Vomiting Without Diarrhea

Office Hours Telephone Triage Protocols | Pediatric | 2015

Vomiting Without Diarrhea

DEFINITION

- Vomiting is the forceful emptying (throwing up) of a large portion of the stomach’s contents
- Nausea and abdominal discomfort usually precede each bout of vomiting

Vomiting Severity is Defined as:

- The following is an arbitrary attempt to classify vomiting by risk for dehydration:
  - **Mild:** 1 - 2 times/day
  - **Moderate:** 3 - 7 times/day
  - **Severe:** Vomits 8 or more times per day; vomits everything or nearly everything
- Caution: Multiple stomach contractions (heaves) do not count as separate episodes of vomiting. At least 10 minutes need to pass, before we consider it another episode of vomiting.
- Severity relates even more to the length of time that the particular level of vomiting has persisted.
- At the beginning of a vomiting illness (especially following food poisoning), it's common for a child to vomit everything for 3 or 4 hours and then become stable with mild or moderate vomiting.
- The younger the child, the greater the risk for dehydration.

TRIAGE ASSESSMENT QUESTIONS

Call EMS 911 Now

Signs of shock (very weak, limp, not moving, unresponsive, gray skin, etc)

*First Aid: Lie down with the feet elevated.*

Difficult to awaken

*R/O: encephalitis, intussusception, overdose*

Confused when awake

*R/O: meningitis, encephalitis*

Sounds like a life-threatening emergency to the triager

See More Appropriate Protocol

Vomiting and diarrhea both present (diarrhea means 2 or more watery or very loose stools)

*Go to Protocol: Vomiting With Diarrhea (Pediatric)*

Previously diagnosed reflux and volume increased today and infant appears well

*Go to Protocol: Spitting Up (Reflux) (Pediatric)*

Age of onset < 1 month old and sounds like reflux or spitting up

*Go to Protocol: Spitting Up (Reflux) (Pediatric)*

Vomiting occurs only while coughing

*Go to Protocol: Cough (Pediatric)*

Diarrhea is the main symptom (no vomiting or vomiting resolved)

*Go to Protocol: Diarrhea (Pediatric)*
Severe headache and history of migraines

Go to Protocol: Headache (Pediatric)

Motion sickness suspected

Go to Protocol: Motion Sickness (Pediatric)

Go to ED Now

Neurological symptoms (e.g., stiff neck, bulging fontanel)

Altered mental status suspected in young child (awake but not alert, not focused, slow to respond)

R/O: increased ICP, meningitis

Could be poisoning with a plant, medicine, or other chemical

Go to ED Now (or to Office with PCP Approval)

Age < 12 weeks with fever 100.4° F (38.0° C) or higher rectally

R/O: sepsis

Blood (red or coffee-ground color) in the vomit that's not from a nosebleed

R/O: peptic ulcer, esophagitis, Mallory-Weiss tear

Intussusception suspected (brief attacks of severe abdominal pain/crying suddenly switching to 2-10 minute periods of quiet) (age usually < 3)

Appendicitis suspected (e.g., constant pain > 2 hours, RLQ location, walks bent over holding abdomen, jumping makes pain worse, etc)

Recent head injury within the last 24 hours

R/O: subdural hematoma

Recent abdominal injury within the last 3 days

R/O: traumatic pancreatitis

High-risk child (e.g., diabetes mellitus, CNS disease, recent GI surgery, inguinal hernia)

Fever and weak immune system (sickle cell disease, HIV, chemotherapy, organ transplant, chronic steroids, etc)

R/O: serious bacterial infection

Recent hospitalization and child not improved or worse

Child sounds very sick or weak to the triager

Reason: severe acute illness or serious complication suspected

Go to Office Now

Signs of dehydration (e.g., very dry mouth, no tears and no urine in > 8 hours)

Bile (green color) in the vomit (Exception: stomach juice which is yellow)

