

Troubleshooting Home Enteral Nutrition Complications

Symptom	Cause	Action
Gastrointestinal		
Nausea, vomiting, cramping	<ul style="list-style-type: none"> - Intolerance to formula ingredients or concentration - Formula spoiled or contaminated - Formula/water temperature cold on administration - Formula administered too rapidly - Poor positioning - GI complications (e.g. GERD, peptic ulcer, constipation, blockage) 	<ul style="list-style-type: none"> - Stop feeding, vent tube if able, elevate HOB $\geq 30^\circ$ - Ensure formula is not spoiled/contaminated and appropriate handling techniques are used - Ensure formula/water is administered at room temperature - If symptoms persist, call provider to rule out GI causes. Follow precautions to prevent dehydration. May need to adjust EN formula/rate.
Diarrhea (3 or more water stools/day)	<ul style="list-style-type: none"> - Infection (e.g. <i>Clostridioides difficile</i>) - Medications (e.g. antibiotics, sorbitol, magnesium, Relyvrio) - Intolerance to formula ingredients or concentration - Inadequate fiber intake 	<ul style="list-style-type: none"> - Decrease EN volume/rate - Call provider to discuss fiber intake, probiotics or need for medication adjustment - Call provider if diarrhea > 24 hours
Constipation (BM frequency > every 3 days, hard or liquid stool, straining, abdominal pain)	<ul style="list-style-type: none"> - Inadequate fluid or hydration - Medications (e.g. narcotics) - Immobility - Bowel blockage 	<ul style="list-style-type: none"> - Increase fluid or fiber intake in regimen - Use stool softener, laxative, or enema per provider - Increase activity as tolerated - If constipation persists, contact provider
Gastrointestinal bleeding	- Bright red blood in stool: hemorrhoids, fissure or anal tear	<ul style="list-style-type: none"> - Call provider - Take measures to reduce diarrhea or prevent constipation (see above)
	- Black, tarry stool or diarrhea; black/brown or bright red blood in vomit: gastritis/ulcer, esophageal tear from excessive vomiting	<ul style="list-style-type: none"> - If small amount, call provider; may benefit from gastric acid blocking agent - If large amount, call provider or go to ER
Aspiration (Heartburn, coughing, chest pain, shortness of breath or pneumonia)	<ul style="list-style-type: none"> - Diminished gag reflex - GERD - Swallowing disorder - Silent aspiration - Esophageal/gastric dysmotility - Laying flat during EN administration - Tube migration (J-tube entered stomach) 	<ul style="list-style-type: none"> - Call provider - To prevent future aspiration, elevate HOB $\geq 30^\circ$ and remain upright 30 minutes after EN administration - Take GERD or dysmotility medicine as prescribed - Address tube migration if needed
Mechanical		
Tube displacement (Moved or out of body)	<ul style="list-style-type: none"> - Tube not properly secured - Accidental excessive pulling 	<ul style="list-style-type: none"> - Discontinue feeding - If nasogastric tube is curled in throat, remove tube

Troubleshooting Home Enteral Nutrition Complications

	- Internal balloon deflated/burst	- If G/J/GJ tube moved, keep tube in abdomen; if fallen out, call provider or go to ER - Consider tube holder if tube accidentally pulled
Tube obstruction/blockage (Increased resistance or inability to flush)	- Clogged tubing - Pump problem	- Assess tubing for kinks; straighten if needed - Ensure clamp is open - If clogged, administer warm water and pull syringe plunger back and forth. Call provider if clog persists. Take precautions to avoid future clogging. - Call DME company if pump malfunctioning
Site issues		
Irritation, odor or bleeding	- Infection - External granulation tissue	- Wash skin with warm water and mild soap, pat dry - Call provider or homecare nurse - Apply barrier/antifungal/antibiotic cream as ordered
Leakage (Multiple soaked dressing > 2 times/day)	- Tube displaced - Tube diameter too small for tract - Bumpers too loose/tight or balloon under/overinflated	- Call provider - Ensure tube is in correct position and bumpers are appropriate - If tract too big, smaller tube can be substituted to allow tract to close
Pain	- Infection - Tube displacement - Buried bumper	- Call provider
Metabolic		
Hyperglycemia (Nausea, weakness, excessive thirst or urination, headache, fruity smelling breath)	Blood sugar > 140 mg/dL due to: - EN solution infused too quickly - Excessive EN/oral carbohydrate intake - Inadequate insulin - Infection - Medications (e.g. steroids)	- Test blood sugar - Call provider; may need to administer insulin or change EN formula
Hypoglycemia (Paleness, shakiness, sweating, hunger, irregular/fast heartbeat, irritability)	Blood sugar < 70 mg/dL or symptomatic due to: - Inadequate EN - Excessive insulin	- Test blood sugar - Consume high-sugar food/drink or administer enteral dextrose solution - Call provider; may need to decrease insulin or adjust infusion rate
Dehydration (Decreased urine output, rapid weight loss, thirst, muscle cramping, rapid heart rate)	- Inadequate fluid intake or incomplete EN infusion - Excess fluid loss from vomiting, diarrhea, wound/fistula/ostomy - Warm and/or dry environment	- Call provider

Troubleshooting Home Enteral Nutrition Complications

Fluid overload (Swelling in feet/ankles/abdomen, high blood pressure, shortness of breath, weight gain of ≥ 1 lb/day or ≥ 5 lbs/week)	<ul style="list-style-type: none">- Fluid retention- Excessive oral sodium intake- Medication changes	<ul style="list-style-type: none">- Reduce oral sodium intake (if appropriate)- Call provider
---	---	--

Key: BM, bowel movement; DME, durable medical equipment; EN, enteral nutrition; ER, emergency room; GERD, gastroesophageal reflux disease; G-tube, gastrostomy tube; J-tube, jejunal tube; GJ-tube, gastrojejunal tube; GI, gastrointestinal; HOB, head of bed

Table originally printed in: Dobak S, Stanner H, Brady R, Hill-Brady C, Medwar M. Considerations when Traveling with Home Nutrition Support: U.S. Consumer, Caregiver, and Clinical Perspectives. Support Line. 2023;45(3):17-18. Posted with permission from Dietitians in Nutrition Support, a dietetic practice group of the Academy of Nutrition and Dietetics.