

Diarrhea

Hilliard Pediatrics, Inc. - Dr. Tim Teller, MD

Introduction

Diarrhea means bowel movements that are more frequent and more loose and watery. Many things can cause diarrhea. Common causes are viral infections, changes in food or drink intake, antibiotics and other medicines, parasite infections, lactose intolerance, and irritable bowel syndrome. Uncommon causes are bacterial infections, inflammatory bowel disease, food allergies, and others. Depending on the cause, diarrhea may last for hours or weeks. Bowel movements may be **many colors**. This is also true when diarrhea is present. **Do not worry about what color the bowel movement is** as long as there is no blood in the bowel movement.

Causes

- **Viral Infections** often cause diarrhea. The most common virus to cause winter-time diarrhea is **rotavirus**, which causes watery diarrhea that lasts for days to weeks. The viruses that cause diarrhea are very contagious, are passed from being in close contact with someone with the illness or something they recently touched, and may cause vomiting and fever. It would be unusual for a viral infection to cause bloody diarrhea. There are literally hundreds of viruses that can cause diarrhea. A number of these viruses can cause a fever for a few days.
- **Diarrhea from food and drink intake** often is a brief (a few hours to days). Food and drinks that may cause this include fruit juices, tomatoes, citrus fruits, spicy food, and seafood. Large amounts of dairy (milk, cheese, etc.) can cause diarrhea. A kind of diarrhea from food and drink intake is a commonly seen form of diarrhea called **Toddler's diarrhea**. This often occurs with children from 1-3 years of age who drink a lot of juice and eat a lot of fruit. These children often have 2-5 loose, mushy, sometimes watery bowel movements a day.
- **Antibiotics** commonly cause diarrhea. Antibiotics often kill the normal, healthy bacteria in the intestines, and diarrhea results. This kind of diarrhea typically is loose and watery, and it lasts for as long as the medicine is taken. If blood is seen in the bowel movement, we are likely to suspect a more serious illness.
- **Parasite infections** often cause frequent watery stools and crampy abdominal pain. These germs, including Giardia and Cryptosporidium, are spread from another person or from drinking water that contains the germ.
- **Lactose intolerance** most commonly occurs during and for a short time after a viral diarrhea illness, but can be a chronic condition. Lactose is the "milk sugar" and is in milk, cheese, yogurt, ice cream, etc. People with lactose intolerance cannot properly digest this sugar. This causes crampy stomach pain, gassiness, and watery diarrhea.
- **Irritable bowel syndrome** causes bloating, belly pain after eating that is helped by having a bowel movement, the gassiness, and alternating diarrhea and constipation. Often, a specific stressful event seems to make the symptoms worse.
- **Bacterial infections** can cause diarrhea illnesses, sometimes with bloody diarrhea. These infections include "food poisoning" in which food is eaten that contains the germ, "stomach flu" diarrhea illnesses (sometimes with vomiting) with bloody diarrhea, and an infection

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when someone takes an antibiotic that kills the healthy intestinal germs and allows a more serious bacteria illness to cause persistent diarrhea, sometimes with blood.

- **Food allergies** that cause diarrhea without hives are most commonly seen in children less than 12 months of age. These infants seem irritable and blood may be seen in the diarrhea. The most common causes are milk and soy proteins. For older children, it is much more common to see hives appear with food allergies rather than a diarrhea illness.

Treatment

- We do **not** recommend any over-the-counter *diarrhea medicine* because they have not been shown to be both safe and effective for children. Because the anti-diarrhea medicines slow down how the bowels move and our bodies way of getting rid of the germ is to pass it out of the system, these medicines can potentially make the illness last longer. In addition, if there is a bacterial infection causing the diarrhea, slowing down the diarrhea could allow the bacteria to build-up in your child's system and the illness to become much more serious. Unless specifically instructed by our office to use one of the medications, do NOT give an over-the-counter diarrhea medicine.
- **Viral infections** run their course without needing any treatment except to the diet (what someone eats and drinks). Antibiotics will not help a viral illness. Children with diarrhea are very likely no longer contagious when the diarrhea ends and no specific treatment will speed this process. See below for specifics about diet changes to help treat diarrhea.
- **Diarrhea from foods and drinks** will stop when the food or drink is avoided or reduced. It may take some trial and error to figure out which food your child is sensitive to. If diarrhea happens each time they eat or drink something and the diarrhea goes away when they avoid that food or drink, it is likely that you have discovered the food or drink to avoid or reduce.
- **Parasite infections** are suspected if a child has persistent watery diarrhea after traveling where they may have ingested infected water (foreign country or a vacation where they were swimming in a lake, river, or pond). Some parasite infections end without antibiotic treatment, while others require special antibiotics. See below for specifics about diet changes to help treat diarrhea. Ova and parasite infections can be detected with stool studies.
- **Lactose intolerance** will require avoiding the lactose milk sugar. Some children can eat and drink small amounts without symptoms occurring. Others must avoid lactose sugars entirely (not eating or drinking any milk, yogurt, ice cream, cheese, etc.). Lactaid is an over-the-counter medicine that breaks-up the lactose sugars for someone who is lactose intolerant. This allows many people to enjoy lactose-containing foods. Lactaid is available as tablets and drops.
- **Irritable bowel syndrome** is often helped by eating a bland diet when the symptoms act up, avoiding caffeine, and learning to avoid or reduce the stressful events that help trigger it. Some children with irritable bowel syndrome will require a prescription medicine to help with their symptoms. We will want to see your child for an appointment in the office to discuss treatment further.

