

# Diarrhea

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## What is it?

Diarrhea is the sudden increase in the frequency and looseness of bowel movements. Mild diarrhea is the passage of a few loose or mushy stools. Moderate diarrhea gives many watery stools. The best indicator of severity of the diarrhea is its frequency. A green stool also points to very rapid passage in moderate to severe diarrhea.

## What causes it?

Diarrhea in children has many causes. Most of the causes are not serious, but occasionally it can be hard to know the difference.

Dietary sugars often cause mild diarrhea in children by irritation of the intestinal tract. Baby's intestinal systems are not yet equipped with the proper enzymes to break down these carbohydrates. Even *lactose*, the sugar found in milk may cause diarrhea in young children. In these cases, soybean formula may be substituted for cow's formula until a child outgrows the problem. Also, remember that fruit juices contain *fructose*, another sugar. Apple juice has high sugar content and is the leading cause of nonspecific diarrhea in infants. Be sure that you dilute juice with the recommended amount of water before giving it to your baby.

Starting solid foods can also cause diarrhea and it may take your baby some time to be able to digest solid food properly.

Medications, either over-the-counter or prescription, may also have components which can cause childhood diarrhea. Syrups often contain sugar to make their taste acceptable to a young baby. However, as mentioned previously, babies are often unable to digest the sugars.

*Gastroenteritis* is another possible cause of childhood diarrhea. This condition is commonly caused by a viral infection but occasionally is caused by bacteria or parasites. *Rotavirus* is the culprit in over 50% of winter-time diarrhea in children. More than 2/3 of children with rotavirus associated diarrhea have a history of recent upper respiratory illness with runny nose, cough, or sore throat and may also have vomiting, fever and irritability.

## Who gets it?

Children of any age can have diarrhea caused by a number of different agents. However, most of the nonspecific diarrheas due to changes in diet are during the first year of life. Infectious diarrhea primarily caused by viruses is more likely to be found in children less than 2 years of age.

## What are the symptoms?

Acute diarrhea is characterized by sudden and frequent passage of large, watery, odorless stools. Exact symptoms vary according to what is causing diarrhea. Viral infections typically have watery diarrhea, a low grade fever, and vomiting for 5 - 8 days. Bacterial infections often affect the small intestine and can cause nausea, vomiting, cramps, a low grade fever, and the sudden passage of watery stools. Infections caused by other microscopic organisms including *protozoa* (one celled organisms), can cause a sudden explosive passage of watery stools and abdominal cramps.

Chronic diarrhea is defined as watery stools over a period longer than 2 weeks. Weight loss, fever, nausea, vomiting, tenderness in the anal region, and anxiety or depression may accompany chronic diarrhea.

## How do you prevent it?

Infectious diarrhea is very contagious. Hand washing after diaper changing or using the toilet is crucial to keep family members from getting diarrhea.

## Can it be treated?

Mild diarrhea is very common in children and it will soon improve with conservative treatment. Children with more severe diarrhea will require an oral rehydration solution (such as Pedialyte, Resol, or Ricelyte) containing the right mix of salts, sugar, potassium and other elements to help replace lost body fluids. Most of the time, medicine isn't necessary.

- **Breast-fed infants** are easily treated by offering extra water between breast feedings. Breast-feedings

should never be discontinued because of diarrhea. An oral rehydration solution can also help replace fluids.

- **Bottle-fed infants** should be given extra fluids by mixing your baby's formula or milk with 1 - 2 ounces of extra water per bottle. If the diarrhea is severe or doesn't improve after 3 days on regular formula, consider changing to a soy formula. There is often less diarrhea with soy formulas than with cow's milk formulas because they don't contain milk sugar, or *lactose*. Mix the formula with 1 - 2 ounces of extra water per bottle until the stools are no longer watery. Plan on keeping your baby on the soy formula until the diarrhea is gone for 3 days.

If your baby is on solids, offer applesauce, strained bananas, strained carrots with rice, pasta, bread, potatoes, and other high fiber foods for the next few days. Avoid food and drinks that contain a lot of sugar, such as ice cream, soda pop and candy.

- **Toddlers** also usually respond to home therapy. Clear fluids (oral rehydration solutions) should be given for at least 24 hours. The commercial preparations (Pedialyte, Resol, Ricelyte) are available without a prescription in most supermarkets.

If your child has diarrhea and isn't vomiting, don't limit how much solution your child drinks. You can use a dropper, spoon, bottle or cup.

If your child is vomiting (with or without diarrhea), try giving small amounts of the oral rehydration solution often, such as one teaspoon a minute. When your child is able to keep the drink down, slowly increase the amount of solution you give. If your child keeps vomiting, wait 30 to 60 minutes after the last time he or she vomits and then give him or her a few sips of the solution from a spoon or a few drops from a dropper. Small amount every few minutes may stay down better.

Solids can begin 24 hours after diarrhea has improved on liquids alone. Generally the foods most easily absorbed are composed of starches (apple sauce, bananas, carrots, potatoes, noodles, and rice).

- **Children and adults** should eat a regular diet with a few simple changes. Clear liquids, especially early in the course of illness, should be emphasized along with foods containing starch, such as breads, rice, potatoes and pasta. Milk and milk products should be reduced or eliminated with the exception of active culture yogurt. A normal diet can be resumed 1 day after diarrhea is gone, which is usually in 3 - 4 days.

## Are there complications?

An infant has a larger percentage of water than an adult and unfortunately children are not able to conserve water as efficiently as an adult. Therefore, there is a very real risk of *dehydration* from diarrhea in a matter of hours or days; in some extreme cases, this can be life threatening.

## Signs of dehydration

- Dry mouth
- Sunken eyes
- Depressed soft spot on the top of the head
- Disinterest in usual activities
- Irritability
- Failure to urinate 3 times in 24 hours
- Weight loss
- Decreased tearing
- Increased thirst

Another complication is *diaper dermatitis* which is caused by the prolonged contact of stool against the delicate skin. You should wash the stool off after each bowel movement and protect the skin with a thick layer of petroleum jelly or Desitin. This protection is especially needed during the night and during naps. Changing the diaper after each bowel movement also helps.

If you notice bloody or tar colored bowel movements, signs of dehydration, fever > 103 F, stiff neck, increased abdominal pain or worsening of the diarrhea and/or vomiting, call your doctor immediately.

## In summary

- Diarrhea has many causes.
- Infectious diarrhea is often caused by viruses and is the most common cause of diarrhea.
- Extra water and diet therapy work best. There is no effective, safe drug for diarrhea.
- Most children will get better in 3 - 4 days.
- Dehydration is the most common complication of diarrhea.
- Follow the treatment schedule prescribed. If the diarrhea has not improved in 3 - 4 days, call your doctor.
- For more information contact the American Academy of Family Physicians at [familydoctor.org](http://familydoctor.org)