

## Vomiting & Diarrhea

Taken from American Academy of Pediatrics, Nelson's Pediatrics and Feigen & Cherry of Pediatric Infectious Disease text

Viral gastroenteritis is the most common cause of vomiting and diarrhea (90 %)

Other common causes of vomiting and / or diarrhea

Vomiting: reflux, coughing with a gag reflex, bacterial gastroenteritis, irritable bowel syndrome, migraines...

Diarrhea : fruit juices and other sugary drinks, bacterial gastroenteritis, irritable bowel syndrome etc.

Though far less frequent, it is important not to overlook the more serious causes of vomiting or diarrhea:

head injury, meningitis, appendicitis, inflammatory bowel syndrome, a toxic ingestion, an intestinal obstruction (see below)

### Popular misconceptions of vomiting & diarrhea

1. You can dehydrate from diarrhea alone (without vomiting)

This could occur in a third world country with a cholera outbreak but Cholera does not occur in industrialized countries.

2. The vomiting is "projectile".

Since all vomiting is an involuntary spasm of the stomach it will all have some force to it.

Projectile is much more.

3. When the infant is spitting up (GE Reflux) they are spitting up the entire content of the feeding. (The entire bottle)

This is a popular misconception that is easily dispelled by asking the parent to pour the entire bottle content onto the counter and then asking them: "Did they spit up that amount?"

## How to manage the child with the common Viral Gastroenteritis

### **Watch for dehydration (often vomiting > 24 hours)**

Avoiding and treating dehydration and maintenance of the nutrition is the main goal in treatment of a Viral Gastroenteritis.. In most cases, your child will just need to stay at home and receive a liquid diet for twelve to twenty-four hours. Your pediatrician rarely (only occasionally) prescribe a drug to treat the vomiting.

When there is continued vomiting, you need to make certain that dehydration doesn't occur. Dehydration is when the body loses so much water that it can no longer function efficiently.

To prevent this from happening, make sure your child consumes enough fluids to restore what has been lost through throwing up. If he/she vomits these fluids for more than 24 hours, notify your pediatrician to evaluate for dehydration. **(See also when to bring your child to the Doctor below)**

### **Modify your child's diet in the first 24 hours of the illness**

Initially start off with clear fluids. Give this fluid in frequent small amounts (small sips initially) as the child can tolerate. & wait for two to three hours after the last vomiting episode before offering every ½ hour to one hour.

Clear liquids include water, sugar water (1.2 teaspoon [2.5 ml] sugar in 4 ounces [120 ml] of water), Popsicles, gelatin water (1 teaspoon [5 ml] of flavored gelatin in 4 ounces of water), or preferably an electrolyte solution (Pedialyte). Modern oral rehydration solutions such as Pedialyte contain appropriate quantities of sodium and glucose promote optimum absorption of fluid from the intestine .

Pedialyte also comes in a favored popsicle form that children naturally take slowly

Other clear liquids such as flat soda, fruit juice, and sports drinks maybe inappropriate for rehydration of young children with significant stool loss since they are too high in sugar content. Dairy (& fatty/fried foods) should be avoid since it fatty foods are too slow to empty out of the stomach leading to further vomiting. Patients may also develop transient dairy (lactose) intolerance during a viral gastroenteritis

resulting in bloating, vomiting and worsening diarrhea. Despite concerns of transient dairy intolerance, breast-feeding can be continued even during rehydration. Selected infants may benefit from lactose-free feedings (such as soy formula or lactose-free cow's milk) for several days.

After rehydration has been achieved within the first 24 hours of the illness, resumption of a normal diet for age has been shown to result in a more rapid recovery from viral gastroenteritis. A BRAT diet (bananas, rice, applesauce, toast diet, cereals, and yogurt) may be introduced into the diet within the first 24 hours of the illness after the child begins to tolerate the clear liquids. A BRAT diets however should only be used for one day since is insufficient in proteins that expedite the recovery. Therapy with probiotic organisms such as Lactobacillus species (some yogurts, lacinex) has been shown to be helpful only in mild cases and not in dehydrating disease.

**When could diarrhea & vomiting be a more serious problem (Need to be evaluated that day)**

1. Persistent vomiting > 24 hours (could be dehydration or the patient in an intractable state of vomiting with malnutrition /dehydration/hypoglycemia/ketosis/acidosis)
2. Vomiting green bile (possible obstruction)
3. Vomiting coffee ground material (old blood in stomach)
4. Vomiting bloody streaks (new blood)
5. Bloody stools with Bright Red Blood or Black Tarry (as oppose to Dark Green Tarry Stools)  
List of causes range from Bacterial gastroenteritis to polyps, to Inflammatory Bowel Disease to potential surgical abdomen a
6. Vomiting with Headache, Stiff neck and fever (meningitis, head injury)
7. Vomiting with Headache (Migraines, head injury)
8. Vomiting after head injury (concussion to a serious brain bleeding)
9. Vomiting with fingertip abdominal pain (well localized to touch) at a point away from the belly button (umbilicus) ± abdominal rigidity. Particularly the right lower side of the abdomen. (These symptoms could represent a appendicitis or another surgical diagnosis/treatment)
10. Vomiting in a Diabetic patient
11. Vomiting after ingesting toxic substances (petroleum products, cleaning products, lye other people's medicines (also call poison control and consider sending to the ER)
12. **True** projectile vomiting in an infant under 2 months of age (see misconceptions above)

**When could vomiting & diarrhea is a problem though may not need to be seen that day**

1. Diarrhea (without persistent vomiting > 24 hours) greater than 10 days
2. It is only brought on by eating alone (secretory diarrhea)
3. Concerns about weight gain only (without any other problem)
4. Concerns about appropriate weight gain in an infant with know GE Reflux
5. Vomiting as a result of cough if there is no wheezing or shortness of breath