Patient education: Constipation in infants and children (Beyond the Basics)

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CONSTIPATION OVERVIEW

Constipation is a common problem in children of all ages. A child with constipation may have bowel movements less frequently than normal, or their bowel movements may be hard, large-caliber, or difficult and painful to pass.

Most children with constipation do not have an identifiable underlying medical problem causing their symptoms. Constipation generally resolves with changes in diet or behavior or sometimes with medicine. You can try some of these treatments at home. If home treatment is not helpful, talk to your child's health care provider.

This article will focus on the diagnosis, treatment, and prevention of constipation. More detailed information about constipation in infants and children is available by subscription. (See 'Professional level information' below.)

NORMAL VERSUS ABNORMAL BOWEL HABITS

The "normal" amount of time between bowel movements in infants or children depends upon their age and what they eat. The look of the bowel movement can also vary.

Normal bowel habits

- During the first week of life, infants pass approximately four soft or liquid bowel movements per day. Infants who are breastfed generally have more bowel movements than those who are formula-fed. (See "Patient education: Deciding to breastfeed (Beyond the Basics)".)

- During the first three months of life, breastfed infants have approximately three soft bowel movements per day. Some breastfed infants have a bowel movement after each feeding, whereas others have only one bowel movement per week. Infants who breastfeed are rarely constipated. (See "Patient education: Common breastfeeding problems (Beyond the Basics)".)

- Most formula-fed infants have two to three bowel movements per day, although this depends on which formula is given. Some soy- and cow's milk-based formulas cause harder bowel movements, while formulas that contain partially or completely hydrolyzed milk proteins (sometimes known as "hypoallergenic" formulas), which may be recommended for infants with an allergy or sensitivity to cow's milk, can cause loose bowel movements.

- By two years of age, a child typically has one to two formed (firm but not hard) bowel movements per day.

- By four years of age, a child usually has one or two formed bowel movements per day.

Abnormal bowel habits

- An infant who is constipated typically has bowel movements that look hard or pellet-like. The infant may cry while trying to move his or her bowels. The infant may have bowel movements less frequently than they used to, for example, having a bowel movement every one to two days rather than the previous normal of three to four per day.

  You may be worried that your infant is constipated if he or she seems to be straining during a bowel movement, causing his or her face to temporarily turn red. In most cases, this happens because young infants are not able to coordinate muscle movements when having a bowel movement. You can help by gently bending your child's hips and legs up towards the abdomen. This helps to relax the muscles in the pelvis, releasing the bowel movement. The infant probably is not constipated if he or she passes a soft bowel movement within a few minutes of straining.

- If your child has fewer bowel movements than usual or complains of pain during a bowel movement, he or she may be constipated. For example, a child who normally has one to two bowel movements every day may be constipated if he or she has not had a bowel movement in two days.

  A child who normally has a bowel movement every two days is not constipated, as long as the bowel movement is reasonably soft and is not difficult or painful to pass.

- Many children with constipation develop unusual habits when they feel the urge to have a bowel movement.

  - Infants may arch their back, tighten their buttocks, and cry.

  - Toddlers may rock back and forth while stiffening their buttocks and legs, arch their back, cross their legs, stand on their tiptoes, and wriggle or fidget or they may squat or get into other unusual positions.

  - Children may hide in a corner or some other special place while doing this "dance."

    Although these behaviors may look like the child is trying to have a bowel movement, the child is actually trying **not** to have a bowel movement. This might be because they are frightened of the toilet or worried that having the bowel movement will be painful.

WHY CONSTIPATION DEVELOPS

Pain — When the child does have a bowel movement, it can be painful and lead them to withhold (avoid going) in an effort to avoid more pain.

On occasion, a child may develop a tear in the anus (called an anal fissure) after passing a large or hard bowel movement. The pain from the tear can lead to withholding. Even infants can learn to withhold because of pain. (See "Patient education: Anal fissure (Beyond the Basics)".)

Treatment is recommended if your child has hard or painful stools. Treating pain early can help prevent your child from withholding, which can lead to chronic constipation and leakage of bowel movements (figure 1).

Unfamiliar surroundings — Children may delay moving their bowels if they do not have a place where they feel comfortable having a bowel movement or if they are busy and ignore the need to use the toilet. This can happen when a child starts going to school and avoids having a

bowel movement because of hygiene concerns or being embarrassed about using the toilet at school.

Teach your child that it is a good idea to have a bowel movement when his or her body says it is time to do so, and reassure him or her that it is okay to use the bathroom at school. This type of training from early childhood may prevent development of constipation when your child starts school.

Medical problems — Medical problems cause constipation in less than 5 percent of all children. Underlying medical problems are even less likely in children who start to have constipation during one of the critical periods discussed below. (See 'Constipation and development' below.)

