

## UPPER GASTROINTESTINAL/ESOPHAGEAL BLEEDING

Bleeding duodenal ulcer is the most frequent cause of massive upper gastrointestinal (GI) hemorrhage, but bleeding may also occur because of gastric ulcers, gastritis, and esophageal varices. Severe vomiting can precipitate gastric bleeding as a result of a tear in the mucosa at the gastroesophageal junction (Mallory-Weiss syndrome). Stress ulcers are often associated with severe burns, major trauma/surgery, or severe systemic disease. Esophagitis, esophageal/gastric carcinoma, hiatal hernia, hemophilia, leukemia, and disseminated intravascular coagulation (DIC) are less common causes of upper GI bleeding. **Note:** Eighty percent to 90% of ulcer patients are now found to have *Helicobacter pylori* as an underlying cause. Because this organism is easily treated with anti-infectives, complications such as perforation and GI bleeding have dropped dramatically.

### CARE SETTING

Generally, a patient with severe, active bleeding is admitted directly to the critical care unit (CCU); however, a patient may develop GI bleeding on the medical-surgical unit or be admitted there for evaluation/treatment of subacute bleeding.

### RELATED CONCERNS

Cirrhosis of the liver  
Fluid and electrolyte imbalances, see Nursing Care Plan CD-ROM  
Psychosocial aspects of care  
Renal failure: acute  
Subtotal gastrectomy/gastric resection, see Nursing Care Plan CD-ROM

## Patient Assessment Database

### ACTIVITY/REST

**May report:** Weakness, fatigue  
**May exhibit:** Tachycardia, tachypnea/hyperventilation (response to activity)

### CIRCULATION

**May report:** Palpitations  
Dizziness with position change  
**May exhibit:** Hypotension (including postural)  
Tachycardia, dysrhythmias (hypovolemia/hypoxemia)  
Weak/thready peripheral pulse  
Capillary refill slow/delayed (vasoconstriction)  
Skin color: pallor, cyanosis (depending on the amount of blood loss)  
Skin/mucous membrane moisture: Diaphoresis (reflecting shock state, acute pain, psychological response)

### EGO INTEGRITY

**May report:** Acute or chronic stress factors (financial, relationships, job-related)  
Feelings of helplessness  
**May exhibit:** Signs of anxiety, e.g., restlessness, pallor, diaphoresis, narrowed focus, trembling, quivering voice

### ELIMINATION

**May report:** Change in usual bowel patterns/characteristics of stool  
**May exhibit:** Abdominal tenderness, distension  
Bowel sounds often hyperactive during bleeding, hypoactive after bleeding subsides  
Character of stool: Diarrhea; dark bloody, tarry, or occasionally bright red stools; frothy, foul-smelling (steatorrhea); constipation may occur (changes in diet, antacid use)  
Urine output may be decreased, concentrated

## FOOD/FLUID

- May report:** Anorexia, nausea, vomiting (protracted vomiting suggests pyloric outlet obstruction associated with duodenal ulcer)  
Problems with swallowing; belching, hiccups  
Heartburn, indigestion, burping with sour taste  
Bloating/distension, flatulence  
Food intolerances, e.g., spicy food, chocolate; special diet for preexisting ulcer disease  
Weight loss
- May exhibit:** Vomitus: coffee-ground or bright red, with or without clots  
Mucous membranes dry, decreased mucus production, poor skin turgor (chronic bleeding)  
Urine specific gravity may be elevated

## NEUROSENSORY

- May report:** Fainting, dizziness/lightheadedness, weakness  
Mental status: Level of consciousness (LOC) may be altered, ranging from slight drowsiness, disorientation/confusion, to stupor and coma (depending on circulating volume/oxygenation)

## PAIN/DISCOMFORT

- May report:** Pain described as sharp, dull, burning, gnawing; sudden, excruciating (can accompany perforation)  
Vague sensation of discomfort/distress following large meals and relieved by food (acute gastritis)  
Left to midepigastric pain and/or pain radiating to back, often accompanied by vomiting after eating and relieved by antacids (gastric ulcer)  
Localized right to midepigastric pain, gnawing, burning, occurring about 2–3 hr after meals when stomach is empty, and relieved by food or antacids (duodenal ulcers)  
Midepigastric pain and burning with regurgitation (chronic gastroesophageal reflux disease [GERD])  
Absence of pain (esophageal varices or gastritis)  
Precipitating factors may be foods (e.g., milk, chocolate, caffeine), smoking, alcohol, certain drugs (salicylates, reserpine, antibiotics, ibuprofen), psychological stressors
- May exhibit:** Facial grimacing, guarding of affected area, pallor, diaphoresis, narrowed focus

