

## Vomiting and Diarrhea

Vomiting and diarrhea are most commonly due to a variety of different viruses. Rarely are bacterial infections the cause of these symptoms. Vomiting and diarrhea can lead to dehydration, which if left uncorrected, can lead to further medical problems. The most important part of treatment for your child with vomiting and diarrhea is to maintain hydration. There are varying degrees of dehydration and these can be classified based on how the child looks and how the child is acting.

	<b>Minimal/No Dehydration</b>	<b>Mild to Moderate Dehydration</b>	<b>Severe Dehydration</b>
<b>Mental Status</b>	Alert, maybe less energy	Fatigued though alert	Lethargic; difficult to arouse
<b>Thirst</b>	Normal; may decline to drink	Normal or increased	Drinks poorly or unable to drink
<b>Heart Rate and Breathing</b>	Normal	Normal or increased	Increased; deep breathing
<b>Eyes and tears</b>	Tears present (eyes appear moist and not sunken)	Decreased tears (eyes appear dry and sunken)	Deeply sunken eyes with absent tears
<b>Mouth</b>	Saliva present ( mouth and lips are moist)	Decreased saliva (mouth and lips are dry)	Parched (dry and tacky mouth and lips)
<b>Capillary refill</b>	Quick (squeeze and release fingernail – nail bed should return to pink in <2 sec)	Slower (>2 ssec)	Slow (>3 sec)
<b>Extremities</b>	Warm and pink	Cool; slightly pale	Cold and mottled
<b>Urine Output</b>	Normal or decreased	Decreased	Minimal

Most children with minimal or no dehydration can be managed at home. An office visit may be necessary if the child has other symptoms such as fever, ear pain, sore throat, urinary symptoms, or any other concerning symptom. Children with mild to moderate dehydration would benefit from evaluation in the office. A child with severe dehydration should proceed to the emergency department or notify EMS/911.

### Treatment

There are several options for the treatment of vomiting and diarrhea, with or without dehydration. The most important step is to maintain hydration and prevent dehydration.

1. Oral rehydration: The recommended fluid for oral rehydration is electrolyte solution such as Pedialyte or Enfalyte, as these have the proper balance of water, sugar, sodium, and potassium that are necessary to prevent further complications associated with dehydration. Sodas and sports drinks (such as Gatorade) are not recommended for oral rehydration due to the high sugar and low sodium content. For children with mild to moderate dehydration, give 1 oz fluid for every 1 lb of body weight in order to maintain hydration every 3-4 hours. In addition to maintaining hydration, additional fluid should be given for every episode of vomiting or

diarrhea. The amount of replacement is based on the child's weight is shown below. Give 1 oz every 10-15 minutes as tolerated. Giving the fluid by medicine cup is very useful to prevent giving too much at a time.

- For children < 22lbs, give 2-4 oz for each episode of vomiting or diarrhea
  - For children > 22lbs, give 4-8 oz for each episode of vomiting or diarrhea
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2. Diet: A child who is nauseous and having abdominal pain and/or nausea will not likely want to eat anything. If a child is not wanting to eat or is not able to keep down any foods, then refer to the instructions above on oral rehydration. For the child that is able to eat, start with easy to tolerate foods (crackers, rice krispies, etc.) and then progress to normal diet as these foods are tolerated. The goal is to resume normal dietary intake as soon as possible to keep all of the vitamins, minerals, and other nutrients in proper balance. Bowel rest is not recommended for any child that is able to eat. A “BRAT” (bananas, rice, apples, toast) diet is not necessary beyond the first couple successful food trials.
  3. Anti-Nausea medications: These medications may offer benefit to the child who is not able to tolerate oral rehydration or who has mild-to-moderate dehydration. These medications are available by prescription and the child should be evaluated prior to being given a prescription. Some natural substances that can also help with nausea and vomiting are ginger and peppermint. There are various over-the-counter formulations that may offer relief.
  4. Anti-Diarrhea medications: These medications, such as Immodium and Pepto Bismol, are not recommended. These medications by preventing the diarrhea can keep the body from expelling the offending infection.
  5. Other: Zinc supplementation may also be beneficial in the treatment of diarrhea. Many oral rehydration solutions are starting to be supplemented with zinc. Probiotics, particularly *Lactobacillus rhamnosus GG*, can reduce the duration of a diarrheal illness by 1-2 days and helps to replace normal intestinal bacterial that is lost due to diarrhea. Probiotics can be found as capsules or packets, in addition to being part of some yogurts such as Activia and Stonyfield Organic.

If at any time there are questions, or if you are concerned about the symptoms your child is having, please call the office to speak with Dr. Flint or to schedule an appointment to have your child seen. You may also log in to the Patient Portal via our website ([www.delavanpediatrics.com](http://www.delavanpediatrics.com)) to send a secure email to the staff or to schedule an appointment.

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