



MIDDLEBORO PEDIATRICS

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DIARRHEA¹

Definition

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 the severity of the diarrhea is its frequency.

Diagnostic Findings

The main complication of diarrhea is dehydration from excessive loss of body fluids. Symptoms are a dry mouth, the absence of tears, sunken eyes, a reduction in urine production (for example, none in 8 hours), and a darker, concentrated urine. It's dehydration you need to worry about, not the presence of diarrhea.

Cause

Diarrhea is usually caused by a viral infection of the intestines (gastroenteritis). Occasionally it is caused by bacteria or parasites. Diarrhea can be due to excessive fruit juice or to a food allergy. If only one or two loose stools are passed, the cause was probably something unusual your child ate.

Expected Course

Diarrhea usually lasts from several days to a week, occasionally longer, regardless of the treatment. The main goal of therapy is to prevent dehydration by giving enough oral fluids to keep up with the fluids lost in the diarrhea. Don't expect a quick return to solid stools. Since one loose stool can mean nothing, don't start dietary changes until there have been at least two.

Home Care: Diet

Dietary changes are the mainstay of home treatment for diarrhea. The optimal diet depends on your child's age and the severity of the diarrhea. Go directly to the part that pertains to your child.

Diet for Mild Diarrhea (Mushy Stools) in Children Less than 2 Years Old.

Give extra fluids by mixing your baby's formula or milk with 1 or 2 ounces of extra water per bottle. If your baby is on solids, offer the BRAT diet (bananas, rice or rice cereal (for infants), applesauce, and toast). You may also give any dry cereal, crackers, pasta, and potatoes for the next few days. Fiber is helpful for both diarrhea and constipation.

Diet for Moderate Diarrhea (Watery or Frequent Stools) in Children Less than 1 Year Old)

Clear Fluids (Oral Electrolyte Solutions) for 24 hours. Have your baby take one of the following special clear fluids (oral electrolyte solutions) for the first 24 hours; Pedialyte, Resol, Ricelyte, or Kaoelectrolyte. These are available without a prescription in most pharmacies and supermarkets. Until you obtain this special solution, half-strength Gatorade or another sports drink will do. As a last resort, Jell-O water can be used. Jell-O water must be mixed (one package per quart of water, or twice as much water as usual). Don't use any red-colored Jell-O water because it can look like blood. Give your baby as much of the liquid as he wants. Diarrhea makes children thirsty and your job is to prevent dehydration.

After being on clear fluids for 6 to 24 hours your baby will be hungry, so begin his regular formula. If the diarrhea is severe, begin a soy formula. Change to a soy formula later if the diarrhea doesn't improve after 3 days on regular formula. There is often less diarrhea with soy formulas than with cow's milk formulas because they don't contain milk sugar (lactose). Mix the formula with 1 or 2 ounces of extra water per bottle until the stools are no longer watery. Plan on keeping your baby on soy formula until the diarrhea is gone for 3 days. Isomil DF is a soy formula made specially for infants with diarrhea.

The foods most easily absorbed are composed of starch. If your baby wants solids offer the BRAT diet described previously.

Diet for Moderate Diarrhea (Watery or Frequent Stools) in Children 1 to 2 Years Old

Babies 1 to 2 years old don't need formula or milk of any kind for the first week. During this week water or other clear liquids can be used for fluids (avoid fruit juice). Gradually phase in the following special solids:

- Day 1: Clear fluids and Popsicles. If your toddler is hungry, add some foods from the day 2 list.
- Day 2: Saltine crackers, toast with jelly, rice, mashed potatoes, carrots, applesauce, bland soups, or other high-fiber foods.
- Day 3: Lean meats, soft-boiled eggs, noodles, soft cooked fruits and vegetables, and active culture yogurt.
- Day 6: Regular diet but no milk products.
- Day 8: Milk and milk products can gradually be added.

Note: Avoid cheeses, which contain 80% of the lactose found in milk, until day 8. By contrast, the lactose in active culture yogurt will be digested by the Lacto-bacillus organisms.

