



Education

Diarrhea: Formula-fed Infants

What is diarrhea?

Diarrhea is the sudden increase in the frequency and looseness of bowel movements (BMs). Mild diarrhea is the passage of a few loose or mushy BMs. Severe diarrhea is the passage of many watery BMs. The best indicator of the severity of the diarrhea is its frequency.

The main complication of diarrhea is dehydration from the loss of too much fluid from the body. Symptoms of dehydration are a dry mouth, the absence of tears, infrequent urination (for example, none in 8 hours), and a darker, concentrated urine. The main goal of diarrhea treatment is to prevent dehydration.

What is the cause?

Diarrhea is usually caused by a viral infection of the lining of the intestines (gastroenteritis). Sometimes it is caused by bacteria or parasites. Occasionally a food allergy or drinking too much fruit juice may cause diarrhea. If your child has just one or two loose bowel movements, the cause is probably something your child ate. A diet of nothing but clear fluids for more than 2 days may cause green, watery bowel movements (called "starvation stools").

How long will it last?

Diarrhea caused by a viral infection usually lasts several days to 2 weeks, regardless of the type of treatment. The main goal of treatment is to prevent dehydration. Your child needs to drink enough fluids to replace the fluids lost in the diarrhea. Don't expect a quick return to solid bowel movements.

What should I feed my child?

Increased fluids and dietary changes are the main treatment for diarrhea.

Note: One loose bowel movement can mean nothing. Don't start dietary changes until your child has had several loose bowel movements.

Mild diarrhea (loose BMs)

Continue a regular diet with a few simple changes. Give full-strength formula--as much as your baby wants. If your baby eats solid foods, offer more rice cereal, mashed potatoes, applesauce, strained bananas, and strained carrots. Avoid all fruit juices because they make diarrhea worse.

Frequent, watery diarrhea

- **Oral glucose-electrolyte solutions for 4 to 6 hours** If your child has severe diarrhea and dark urine or not much urine, buy Kao Lectrolyte or Pedialyte at your pharmacy or supermarket. (These special solutions are not needed for diarrhea that is not severe.) If your child doesn't like the flavor, add a bit of KOOL-Aid powder or 2 drops of NutraSweet. Give as much of the special liquid as your baby wants (at least 10 ml for every pound your child weighs each hour). Diarrhea makes children thirsty, and your job is to satisfy that thirst and prevent dehydration. Never restrict fluids when your child has diarrhea. Until you get one of these special solutions, continue giving your baby full-strength formula in unlimited amounts. Avoid giving your baby Jell-O water mixtures or sports drinks (they do not contain enough sodium). Fruit juice will make the diarrhea worse. If you aren't able to get an oral glucose-electrolyte solution, ask your doctor about making a homemade solution as follows: Mix 1/2 cup of dry infant rice cereal with 2 cups (16 ounces) of water and 1/4 level teaspoon of salt. Be careful not to add too much salt (to avoid the risk of salt poisoning).
 - **Returning to formula** After being given electrolyte fluids for 4 to 6 hours, your baby will be hungry, so begin her full-strength formula. Offer it more frequently than you normally do. If the diarrhea continues to be
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severe, switch to a soy formula. If you give cow's milk formula and the diarrhea doesn't improve after 3 days, change to a lactose-free formula (a soy formula or milk-based Lactofree). Often there is less diarrhea with soy formulas than with cow's milk formulas because the soy formulas don't contain milk sugar (lactose). If you need to start soy formula, plan to keep your baby on it until the diarrhea is gone for 3 days.

- **Continuing solids** Foods that contain a lot of starch are more easily digested than other foods during diarrhea. If your baby is over 4 months old, continue solid foods. Good choices are: any cereal, applesauce, strained bananas, strained carrots, mashed potatoes, and other high-fiber foods.

How can I take care of my child?

- **Common mistakes** Using boiled skim milk or any concentrated solution can cause serious complications for babies with diarrhea because it contains too much salt. KOOL-Aid, soda pop, or water should not be used as the only food because they contain little or no salt. Use only the fluids suggested here. Clear fluids alone should be used for only 4 to 6 hours because the body needs more calories than clear fluids can provide. Likewise, a diluted formula is not needed because regular formula contains enough water. The most dangerous myth is that the intestine should be "put to rest." Restricting fluids can cause dehydration. There is no effective, safe drug for diarrhea. Extra fluids and diet therapy work best.
- **Prevention** Diarrhea is very contagious. Always wash your hands after changing diapers or using the toilet. This is crucial for keeping everyone in the family from getting diarrhea.
- **Diaper rash from diarrhea** The skin near your baby's anus can become irritated by the diarrhea. Wash the area near the anus after each bowel movement and then protect it with a thick layer of petroleum jelly or other ointment. This protection is especially needed during the night and during naps. Changing the diaper quickly after bowel movements also helps.
- **Overflow diarrhea in a child not toilet-trained** For children in diapers, diarrhea can be a mess. Place a cotton washcloth inside the diaper to trap some of the more watery BM. Use disposable superabsorbent diapers to cut down on cleanup time. Use the diapers with snug leg bands or cover the diapers with a pair of plastic pants. Wash your child under running water in the bathtub.
- **Vomiting with diarrhea** If your child has vomited more than twice, follow your doctor's recommended treatment for vomiting instead of this treatment for diarrhea until your child has gone 8 hours without vomiting. A good approach is for your child to take one swallow of fluid at a time every 5 minutes. (See information on vomiting.)

When should I call my child's health care provider?

Call IMMEDIATELY if:

- There are signs of dehydration (no urine in more than 8 hours, very dry mouth, no tears).
- Any blood appears in the diarrhea.
- The diarrhea is severe (more than 8 BMs in the last 8 hours).
- The diarrhea is watery AND your child repeatedly vomits.
- Your child starts acting very sick.

Call during office hours if:

- Mucus or pus appears in the BMs.
- A fever lasts more than 3 days.
- Mild diarrhea lasts more than 2 weeks.
- You have other concerns or questions.

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