## SAFETY

- May report:** Drug allergies/sensitivities, e.g., acetylsalicylic acid (ASA)
- May exhibit:** Temperature elevation  
Spider angiomas, palmar erythema (reflecting cirrhosis/portal hypertension)

## TEACHING/LEARNING

- May report:** Recent use of prescription/over-the-counter (OTC) drugs containing ASA, alcohol/recreational drugs, steroids, or nonsteroidal anti-inflammatory drugs (NSAIDs) (leading cause of drug-induced GI bleeding)  
Current complaint may reveal admission for related (e.g., anemia) or unrelated (e.g., head trauma) diagnosis, intestinal flu, or severe vomiting episode; long-standing health problems, e.g., cirrhosis, alcoholism, hepatitis, eating disorders  
History of previous hospitalizations for GI bleeding or related GI problems, e.g., peptic/gastric ulcer, gastritis, gastric surgery, irradiation of gastric area
- Discharge plan considerations:** **DRG projected mean length of inpatient stay: 5.3 days**  
May require changes in therapeutic/medication regimen.  
**Refer to section at end of plan for postdischarge considerations.**

## DIAGNOSTIC STUDIES

**Esophagogastroduodenoscopy (EGD):** Key diagnostic test for upper and lower GI bleeding, done to visualize site of bleeding/ degree of tissue ulceration/injury.

**Gastrointestinal nuclear scan:** Radionuclide uptake at sites of bleeding identifies site (not cause) of bleeding. Test is considered to be more sensitive than EGD, upper GI studies with barium, or angiography in detecting sites of lower GI bleeding or persistent bleeding anywhere in GI tract.

**Helicobacter pylori breath test:** Patient drinks a carbon-enriched urea solution. If *H. pylori* is present, it breaks down the compound and releases CO<sub>2</sub>. *H. pylori* can also be detected by blood or tissue tests with blood test now being the most common.

**Barium swallow with x-ray:** Done after bleeding has ceased for differential diagnosis of cause/site of lesion, presence of structural defects such as strictures.

**Gastric aspirate analysis:** May be done in suspected peptic ulcer disease as indicated by low to normal pH and/or presence of blood; also in suspected gastric cancer (abnormal acidity, blood and/or abnormal cells on cytological examination).

**Gastric cultures:** Determine presence of *H. pylori* (Gram-negative urease-producing bacteria), currently accepted as organism responsible for 90% of duodenal and 70%–80% of gastric ulcers.

**Angiography:** GI vasculature may be reviewed if endoscopy is inconclusive or impractical. Demonstrates collateral circulation and possibly bleeding site.

**Stools:** Testing for blood will be positive.

**Complete blood count (CBC), hemoglobin (Hb)/hematocrit (Hct):** Decreased levels occur 6–24 hr after acute bleeding begins. Red blood cells (RBCs) and platelets may also be decreased. White blood cell (WBC) count may be elevated, reflecting body's response to injury.

**Prothrombin time (PT) and activated partial thromboplastin time (aPTT); coagulation profile:** Prolonged in active bleeding. May indicate need for replacement of coagulation factors (fresh frozen plasma [FFP]). Increased platelets with decreased clotting times may be the body's attempt to restore hemostasis. Severe abnormalities may reveal coagulopathy, e.g., DIC, as cause of bleeding.

**Blood urea nitrogen (BUN):** Elevated within 24–48 hr as blood proteins are broken down in the GI tract and kidney filtration is decreased.

**Creatinine (Cr):** Usually not elevated if renal perfusion is maintained.

**Ammonia:** May be elevated when severe liver dysfunction disrupts the metabolism and proper excretion of urea or when massive whole blood transfusions have been given.

**Arterial blood gases (ABGs):** May reveal initial respiratory alkalosis (compensating for diminished blood flow through lungs). Later, metabolic acidosis develops in response to sluggish liver flow/accumulation of metabolic waste products.

**Sodium:** May be elevated as a hormonal compensation to conserve body fluid.

**Potassium:** May initially be depleted because of massive gastric emptying/vomiting or bloody diarrhea. Elevated potassium levels may occur after multiple transfusions of stored blood or with acute renal impairment.

**Serum gastrin analysis:** Elevated level suggests Zollinger-Ellison syndrome or possible presence of multiple poorly healed ulcers. Normal or low in type B gastritis.

**Serum amylase:** Elevated with posterior penetration of duodenal ulcer.

**Pepsinogen level:** Increased by duodenal ulcer; low level suggestive of gastritis.

**Serum parietal cell antibodies:** Presence suggestive of chronic gastritis.

## NURSING PRIORITIES

1. Control hemorrhage.
2. Achieve/maintain hemodynamic stability.
3. Promote stress reduction.
4. Provide information about disease process/prognosis, treatment needs, and potential complications.

