

Nausea and vomiting

- Nausea is an unpleasant sensation, which may be a precursor to the forceful expulsion of gastric contents (vomiting).
- Nausea is defined as the feeling of a need to vomit and vomiting as the expulsion of gastric contents via abdominal and chest wall contractions.
- Nausea and vomiting are symptoms of other conditions especially gastrointestinal conditions. Most cases have a gastrointestinal origin, with viral gastroenteritis and food poisoning being the most common acute cause in all age groups.
- Infections, acute alcohol ingestion, anxiety, severe pain, labyrinth and cardiovascular causes can also produce nausea and vomiting. Therefore, their prevalence and epidemiology within the population are determined by that condition.

What you need to know?

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| <ul style="list-style-type: none">• Age of the patient• Pregnant?• Duration of symptoms• Prescribed and OTC medications• Previous medical history• Alcohol intake? | <ul style="list-style-type: none">• Associated symptoms<ul style="list-style-type: none">• Has vomiting started• Abdominal pain• Diarrhea• Constipation• Fever• Alcohol intake• Dizziness/vertigo |
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Presence of abdominal pain

Certain abdominal conditions, e.g. appendicitis, cholecystitis and cholelithiasis, can also cause nausea and vomiting. However, for all three conditions abdominal pain would be the presenting symptom and not nausea and vomiting. The severity of the pain alone would trigger referral.

Timing of nausea and vomiting

- Early morning vomiting is often associated with pregnancy and excess alcohol intake.
- If vomiting occurs immediately after food this suggests gastritis and if vomiting begins after 1 hour or more after eating food then peptic ulcers are possible.

Signs of infection

- Acute cases of gastroenteritis will normally have other associated symptoms such as diarrhea, fever and abdominal discomfort.
- If infection is due to food contamination, then other people are often affected at the same time.
- Other infection, such as otitis media, may cause nausea and vomiting.

Pregnancy

Nausea and vomiting are common in pregnancy. Sickness tends to be worse in the first trimester and in the early morning.

Nausea and vomiting in pediatric patients

- Vomiting in neonates should always be referred because it suggests a congenital disorder, for example Hirschsprung's disease.
- In the first year of life the most common causes of nausea and vomiting are feeding problems, gastrointestinal and urinary tract infection. Vomiting in infants needs to be differentiated from ***regurgitation***.
- Children under 12 years who experience nausea and vomiting will usually have gastroenteritis, fever or otitis media. In most instances the conditions are self-limiting and medication designed to reduce pain and temperature and replace fluid will help resolve symptoms.

Medicine-induced nausea and vomiting

- Many medications can cause nausea and vomiting. If medication is suspected, then the pharmacist should contact the prescriber to discuss alternative treatment options.
- **NSAIDs** are common causes.
- Some **antibiotics** may cause nausea and vomiting. For example: doxycycline.
- Other frequently implicated medicines are cytotoxic drugs, iron, potassium supplements, selective serotonin reuptake inhibitors (SSRIs), nicotine gum (ingestion of nicotine rather than buccal absorption), estrogens and other hormonal drugs, steroids and narcotic analgesics.
- Nausea and vomiting may be signs of ***drug toxicity*** as in theophylline and digoxin toxicity. In such cases, **Immediate referral** should be done.
- ***Digoxin toxicity*** may show itself by producing nausea and vomiting, and such symptoms in a patient who is taking *digoxin*, especially an **elderly person**.
- Symptoms can sometimes be improved by **taking the medication with food**, but if they continue, the patient should see the doctor.

Special cases

- Vomiting and nausea are common in patients with migraines.
- Raised intracranial pressure can cause nausea and vomiting.
- Any middle ear disturbance or imbalance may produce nausea and vomiting. Tinnitus, dizziness and vertigo are suggestive of Ménière's disease.

Indications of referral

- Children who fail to respond to OTC treatment
- Moderate to severe abdominal pain
- Suspected pregnancy
- Unexplained nausea and vomiting in any age group
- Vomiting in children under 1 year old lasting longer than 24 hours. According to some recommendations: Children under 2 years are referred, whatever the duration, because of the risks from dehydration.
- Adults should be referred to the doctor if vomiting has been present for longer than 2 days.
- Chronic vomiting are referred as such symptoms may indicate a chronic disease.

Treatment

- Patients who are vomiting should be referred to the doctor. The pharmacist can initiate rehydration therapy in the meantime. Oral rehydration solutions should be offered.
- Ginger (*Zingiber officinale*) has some limited data to support use in pregnancy, motion sickness, and surgery.
- Peppermint (*Mentha piperita*), chamomile (*Matricaria recutita*), and lemon balm (*Melissa officinalis*) are thought to have antispasmodic properties that may be helpful in treating nausea and vomiting.
- Prochlorperazine is licensed for the relief of nausea and vomiting associated with migraine in adults more than 18 years.
- Domperidone is no more licensed for pharmacy sale in UK. It is withdrawn from US market over fears over its potential cardiac side effects.
- Vitamin B6 is commonly used as anti-emetic. It is more effective than placebo. It has been advocated for use in pregnant women.
- Meclozine (=Meclizine) and some first-generation anti-histamines are also used.
- Mixture of phosphoric acid/dextrose/fructose is used to relief of upset stomach with nausea. Its mechanism may be related to delay of gastric emptying time and decreased smooth-muscle contraction. Because of its high carbohydrate content, this product is not recommended for patients with diabetes mellitus