Some of the common medical problems that cause constipation include Hirschsprung disease (an abnormality of nerves in the colon), abnormal development of the anus, problems absorbing nutrients, spinal cord abnormalities, and certain medicines. In most cases, a doctor can rule out these problems by asking questions and performing a physical examination. (See 'Medical evaluation of constipation' below.)

CONSTIPATION AND DEVELOPMENT

Constipation is particularly common at three times in an infant's and child's life: after starting cereal and puréed foods, during toilet training, and after starting school. Parents can help by being aware of these high-risk times, working to prevent constipation, recognizing the problem if it develops, and acting quickly so that constipation does not become a bigger problem.

Transition to solid diet — Infants who are transitioning from breast milk or formula to solid foods may experience constipation. An infant who develops constipation during this time can be treated with one of the measures described below. (See 'Infants' below.)

Toilet training — Children are at risk for constipation during toilet training for several reasons (see "Patient education: Toilet training (Beyond the Basics)"):

- If a child is not ready or interested in using the toilet, he or she may try to avoid going to the bathroom (called withholding), which can lead to constipation
- Children who have experienced a hard or painful bowel movement are even more likely to withhold, and this only worsens the problem

Tips for avoiding constipation during the toilet training phase are below. (See 'Approach to toilet training' below.)

School entry — Once your child starts school, you may not be aware if he or she has problems going to the bathroom. Some children are reluctant to use the bathroom at school because it is unfamiliar or too "public," and this can lead to withholding.

Continue to monitor your child's bowel movements when the child starts school for the first time (eg, kindergarten) and after long absences (eg, summer or winter breaks). You can do this by monitoring how often your child has a bowel movement while at home, particularly on weekends. Ask your child if he or she has any problems trying to have a bowel movement away from home; if limited time or embarrassment is an issue, you can work with your child and/or the school to find a solution.

HOME TREATMENTS FOR CONSTIPATION

You can try using home remedies first to relieve your child's constipation. These remedies should begin to work within 24 hours; if your child does not have a bowel movement with 24 hours or if you are worried, call your child's doctor or nurse for advice.

Infants — If your child is younger than four months old, talk to a doctor or nurse about treatment of constipation. For infants of any age, contact the child's doctor if there are concerning signs or symptoms (such as severe pain or rectal bleeding) along with constipation. (See 'When to seek help' below.)

The following remedies are for infants with constipation who are older than four months:

- Fruit juice – If your infant is at least four months old, you can give certain fruit juices to treat constipation. This includes prune, apple, or pear juice (other juices are not as helpful). You can give a total of 2 to 3 ounces (60 to 120 mL) of 100 percent fruit juice per day for children four to eight months old. You can give up to 6 ounces (180 mL) of fruit juice per day to infants 8 and 12 months old. However, do not give juice every day for more than a week or two. Too much juice can be unhealthy for children's overall diet and growth.

- Dark corn syrup – Dark corn syrup has been a folk remedy for constipation for hundreds of years. Dark corn syrup contains complex sugar proteins that keep water in the bowel movement. However, current types of dark corn syrup may not contain these sugar proteins, so the syrup may not be helpful. It is not clear whether light corn syrup is helpful.

- High-fiber foods – If your infant has started eating solid foods, you can substitute barley cereal for rice cereal. You can also offer other high-fiber fruits and vegetables (or purées),

including apricots, sweet potatoes, pears, prunes, peaches, plums, beans, peas, broccoli, or spinach. You can mix fruit juice (apple, prune, pear) with cereal or the fruit/vegetable purée.

- Formulas with iron – The iron in infant formula does not cause or worsen constipation, because the dose of iron is very small. Therefore, changing to a low-iron formula is not recommended, because this will not help with the constipation. Your doctor or nurse may recommend a different type of formula; consult them before making any formula changes.

  Iron drops contain higher amounts of iron and may sometimes cause constipation. Therefore, infants who need iron drops sometimes also need extra diet changes or treatments to make sure that they do not get constipated.

Children — If your child has been constipated for a short time, changing what he or she eats may be the only treatment needed. You can make these changes as often as needed so that the child has soft and painless bowel movements.

If your child does not have a bowel movement within 24 hours of trying the following suggestions, call your child's doctor or nurse. If your child has worrisome symptoms (severe pain, rectal bleeding) with constipation or you have questions, call your child's doctor or nurse before using any of the following treatments.

Dietary recommendations

- Fruit juice – Certain fruit juices can help to soften bowel movements. These include prune, apple, or pear (other juices are not as helpful). Do not give more than 4 to 6 ounces (120 to 180 mL) of 100 percent fruit juice per day to children between one and six years of age; children older than seven years may drink up to two 4-ounce (120 mL) servings per day.