## DISCHARGE GOALS

1. Hemorrhage curtailed.
2. Hemodynamically stable.
3. Anxiety/fear reduced to manageable level.
4. Disease process/prognosis, therapeutic regimen, and potential complications understood.
5. Plan in place to meet needs after discharge.

**NURSING DIAGNOSIS: Fluid Volume, deficient [isotonic]**

**May be related to**

Active fluid volume loss (hemorrhage)

**Possibly evidenced by**

Hypotension, tachycardia, delayed capillary refill

Changes in mentation, restlessness

Concentrated/decreased urine

Pallor, diaphoresis

Hemoconcentration

**DESIRED OUTCOMES/EVALUATION CRITERIA—PATIENT WILL:**

**Hydration (NOC)**

Demonstrate improved fluid balance as evidenced by individually adequate urinary output with normal specific gravity, stable vital signs, moist mucous membranes, good skin turgor, prompt capillary refill.

ACTIONS/INTERVENTIONS	RATIONALE
<p><b>Bleeding Reduction: Gastrointestinal (NIC)</b></p> <p><b>Independent</b></p> <p>Note characteristics of vomitus and/or drainage.</p> <p>Monitor vital signs; compare with patient's normal/previous readings. Take blood pressure (BP) in lying, sitting, standing positions when possible.</p> <p>Note patient's individual physiological response to bleeding, e.g., changes in mentation, weakness, restlessness, anxiety, pallor, diaphoresis, tachypnea, temperature elevation.</p> <p>Measure central venous pressure (CVP), if available.</p>	<p>May be helpful in differentiating cause of gastric distress. Yellow-green bile content implies that the pylorus is open. Fecal content indicates bowel obstruction. Bright red blood signals recent or acute arterial bleeding, perhaps caused by gastric ulceration; dark red blood may be old blood (retained in intestine) or venous bleeding from varices. Coffee-ground appearance is suggestive of partially digested blood from slowly oozing area. Undigested food indicates obstruction or gastric tumor.</p> <p>Changes in BP and pulse may be used for rough estimate of blood loss (e.g., BP less than 90 mm Hg and pulse greater than 110 suggest a 25% decrease in volume, or approximately 1000 mL). Postural hypotension reflects a decrease in circulating volume. <i>Note:</i> Heart rate may not rise above normal until up to 30% of total blood volume is lost.</p> <p>Symptomatology may be useful in gauging severity/length of bleeding episode. Worsening of symptoms may reflect continued bleeding or inadequate fluid replacement.</p> <p>Reflects circulating volume and cardiac response to bleeding and fluid replacement, e.g., CVP values between 5 and 20 cm H<sub>2</sub>O usually reflect adequate volume.</p>

ACTIONS/INTERVENTIONS	RATIONALE
<p><b>Bleeding Reduction: Gastrointestinal (NIC)</b></p> <p><b>Independent</b></p> <p>Monitor intake and output (I&amp;O), and correlate with weight changes. Measure blood/fluid losses via emesis, gastric suction/lavage, and stools.</p> <p>Keep accurate record of subtotals of solutions/blood products during replacement therapy.</p> <p>Maintain bedrest; prevent vomiting and straining at stool. Schedule activities to provide undisturbed rest periods. Eliminate noxious stimuli.</p> <p>Elevate head of bed during antacid gavage.</p> <p>Note signs of renewed bleeding after cessation of initial bleeding.</p> <p>Observe for secondary bleeding, e.g., nose/gums, oozing from puncture sites, appearance of ecchymotic areas following minimal trauma.</p> <p>Provide clear/bland fluids when intake is resumed. Avoid caffeinated and carbonated beverages.</p>	<p>Provides guidelines for fluid replacement.</p> <p>Potential exists for overtransfusion of fluids, especially when volume expanders are given before blood transfusions.</p> <p>Activity/vomiting increases intra-abdominal pressure and can predispose to further bleeding.</p> <p>Prevents gastric reflux and aspiration of antacids, which can cause serious pulmonary complications.</p> <p>Increased abdominal fullness/distension, nausea or renewed vomiting, and bloody diarrhea may indicate rebleeding.</p> <p>Loss of/inadequate replacement of clotting factors may precipitate development of DIC.</p> <p>More easily digested and reduce risk of added irritation to inflamed tissues. Caffeine and carbonated beverages stimulate hydrochloric acid (HCl) production, possibly potentiating rebleeding.</p>
<p><b>Collaborative</b></p> <p>Administer IV fluids/volume expanders as indicated, e.g., 0.9% sodium chloride, lactated Ringer's solution;</p> <p>Fresh whole blood/packed RBCs;</p>	<p>Fluid replacement with isotonic crystalloid solutions depends on degree of hypovolemia and duration of bleeding (acute or chronic). Other volume expanders, such as albumin, may be infused until type and cross-matching can be completed and blood transfusions begun. Approximately 80%–90% of gastric bleeding is controlled by fluid resuscitation and medical management without transfusion of blood products.</p> <p>Fresh whole blood is indicated only for acute bleeding with severe volume and RBC depletion because stored blood may be deficient in clotting factors. Packed red blood cells (PRCs) are adequate for stable patients with subacute/chronic bleeding to increase oxygen-carrying capability. <i>Note:</i> PRCs are preferred for patients with heart failure (HF) to prevent fluid overload.</p>

