

Diarrhea

Definition

- Diarrhea is the sudden increase in the frequency and looseness of stools
- The main risk of diarrhea is [dehydration](#)
- Loose or runny stools do not cause dehydration
- Frequent, watery stools can cause dehydration

Causes

- Viral gastroenteritis (viral infection of the stomach and intestines) is the usual cause
- Bacteria (e.g., Salmonella or Shigella) cause some diarrhea. The main food-borne bacteria are [Campylobacter](#), Salmonella, and [E.coli](#).
- Food-poisoning: Rapid onset of vomiting and diarrhea within hours after eating a food contaminated with toxins (e.g. cream dishes that are not properly refrigerated). The symptoms usually resolve in less than 24 hours without a need for medical care.
- [Giardia](#) (a parasite) occasionally, especially in [child care centers](#)

Dehydration: How to Recognize

- Dehydration means that the body has lost excessive fluids, usually from vomiting and/or diarrhea. An associated weight loss of more than 3% is required. In general, mild diarrhea, mild vomiting, or a mild decrease in fluid intake does not cause dehydration.
- Dehydration is the most important complication of diarrhea.
- The following are signs of dehydration:
- Decreased urination (no urine in more than 8 hours) occurs early in the process of dehydration. So does a dark yellow, concentrated yellow. If the urine is light straw colored, your child is not dehydrated.
- Dry tongue and inside of the mouth. Dry lips are not helpful.
- Dry eyes with decreased or absent tears
- In infants, a depressed or sunken soft spot
- Delayed capillary refill longer than 2 seconds. This refers to the return of a pink color to the thumbnail after you press it and make it pale. Ask your doctor to teach you how to do this test.
- Irritable, tired out or acting ill. If your child is alert, happy and playful, he or she is not dehydrated.
- A child with severe dehydration becomes too weak to stand or very dizzy if tries to stand.

Definition of Diarrhea in Breastfed Infants

- The [stools](#) of a breastfed infant are normal unless they contain mucus or blood or develop a new bad odor.
- The looseness (normally runny and seedy), color (normally yellow) and frequency of stools (normally more than 6/day) are not much help. Breastfed babies may normally even pass some green stools surrounded by a water ring (normal bile can come out green if intestinal transit time is rapid enough).
- During the first 1 to 2 months of life, the breastfed baby may normally pass a stool after each feeding. (However, if an infant's stools abruptly [increase in number](#) and looseness and persist for 3 or more stools, the baby probably has diarrhea.)
- Other clues to diarrhea are poor eating, acting sick, or a fever

Definition of Diarrhea in Formula-Fed Infants

- Formula-fed babies pass 1 to 8 stools per day during the first week, then 1 to 4 per day until 2 months of age.
- The stools are yellow in color and peanut butter in consistency.
- Formula-fed newborns have true diarrhea if the stools abruptly increase in number or looseness and persist for 3 or more stools, become watery or very runny, contain mucus or blood or develop a new bad odor.
- Other clues to diarrhea are poor eating, acting sick, or a fever.
- After 2 months of age, most infants pass 1 or 2 stools per day (or 1 every other day) and no longer appear to have mild diarrhea.

Return to School

- Your child can return to childcare or school after the stools are formed and the fever is gone. The school-aged child can return if the diarrhea is mild and the child has good control over loose stools.

Care Advice

Home Care Advice for Diarrhea

1. Reassurance:
 - Most diarrhea is caused by a viral infection of the intestines.
 - Diarrhea is the body's way of getting rid of the germs.
 - Here are some tips on how to keep ahead of the fluid losses.
2. Mild Diarrhea:
 - Continue regular diet.
 - Eat more starchy foods (e.g., cereal, crackers, rice).
 - Drink more fluids. Formula or milk are good balanced fluids for diarrhea. (EXCEPTION: avoid all fruit juices and soft drinks because they make diarrhea worse).
3. Formula-Fed Infants WITH frequent, watery diarrhea: Start Oral Rehydration Solutions (ORS)
 - ORS (e.g., Pedialyte or the store brand) is a special electrolyte solution that can prevent dehydration. It's readily available in supermarkets and drug stores.
 - Start ORS for frequent, watery diarrhea (Note: Formula is fine for average diarrhea).
 - Use ORS alone for 4 to 6 hours to prevent dehydration. Offer unlimited amounts.
 - If ORS not available, use formula prepared in the usual way (unlimited amounts) until you can get some.
 - Avoid Jello water, sports drinks, or fruit juice.
4. Returning to Formula
 - Go back to formula by 6 hours at the latest. (Reason: needs the calories)
 - Use formula prepared in the usual way. (Reason: It contains adequate water).
 - Offer the formula more frequently than you normally do.
 - Lactose: Regular formula is fine for most diarrhea. Lactose-free formulas (soy formula) are only needed for watery diarrhea persisting over 3 days.
 - Extra ORS: also give 2-4 ounces (60-120 mls) of ORS after every large watery stool.
5. Solids
 - Infants over 4 months old: Continue solids (e.g., rice cereal, strained bananas, mashed potatoes, etc).
6. Breastfed Infants WITH frequent, watery diarrhea:
 - Continue breastfeeding at more frequent intervals. Continue solids as for formula-fed.
 - Offer 2-4 ounces (60-120 mls) ORS (e.g., Pedialyte) after every large watery stool (especially if urine is dark) in addition to breastfeedings.

