid levels (hypothyroidism) (Mayo Clinic, 2018).
- Examination of the rectum and lower or sigmoid colon (sigmoidoscopy).
- Examination of the rectum and entire colon (colonoscopy).
- Evaluation of anal sphincter muscle function (anorectal manometry).
- MRI (magnetic resonance imaging).

Treatments for Constipation (Functional or Organic)

Laxatives

Several types of laxatives may be prescribed by the individual's primary care physician (PCP) to lower the risk of constipation and/or the risk of serious complications from constipation. An order from the individual's primary care physician (PCP) or physician specialist is required to administer the following medications. The goal of any laxative is to: 1) increase the frequency of bowel movements, and 2) make bowel movements easier (less painful) for the individual. The following are some of the most commonly used laxatives (Mayo Clinic, 2018).

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- **Fiber supplements** add bulk to your stool. These include psyllium (Metamucil, Konsyl), calcium polycarbophil (FiberCon) and methylcellulose fiber (Citrucel). Dietary fiber appears to be effective in relieving mild to moderate constipation, but is not effective in severe constipation. In some patients, these agents also delay gastric emptying and depress appetite. Individuals must also be encouraged to drink water and maintain hydration when increasing fiber intake (Portalatin & Winstead, 2012).
- **Stimulants** including Correctol, bisacodyl (Ducodyl), Dulcolax and senna-sennosides oral (Senokot) cause your intestines to contract.
- **Osmotic laxatives** help fluids move through the colon. Examples include oral magnesium hydroxide (Phillips Milk of Magnesia), magnesium citrate, lactulose (Kristalose), polyethylene glycol (Miralax). In addition, polyethylene glycol (PEG) (Golytely, Nulytely) is available by prescription.
- **Lubricants** (e.g. mineral oil) enable stool to move through your colon more easily.
- **Stool softeners** such as docusate sodium (Colace) and docusate calcium (Surfak) moisten the stool by drawing water from the intestines.
- **Enemas and suppositories**. Sodium phosphate (Fleet), soapsuds or tap water enemas can be useful to soften stool and produce a bowel movement. Glycerin or bisacodyl suppositories can also soften stool.

If a laxative does not help the individual's chronic constipation, the primary care physician (PCP) may recommend another class of medication for the individual. The primary care physician's (PCP's) orders should contain specific instructions indicating what to do if the medication is not effective. Always contact the prescribing physician, if the desired effect is not achieved.

Managing Constipation

Recommendations for Caregivers

- The main management response to constipation in people with intellectual disability is laxative use, despite limited effectiveness. (Robertson, Baines, Emerson, & Hatton, 2017).
- Discuss treatment strategies with the individual's primary care physician (PCP); including implementation of a bowel management guideline or protocol to ensure the individual receives the prescribed treatment and proper monitoring for prevention of complications.
- A bowel management program should include: 1) having a consistent schedule in place for taking medicines regularly to prevent or relieve constipation; 2) monitoring of bowel movement frequency, consistency, and volume; 3)

documenting the findings of monitoring by utilizing a tool such as a bowel diary to record stool frequency and consistency.

- Constipation and fecal impaction can affect the quality of life of individuals. Despite the availability of medications, recurrence of constipation and fecal impaction can be a chronic problem. The priority is to improve the quality of life, rather than subject these individuals to drastic surgery or invasive procedures, which also have the potential to cause additional complications (Waheed, Mathew & Cagir, 2018).

Signs & Symptoms of a Fecal (Stool) Impaction (Mayo Clinic, 2018).

Fecal impaction is the inability to pass a hard collection of stool and can sometimes result in a large bowel obstruction (LBO). It is a common gastrointestinal disorder, with significant morbidity among the elderly and individuals with intellectual or developmental disability in all age groups. Signs and symptoms of a fecal (stool) impaction include the following:

- Constipation.
- Rectal discomfort.
- Anorexia.
- Nausea.
- Vomiting.
- Abdominal pain.
- Paradoxical diarrhea (Liquid stool leaks around the fecal mass, imitating incontinence).
- Urinary frequency and/or urinary overflow incontinence.
- Abdominal distention and tenderness.
- Fever.

What is a Bowel/Intestinal Obstruction?

A bowel/intestinal blockage or obstruction occurs when something prevents the contents of the intestines from passing normally through the digestive tract. The problem causing the blockage can be inside or outside the intestine. A tumor, swelling of the intestine, or stool all have the potential to block the inside passageway of the intestine. Outside the intestine, it is also possible for an adjacent organ or area of tissue to pinch, twist or compress a segment of the intestine/bowel, which results in a blockage of the intestinal passageway. A bowel obstruction can occur in the small bowel (small intestine) or in the large bowel (large intestine or colon). A bowel obstruction can be total or partial, depending on whether any intestinal contents can pass through the obstructed area.