ACTIONS/INTERVENTIONS	RATIONALE
<p><b>Bleeding Reduction: Gastrointestinal (NIC)</b></p> <p><b>Collaborative</b></p> <p>Platelets;</p> <p>Fresh frozen plasma.</p> <p>Insert/maintain large-bore nasogastric (NG) tube in acute bleeding.</p> <p>Perform gastric lavage with cool or room-temperature saline until aspirate is light pink or clear and free of clots. Simultaneous low-pressure gastric suctioning and continuous saline infusion through the air port of a Salem sump tube may also be used.</p> <p>Administer medications, as indicated, e.g.:  Cimetidine (Tagamet), ranitidine (Zantac),  famotidine (Pepcid), nizatidine (Axid);</p> <p>Sucralfate (Carafate);</p> <p>Cisapride (Propulsid);</p> <p>Misoprostol (Cytotec);</p>	<p>Transfused more often than any other blood component, platelets are given to correct deficits in platelet number and clotting function. Clotting factors/components are depleted by two mechanisms: hemorrhagic loss and the clotting process at the site of bleeding.</p> <p>FFP is an excellent source for clotting factors. Administered to patients with coagulation deficiencies who are bleeding or about to undergo an invasive procedure.</p> <p>Provides avenue for removing irritating gastric secretions, blood, and clots; reduces nausea/vomiting; and facilitates diagnostic endoscopy. <b>Note:</b> Blood remaining in the stomach/intestines will be broken down into ammonia, which can produce a toxic central nervous system (CNS) effect, e.g., encephalopathy.</p> <p>Flushes out/breaks up clots and may reduce bleeding by local vasoconstriction. Facilitates visualization by endoscopy to locate bleeding source. <b>Note:</b> Research suggests that iced saline is no more effective than room temperature solution in controlling bleeding, and it may actually damage gastric mucosa and lower patient's core temperature, which could prolong bleeding by inhibiting platelet function. Controversy also exists as to whether benefit is obtained from any gastric lavage, whether iced or room temperature.</p> <p>Histamine (H<sub>2</sub>)-receptor antagonists may be given parenterally during bleeding to reduce hydrochloric acid production, increase gastric pH, and aid in healing. After bleeding subsides, patient may begin oral doses with meals.</p> <p>Antiulcer agent that coats the stomach, adheres to the ulcer surface, and reinforces the mucosal barrier. <b>Note:</b> Impairs absorption of some drugs, e.g., theophylline, digoxin, phenytoin, tetracycline, amitriptyline.</p> <p>Serotonin-4-receptor agonist used to treat peptic ulcer disease (PUD), reflux esophagitis.</p> <p>Aids in mucus production and inhibits acid secretions. Used to prevent gastric ulcers associated with NSAID use.</p>