Diet for Mild or Moderate Diarrhea in Children Over 2 Years Old. For the child who is toilet trained for bowel movements, the approach to diarrhea is the same as what any adult would do; namely, eat a regular diet with a few simple changes.

- Increase the intake of foods containing starch since these are easily absorbed during diarrhea. Examples are breads, crackers, rice, mashed potatoes, and noodles.
- Increase the intake of water or clear fluids (those you can see through).
- Reduce or eliminate the intake of milk and milk products (EXCEPTION: active-culture yogurt is fine).
- Resume normal diet 1 day after the diarrhea is gone, which is usually in 3 or 4 days.
- Medications: Children 6 years old and older may take Imodium-AD. There are no diarrhea medications available for children under 6 years old.

Diet for Breast-feeding Babies with Diarrhea

Definition/Special Considerations. No matter how it looks, the stool of the breast-fed infant must be considered normal unless it contains mucus or blood. In fact, breast-fed babies can normally pass some green stools or stools with a water ring. Frequency of movements is also not much help. During the first 2 or 3 months of life, the breast-fed baby may normally have one stool after each feeding. The presence of something in the mother's diet that causes rapid passage should always be considered in these babies (for example, coffee, cola, or herbal teas). Diarrhea can be diagnosed if your baby's stools abruptly increase in number.

Diet. If your breast-fed baby has diarrhea, treatment is straightforward. Breast-feeding should never be discontinued because of mild to moderate diarrhea. The only treatment necessary is to offer extra water or and electrolyte solution such as Pedialyte between breast feedings. Breast-feeding may have to be temporarily discontinued if you baby requires intravenous fluids for severe diarrhea and dehydration. Pump your breasts to maintain milk flow until you can breast-feed again (usually within 12 hours).

HOME CARE: OTHER ASPECTS

Common Mistakes. Using boiled skim milk or any concentrated solution can cause serious complications for babies with diarrhea because they contain too much salt. Kool-Aid and soda pop should not be used as the only foods because they contain little or no salt. Use only the fluids mentioned. Clear fluids alone should only be used for 6 to 24 hours because the body needs more calories than they can provide. Likewise, a diluted formula should not be used for more than 24 hours. The most dangerous myth is that the intestine should be "put to rest"; restricting fluids can cause dehydration. Keep in mind that there is no effective, safe drug for diarrhea in children under three years old. Extra water and diet therapy work best.

Prevention. Diarrhea is very contagious. Hand washing after diaper changing or using the toilet is crucial for keeping everyone in the family from getting diarrhea.

Diaper Rash from Diarrhea. The skin near your baby's anus can become "burned" from the diarrhea stools. Wash it off after each BM 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 BMs 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 stool. Use disposable superabsorbant diapers temporarily to cut down on cleanup time. Use the ones with snug leg bands or cover the others with a pair of plastic pants. Wash your child under running water in the bathtub. Someday he will be toilet trained.

Call our office

Immediately if

- Your child does not urinate in more than 8 hours
- Crying produces no tears.
- The mouth becomes dry rather than moist.
- Any blood appears in the diarrhea
- Severe abdominal cramps occur.
- The diarrhea becomes severe (such as a bowel movement every hour for more than 8 hours)
- The diarrhea is watery and your child vomits the clear fluids three or more times.
- Your child becomes dizzy with standing.
- Your child starts acting very sick.

NOTE: If your child has vomited more than once, treatment of the vomiting has priority over the treatment of diarrhea until your child has gone 8 hours without vomiting.

During regular hours if

- Mucus or pus appears in the stools
- The diarrhea causes loss of bowel control
- A fever over 100 F (37.8 C) has been present for more than 72 hours
- The diarrhea does not improve after 48 hours on the special diet
- Mild diarrhea lasts more than 1 week
- You have other concerns or questions

1. Adapted from *Instructions for Pediatric Patients* by Barton D. Schmitt, M.D., 1992