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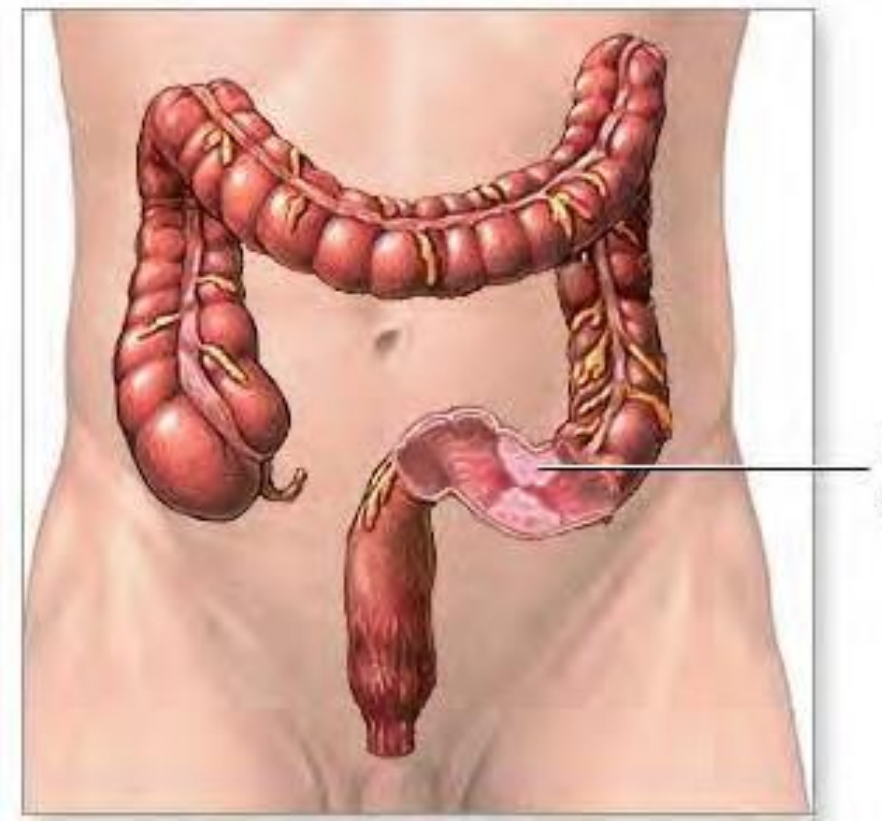
In the small intestine, the most common causes of bowel obstruction are:

- Adhesions.
- Hernia.
- Tumors.

In the large intestine, the most common causes of bowel obstruction are:

- Colorectal Cancer.
- Volvulus.
- Diverticulitis.



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Signs and Symptoms of a Bowel/Intestinal Obstruction can be any Combination of the Following

- Cramping abdominal pain, generally coming in intense waves that strike at intervals of five to 15 minutes. Pain may occur in the navel area, or between the navel and the rib cage. Pain that becomes constant may be a symptom of bowel strangulation.
- Nausea and vomiting.
- No gas passing through the rectum.
- A "tight" or firm and/or bloated abdomen, sometimes with abdominal tenderness.
- Rapid pulse and rapid breathing during episodes of cramps.
- Abdominal pain, which can be either vague and mild, or sharp and severe, depending on the cause of the obstruction.
- Constipation at the time of obstruction, and intermittent bouts of constipation that have occurred several months beforehand.
- If a colon tumor is the cause of the problem, a history of rectal bleeding (such as streaks of blood on the stool).
- Diarrhea resulting from liquid stool leaking around a partial bowel obstruction.

Large bowel obstruction (LBO) is an important abdominal emergency that **can be fatal, in cases of acute complete obstruction and/or delayed diagnosis or treatment (**Ramanathan, et al., 2017). The potential complications of a bowel obstruction are many including electrolyte imbalances, (metabolic alkalosis or metabolic acidosis), dehydration, jaundice, intestinal perforation, tissue necrosis, infection, septicemia or death. If the bowel obstruction leads to vomiting, this can also result in aspiration of fecal material into the lungs, which can also lead to pneumonia or death (Smith & Escude, 2015).

