



Nausea and vomiting

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Introduction

Nausea refers to the unpleasant sensation one experiences when having to vomit.^{1,2} Vomiting is the ultimate forceful expulsion of stomach contents through the mouth, intended to protect a person from harmful ingested substances.¹⁻³ Causes of nausea and vomiting vary across different age groups and can range from relatively mild to potentially life threatening.¹

Vomiting in babies

It may be difficult to determine whether an infant is vomiting or spitting up. Spitting up should be suspected if the episodes occur during or shortly after feeding or after being burped, and only a small amount comes up.⁴ Rapid feeding, swallowing air

and overfeeding may lead to spitting up, although it could also occur in the absence of these factors.¹ Table 1 describes the most likely causes of vomiting in infants¹ and suggestions for management.

Nausea and vomiting in children

Nausea and vomiting are unpleasant symptoms for children, but will usually subside after a few days. However, persistent vomiting may cause the child to become severely dehydrated and may be a sign of a more serious condition.^{1,3-5} Table 2 describes the most likely causes of vomiting in children and suggested management.

Nausea and vomiting during pregnancy

Vomiting is especially common in the first trimester of pregnancy and may be due to the change in hormone levels.⁴ Common causes of nausea and vomiting during pregnancy and suggested management are described in Table 3.

Table 1: Possible causes of vomiting in infants^{1,3,4} and suggested management

Possible causes	Management with non-drug measures	Over-the-counter medicines	When to refer the patient to a doctor
<ul style="list-style-type: none"> Gastro-oesophageal reflux may cause babies to vomit. It happens before, during and after feeds. Food intolerance: There may be an intolerance to the type of infant formula. Infection: Vomiting with associated diarrhoea may point to a viral infection. Projectile vomiting: Forceful vomiting after feeding may be a sign of pyloric stenosis. This is a condition that blocks the entrance to the small intestine. 	<p>If a breastfeeding infant vomits, continue to breastfeed unless discouraged by a doctor.</p> <p>If the infant vomits immediately after nursing, try shorter but more frequent feeds. If an improvement is seen after two to three hours, resume the usual feeding schedule.</p> <p>If the infant drinks formula, start by offering an oral rehydration solution every 15 minutes over the course of two to three hours. If vomiting occurs after drinking, wait 30 minutes and try again. Feeding with full-strength infant formula may resume once vomiting ceases.</p>	<p>This type of treatment for nausea or vomiting is not usually recommended for infants.</p> <p>For this age group, medicines for nausea and vomiting are best prescribed by a doctor.</p>	<ul style="list-style-type: none"> Any episode of forceful vomiting in a newborn If vomiting worsens or does not improve within 24 hours Temperature of 38 °C or higher If vomit is tinged with blood (red or brown) or contains bile (green) If an infant refuses to feed for more than a few hours Moderate to severe dehydration is seen Blood in the stools Behaviour changes, including lethargy or decreased responsiveness

Table 2: Possible causes of vomiting in children¹⁻⁵ and suggested management

Possible causes	Management with non-drug measures	Over-the-counter medicines	When to refer the patient to a doctor
<p>The most common causes of vomiting in children are viral or bacterial infections, e.g. food poisoning. However, nausea and vomiting may also be experienced because of:</p> <ul style="list-style-type: none"> • high fever • severe motion sickness • coughing • overeating • food allergies • gastro-oesophageal reflux • side effects from medication <p>In rare cases vomiting may be a symptom of a more serious condition, including:</p> <ul style="list-style-type: none"> • appendicitis • migraine headaches • meningitis • concussion • a brain tumour • blockage in the intestines • ingesting a drug or poison • intense pain • bladder infection 	<p>Children who are vomiting but are not dehydrated may continue to eat a regular diet as tolerated. Recommended foods include rice, potatoes, bread and lean meats. Fatty foods should be avoided.</p> <p>Dehydrated children require replacement of lost fluid. Commercially prepared oral rehydration solutions or clear fluids, including water, diluted juice or soda, may be given in small quantities.</p> <p>Careful hygiene (especially hand washing) may prevent infection from spreading.</p>	<p>Non-prescription treatments for nausea or vomiting are usually avoided in children because of the lack of demonstrated efficacy and the high incidence of side effects. A doctor should always investigate persistent vomiting.</p>	<ul style="list-style-type: none"> • Vomiting that continues for more than 24 hours • If moderate to severe dehydration is evident • If severe abdominal pain is experienced, even if it is intermittent • If the vomit is tinged with blood (red or brown) or contains bile (green) • Blood in the stools • Fever • Behaviour changes, including lethargy or decreased responsiveness