- Fluids – It is not necessary to drink large amounts of fluid to treat constipation, although it is reasonable to be sure that the child drinks enough fluid. For children older than one year, enough fluid is defined as 32 ounces (960 mL) or more of water or other non-milk liquids per day. It is not necessary or helpful for the child to drink more than this if he or she is not thirsty.

- Food recommendations – Offer your child a well-balanced diet, including whole-grain foods, fruits, and vegetables (figure 2 and table 1). However, do not force these foods and do not use a high-fiber diet instead of other treatments (table 2A-B).

  Praise your child for trying these foods and encourage him or her to eat them frequently, but do not force these foods if your child is unwilling to eat them. You should offer a new food 8 to 10 times before giving up. You may want to avoid giving (or give smaller amounts

of) certain foods while your child is constipated, including cow's milk, yogurt, cheese, and ice cream.

A fiber supplement may be recommended for some children. Fiber supplements are available in several forms, including wafers, chewable tablets, or powdered fiber that can be mixed in juice (or frozen into popsicles).

- Milk – Some children develop constipation because they are unable to tolerate the protein in cow's milk. If other treatments for constipation are not helpful, try having the child avoid all cow's milk (and milk products) for at least two weeks. If your child's constipation does not improve during this time, you can begin giving cow's milk again. If you see blood in your child's bowel movement, check with your doctor or nurse.

  If the child does not drink milk for a long time, ask your child's doctor or nurse for suggestions about ways to be sure that he or she gets enough calcium and vitamin D.

Approach to toilet training — If your child develops constipation while learning to use the toilet, stop toilet training temporarily. It is reasonable to wait two to three months before restarting toilet training. When you resume, encourage your child to sit on the toilet as soon as he or she feels the urge to have a bowel movement and give positive reinforcement (a hug, kiss, or words of encouragement) for trying, whether or not the child is successful. Avoid punishing or pressuring your child.

Encouraging healthy toilet habits — If your child is toilet trained, encourage him or her to sit on the toilet for approximately 10 minutes once or twice a day after eating. The child is more likely to have a bowel movement after a meal, especially breakfast. Reward the child with praise or attention for sitting, even if he or she does not have a bowel movement.

In addition, be sure the child has foot support (eg, a stool), especially while using an adult-sized toilet. If possible, the foot support should be high enough that the child's knees are slightly above his or her hips (figure 3). This position helps to relax the muscles in the pelvis and anus. Foot support also provides a place for the child to push against as he or she bears down and helps the child feel more stable when sitting on the toilet.

Reading to your child or keeping him/her company while in the bathroom can help to keep the child's interest and encourage cooperation. More information on rewards is discussed below. (See 'Behavior changes' below.)

MEDICAL EVALUATION OF CONSTIPATION

Some infants and children have concerning symptoms with constipation or have constipation that does not improve with home treatments. In these situations, your child should see a doctor or nurse. If you are worried or not sure whether your child should be evaluated, ask his or her doctor or nurse for advice.

During the medical history, the doctor or nurse will ask you (and your child, if appropriate) when constipation began, if there was a painful bowel movement, and how often the child normally has a bowel movement. Mention any other symptoms (such as pain, vomiting, or decreased appetite), how much the child drinks, and if you have seen blood in the child's bowel movements. You can describe how hard or soft the bowel movement is by comparing it to pictures known as the Bristol stool scale.

The doctor or nurse will do a physical examination and may do a rectal examination. Most children with constipation will not require any laboratory testing or X-rays.

RECURRENT CONSTIPATION

If your infant or child has repeated episodes of constipation (called recurrent constipation), work with your child's doctor or nurse to figure out why this is happening. Some children with chronic and recurrent constipation can develop a problem with bowel leakage (called fecal incontinence), in which liquid stool leaks around the large hard stool in the rectum. Because the leaking stool is soft, some parents can confuse this with diarrhea.

Possible reasons for recurrent constipation include:

- Fear of pain due to hard stools or an anal fissure (a small tear in the anal opening). A child can withhold stool by willfully clinching his or her buttocks (butt cheeks), which can be confused with the child trying to push the stool out. Discussing this with your doctor can help you learn to tell whether your child is trying to withhold stool.
- Fear of using the bathroom away from home.
- Not having enough time to use the bathroom.
- Reducing the laxative dose or discontinuing laxative too soon.

"Clean out" treatment — If your child has recurrent constipation, continue to follow the suggestions for home treatment above. Your child may also need a "clean out" treatment to help empty the bowels. This treatment may include a medicine (eg, polyethylene glycol [PEG; such as Miralax] or magnesium hydroxide [Milk of Magnesia]), an enema or rectal suppository

(a pill that you insert in the child's rectum), or a combination of treatments. Consult your child's doctor or nurse before giving any of these treatments.