R/O: GI obstruction, necrotizing enterocolitis

Continuous abdominal pain or crying for > 2 hours (esp. if the abdomen is swollen)

R/O: GI obstruction due to intussusception, volvulus, etc. (Caution: intermittent abdominal pain that comes on with vomiting and then goes away is common)
Age < 12 weeks with vomiting 2 or more times today (Exception: just spitting up or reflux)
*R/O: GI obstruction, pyloric stenosis*

Receiving ORS and vomits everything > 8 hours

Fever > 105° F (40.6° C)
*R/O: serious bacterial infection*

Hernia in the groin that looks like it's stuck

Severe headache persists > 2 hours
*R/O: increased intracranial pressure, 1st migraine headache*

Diabetes suspected (excessive thirst, frequent urination, weight loss)

Kidney infection suspected (flank pain, fever, painful urination, female)
*R/O: acute pyelonephritis*

**Discuss with PCP and Callback by Nurse within 1 Hour**

Vomiting an essential medicine (e.g., seizure medications)

**See Today in Office**

Vomiting started after taking fever medicine for 3 or more days
*R/O: acetaminophen or ibuprofen toxicity*

Fever present > 3 days

Fever returns after going away > 24 hours
*R/O: UTI, strep pharyngitis, sinusitis*

Strep throat suspected (sore throat is main symptom with mild vomiting)

**See Today or Tomorrow in Office**

Age < 2 years and vomiting > 24 hours

Age > 2 years and vomiting > 48 hours

**Discuss with PCP and Callback by Nurse Today**

Taking any medicine that could cause vomiting (e.g., erythromycin, tetracycline, codeine)

*Note: may be able to manage by phone by making some changes (e.g., checking dosage, skipping 1 dose to allow irritated stomach to heal and giving medicine after meals or snack)*

**See Within 3 Days in Office**

Triageer thinks child needs to be seen for non-urgent acute problem

**See Within 2 Weeks in Office**

Vomiting is a chronic problem (present > 4 weeks)
*R/O: psychogenic vomiting, peptic ulcer, eating disorder*

**Home Care**

Mild-moderate vomiting (probable viral gastritis)
1. **Reassurance and Education:**
   - Most vomiting is caused by a viral infection of the stomach or mild food poisoning.
   - Vomiting is the body's way of protecting the lower GI tract.
   - Fortunately, vomiting illnesses are usually brief.

2. **For Bottlefed Infants Offer Oral Rehydration Solution (ORS) for 8 Hours:**
   - 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.
   - For vomiting once, continue regular formula.
   - For vomiting more than once, offer ORS for 8 hours.
   - Spoon or syringe feed small amounts of ORS: 1-2 teaspoons (5-10 ml) every 5 minutes.
   - After 4 hours without vomiting, double the amount.
   - **Formula:** After 8 hours without vomiting, return to regular formula.
   - **Solids:** For infants over 4 months old, also return to baby foods, especially cereals.
   - Return to normal diet in 24-48 hours.

3. **For Breastfed Infants, Reduce the Amount Per Feeding:**
   - If vomits once, nurse 1 side every 1 to 2 hours.
   - If vomits more than once, nurse for 5 minutes every 30 to 60 minutes.
   - After 4 hours without vomiting, return to regular breastfeeding.
   - If continues to vomit, switch to ORS for 4 hours.
   - Spoon or syringe feed small amounts of ORS: 1-2 teaspoons (5-10 ml) every 5 minutes.
   - After 4 hours without vomiting, return to regular breastfeeding. Start with small feedings of 5 minutes every 30 minutes and increase as tolerated.

