Vomiting Without Diarrhea

Office Hours Telephone Triage Protocols | Pediatric | 2020

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

- Food or other object stuck in the throat

  Go to Protocol: Swallowed Foreign Body (Pediatric)
- Vomiting and diarrhea both present (diarrhea means 3 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/UCC 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)
- 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)

- Recent head injury within the last 24 hours

  R/O: subdural hematoma

- High-risk child (e.g., diabetes mellitus, CNS disease, recent GI surgery)
- Recent abdominal injury within the last 3 days

  R/O: traumatic pancreatitis

- 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
- Hernia in the groin that looks like it's stuck
- Severe headache persists > 2 hours
  R/O: increased intracranial pressure, 1st migraine headache
- 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)
- Age < 12 weeks with vomiting 3 or more times today (Exception: just spitting up or reflux)
  R/O: GI obstruction, pyloric stenosis
- Pyloric stenosis suspected (age < 3 months and projectile vomiting 2 or more times)
- SEVERE vomiting (vomits everything) > 8 hours while receiving clear fluids (or pumped breastmilk for breastfed infants)
- Fever > 105° F (40.6° C)
  R/O: serious bacterial infection
- Diabetes suspected (excessive thirst, frequent urination, weight loss)
- Kidney infection suspected (flank pain, fever, painful urination, female)
  R/O: acute pyelonephritis
- Age < 6 months with fever and vomiting 2 or more times
  R/O: serious cause of isolated vomiting

Discuss with PCP and Callback by Nurse within 1 Hour

- Vomiting an essential medicine (e.g., seizure medications)
- Taking Zofran, but vomits 3 or more times
  R/O: wrong diagnosis

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, etc)

  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

- Triager thinks child needs to be seen for non-urgent acute problem
- Caller wants child seen for non-urgent 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)

HOME CARE ADVICE FOR VOMITING WITHOUT DIARRHEA

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.
   - The main risk of vomiting is dehydration. Dehydration means the body has lost too much fluid.
2. **For Formula-Fed Infants Offer Oral Rehydration Solution (ORS) for 8 Hours**:
   - For vomiting once, continue regular formula.
   - For vomiting more than once, offer ORS for 8 hours. If you don't have ORS, use formula until you can get some.
   - ORS (eg. Pedialyte or the store brand) is a special electrolyte solution that can prevent dehydration. It's readily available in supermarkets and drug stores.
   - 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.
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 pumped breastmilk. Note: ORS is rarely needed in breastfed babies but can be used if vomiting becomes worse.
   - Spoon or syringe feed small amounts of pumped breastmilk: 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. **Pumped Breastmilk Bottle-Fed Infants - Reduce the Amount per Feeding:**
   - If vomits once and bottle-feeding breastmilk, give half the regular amount every 1-2 hours.
   - If vomits more than once within last 2 hours, give 1 ounce (30 mL) every 30 to 60 minutes.
   - If continues to vomit, give 1-2 teaspoons (5-10 mL) every 5 minutes. If not tolerating breastmilk, switch to ORS (e.g., Pedialyte).
   - After 4 hours without vomiting, return to regular feedings. Start with 1 ounce (30 mL) every 30 minutes and slowly increase as tolerated.

5. **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.
   - Other clear fluids: Use half-strength Gatorade. Make it by mixing equal amounts of Gatorade and water. Can mix apple juice the same way.
   - ORS (such as Pedialyte) is usually not needed in older children.
   - Popsicles work great for some kids.
   - The key to success is giving small amounts of fluid. Offer 2-3 teaspoons (10-15 ml) every 5 minutes. Older kids can just slowly sip a clear fluid.
   - 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.

6. **Stop Solid Foods:**
   - Avoid all solid foods (and baby foods) in kids who are vomiting.
   - After 8 hours without throwing up, gradually add them back.
   - Start with starchy foods that are easy to digest. Examples are cereals, crackers and bread.
   - Return to completely normal diet in 24-48 hours.

7. **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.

8. **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.

9. **For Severe or Continuous Vomiting, but Well-Hydrated:**
   - Sometimes children vomit almost everything for 3 or 4 hours, even if given small amounts.
   - However, some fluid is being absorbed and this will help prevent dehydration.
   - From what you've told me, your child is well hydrated at this time. So continue offering clear fluids (Avoid: NPO).

10. **Return to Day Care or School:**
    - Your child can return to day care or school after vomiting and fever are gone.

11. **Expected Course:**
    - For the first 3 or 4 hours, your child may vomit everything. Then the stomach settles down.
    - Vomiting from viral gastritis usually stops in 12 to 24 hours.
    - Mild vomiting with nausea may last 3 days.

12. **Call Back If:**
    - Vomiting becomes severe (vomits everything) over 8 hours
    - Vomiting persists over 24 hours

- Blood in vomit or diarrhea
- Signs of dehydration
- Stomach pain becomes constant or severe
- Your child becomes worse

FIRST AID

N/A

BACKGROUND INFORMATION

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.** 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.
- Peak Age: 2 weeks to 2 months. Rare after 3 months.
- Vomiting is forceful. It becomes projectile and shoots out.
- Right after vomiting, the baby is hungry and wants to feed. ("hungry vomiter")
- **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 oral rehydration solution (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 Oral Rehydration Solution (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.

Dehydration: How to Explain to Callers

- The main risk of not drinking enough fluids is dehydration.
- Dehydration means the body has lost too much water.
- Dehydration is a reason to see a doctor right away. Your child may have dehydration if not drinking much fluid and:
- The urine is dark yellow and has not passed any in over 8 hours.
- Inside of the mouth and tongue are dry or very sticky.
- There are no tears if your child cries
- Slow blood refill test: Longer than 2 seconds. First, press on the thumbnail and make it pale. Then let go. Count the seconds it takes for the nail to turn pink again. Ask your doctor to teach you how to do this test.
- A child with severe dehydration may become too weak to stand or be very dizzy when trying to stand. Severe dehydration can also lead to confusion, rapid breathing, or floppiness.

Matching Pediatric Handouts for Callers

Printed home care advice instructions for patients have been written for this guideline. If your software contains them, they can be sent to the caller at the end of your call. Here are the names of the pediatric handouts (ACIs) that relate to this topic:

- Vomiting (Baby on Breastmilk)
- Vomiting (Baby on Baby Formula)
- Vomiting (Age 1-5)
- Vomiting (Age 6-21)
- Fever - How to Take the Temperature
- Fever - Myths Versus Facts
- Food Poisoning
- Acetaminophen (Tylenol) Dosage Table - Children

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Company: Schmitt-Thompson Clinical Content

Content Set: Office Hours Telephone Triage Protocols | Pediatric

Version Year: 2020

Last Revised: 7/30/2020

Last Reviewed: 4/1/2020