Maintenance treatment — After the "clean out" treatment, most infants and children are treated with a laxative for several months or longer. PEG is often used for this purpose. You can adjust the amount of laxative so that the child has one soft bowel movement per day. Although several laxatives are available without a prescription, it is important to consult with your child's doctor or nurse before giving laxatives on a regular basis.

Parents are often concerned about giving laxatives, fearing side effects or that the child will not be able to have a bowel movement when the laxative is stopped. Using appropriate laxatives, as recommended by your child's doctor or nurse, does not increase the risk of constipation in the future. Instead, careful use of laxatives can actually prevent long-term problems with constipation by breaking the cycle of pain and withholding and helping the child to develop healthy toileting habits.

Some children need to continue using a laxative treatment for months or even years. After the child has regular bowel movements and uses the toilet alone for at least six months, it is reasonable to talk about decreasing and eventually stopping the laxative with the child's doctor or nurse. Do not stop the laxative too soon, because constipation could return and the child would need to start over with treatment. Laxative use should be combined with dietary changes to reduce the risk of recurrence.

Rescue treatment — It is possible for a child to retain a large bowel movement in the colon, despite using laxatives. Develop a "rescue" plan with your child's doctor or nurse in case this happens. If the child has not had a bowel movement for two to three days, a "clean out" treatment and an increased dose of the maintenance laxative are usually recommended.

Behavior changes — In children who have constipation frequently, behavior changes are recommended to help the child develop normal bowel habits.

- Encourage your child to sit on the toilet within 30 minutes after each meal (ie, for 10 minutes two to three times per day). Do this every day if possible.

- Design a reward system with your child to recognize the child's efforts. Give the reward after the child sits, even if he or she does not have a bowel movement. Rewards for preschoolers may include stickers or small sweets, reading books, singing songs while sitting, or special toys that are only used during toilet sitting. Rewards for school-aged children may include reading books together, activity books, handheld electronics that are

only used during toilet-sitting time, or coins or stickers that can be redeemed for small items or toys.

- Keep a diary of your child's bowel movements, medicines, pain, and accidents (figure 4A-B). This will help you and your child's doctor or nurse figure out if there are triggers for constipation.

Dietary suggestions — There are a number of myths about dietary treatments for constipation in children and infants. Drinking extra fluids and eating a high-fiber diet are not enough to treat repeated episodes of constipation in children; most children also need a laxative and behavior changes. Dietary recommendations are described above. (See 'Dietary recommendations' above.)

Treatment follow-up — After beginning treatment for constipation, most doctors and nurses recommend periodic follow-up phone calls or visits to check on the child. Infants and children with constipation often need adjustments in treatment as they grow, and there are changes in their diet and daily routine.

WHEN TO SEEK HELP

Call your child's doctor or nurse immediately (during the day or night) if your child has severe abdominal or rectal pain.

In addition, call your child's doctor or nurse if any of the following occurs:

- Your infant (younger than four months) has fewer than three bowel movements per week. You should call earlier if your infant has other symptoms such as vomiting or excessive crying.
- Your infant (younger than four months) has hard (rather than soft or pasty) stools.
- Your infant or child does not want to eat or loses weight because of constipation.
- Your infant has a distended abdomen or vomiting.
- You see blood in your child's bowel movement or diaper.
- Your child has repeated episodes of constipation.
- Your child complains of pain with bowel movements.

- You have trouble toilet training your child or your child refuses to sit on the toilet or seems afraid of having a bowel movement.
- You have questions or concerns about your child's bowel habits.

WHERE TO GET MORE INFORMATION

Your child's health care provider is the best source of information for questions and concerns related to your child's medical problem.

This article will be updated as needed on our website (www.uptodate.com/patients). Related topics for patients, as well as selected articles written for health care professionals, are also available. Some of the most relevant are listed below.

Patient level information — UpToDate offers two types of patient education materials.

The Basics — The Basics patient education pieces answer the four or five key questions a patient might have about a given condition. These articles are best for patients who want a general overview and who prefer short, easy-to-read materials.

Patient education: Constipation in children (The Basics)
Patient education: Daytime wetting in children (The Basics)
Patient education: Giving your child over-the-counter medicines (The Basics)
Patient education: Hirschsprung disease (The Basics)
Patient education: Fecal incontinence in children (The Basics)

Beyond the Basics — Beyond the Basics patient education pieces are longer, more sophisticated, and more detailed. These articles are best for patients who want in-depth information and are comfortable with some medical jargon.

