

Nausea and Vomiting

Heart Failure Symptom Management Guideline

For adults, age 19 and older in British Columbia



BC's HEART FAILURE NETWORK
Quality care for quality life.

Nausea and vomiting occurs in 17% to 32% of patients with heart failure. In this patient population, nausea and vomiting is multifactorial, can occur due to nervous system activation, hypoperfusion, congestion of tissues/organs, or coexistent diseases. Opioids and drugs with anticholinergic properties (e.g., class 1A antiarrhythmic agents, tricyclic antidepressants) can compound the problem of slowed gastric emptying innate to advanced heart failure. In patients receiving palliative care, nausea and vomiting rarely occurs in isolation; it tends to cluster with other symptoms, such as, pain, dyspnea, fatigue and decreased appetite.

Approach to Managing Nausea and Vomiting

Assessment

- Focused physical examination: vital signs, oropharynx/mucous membranes; abdomen, rectum (to assess for constipation/impaction/bowel obstruction); volume status (JVP, decreased urine output, thirst, dry mouth, dizziness, muscle cramps) and nutritional status (weight).

Dietary Approach

- Avoid intolerant food and/or restrict intake as appropriate.
- Start with sips, ice chips or popsicles once nausea improves; gradually increase from fluids to semi-solid to full food.
- Avoid spicy, fatty, excessively salty or sweet foods, or ones with strong odors.
- Sit up during and after eating.
- Consult with a clinical dietician and provide dietary/nutritional advice (www.healthlinkbc.ca/dietician/).

Non-pharmacological Approach

- Treat underlying causes based on mechanism involved, or any reversible causes where possible and desirable according to the goals of care.
- Maintain good oral hygiene (brushing teeth and rinsing mouth), especially after vomiting.
- Environmental modification: eliminate strong smells and sights; open windows to get fresh air, use a fan, air deodorizers or fresheners.
- Cognitive therapies: relaxation, visualization/imagery, hypnosis, distraction.
- Consider alternative therapies: acupuncture, acupressure or massage.
- Consultation: social worker, physiotherapist, occupational therapist, spiritual practitioner, counselors for psychosocial care, or anxiety reduction.

Pharmacological Approach

- Consider intravenous hydration or hypodermoclysis to replace lost fluids and electrolytes.
- Medications that may be contributing to symptoms should be discontinued.

Principles of Antiemetic Therapy

- Select antiemetics based on the central emetogenic pathways and their corresponding neurotransmitters involved.
- Give antiemetics prophylactically to prevent nausea (especially with opioid).
- Give antiemetics subcutaneously (if vomiting) on a regular dosing schedule with a breakthrough dose available for persistent symptoms.
- Titrate up antiemetics to their full dose before adding another drug.
- If symptoms not controlled for 24–48 hours, add another antiemetic from another group, (do not stop initial drug)
- Consider combinations but monitor overlapping toxicities.



Persistent Symptoms

May be due to worsening heart failure – consider consultation with the heart failure team and/or palliative care consultation team if symptoms persist.

Causes – Mechanisms & Pathways	Medication (Generic)	Route	Initial Dose and Titration
Gastrointestinal: Delayed gastric emptying, liver distension, gut wall edema, constipation	domperidone* metoclopramide* haloperidol dexamethasone	PO PO, SC, IV PO, SC, IV PO, SC, IV	10 – 20 mg TID, or QID 5- 10 mg Q6h 0.5 – 2.5 mg q6h – q24h 4 – 6 mg daily in AM (avoid BID or TID dosing which can lead to insomnia)
Chemoreceptor Trigger Zone: Drugs (opioids, digoxin, steroids, antiarrhythmic agents, spironolactone, SSRI antidepressants) Biochemical (hypercalcemia, uremia, organ failure) Toxins: infection, drug metabolites, ischemic bowel	haloperidol prochlorperazine methotrimeprazine ondansetron	PO, SC, IV PO, PR, PO, SC PO,SC,IV	0.5 – 2. 5 mg q6h – q24h 2.5 – 10 mg q4h – q6h 5 – 25 mg q8h – q24h 4 to 8 mg Q6H to Q8H
Vestibular: Motion sickness, opioids	dimenhydrinate scopolamine	PO, SC, IV Transdermal	25 – 50 mg q4h 1.5 mg patch q72h

Precautions:

- **Use PO route if patient is not vomiting and able to tolerate. Use subcutaneous route if patient is vomiting.**
- **Steroids** can contribute significantly to fluid retention which can worsen heart failure. (This side-effect is more common with prednisone; dexamethasone in low doses may be effective for severe nausea).
- **Methotrimeprazine** is an anti-psychotic which has anti-emetic properties and is used in palliative care. Must be used in carefully titrated doses as it can cause hypotension in those with heart failure and ambulatory patients.
- **Metoclopramide** – Assess effectiveness within 2 days. Monitor for adverse movement effects.

*Reduce dose in renal impairment.