4. **For Older Children (over 1 Year Old) Offer Small Amounts of Clear Fluids For 8 Hours:**
   - **Clear Fluids:** Water or ice chips are best for vomiting in older children. Reason: Water is directly absorbed across the stomach wall.
   - **ORS:** If child vomits water, offer Oral Rehydration Solution (e.g., Pedialyte). If refuses ORS, use ½ strength Gatorade.
   - Give small amounts: 2-3 teaspoons (10-15 ml) every 5 minutes.
   - Other options: ½ strength flat lemon-lime soda, popsicles or ORS frozen pops.
   - After 4 hours without vomiting, increase the amount.
   - After 8 hours without vomiting, return to regular fluids.
   - Caution: If vomiting continues over 12 hours, switch to ORS or half-strength Gatorade. Reason: needs some electrolytes.
   - **Solids:** After 8 hours without vomiting, add solids:
     - Limit solids to bland foods.
     - Starchy foods are easiest to digest.
     - Start with crackers, bread, cereals, rice, mashed potatoes, noodles, etc.
     - Return to normal diet in 24-48 hours.

5. **Avoid Medicines:**
   - Discontinue all nonessential medicines for 8 hours (reason: usually make vomiting worse).
   - **Fever:** Fevers usually don't need any medicine. For higher fevers, consider acetaminophen (Tylenol) suppositories. Never give oral ibuprofen; it is a stomach irritant.
   - **Call Back If:** vomiting an essential medicine.

6. **Try to Sleep:**
   - Help your child go to sleep for a few hours (Reason: Sleep often empties the stomach and relieves the need to vomit).
   - Your child doesn't have to drink anything if he feels very nauseated.
Causes of Vomiting

- **Viral Gastritis.** Stomach infection from a stomach virus is the most common cause. Also called stomach flu. A common cause is the Rotavirus. The illness starts with vomiting. Watery loose stools may follow within 12-24 hours.
- **Food Poisoning.** This causes rapid vomiting within hours after eating the bad food. Diarrhea may follow. Caused by toxins from germs growing in foods left out too long. An example is Staph toxin in egg salad.
- **Ibuprofen Overdose.** Ibuprofen products (such as Advil) can be a stomach irritant. If taken on an empty stomach, it can cause vomiting.
- **Food Allergy.** Vomiting can be the only symptom of a food reaction. The vomiting comes on quickly after eating the food. Common foods are peanuts, tree nuts, fish and shellfish (such as shrimp).
- **Coughing.** Hard coughing can also cause your child to throw up. This is more common in children with reflux.
- **Motion Sickness.** Vomiting and dizziness are triggered by motion. Sea sickness or fun-park ride sickness are the most common types. Strongly genetic.
- **Migraine Headaches.** In children, most migraine headaches also have vomiting.
- **Serious Causes.** Vomiting alone (without diarrhea) should stop within about 24 hours. If it lasts over 24 hours, you must think about more serious causes. Examples are appendicitis, a kidney infection, diabetes and head injury. A serious cause in young babies is pyloric stenosis. (See below for more on this).
- **Cyclic Vomiting.** Cyclic vomiting is the most common cause of recurrent attacks of vomiting. Attacks have a sudden onset and offset. Often occur in children who later develop migraine headaches.

**Pyloric Stenosis (Serious Cause)**

- The most common cause of true vomiting in young babies.
- Onset of vomiting is age 2 weeks to 2 months
- Vomiting is forceful. It becomes projectile and shoots out.
- Right after vomiting, the baby is hungry and wants to feed. ("hungry vomiter")

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**FIRST AID**

N/A

**BACKGROUND INFORMATION**

**Causes of Vomiting**

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• **Cause:** The pylorus is the channel between the stomach and the gut. In these babies, it becomes narrow and tight.

• **Risk:** Weight loss or dehydration

• **Treatment:** Cured by surgery.

**Vomiting: Most Frequent Pediatric Call**

- Every year, vomiting comes in first in call frequency. This can be explained by the following:
- Before vomiting, children are apprehensive and unable to participate in any normal activities.
- During vomiting, children are miserable.
- Parents remember how badly vomiting has made them feel in the past.
- Parents often hope there is a medicine to stop the vomiting. Unfortunately, there is no OTC medicine for home treatment. Zofran (ondansetron) can be prescribed for children with severe vomiting, but only after they have been seen.
- All parents want to be sure they are treating the vomiting correctly. Hence, the importance of providing helpful, detailed care advice.