Patient education: Deciding to breastfeed (Beyond the Basics)
Patient education: Common breastfeeding problems (Beyond the Basics)
Patient education: Anal fissure (Beyond the Basics)
Patient education: Toilet training (Beyond the Basics)

Professional level information — Professional level articles are designed to keep doctors and other health professionals up-to-date on the latest medical findings. These articles are thorough, long, and complex, and they contain multiple references to the research on which they are based. Professional level articles are best for people who are comfortable with a lot of medical terminology and who want to read the same materials their doctors are reading.

Constipation in infants and children: Evaluation
Functional fecal incontinence in infants and children: Definition, clinical manifestations, and evaluation
Rectal prolapse in children
Recent-onset constipation in infants and children
Toilet training
Chronic functional constipation and fecal incontinence in infants, children, and adolescents: Treatment
Functional constipation in infants, children, and adolescents: Clinical features and diagnosis

The following organizations also provide reliable health information:

- National Institute of Diabetes and Digestive and Kidney Diseases

  (https://www.niddk.nih.gov/health-information/digestive-diseases/constipation-children)

- American Academy of Pediatrics

  (http://www.healthychildren.org/English/health-issues/conditions/abdominal/Pages/Constipation.aspx)

- GI Kids (North American Society for Pediatric Gastroenterology, Hepatology and Nutrition)

  (http://www.gikids.org/)

[1-3]

ACKNOWLEDGMENT

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REFERENCES

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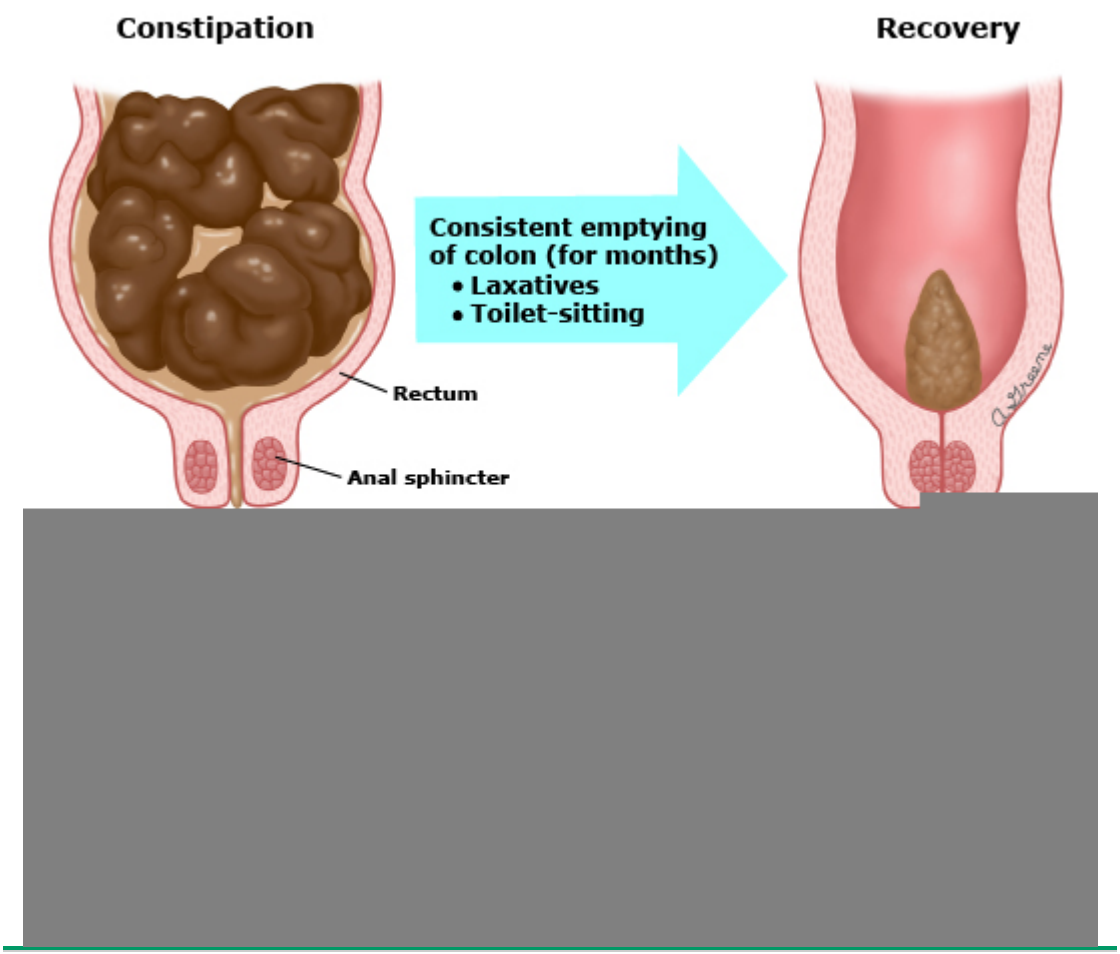
2. Loening-Baucke V. Prevalence, symptoms and outcome of constipation in infants and toddlers. J Pediatr 2005; 146:359.