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- **Bacterial infections** causing diarrhea are found by sending samples of the bowel movement to the lab for testing. Some of these bacteria need special antibiotic treatments, while others need no antibiotics. See below for specifics about diet changes to help treat diarrhea.

Dehydration

Dehydration is when our body no longer has enough fluids in our system. Dehydration most commonly happens with repeated vomiting, but can occur if there is severe diarrhea. One of the goals of treating diarrhea is to avoid dehydration. We are concerned that a child is dehydrated if they have **not urinated** (or had a wet diaper) in **8 or more hours**, have made **urine less than 3 times in 24 hours**, have a **dry mouth** (sometimes called "cotton mouth"), make **no tears** when they cry, and act **lethargic** (like a limp rag doll; this is different than "listless" which means less active and laying around but will be up and around on occasion). Note if a child is drinking well without vomiting, is not acting lethargic, but has not urinated in the last 8 to 10 hours, it is safe to see if their drinking will allow them to make urine in the next couple of hours.

Treating Diarrhea with Diet Changes

Diarrhea illnesses irritate our intestines. This causes us to not digest our food and drink normally while the diarrhea illness remains in our system. Because the vast majority of diarrhea illness will end on their own without antibiotics and the over-the-counter diarrhea medicines are not both safe and effective, we recommend changing a child's diet during the diarrhea illness. This helps decrease (but may not stop!) the diarrhea and can help the child feel less gassy and uncomfortable. These food and drink changes should be continued for as long as the diarrhea continues. See below.

- **Foods and drinks to avoid:** **Milk** and all **dairy** foods (cheese and cheese sauce, ice cream, yogurt, and pudding), **spicy** foods (chili, spicy Mexican foods, spicy Chinese and other Asian foods, and spicy Indian foods), **greasy** foods (french fries, hamburgers, chicken nuggets, etc.), **citrus** fruits and juices, and **apple, prune and pear juices**.
- **Recommended foods:** bland and easily digested foods, including bananas, plain rice, plain noodles, toast, apple sauce, crackers, waffles or pancakes without syrup, Jell-O® gelatin, and Cheerios®.
- **Recommended drinks for infants:** breast milk, Pedialyte® and other over-the-counter electrolyte drinks, and soy formula. Note that the irritation to our intestines that happens with the diarrhea illnesses keeps infants from digesting milk-based formulas (Similac®, Enfamil®, and others) well for a few days to a few weeks. Soy formulas (such as Similac® Soy Isomil) are much better tolerated as they are digested well even when the intestines are irritated. Similac® Advanced Care for Diarrhea is a good choice and is a soy formula that is lactose-free. Many breast-feeding mothers do not need to modify anything at all. A few mothers will notice that their infants with diarrhea improve if the mother avoids dairy while the diarrhea continues.
- **Recommended drinks for toddlers and older children:** Pedialyte® or Gatorade®, white grape juice, and water. These are preferred to other clear liquids, including, non-caffeinated flat

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lemon-lime soda (such as Sierra Mist®, Sprite®, and 7-Up®), Kool-Aid®, Jell-O® water. Pedialyte® is much better for infants and toddlers than sports hydration drinks (such as Gatorade®) or sodas (such as 7-Up®) because Pedialyte® has the right balance of salts and sugars. The other drinks do not and they can actually make diarrhea worse. White grape juice has been scientifically shown to not worsen diarrhea compared to apple, pear, and prune juices. Note that it is better for an upset stomach to let the soda lose its carbonation (bubbles) by pouring it into a glass and not drinking it for 20-30 minutes.

What to Do When

- If your child has **diarrhea** that **just started** and does not have an obvious cause => follow the diet changes recommended above.
- If your child has had diarrhea, but **no more than 4** diarrhea bowel movements in **24 hours** => it is less likely that continuing to follow the dietary changes will help and therefore is not necessary. However, if returning to your child's normal diet (food and drink intake) makes the diarrhea worse, follow the above recommended dietary changes.
- If your child has had diarrhea for **2 weeks or more** and it is not improving => call our office during regular office hours.
- If your child has **bloody diarrhea** => call us immediately, whether during regular office hours or after hours.
- If your child has had diarrhea and now shows **signs of dehydration** => call us immediately. We will discuss with you further treatment. The Nationwide Children's Hospital Emergency Department can treat dehydration with IV (intravenous; into the vein) fluids if necessary. If a child is perking-up after 4-6 hours of IV fluids, they are often able to go home. If not, some children will need to be admitted to the hospital for further treatment. The Urgent Care does not treat dehydration with IV fluid.
- If your child has severe or **doubling-over belly pain** with diarrhea => your child will need to be seen promptly. Call our office day or night or take your child to Children's Hospital Emergency Department (not the Urgent Care).
- If your child has **vomiting** with their diarrhea => follow the above information, but make sure you read the [Vomiting](#) protocol.
- If your child has persistent diarrhea when they normally drink a **milk-based formula** => we suggest switching to a soy-based formula, such as Similac® Soy Isomil®, Similac® Advanced Care for Diarrhea, or Enfamil® ProSoBee®, until the diarrhea improves.
- If your child has had diarrhea that was improving on diet changes but now has **worsened again** once your child has returned to their normal food and drink => return to the diet changes for diarrhea until the diarrhea again resolves.
- If your child has a **fever** with diarrhea => treat the fever the way you normally would as long as dehydration, doubling-over or severe belly pain, or bloody diarrhea is present. Read the [Fever](#) protocol for more information.

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