ACTIONS/INTERVENTIONS	RATIONALE
<p><b>Bleeding Reduction: Gastrointestinal (NIC)</b></p> <p><b>Collaborative</b></p> <p>Antacids: e.g., aluminum-based (Amphojel, Basaljel), magnesium-based (e.g., Mylanta, Riopan);</p> <p>Proton pump inhibitor: omeprazole (Prilosec), lansoprazole (Prevacid);</p> <p>Belladonna, atropine;</p> <p>Octreotide (Sandostatin);</p> <p>Vasopressin (Pitressin);</p> <p>Vitamin K<sub>1</sub> (AquaMEPHYTON);</p> <p>Phenobarbital;</p> <p>Antiemetics, e.g., metoclopramide (Reglan), prochlorperazine (Compazine);</p> <p>Supplemental vitamin B<sub>12</sub>;</p> <p>Anti-infectives, e.g., tetracycline (Achromycin), metronidazole (Flagyl), amoxicillin (Amoxil), clarithromycin (Biaxin).</p>	<p>Antacids (administered orally or by gavage) may be used to reduce total acid load within the gastric lumen. Effectiveness is greatest for duodenal ulcers. Antacids maintain gastric pH level at 4.5 or higher and reduce risk of rebleeding. <b>Note:</b>Antacids block the gastric absorption of oral histamine antagonists and therefore should not be administered within 1 hr after oral administration of histamine blockers.</p> <p>Can completely inhibit acid secretion, has a long duration of action. Used for PUD and GERD or short-term therapy for duodenal ulcers (healing duodenal ulcers in 2–4 wk once severe bleeding is controlled). Typically given with antibiotics when <i>H. pylori</i> infection is present.</p> <p>Anticholinergics may be used to decrease gastric motility, particularly in peptic ulcer disease after acute bleeding has subsided.</p> <p>An analogue of the hormone somatostatin thought to help control esophageal bleeding by decreasing blood flow to the gut, thereby lowering pressure to the portal system.</p> <p>Administration of intra-arterial vasoconstrictors may be needed in severe, prolonged bleeding (varices). <b>Note:</b> Effects of vasopressin (Pitressin) are systemic, whereas octreotide is more regional.</p> <p>Promotes hepatic synthesis of coagulation factors to support clotting. <b>Note:</b> Use of sucralfate may decrease absorption of vitamin K.</p> <p>Mild sedatives may be given to promote rest, reduce intensity of bleeding, and alleviate pain. <b>Note:</b> Use with caution to avoid masking signs of developing hypovolemia.</p> <p>Alleviates nausea and prevents vomiting.</p> <p>In diffuse atrophic gastritis, the intrinsic factor necessary for vitamin B<sub>12</sub> absorption from the GI tract is not secreted, and individual may develop pernicious anemia.</p> <p>Oral agents may be combined with antacids or histamine blockers to treat infections causing chronic gastritis or peptic ulcers (<i>H. pylori</i>). <b>Note:</b> Some studies indicate that <i>H. pylori</i> is developing widespread resistance to metronidazole (Flagyl).</p>

ACTIONS/INTERVENTIONS	RATIONALE
<p><b>Bleeding Reduction: Gastrointestinal (NIC)</b></p> <p><b>Collaborative</b></p> <p>Monitor laboratory studies, e.g.: Hb, Hct, RBC count;</p> <p>BUN/Cr levels</p> <p>Assist with/prepare for: Sclerotherapy, e.g., ethanolamine, polidocanol, or combination of sodium tetradecyl, alcohol, and sodium chloride;</p> <p>Endoscopic variceal ligation (EVL);</p> <p>Balloon tamponade;</p> <p>Electrocoagulation or photocoagulation (laser) therapy;</p> <p>Surgical intervention.</p>	<p>Aids in establishing blood replacement needs and monitoring effectiveness of therapy, e.g., one unit of whole blood should raise Hct two to three points. Levels may initially remain stable, because of loss of both plasma and RBCs. <i>Note:</i> Levels may not accurately reflect early/sudden blood loss, and low baseline levels may indicate preexisting anemia.</p> <p>BUN greater than 40 with normal Cr level indicates major bleeding. BUN should return to patient's normal level approximately 12 hr after bleeding has ceased.</p> <p>Injection of an irritating (sclerosing) agent into esophageal varices (to create thrombosis) is standard treatment to stop bleeding and/or prevent recurrence after initial bleeding is controlled. The percentage of rebleeding is still significant (50%–60%) following this therapy in patients with varices.</p> <p>This banding technique is used as an effective alternative to sclerotherapy. Active hemorrhage is controlled in a high percentage of patients with fewer complications than with sclerotherapy.</p> <p>Short-term intervention technique using Sengstaken-Blakemore tubes when medication or sclerotherapy fails to control esophageal bleed.</p> <p>Provides direct coagulation of bleeding sites, e.g., gastritis, duodenal ulcer, tumor, esophageal (Mallory-Weiss) tear.</p> <p>Total/partial gastrectomy, pyloroplasty, and/or vagotomy may be required to control/prevent future gastric bleeding. Shunt procedures (portacaval, splenorenal, mesocaval, or distal splenorenal) may be done to divert blood flow and reduce pressure within esophageal vessels when other measures fail.</p>

**NURSING DIAGNOSIS: Tissue Perfusion, risk for ineffective**

**Risk factors may include**

Hypovolemia

**Possibly evidenced by**

[Not applicable; presence of signs and symptoms establishes an *actual* diagnosis.]

**DESIRED OUTCOMES/EVALUATION CRITERIA—PATIENT WILL:**

**Circulation Status (NOC)**

Maintain/improve tissue perfusion as evidenced by stabilized vital signs, warm skin, palpable peripheral pulses, ABGs within patient norms, adequate urine output.

