

WHAT IS NAUSEA & VOMITING?

Nausea is the unpleasant sensation that precedes vomiting. Nausea frequently is relieved by vomiting and may be accompanied by increased parasympathetic nervous system activity, including diaphoresis, salivation, bradycardia, pallor, and decreased respiratory rate.

Vomiting, or emesis, is the forceful retrograde expulsion of gastric contents from the body.

- Retching (“dry heaves”) is the simultaneous contraction of the abdominal muscles and muscles of inspiration that may occur with vomiting.
- Vomiting should be differentiated from regurgitation, the nonforceful expulsion of gastric contents into the esophagus, and eructation (belching), the expulsion of swallowed gastric air.
- Regurgitation or eructation may be volitional or result from an incompetent lower esophageal sphincter.
- Anatomic alterations of the esophagus (by mucosal rings, carcinoma, or diverticula) and disorders of esophageal motility (such as achalasia and diffuse spasm) may simulate vomiting, but the food bolus never reaches the stomach.

SIGNS & SYMPTOMS

A patient’s self-report should be used whenever possible for the assessment of nausea (subjective); whereas, vomiting can be observed and measured.⁴ The Visual Analog Scale (VAS) to quantify the severity of subjective symptoms may be used when a patient’s self-report is not feasible. Some other reliable tools to measure nausea and vomiting are the Morrow Assessment of Nausea and Emesis (MANE), Rhodes Index of Nausea and vomiting Form 2 (INV-2) and the Functional Living Index Emesis (FLIE).

Particular focus is needed to assess how nausea and vomiting is affecting the patient’s ability to function, their quality of life, and the burden on the caregiver.⁴

- Patients may describe an unpleasant sensation experienced in the back of the throat and the epigastrium, which may or may not result in vomiting. This may be an acute, anticipatory, or delayed occurrence.³
- Patients may describe feelings of increased salivation, dizziness, light-headedness, difficulty swallowing, tachycardia, sweating, or indigestion.³
- Patients may report feeling dehydrated and may have a sore mouth or throat.⁵
- Patients may report emesis that includes blood (active gastric bleeding), coffee ground emesis (lower intestinal bleeding), or fecal matter (partial bowel obstruction).³
- Patients may express pain, anxiety, or fear.³

- Caregivers may describe caring for the patient's symptoms as frustrating, painful, and exhausting.⁴
- Patients may report contributing factors associated with nausea and vomiting, such as certain smells, position changes, vertigo, blood sugar levels, after taking medications, relationship to food intake, presence of constipation or impaction, presence of uncontrolled pain or infection, and presence of anxiety and other emotional symptoms.⁵

INTERVENTIONS

Identifying the underlying etiology of nausea and vomiting is crucial as it allows proper selection of treatment regimens. Often, the cause is multifactorial, requiring multiple interventions. Ruling out potentially reversible or treatable causes, such as dehydration, electrolyte imbalances, constipation, and partial small bowel obstruction should be addressed.²

- Implement measures to reduce immediate suffering from nausea and vomiting.^{2,3}
- Review goals of care with patient and family, to include medically administered nutrition and hydration (MANH) and other possible interventions given the nature of their disease.²⁻⁴
- In advanced illness, as culturally appropriate, discuss shifting goals of care to reduce symptom burden and improve patient's capacity to cope.²⁻⁴
- Discuss the benefits and burdens of treatment to reduce frequency and intensity of nausea/vomiting.²⁻⁴

NONPHARMACOLOGICAL INTERVENTIONS	PHARMACOLOGICAL INTERVENTIONS
<p>Investigate reversible causes while pursuing quality of life or symptom management.</p> <p>Self-management techniques: Dietary modifications, environment modifications, psychological strategies, communication strategies that include the patient, family, and healthcare team.</p> <p>Integrative therapies: Biological, nonbiological, and behavioral therapies</p> <p>Invasive therapies: Nasogastric tubes, MANH, draining gastrostomy tube, aggressive bowel regime, paracentesis, radiation, steroids, and surgery</p>	<p>**First, optimize current regimen of medication treatments, trying interventions that have worked in the past for the patient. Treatments to be aligned with the patient's and family's goals of care.</p> <p>Anticholinergics</p> <p>Antihistamines</p> <p>Prokinetic agents</p> <p>Corticosteroids</p> <p>Dopamine receptor antagonists</p> <p>5-HT₃ receptor agonists</p> <p>Benzodiazepines</p> <p>Cannabinoids</p> <p>Antibiotics</p> <p>Olanzapine</p> <p>Somatostatin analogues</p>

FAMILY & TEAM DISCUSSIONS

Patient and Family Education and Support²⁻⁵

- Instruct on underlying etiology of nausea and vomiting, treatment options with associated benefits and burdens, medications, and anticipated effects.
- Clarify the intent of treatments, anticipation of the needs of patients and their families, and involvement of caregivers in the treatment process when appropriate.
- Explore realistic expectations for symptom trajectory with reassuring education on continued management strategies to allay fears.
- Instruct on appropriate nonpharmacological strategies and safety:
 - ▶ Instruct on thorough oral care and hydration.
 - ▶ Encourage slow eating and correct positioning to avoid aspiration.
 - ▶ Instruct on minimalizing sights, sounds, or smells that can initiate nausea.
 - ▶ Instruct on deep breathing, relaxation, and cognitive distraction techniques.
 - ▶ Instruct on when and why to take certain antiemetic medications because patient may be given multiple agents, when to escalate symptom reporting to providers, and timelines for follow up assessment.
 - ▶ Instruct on personalized education plans and keeping a symptom diary. This will assist with helping patients understand how to follow their plan at home and keep track of their symptoms.
- Instruct on medication management strategies, available routes of administration, willingness/capabilities of caregiver assistance, and clarification of goals.

Interprofessional Team:

Successful interventions in caring for patients with nausea and vomiting benefit from multiple perspectives.

SYMPTOM DOCUMENTATION EXAMPLES

68 yr old woman with stage IIB breast cancer diagnosed 3 years ago. Two weeks ago, she fell and sustained a pathological fracture of her left radius, which was treated with a splint and morphine prn for pain. One week ago, she reported nausea 8/10, decreased appetite, drinking mostly liquids, and no bowel movement for 6 days. No reported episodes of vomiting. She was distraught and tearful, worried that her current nausea might be difficult to control and trying to deal with recurrent cancer. Reports difficulty performing activities of daily living (ADLs) and all independent activities of daily living (IADLs) with current symptoms. Today she reports she is now taking haloperidol as prescribed with stated relief of nausea. She reports increased

appetite, reintroduction of solid foods, and has had regular bowel movements x 2 days after starting a regular bowel regimen. She has begun a relaxation self-care program, which includes massage, aromatherapy, and guided imagery. Patient self-reports anxiety decreased from 7/10 at time of visit 5 days ago and is now self-reported at 3/10 following addition of haloperidol and nonpharm interventions.

DESIRED NURSING OUTCOMES

Improve patient's quality of life by addressing suffering in across all dimensions. Inadequately controlled nausea and vomiting comes with a significant cost to the patient's physical well-being, functionality, and quality of life.²⁻⁴

- Promote goals of care conversations to include use of invasive vs noninvasive therapies
- Clarify the circumstances in which the patient would want to start or stop invasive therapies once they have been initiated.
- Ensure/document decision-makers and family are aware of patient's preferences.

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