7. Older Children (over 1 year old) WITH frequent, watery diarrhea:
 - Fluids: Offer unlimited fluids. If taking solids, give water or half-strength Gatorade. If refuses solids, give milk or formula.
 - Avoid all fruit juices and soft drinks. (Reason: makes diarrhea worse)
 - ORS (e.g., Pedialyte) is rarely needed, but for severe diarrhea, also give 4-8 ounces (120-240ml) of ORS after every large watery stool.
 - Solids: Starchy foods are absorbed best. Give dried cereals, oatmeal, bread, crackers, noodles, mashed potatoes, rice, etc. Pretzels or salty crackers can help meet sodium needs.

8. Probiotics:
 - Probiotics contain healthy bacteria (Lactobacilli) that can replace unhealthy bacteria in the GI tract.
 - YOGURT is the easiest source of probiotics. If over 12 months old, give 2 to 6 oz (60 to 180 ml) of yogurt twice daily. (Note: Today, almost all yogurts are "active culture".)
 - Probiotic supplements in granules, tablets or capsules are also available in health food stores.

9. Diaper Rash: Wash buttocks after each stool to prevent a bad diaper rash. Consider applying a protective ointment (e.g., petroleum jelly) around the anus to protect the skin.

10. Contagiousness: Your child can return to child care or school after the stools are formed and the fever is gone. The school-aged child can return if the diarrhea is mild and the child has good control over loose stools.

11. Expected Course: Viral diarrhea lasts 5-14 days. Severe diarrhea only occurs on the first 1 or 2 days, but loose stools can persist for 1 to 2 weeks.

12. Call Your Doctor If:
 - Signs of dehydration occur
 - Diarrhea persists over 2 weeks
 - Your child becomes worse

And remember, contact your doctor if your child develops any of the "Call Your Doctor" symptoms.

Disclaimer: This information is not intended to be a substitute for professional medical advice. It is provided for educational purposes only. You assume full responsibility for how you choose to use this information. For more information, click [here](#).

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What is the best way to treat diarrhea?

Most children with mild diarrhea can continue to eat a normal diet including formula or milk. Breastfeeding can continue. If your baby seems bloated or gassy after drinking cow's milk or formula, call your pediatrician to discuss a temporary change in diet. Special fluids for mild illness are not usually necessary.

Special fluids for moderate illness

Children with moderate diarrhea may need special fluids. These fluids, called electrolyte solutions, have been designed to replace water and salts lost during diarrhea. They are extremely helpful for the home management of mild to moderately severe illness. Do not try to prepare these special fluids yourself. Use only commercially available fluids—brand-name and generic brands are equally effective. Your pediatrician or pharmacist can tell you what products are available.

If your child is not vomiting, these fluids can be used in very generous amounts until the child starts making normal amounts of urine again.

Reminder – Do's and Don'ts

Do

- Watch for signs of dehydration which occur when a child loses too much fluid and becomes dried out. Symptoms of dehydration include a decrease in urination, no tears when baby cries, high fever, dry mouth, weight loss, extreme thirst, listlessness, and sunken eyes.
- Keep your pediatrician informed if there is any significant change in how your child is behaving.
- Report if your child has blood in his stool.
- Report if your child develops a high fever (more than 102°F or 39°C).
- Continue to feed your child if she is not vomiting. You may have to give your child smaller amounts of food than normal or give your child foods that do not further upset his or her stomach.
- Use diarrhea replacement fluids that are specifically made for diarrhea if your child is thirsty.

Don't

- Try to make special salt and fluid combinations at home unless your pediatrician instructs you and you have the proper instruments.
- Prevent the child from eating if she is hungry.
- Use boiled milk or other salty broth and soups.
- Use "anti-diarrhea" medicines unless prescribed by your pediatrician.

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