



Dehydration

Under normal conditions, we all lose some body water every day in our sweat, tears, urine, and stool. Water also evaporates from our skin and leaves the body as vapor when we breathe. We usually replace this body fluid and the salts it contains with the water and salts in our regular diet.

Sometimes, however, kids lose abnormally large amounts of water and salts through fever (more water evaporates from the body when body temperature is increased), diarrhea, vomiting, or long periods of exercise with excessive sweating. Some illnesses might also prevent them from taking fluids by mouth. If they're unable to adequately replace the fluid that's been lost, kids can become dehydrated.

Recognizing Dehydration

If your child has fever, diarrhea, or vomiting, or is sweating a lot on a hot day or during intense physical activity, you should watch for signs of dehydration, which can include:

- dry or sticky mouth
- few or no tears when crying
- eyes that look sunken into the head
- soft spot (fontanelle) on top of baby's head that looks sunken
- lack of urine or wet diapers for 6 to 8 hours in an infant (or only a very small amount of dark yellow urine)
- lack of urine for 12 hours in an older child (or only a very small amount of dark yellow urine)
- dry, cool skin
- lethargy or irritability
- fatigue or dizziness in an older child

Preventing Dehydration

The best way to prevent dehydration is to make sure kids get plenty of fluids when they're sick or physically active — they should consume more fluids than they lose (from vomiting, diarrhea, or sweating).

How you keep a child adequately hydrated can depend on the circumstances. For example, a child with a sore throat may become dehydrated due to difficulty drinking or eating. Easing the pain with acetaminophen or ibuprofen may help, while cold drinks or popsicles can soothe a burning throat while also supplying fluids.

Infants with blocked noses who have trouble feeding can be helped by flushing their nostrils with saltwater (saline) nose drops and suctioning out the mucus with a bulb syringe.

Fever, which can be a factor in dehydration in any infectious disease, can be controlled with medications or room-temperature sponge baths and dressing the child in light clothing.

It's important that kids drink often on hot, dry, and windy days. Those who participate in sports or

strenuous activities should also drink some extra fluid before the activity begins. They should also drink at regular intervals (every 20 minutes) during the course of the activity and after it ends. Ideally, sports practices and competitions should be scheduled for the early morning or late afternoon to avoid the hottest part of the day.

Thirst is **not** a good early indicator of dehydration. By the time a child feels thirsty, he or she may already be dehydrated. And thirst can be quenched before the necessary body fluids have been replaced. That's why kids should start drinking before thirst develops and consume additional fluids even after thirst is quenched.

Kids with mild gastroenteritis (also called the "stomach flu," which can cause nausea, vomiting, and diarrhea) who aren't dehydrated should continue to eat normally but should be encouraged to drink additional fluid to replace fluid losses. According to the American Academy of Pediatrics (AAP), recent studies have shown that most kids with gastroenteritis can safely eat a regular age-appropriate diet while they're sick. In fact, feeding a regular diet to kids who have diarrhea may even reduce the duration of diarrhea, while offering proper nutrition. Infants with mild gastroenteritis who aren't dehydrated should continue to receive breast milk or regular-strength formula. Older kids may continue to drink full-strength milk.

Foods that are usually well tolerated by kids with gastroenteritis who aren't dehydrated include: complex carbohydrates (such as rice, wheat, potatoes, bread, and cereals), lean meats, yogurt, fruits, and vegetables. Avoid fatty foods or foods high in simple sugars (including juices and soft drinks). If the child is vomiting and isn't dehydrated, give fluids frequently, but in small amounts.

Treating Dehydration

It's important for parents to learn to recognize the early signs of dehydration and to respond quickly if they develop. Younger infants and children should be watched very carefully because they're more likely to become dehydrated than older kids or adolescents.

The goal in treating dehydration is to replace fluids to restore the levels of body fluids to normal. As with prevention, strategies may differ depending on the age of the child and the condition causing the dehydration.

An older child who's mildly dehydrated due to overexertion will probably be thirsty and should be allowed to drink as much as he or she wants. Plain water is the best option for the first hour or two. After this, the child might need drinks containing sugar and electrolytes (salts) or regular food. Also, the child should rest in a cool, shaded environment until the lost fluid has been replaced.

Kids who are dehydrated due to vomiting or diarrhea from an illness (such as gastroenteritis) should have their lost fluids replaced with a special drink called an oral rehydration solution (ORS). This is available in many grocery stores and pharmacies without a prescription and is designed for children who are dehydrated. It contains just the right combination of sugar and salts to help the intestines absorb what the body needs.

The replacement of lost fluids is known as **rehydration**, which is achieved by quickly replacing the lost fluids using an ORS over the course of a few hours. Start the rehydration process by giving your child 1 or 2 teaspoons (5 or 10 milliliters) of an ORS every few minutes. This can be done with a spoon or an oral syringe, or even in popsicle form. Although this may not seem like enough fluids to rehydrate your child, these small amounts can add up to more than a cup (237 milliliters) an hour. Even kids who are vomiting can usually be successfully rehydrated in this way because the small frequent sips get absorbed in between the vomiting episodes. In addition, the correction of dehydration often lessens the frequency of vomiting. If the child does well, you can gradually give

bigger sips a little less often.

In nursing infants, breastfeeding should be continued at all times, even during the initial rehydration process. The oral rehydration solution can be given in between breastfeedings. For kids who are normally formula-fed or who eats solids, formula and foods should be stopped during rehydration and restarted as soon as the child is no longer showing signs of dehydration several hours later. Changes in formula usually aren't necessary.

Other "clear liquids" often used by parents or recommended by doctors in the past are no longer considered appropriate for use in dehydrated kids. Drinks to avoid include: water, soda, ginger ale, tea, fruit juice, gelatin desserts, chicken broth, or sports drinks. These don't have the right mix of sugar and salts and can even make diarrhea worse.

Once your child is rehydrated, you can resume a normal diet, which should include lots of complex carbohydrates (such as rice, potatoes, and whole-grain breads and cereals), lean meats, yogurt, fruits and vegetables, as well as the child's usual milk source (breast milk or formula for infants and full-strength cow's milk for older kids). But be sure to avoid fatty foods or foods high in simple sugars, such as juices and soft drinks. Resuming an age-appropriate diet early is essential in supplying your child with necessary calories and nutrients and can even reduce the duration of gastroenteritis.

It's also important to note a number of old wives' tales about treating dehydration are **not** recommended. For example, the practice of withholding food for more than 24 hours is inappropriate and can be unsafe. Likewise, specific diets that have been commonly recommended in the past — such as the BRAT diet (bananas, rice, applesauce, and toast) — are unnecessarily restrictive and do not provide the best nutrition for a child's recovering intestinal tract. Also, over-the-counter medicines for diarrhea or vomiting are not recommended for children, as they can have potentially dangerous side effects. Appropriate fluids — not medicines — are the key to treatment.

A few dehydrated children do not improve when given an oral rehydration solution, especially if they have very frequent bouts of explosive diarrhea or frequent vomiting. Kids who can't replace losses because of vomiting, difficulty swallowing, massive diarrhea, or other reasons, might need to receive intravenous (IV) fluids in the hospital.

If you're treating your child for dehydration at home and feel that there's no improvement or that the dehydration is worsening, call your doctor immediately or take your child to the nearest emergency department.

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