ACTIONS/INTERVENTIONS	RATIONALE
<p><b>Shock Prevention (NIC)</b></p> <p><b>Independent</b></p> <p>Investigate changes in level of consciousness, reports of dizziness/headache.</p> <p>Investigate reports of chest pain. Note location, quality, duration, and what relieves pain.</p> <p>Auscultate apical pulse. Monitor cardiac rate/rhythm if continuous electrocardiogram (ECG) available/indicated.</p> <p>Assess skin for coolness, pallor, diaphoresis, delayed capillary refill, and weak, thready peripheral pulses.</p> <p>Note urinary output and specific gravity.</p> <p>Note reports of abdominal pain, especially sudden, severe pain or pain radiating to shoulder.</p> <p>Observe skin for pallor, redness. Massage with lotion. Change position frequently.</p>	<p>Changes may reflect inadequate cerebral perfusion as a result of reduced arterial blood pressure. <b>Note:</b> Changes in sensorium may also reflect elevated ammonia levels/hepatic encephalopathy in patient with liver disease.</p> <p>May reflect cardiac ischemia related to decreased perfusion. <b>Note:</b> Impaired oxygenation status resulting from blood loss can bring on myocardial infarction (MI) in patient with cardiac disease.</p> <p>Dysrhythmias and ischemic changes can occur as a result of hypotension, hypoxia, acidosis, electrolyte imbalance, or cooling near the heart if cold saline lavage is used to control bleeding.</p> <p>Vasoconstriction is a sympathetic response to lowered circulating volume and/or may occur as a side effect of vasopressin administration.</p> <p>Decreased systemic perfusion may cause kidney ischemia/failure manifested by decreased urine output. Acute tubular necrosis (ATN) may develop if hypovolemic state is prolonged.</p> <p>Pain caused by gastric ulcer is often relieved after acute bleeding because of buffering effects of blood. Continued severe or sudden pain may reflect ischemia due to vasoconstrictive therapy, bleeding into biliary tract (hematobilia), or perforation/onset of peritonitis.</p> <p>Compromised peripheral circulation increases risk of skin breakdown.</p>

ACTIONS/INTERVENTIONS	RATIONALE
<p><b>Shock Prevention (NIC)</b></p> <p><b>Collaborative</b></p> <p>Monitor ABGs/pulse oximetry.</p> <p>Provide supplemental oxygen if indicated.</p> <p>Administer IV fluids as indicated.</p>	<p>Identifies hypoxemia, effectiveness of/need for therapy</p> <p>Treats hypoxemia and lactic acidosis during acute bleed.</p> <p>Maintains circulating volume and perfusion. <i>Note:</i> Use of lactated Ringer's solution may be contraindicated in presence of hepatic failure because metabolism of lactate is impaired, and lactic acidosis may develop.</p>

<p><b>NURSING DIAGNOSIS: Fear/Anxiety [specify level]</b></p> <p><b>May be related to</b> Change in health status, threat of death</p> <p><b>Possibly evidenced by</b> Increased tension, restlessness, irritability, fearfulness Trembling, tachycardia, diaphoresis Lack of eye contact, focus on self Verbalization of specific concern Withdrawal, panic, or attack behavior</p> <p><b>DESIRED OUTCOMES/EVALUATION CRITERIA—PATIENT WILL:</b></p> <p><b>Anxiety Control (NOC)</b> Discuss fears/concerns recognizing healthy versus unhealthy fears. Verbalize appropriate range of feelings. Appear relaxed and report anxiety is reduced to a manageable level. Demonstrate problem solving and effective use of resources.</p>
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ACTIONS/INTERVENTIONS	RATIONALE
<p><b>Anxiety Reduction (NIC)</b></p> <p><b>Independent</b></p> <p>Monitor physiological responses, e.g., tachypnea, palpitations, dizziness, headache, tingling sensations.</p> <p>Note behavioral cues, e.g., restlessness, irritability, lack of eye contact, combativeness/attack behavior.</p> <p>Encourage verbalization of concerns. Assist patient in expressing feelings by Active listening.</p>	<p>May be indicative of the degree of fear patient is experiencing, but may also be related to physical condition/shock state.</p> <p>Indicators of degree of fear patient is experiencing; e.g., patient may feel out of control of the situation or reach a state of panic.</p> <p>Establishes a therapeutic relationship. Assist patient in dealing with feelings, and provides opportunity to clarify misconceptions.</p>