- ★ **If an individual has *any* signs or symptoms of a bowel obstruction, take the individual to the ER immediately.**

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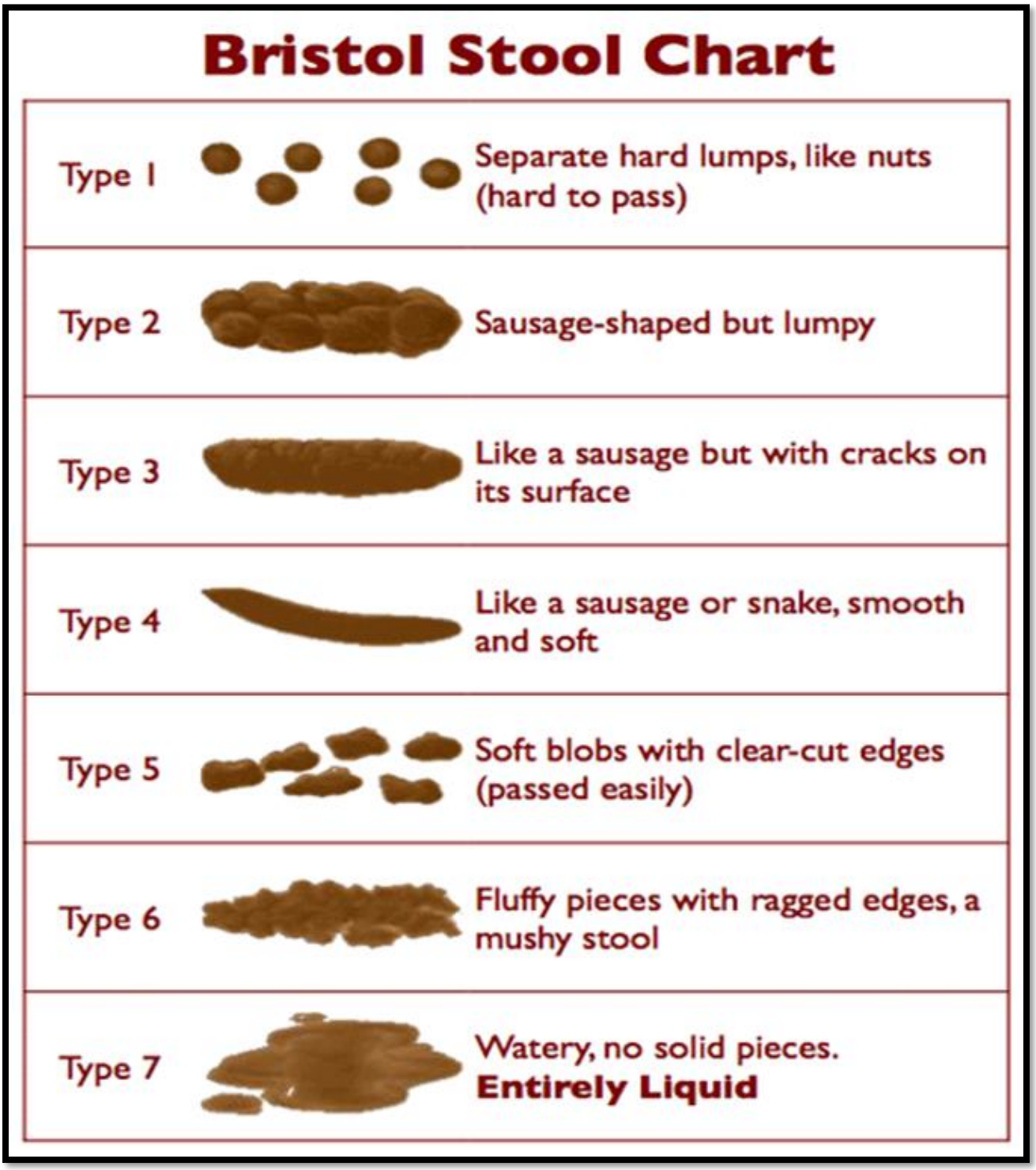

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Resources

- Download a Stool Diary (National Institute of Diabetes and Digestive and Kidney Diseases, n.d.): file:///C:/Users/dha92624/Downloads/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
- Consult an OT or PT to determine if a toileting/positioning stool might be beneficial for the individual. If you type the following into your computer browser: "toilet stool for bowel movements" there are numerous articles and videos on how toileting/positioning stools work and there are several different brands available. However, please do not buy a toileting/positioning stool for any individual without checking first with an OT or PT for their guidance. A toileting/positioning stool might not be appropriate for some individuals, and could increase the individual's risk for a serious injury or fall.

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