3. Tabbers MM, DiLorenzo C, Berger MY, et al. Evaluation and treatment of functional constipation in infants and children: evidence-based recommendations from ESPGHAN and NASPGHAN. J Pediatr Gastroenterol Nutr 2014; 58:258.

Topic 1215 Version 25.0

GRAPHICS

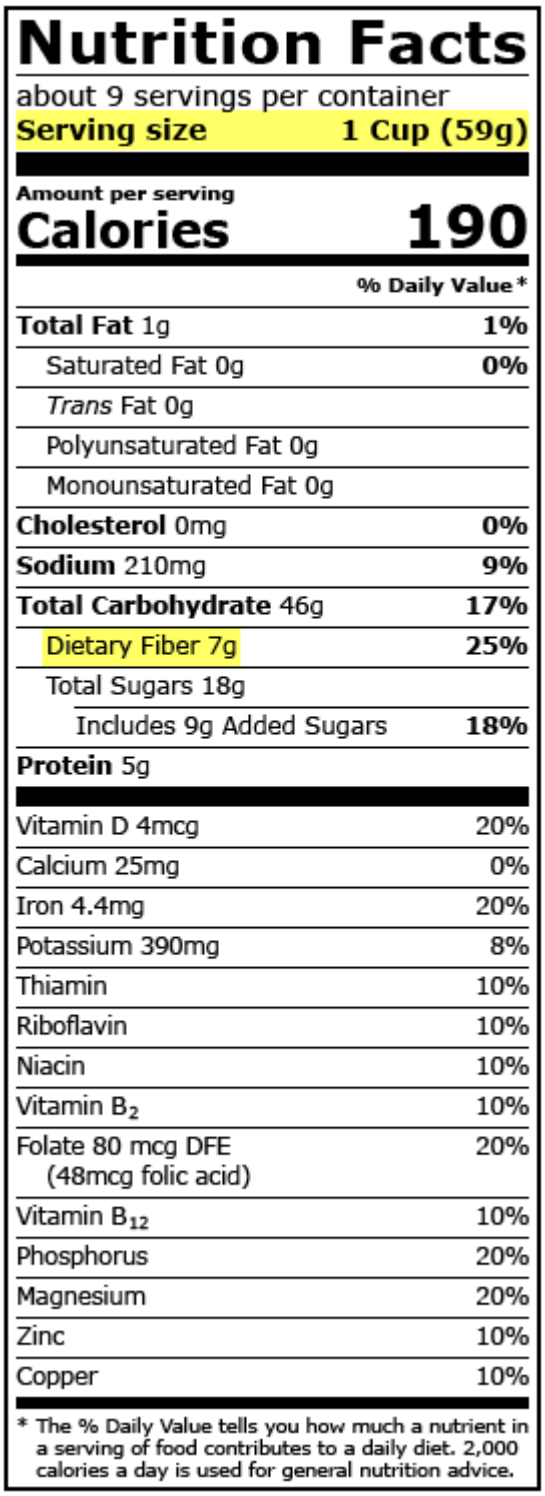
Constipation and bowel retraining



Fecal incontinence in children is when a toilet-trained child has bowel movements in the wrong place. Constipation is the most common cause. This diagram shows how constipation can make bowel movements build up and how treatment works.

Graphic 69473 Version 5.0

Nutrition label - fiber



Nutrition Facts

about 9 servings per container

Serving size **1 Cup (59g)**

Amount per serving

Calories **190**

	% Daily Value*
Total Fat 1g	**1%**
Saturated Fat 0g	**0%**
Trans Fat 0g	
Polyunsaturated Fat 0g	
Monounsaturated Fat 0g	
Cholesterol 0mg	**0%**
Sodium 210mg	**9%**
Total Carbohydrate 46g	**17%**
Dietary Fiber 7g	**25%**
Total Sugars 18g	
Includes 9g Added Sugars	**18%**
Protein 5g	
Vitamin D 4mcg	20%
Calcium 25mg	0%
Iron 4.4mg	20%
Potassium 390mg	8%
Thiamin	10%
Riboflavin	10%
Niacin	10%
Vitamin B_2	10%
Folate 80 mcg DFE (48mcg folic acid)	20%
Vitamin B_{12}	10%
Phosphorus	20%
Magnesium	20%
Zinc	10%
Copper	10%

* The % Daily Value tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

This is an example of a nutrition label. To figure out how much fiber is in a food, look for the line that says "Dietary Fiber." It's also important to look at the serving size. This food has 7 grams of fiber in each serving, and each serving is 1 cup.