ACTIONS/INTERVENTIONS	RATIONALE
<p><b>Anxiety Reduction (NIC)</b></p> <p><b>Independent</b></p> <p>Acknowledge that this is a fearful situation and that others have expressed similar fears.</p> <p>Provide accurate, concrete information about what is being done, e.g., sensations to expect, usual procedures undertaken.</p> <p>Provide a calm, restful environment.</p> <p>Encourage significant other (SO) to stay with patient as able. Respond to call signal promptly. Use touch and eye contact as appropriate.</p> <p>Provide opportunity for SO to express feelings/concerns. Encourage SO to project positive, realistic attitude.</p> <p>Demonstrate/encourage relaxation techniques, e.g., visualization, deep-breathing exercises, guided imagery.</p> <p>Help patient identify and initiate positive coping behaviors used successfully in the past.</p> <p>Encourage and support patient in evaluation of lifestyle.</p> <p><b>Collaborative</b></p> <p>Administer medications as indicated, e.g.:  Diazepam (Valium), clorazepate (Tranxene),  alprazolam (Xanax).</p> <p>Refer to psychiatric clinical nurse specialist social services, spiritual advisor.</p>	<p>When patient is expressing own fear, the validation that these feelings are normal can help patient to feel less isolated.</p> <p>Involves patient in plan of care and decreases unnecessary anxiety about unknowns.</p> <p>Removing patient from outside stressors promotes relaxation, may enhance coping skills.</p> <p>Helps reduce fear of going through a frightening experience alone.</p> <p>Helps SO to deal with own anxiety/fears that can be transmitted to patient. Promotes a supportive attitude that can facilitate recovery.</p> <p>Learning ways to relax can be helpful in reducing fear and anxiety. Because patient with GI bleeding is often a person who has difficulty relaxing, learning these skills can be important to recovery and prevention of recurrence.</p> <p>Successful behaviors can be fostered in dealing with current fear, enhancing patient's sense of self-control and providing reassurance.</p> <p>Changes may be necessary to avoid recurrence of ulcer condition.</p> <p>Sedatives/antianxiety agents may be used on occasion to reduce anxiety and promote rest, particularly in patient with an ulcer.</p> <p>May need additional assistance during recovery to deal with consequences of emergency situation/adjustments to required/desired changes in lifestyle.</p>

**NURSING DIAGNOSIS: Pain, acute/chronic**

**May be related to**

Chemical burn of gastric mucosa, oral cavity  
Physical response, e.g., reflex muscle spasm in the stomach wall

**Possibly evidenced by**

Communication of pain descriptors  
Abdominal guarding, rigid body posture, facial grimacing  
Autonomic responses, e.g., changes in vital signs (acute pain)

**DESIRED OUTCOMES/EVALUATION CRITERIA—PATIENT WILL:**

**Pain Level (NOC)**

Verbalize relief of pain.  
Demonstrate relaxed body posture and be able to sleep/rest appropriately.

ACTIONS/INTERVENTIONS	RATIONALE
<p><b>Pain Management (NIC)</b></p> <p><b>Independent</b></p> <p>Note reports of pain, including location, duration, intensity (0–10 scale).</p> <p>Review factors that aggravate or alleviate pain.</p> <p>Note nonverbal pain cues, e.g., restlessness, reluctance to move, abdominal guarding, tachycardia, diaphoresis. Investigate discrepancies between verbal and nonverbal cues.</p> <p>Provide small, frequent meals as indicated for individual patient.</p> <p>Identify and limit foods that create discomfort.</p> <p>Assist with active/passive range of motion (ROM) exercises.</p> <p>Provide frequent oral care and comfort measures, e.g., back rub, position change.</p> <p><b>Collaborative</b></p> <p>Provide and implement prescribed dietary modifications.</p>	<p>Pain is not always present, but if present should be compared with patient’s previous pain symptoms. This comparison may assist in diagnosis of etiology of bleeding and development of complications.</p> <p>Helpful in establishing diagnosis and treatment needs.</p> <p>Nonverbal cues may be both physiological and psychological and may be used in conjunction with verbal cues to evaluate extent/severity of the problem.</p> <p>Food has an acid neutralizing effect and dilutes the gastric contents. Small meals prevent distension and the release of gastrin.</p> <p>Specific foods that cause distress vary among individuals. Studies indicate pepper is harmful, and coffee (including decaffeinated) can precipitate dyspepsia.</p> <p>Reduces joint stiffness, minimizing pain/discomfort.</p> <p>Halitosis from stagnant oral secretions is unappetizing and can aggravate nausea. Gingivitis and dental problems may arise.</p> <p>Patient may receive nothing by mouth (NPO) initially. When oral intake is allowed, food choices depend on the diagnosis and etiology of the bleeding.</p>