Table 3: Common causes of nausea and vomiting during pregnancy⁶⁻⁸ and suggested management

Possible causes	Management with non-drug measures	Over-the-counter medicines	When to refer the patient to a doctor
<ul style="list-style-type: none"> • Increased hormone levels: The increased levels of human chorionic gonadotropin and oestrogen during pregnancy are associated with an increased frequency of nausea and vomiting • Psychological factors • Slowed movement of the stomach contents • Use of iron-containing prenatal vitamin preparations 	<p>Consider dietary changes, such as:</p> <ul style="list-style-type: none"> • eating before or as soon as hunger is experienced to avoid an empty stomach • frequently eating snacks and having small meals (e.g. six small meals a day) that are high in protein or carbohydrates and low in fat • drinking small amounts of cold, clear and carbonated or sour fluids (e.g. ginger ale or lemonade) between meals <p>Avoid triggers such as:</p> <ul style="list-style-type: none"> • odours, e.g. perfume, coffee, smoke, chemicals • spicy or fatty foods • stuffy rooms • heat and humidity • visual or physical motion such as flickering lights, driving • excessive exercise • consuming large amounts of high-sugar foods or snacks <p>Consider complementary treatments such as:</p> <ul style="list-style-type: none"> • acupuncture and acupressure • hypnosis • ginger • vitamin B₆ supplements, which may reduce symptoms of mild to moderate nausea 	<p>Consult a doctor before taking any medication for nausea and vomiting during pregnancy.</p>	<ul style="list-style-type: none"> • Vomiting occurs repeatedly throughout the day • If the patient is unable to keep down any food or drinks for more than 12 hours • If signs of dehydration are present • Presence of blood in the vomit • Abdominal or pelvic pain or cramping • Weight loss exceeding 2.3 kg

Table 4: Common causes and management of nausea and vomiting associated with diarrhoea^{4,6,9,10}

Possible causes	Management with non-drug measures	Over-the-counter medicines	When to refer the patient to a doctor
Infectious gastroenteritis may be caused by: <ul style="list-style-type: none"> viruses (e.g. rotavirus, norovirus) bacteria (e.g. <i>Salmonella</i>, <i>Campylobacter</i>, <i>Shigella</i>, <i>Escherichia coli</i>, <i>Clostridium difficile</i>) parasites (e.g. <i>Giardia</i>, <i>Cryptosporidium</i>) 	<ul style="list-style-type: none"> Drink plenty of clear fluids to avoid dehydration Get plenty of rest Eat small amounts of plain foods, such as soup, rice, pasta and bread Use an oral rehydration solution to replace lost electrolytes Disinfect any surfaces or objects that could be contaminated Wash hands regularly 	<p>Children: Non-prescription treatments for nausea or vomiting are usually avoided in children because of a lack of demonstrated efficacy and the high incidence of side effects. A doctor should always investigate persistent vomiting.</p> <p>Adults: Cyclizine or promethazine may be beneficial in case of severe vomiting.</p> <p>Note: Refer to the manufacturer's package insert for age indication and dosing guidelines.</p>	<ul style="list-style-type: none"> Symptoms of severe dehydration are evident Bloody diarrhoea Vomiting occurs repeatedly and the patient is unable to keep down any fluids Temperature higher than 38 °C No improvement in symptoms

Nausea and vomiting associated with diarrhoea

Viral infection is a leading cause of nausea, vomiting and diarrhoea. These symptoms are usually self-limiting, which means they will resolve on their own in a few days. Gastroenteritis is a common condition that causes diarrhoea and vomiting. It affects people of all ages, but is particularly common in young children. It is usually caused by a bacterial or viral infection. Possible causes of nausea and vomiting associated with diarrhoea and suggested management are described in Table 4.

Conclusion

Nausea and vomiting are common complaints presenting in the pharmacy. The pharmacist's assistant has an important role in educating the customer on how to manage these symptoms at home and has to know when to refer the patient to the pharmacist or doctor.

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