

## Diarrhea

Diarrhea is a sudden increase in the frequency and wateriness of bowel movements or stools. This can happen for a number of reasons, but in children it most often indicates an intestinal infection. Usually these infections are mild and do not require treatment, but, as in vomiting illnesses, we do need to worry a bit about dehydration.

Sometimes, especially in babies, it can be difficult to know if they even have diarrhea. Babies' stools tend to be looser and more frequent generally. Usually, the best clue to diarrhea in a very young child is an abrupt increase in the wateriness and number of stools, combined with more general signs of illness like fever, poor appetite, or decreased activity.

The color of the diarrhea is probably less important than people think. Yellow, green, and brown are all pretty typical. Black and tarry stools, outside of the immediate newborn period are a concern, as are bright red ones, obviously. White or nearly white stools may also be a concern if they persist.

Vomiting and diarrhea occur together in many illnesses, and often it is the vomiting that presents the bigger challenge. Vomiting is addressed in a separate document.

### Infectious Diarrhea

Most diarrheal illnesses we see are viral, like rotavirus or noravirus. Generally, you can expect these illnesses to resolve on their own, but, while the worst of it will probably be over within 2-3 days, the total duration of illness can extend for up to 2 weeks.

Some diarrhea has a bacterial cause, often related to contaminated food products, international travel, or direct contact with reptiles. These infections include Salmonella and E. coli, among others. Recent treatment with antibiotics is also a particular risk factor for developing an infection called *C. difficile*. Usually the symptoms of bacterial diarrhea are more intense and prolonged. Blood or pus may be seen in the stool.

Some bacteria can cause diarrhea without even infecting a patient. In food poisoning, the bacteria in the food produce a chemical, or toxin, which causes symptoms even when the bacteria are killed or no longer there. Symptoms caused by a bacterial toxin typically come on fast, within a few hours of the meal, and resolve within 1 or 2 days.

Human parasites can also cause diarrhea. Children (and workers) at day care centers are at particular risk for a parasite called giardia, as are campers or hikers who have contact with contaminated water supplies. With giardia, the patients tend to have loose, greasy stools with lots of gas and crampy abdominal pain.

You do not need to call us with every case of diarrhea.

However, **you should definitely call us for:**

- any child who seems unusually ill (See "Dehydration" below.)
- severe abdominal pain lasting more than 2 hours

A bit less urgently, perhaps, but you should certainly call us during regular office hours if you see:

- blood or pus in the stool
- fevers with diarrhea lasting more than 3 days
- close contact with someone who has known bacterial diarrhea
- when diarrhea lasts more than 1 week. We may need to run some tests.
- when the diarrhea lasts more than 2 weeks. These children should come to the office for an appointment.

### **Noninfectious Diarrhea**

Not all diarrhea is caused by infection. In children, the cause can often be dietary. Too much fruit juice can be a problem for some children. Sometimes children lack an enzyme (called lactase) which makes it difficult for them to digest milk properly. Usually these children do not appear acutely ill, although they can have intermittent abdominal pain associated with the loose stool. Diarrhea can also be caused by some medications, like antibiotics. You should call us with severe diarrhea in any child taking a medication which is known to cause diarrhea. We may need to make a change.

### **Dehydration**

Most children with diarrhea will do just fine, so long as they do not get dehydrated. Dehydration occurs when the body loses so much fluid that it cannot perform essential functions. The good news is that, without severe vomiting, we can usually avoid dehydration. At home, **you should watch for decreasing urine production, dryness inside the mouth, weakness, and lethargy.** As a general rule, children playing happily are not significantly dehydrated.

- Feed through the diarrhea. Encourage a normal diet, with emphasis on starchy foods, like rice, bread, and bananas.
- In babies, use Pedialyte (or similar rehydration solution) along with their regular foods. Provide 2-4 ounces following each large watery stool.
- Allow older children unlimited access to fluids and encourage them to drink. A diluted sports drink is fine, as is soup or even milk initially. Avoid undiluted juices or soda. In severe cases, Pedialyte can also be used.
- Call us if you suspect dehydration, especially in cases where the diarrhea has been severe for more than 24 hours or the child passes more than 8 stools in an 8 hour period. (Some urine produced within the past 8 hours is reassuring. No urine production in a 12 hour period is concerning.)

### **Medications**

We will not generally recommend the use of anti-diarrheal medications (like Imodium) in children under the age of 12 years. Remember, the diarrhea is part of the body's way of eliminating infection from the intestines. Some doctor's may suggest the use of probiotics (healthy intestinal bacteria like Lactobacilli) in mild diarrheal illnesses. Antibiotics are only rarely used in the treatment of diarrhea in children.