%: percent.

Graphic 51585 Version 7.0

High-fiber foods

	Fiber (grams)
Cereal (½ cup serving)	
Fiber One	13
100% Bran	12
All Bran	12
Bran Buds	12
Kashi Go Lean	5
Kellogg's Complete Bran Flakes	5
Grape Nuts	5
Raisin Bran*	3 to 5
Cracklin' Oat Bran*	4
100% Whole Grain Wheat Chex	3
Fruit and Fiber	3
Great Grains	3
Frosted Mini Wheats	3
Kellogg's Low-Fat Granola	3
Cheerios	2¶
Wheaties	2¶
Instant oatmeal	2¶
Fruit	
Pear (one)	4
Strawberries (1 cup)	3
Apple (one, with skin)	3
Dried fruits (eg, raisins) (3 tablespoons)	3
Papaya (one)	3
Peach (fresh)	2¶
Plums (two)	2¶
Mango	2¶
Nectarine	2¶
Avocado (½ medium)	2¶
Tomato (one medium)	2¶
Vegetables (cooked unless indicated)	
Pinto, kidney, black, lima beans (½ cup)	4 to 7
Sweet potato (1 medium)	4
Lentils (½ cup)	4
Jicama (½ raw)	3 to 4
Baked potato with skin (medium)	3
Corn (½ cup)	3
Peas (½ cup)	3
Broccoli (½ cup)	2¶

Cabbage (½ cup)	2¶
Spinach (½ cup)	2¶
Cauliflower (¾ cup)	2¶
Carrots (1 medium raw, or ½ cup cooked)	2¶

* These cereals are also high in sugar (15 to 20 grams per serving).
¶ These foods contain relatively small amounts of fiber, but may still be helpful to provide a portion of the child's fiber intake.
Δ Reflects **insoluble** fiber, which is the most relevant type of fiber for prevention and treatment of constipation. **Soluble** fiber has different health benefits. Some "high fiber" forms of instant oatmeal contain up to 10 grams of fiber. However, most of this additional fiber is soluble, which may not be as valuable as insoluble fiber for prevention and treatment of constipation.

Graphic 54403 Version 6.0

High-fiber diet guidelines for children

Why we need fiber

Fiber helps children and adults have regular bowel movements and helps prevent constipation and other health problems. Dietary fiber helps keep the bowel and digestive tract healthy and enhances feelings of fullness after eating.

How much fiber is needed

For prevention of constipation, a practical target for fiber intake is the child's age plus 5 to 10 grams per day.[1] Giving more than this fiber goal has no proven benefit for management of constipation in children.[2]

Somewhat higher targets for fiber intake (14 grams/1000 kcals in the diet) have been recommended by the Institute of Medicine.[3] For children, this translates to an intake of about 20 grams/day in early childhood, rising to 29 grams/day for adolescent girls and young women, and 38 grams/day for adolescent boys and young men.

To find out the number of grams of fiber in a certain food, read the label, or see the foods listed in this table. High-fiber foods contain 3 or more grams of fiber per serving.

How to help your child eat more fiber

A high-fiber diet should be a balanced diet with foods from all the food groups. The most common sources of fiber are whole grain breads and cereals, legumes and nuts, fruits, and vegetables. Include these in your child's balanced diet:

- Offer your child a variety of high-fiber foods during the day rather than giving only one or two high fiber foods.
- Mix a high-fiber cereal with a cereal your child likes.
- Offer fresh fruits with the skin on. Prunes and pears act as natural laxatives.
- Offer raw vegetables, such as carrots, jicama, or cherry tomatoes for snacks and with meals. Offer a salad with dark green lettuce each day.
- Use whole-wheat bread or white bread with added fiber, brown rice, whole-wheat crackers, bran muffins, barley, bran cereals, or oatmeal. Use less refined white flour bread, cereal, and other starches.
- Offer 4 to 6 ounces of prune, apple, orange, or pear juice each day. Remember that fresh fruit has more fiber than juice.
- Offer snacks that have fiber, like granola bars, fruit bars, fig cookies, or popcorn (after age 3 years).
- Help your child develop a taste for bran. Try to include 2 to 4 tablespoons of some form of bran each day.
- Add nuts or seeds to breads and salads, or use them as a snack. This is not recommended for children younger than three years.
- Read labels on foods, and look for foods with 3 or more grams of fiber per serving. Have your child eat 3 or more servings each day of breads and cereals made from whole grains and bran. Have your child eat 5 or more servings of vegetables and fruits, including beans. It is important to increase water in the diet when you increase fiber.

