



Nausea and Vomiting in the Pharmacy

Fae Farrer, BPharm

Nausea and vomiting are not diseases but are common symptoms that may be caused by a variety of physical and psychological conditions.¹

Vomiting may be voluntary or involuntary, but is commonly an involuntary, uncontrollable reflex that expels the contents of the stomach through the mouth. Nausea is a term used to describe the uneasiness in the stomach that precedes vomiting, although the patient may experience nausea and not actually vomit.^{1,2,3} Dry heaves or retching is the movement of the stomach trying to vomit when there are no contents remaining, but the impulse to vomit is still present.^{4,5}

Causes of nausea and vomiting

Nausea and vomiting are controlled by the part of the brain responsible for involuntary functions. Nausea may occur with or without vomiting. Vomiting is a reflex triggered by a signal from the brain.^{1,4}

Nausea

The most common causes of nausea are intense pain due to illness or injury and hormonal changes that occur in the first trimester of pregnancy. Other common causes include^{1,3}:

- Motion sickness
- Emotional stress
- Indigestion
- Food poisoning
- Viral infections
- Gallbladder disease
- Chemical toxins

Vomiting

Causes of vomiting vary with age. Children are most likely to vomit due to viral infections or food poisoning. Other common causes of vomiting in children include:

- milk allergy
- motion sickness
- coughing
- high fever
- overeating^{1,2,3}

Most adults rarely vomit. When they do, common causes are infections or food poisoning. Other causes may include:

- Pregnancy – Nausea and vomiting are well-known symptoms of early pregnancy. Often called “morning sickness”, nausea is due to changes in hormone levels in the blood and is common in the first trimester, although it may continue throughout the pregnancy and not be restricted to morning. Continued vomiting in pregnancy is only a problem if the expectant mother is unable to keep food down and the vomiting poses a risk to her or her baby’s health.^{1,3,5}
- Gastritis – inflammation of the stomach lining due to toxins released by viruses or bacteria, or other irritants such as alcohol, smoking and spicy food.^{1,5}
- Gastroesophageal reflux disease – nausea and vomiting are associated with the reflux of stomach acid into the oesophagus.⁵
- Migraine – severe headaches may be associated with vomiting.^{1,5}
- Inner ear disorders – patients suffering from motion sickness, vertigo and Meniere’s syndrome may experience nausea and vomiting.⁵
- Increased intracranial pressure – injury or illness causing increased pressure in the brain may result in vomiting. This includes brain tumours, infections such as meningitis and trauma or concussion due to accidents or injuries.⁵
- Pain – extreme pain due to illness or injury may cause vomiting.^{1,5}
- Emotional stress – shock, anxiety or fear may cause nausea and vomiting.⁵

Certain illnesses or conditions may also predispose a patient to nausea. These include diabetes, gallbladder disease, irritable bowel disease, hepatitis, Crohn's disease, kidney disease, and cancers. Patients with eating disorders such as bulimia have self-induced vomiting as part of their illness.^{1,5}

Some patients may experience nausea or vomiting due to the side-effects of some medications. These include non-steroidal anti-inflammatories which may irritate the stomach lining, some pain killers, antibiotics and chemotherapy drugs. Surgical anaesthesia may also cause nausea or vomiting.^{4,5}

Dehydration may worsen nausea making the patient reluctant to drink any fluid, making the dehydration worse, resulting in increased nausea.⁵

Complications related to nausea and vomiting

Vomiting is never pleasant, but is usually not harmful. However, it may be a symptom of another condition. Nausea that lasts more than a week or vomiting lasting more than 24 hours should be investigated further.^{1,2,3}

When to seek medical attention depends on the timing, duration and severity of the nausea or vomiting. Vomiting shortly after a meal may indicate an ulcer, vomiting 6–8 hours after a meal may indicate food poisoning. Patients who have ingested large amounts of food or alcohol need to allow the food and drink to move through their systems.^{2,3}

Women who suspect they might be pregnant should confirm this before taking any medication for nausea.

A doctor should be consulted immediately if any of the following symptoms are present^{1,2,3,4,5}:

- A head injury
- A suspected infection
- Vomiting accompanied by a fever, especially in a small child
- Projectile vomiting
- Symptoms of dehydration (e.g. thirst, dry mouth, dark coloured urine)
- Blood in the vomit
- Other medical conditions (heart, kidney or liver disease or diabetes)
- Signs of weakness or a person is unable to take care of themselves
- A new or severe headache or stiff neck
- Severe abdominal pain
- Confusion
- Rapid pulse

Infants or small children should be examined by a doctor if vomiting has lasted more than a few hours.³

Dehydration may occur due to vomiting. This is more common in children as adults have a greater electrolyte reserve and detect the symptoms of dehydration (increased thirst and dry lips) more easily. Adults caring for children with vomiting and/or diarrhoea need to be aware of dehydration symptoms such as dry lips, sunken eyes, rapid pulse, decreased urination (fewer wet nappies than usual), and in infants – a sunken fontanelle (soft spot on top of the baby's head).^{2,3,4,5}

Treatment

Nausea and vomiting are often self-limiting, but patients may use remedies to alleviate or reduce symptoms. It is important to allow the stomach to rest, and yet avoid dehydration. Only small amounts of liquids should be taken initially, as large amounts may worsen the nausea.⁵

Home remedies

- Water or clear fluids – fluid intake helps to regulate electrolyte imbalances and prevent dehydration. Clear fluids include sports drinks and clear broth.
- Soft, bland foods – jelly, porridge, toast, bananas, apple sauce and yoghurt may be eaten once vomiting has stopped. If the nausea returns, the patient should switch back to a liquid diet. Milk products should be avoided for 24–48 hours. Patients should avoid fried or greasy foods.
- Oral rehydration solutions may be used and are recommended especially for children. A home-made solution may be prepared using six teaspoons of sugar, half a teaspoon of salt in one litre of previously boiled water.
- Rest and avoid activity after eating.
- Pregnant women may find it beneficial to eat a high protein snack before going to bed, or a few dry crackers before getting out of bed.^{1,2,3,4,5}

Medical treatment

Some medicines are available to treat nausea without prescription. These include cyclizine, promethazine, doxylamine, and cinnarizine. Other medications available on prescription include prochlorperazine, domperidone, metoclopramide and betahistine. Patients with severe vomiting may require intravenous treatment.^{1,4}

Nausea and vomiting prevention

Nausea and vomiting may be prevented by avoiding known triggers such as certain foods and excess alcohol. Motion sickness can be anticipated and prevented with medication.

Once nauseous, vomiting may be prevented by drinking small amounts of sugary liquids and resting in a sitting position.^{1,2,3,4}

Conclusion

Most cases of nausea and vomiting resolve without treatment, but these symptoms may mask other problems and should be investigated if they become severe or persistent.

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