**Detecting Bile in Vomitus**

- Bile in the vomitus is a serious finding. In young infants, it is commonly seen with volvulus and bowel obstruction. These are surgical emergencies.
- Bile is always green or dark green in color.
- When mixed with stomach juices, it can be greenish-yellow, but never just yellow. If the caller is unsure if the color is greenish, ask "Does it look like spinach or mustard?" If the caller is still unsure, the child also needs to be seen.
- Bile is in a liquid state. If the green color is in a glob of mucus, it’s usually nasal mucus ("snot") or coughed-up phlegm that has been swallowed.
- Yellow-colored fluid in vomitus is usually normal stomach juices and acid.

**Clues to Neurological Causes of Isolated Vomiting (e.g., meningitis)**

- Delirium (confusion), lethargy, stupor
- Headache
- Stiff neck
- Bulging soft spot
- Recent head trauma

**Clues to Serious GI Causes of Isolated Vomiting**

- Abdominal pain that is continuous and present over 2 hours
- Intussusception pain pattern
- Appendicitis pain pattern
- Vomiting bile and under 6 mo
- Vomiting bile associated with abdominal pain or swollen abdomen
- Vomits everything over 8 hours (over 12 hours if over 6 yo)
- Age under 12 weeks and vomits 3 or more times
- Age under 2 yo and isolated vomiting over 24 hours
- Age over 2 yo and isolated vomiting over 48 hours

**Giving Fluids Versus Nothing Per Mouth (NPO) For Vomiting**

Sometimes children vomit everything that is offered to them, including ORS and water. Other children are so nauseated they don’t want to swallow anything. If vomiting is the only symptom (no associated diarrhea), it is safe to rest the stomach completely for 1 or 2 hours. It’s unusual to become rapidly dehydrated from vomiting alone. Some children who begin vomiting at bedtime will vomit several times during the night without having any fluid intake, but still be hydrated with very concentrated urine in the morning. The reason that this guideline instructs callers not to use NPO is that
recommending it in selected circumstances can be confusing to some parents and contribute to dehydration in children who develop watery diarrhea with their vomiting. In addition, during the brief time that fluid is retained in the stomach, some of it is absorbed and this can help prevent dehydration. The literature demonstrates that we can feed most children through a vomiting and/or diarrhea illness.

Vomiting: Treating with Sips of Water versus ORS

- This guideline recommends treating vomiting with small amounts of water (rather than ORS) after 1 year of age. The following are the reasons:
  - Vomiting as an isolated symptom is usually short-lived (24 hours or less). During that time, it is difficult to become dehydrated from vomiting without diarrhea.
  - If diarrhea also develops, the fluid is switched to ORS.
  - Water is the most accessible fluid and in contrast to ORS, older children rarely refuse it, as they may do with ORS.
  - The cutoff of 12 months for switching from ORS to water was arbitrary but matches the age of switching fluids in the Diarrhea protocol. I think there needs to be some age after which we no longer use ORS to treat isolated vomiting.
  - With diarrhea, the older children can also receive water as their main fluid as long as they are receiving their electrolytes from solid foods. Again, this is based upon the fact that we teach parents to feed through diarrhea. In children with diarrhea, if we only give them ORS for more than 6 hours, they become hungry and ketotic.
  - All children with isolated vomiting are seen if it persists more than 24 hours.
  - Summary: Treating vomiting with sips of water is safe and will not cause hyponatremia under the following conditions: Age greater than 1 year, no associated diarrhea and limited to less than 24 hours.

Return to School

- Your child can return to day care or school after vomiting and fever are gone.

Expert Reviewers

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- Joseph A Grubenhoff, MD, Pediatric Emergency Medicine, Children's Hospital Colorado, Aurora, Colorado.

REFERENCES