Preventing constipation

If your child is constipated, follow the dietary guidelines above. Also, encourage your child to drink at least 4 to 8 cups (32 to 64 ounces) of fluid per day, preferably water, low-fat milk, and low-sugar decaffeinated beverages.

References:

1. *Williams CL, Bollella M, Wynder EL. A new recommendation for dietary fiber in childhood. Pediatrics 1995; 96:985.*
2. *Tabbers MM, DiLorenzo C, Berger MY, et al. Evaluation and treatment of functional constipation in infants and children: evidence-based recommendations from ESPGHAN and NASPGHAN. J Pediatr Gastroenterol Nutr 2014; 58:258.*
3. *Dietary Guidelines for Americans 2005. US Department of Health and Human Services. Available at: www.health.gov/dietaryguidelines/pubs.htm.*

Graphic 57015 Version 8.0

Sample menu for a high-fiber diet for children

Sample menu for a 7- to 10-year-old child, with approximate fiber content* (estimated fiber requirement for this age group: 25 to 31 grams per day)
Breakfast (6.5 grams fiber)
1 cup instant oatmeal (2 grams fiber)*¶
1 slice whole-grain toast (1.5 grams fiber)
1 teaspoon margarine or butter
1 cup strawberries (3 grams fiber)
8 ounces skim milk
Lunch (10 grams fiber)
Turkey sandwich on whole-grain bread (3 grams fiber)
1 teaspoon mustard
1 ounce whole-grain chips (2 grams fiber)
1 medium apple (3 grams fiber)
8 baby carrots (2 grams fiber)
Bottled water
Snack 1 (3 grams fiber)
4 fig bar cookies (3 grams fiber)
8 ounces skim milk
Dinner (8.5 grams fiber)
3 ounces pork tenderloin
½ cup mashed sweet potatoes (4 grams fiber)
½ cup green beans (1.5 grams fiber)
¼ cup baked beans (3 grams fiber)
2 teaspoons margarine or butter
8 ounces skim milk
Snack 2
½ cup vanilla bean ice cream

* Reflects insoluble fiber, which is the most relevant type of fiber for prevention and treatment of constipation. Soluble fiber has different health benefits.

¶ Some "high fiber" forms of instant oatmeal contain up to 10 grams of fiber. However, most of this additional fiber is soluble, which may not be as valuable as insoluble fiber for prevention and treatment of constipation.

Graphic 76458 Version 6.0

Proper positioning on the toilet for a child

This illustration shows proper positioning on the toilet for a child. A step stool is under the child's feet so that his knees are above the level of his hips. This position helps to relax the pelvic muscles, which makes it easier to pass the bowel movement.

Graphic 126638 Version 1.0

Stool diary (sample)

Name: John Smith
Weeks of: Jan 1-14

Day/date	Toilet sitting AM	Toilet sitting Mid-day	Toilet sitting PM	Stools outside of sitting time	Medication		Comments
SUN 1	o	o	x		✓	✓	
MON 2	o	o	o	x	✓	✓	
TUE 3	o	o	x		✓	✓	hard stool
WED 4	o	o	o	x	✓	✓	
THU 5	o	x	o		✓	✓	
FRI 6	o	o	x		✓	✓	abdominal pain
SAT 7	o	o	o	x	✓	✓	
SUN 8	x	o	o		✓	✓	
MON 9	o	o	x		✓	✓	
TUE 10	o	o	x		✓	✓	
WED 11	o	x	o		✓	✓	
THU 12	o	o	x		✓	✓	
FRI 13	x	o	o		✓	✓	
SAT 14	o	o	o	x	✓	✓	

Instructions:
Write your child's name and the time period in the upper right corner.
Write the day of the week and date in the first column.
When your child has a bowel movement in the toilet place an "X" in the appropriate column
(ie, during toilet sitting or outside of sitting time).
When your child sits on the toilet, but doesn't have a bowel movement,
place an "O" in the appropriate column.
When your child takes his or her maintenance laxative, place a checkmark in the "Medication" column.
Write any additional information in the "Comments" column
(eg, need for rescue medication, episodes of wetting, soiling, or abdominal pain).
Keep this diary and bring it with you to the next appointment.

Graphic 67114 Version 1.0

Stool diary

Graphic 61504 Version 1.0

Contributor Disclosures

Manu R Sood, MBBS, FRCPCH, MD, MSc Employment (spouse): AbbVie - No relevant conflict on topic. Equity Ownership/Stock Options (spouse): AbbVie; Abbott. Consultant/Advisory Boards: Sucampo and Takeda [Constipation]. **B UK Li, MD** Consultant/Advisory Boards: Takeda, GLG Consulting [Antiemetics]. **Alison G Hoppin, MD** Nothing to disclose

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Conflict of interest policy

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