ACTIONS/INTERVENTIONS	RATIONALE
<p><b>Pain Management (NIC)</b></p> <p><b>Collaborative</b></p> <p>Use regular rather than skim milk, if milk is allowed.</p> <p>Administer medications, as indicated, e.g.:</p> <p style="padding-left: 40px;">Analgesics, e.g., morphine sulfate;</p> <p style="padding-left: 40px;">Acetaminophen (Tylenol);</p> <p style="padding-left: 40px;">Antacids;</p> <p style="padding-left: 40px;">Anticholinergics, e.g., belladonna, atropine.</p>	<p>Fat in regular milk may decrease gastric secretions; however, the calcium and protein content (especially in skim milk) increases them.</p> <p>May be narcotic of choice to relieve acute/severe pain and reduce peristaltic activity. <i>Note:</i> Meperidine (Demerol) has been associated with increased incidence of nausea/vomiting.</p> <p>Promotes general comfort and rest.</p> <p>Decreases gastric acidity by absorption or by chemical neutralization. Evaluate choice of antacid in regard to total health picture, e.g., sodium restriction.</p> <p>May be given at bedtime to decrease gastric motility, suppress acid production, delay gastric emptying, and alleviate nocturnal pain associated with gastric ulcer.</p>

<p><b>NURSING DIAGNOSIS: Knowledge, deficient [Learning Need] regarding disease process, prognosis, treatment, self-care, and discharge needs</b></p> <p><b>May be related to</b></p> <p>Lack of information/recall  Unfamiliarity with information resources  Information misinterpretation</p> <p><b>Possibly evidenced by</b></p> <p>Verbalization of the problem, request for information, statement of misconceptions  Inaccurate follow-through of instructions  Development of preventable complications</p> <p><b>DESIRED OUTCOMES/EVALUATION CRITERIA—PATIENT WILL:</b></p> <p><b>Knowledge: Disease Process (NOC)</b>  Verbalize understanding of cause of own bleeding episode (if known) and treatment modalities used.  Begin to discuss own role in preventing recurrence.</p> <p><b>Knowledge: Treatment Regimen (NOC)</b>  Identify/implement necessary lifestyle changes.  Participate in treatment regimen.</p>
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ACTIONS/INTERVENTIONS	RATIONALE
<p><b>Teaching: Disease Process (NIC)</b></p> <p><b>Independent</b></p> <p>Determine patient perception of cause of bleeding.</p> <p>Provide/review information regarding etiology of bleeding, cause/effect, relationship of lifestyle behaviors, and ways to reduce risk/contributing factors. Encourage questions.</p> <p>Assist patient to identify relationship of food intake and precipitation of/relief from epigastric pain, including avoidance of gastric irritants, e.g., pepper; caffeine; alcohol; fruit juices; carbonated beverages; and extremely hot, cold, fatty, or spicy foods.</p> <p>Recommend small, frequent meals/snacks, chewing food slowly, eating at regular time, and avoiding “skipping” meals.</p> <p>Stress importance of reading labels on OTC drugs and either avoiding products containing aspirin or switching to enteric-coated aspirin.</p> <p>Review significance of signs/symptoms such as coffee-ground emesis, tarry stools, abdominal distension, severe epigastric/abdominal pain radiating to shoulder/back.</p> <p>Support use of stress management techniques, avoidance of emotional stress.</p> <p>Review drug regimen, possible side effects, and interaction with other drugs as appropriate.</p> <p>Encourage patient to inform all healthcare providers of bleeding history.</p> <p>Discuss importance of cessation of smoking.</p>	<p>Establishes knowledge base and provides some insight into how the teaching plan needs to be constructed for this individual.</p> <p>Provides knowledge base from which patient can make informed choices/decisions about future and control of health problems.</p> <p>Caffeine stimulates gastric acidity. Alcohol contributes to erosion of gastric mucosa. Although current research indicates that diet does not contribute to the development of PUD, individuals may find that certain foods/fluids increase gastric secretion and pain.</p> <p>Frequent eating keeps HCl neutralized, dilutes stomach contents to minimize action of acid on gastric mucosa. Small meals prevent gastric overdistension.</p> <p>Aspirin damages the protective mucosa, permitting gastric erosion, ulceration, and bleeding to occur.</p> <p>Prompt medical evaluation/intervention is required to prevent more serious complications, e.g., perforation, Zollinger-Ellison syndrome.</p> <p>Decreases extrinsic stimulation of HCl, reducing risk of recurrence of bleeding.</p> <p>Helpful to patient’s understanding of reason for taking drugs and what symptoms are important to report to healthcare provider. <b>Note:</b> Aluminum-containing antacids inhibit the intestinal absorption of some drugs and affect scheduling of drug intake. Some men may incur impotence when using prescription-strength cimetidine (Tagamet). Alternative drug choices are famotidine (Pepcid) and ranitidine (Zantac).</p> <p>May affect drug choices and/or concomitant prescriptions, e.g., misoprostol (Cytotec) can be given with NSAIDs to inhibit gastric acid secretion and reduce risk of gastric irritability/lesions resulting from NSAID therapy.</p> <p>Ulcer healing may be delayed in people who smoke, particularly in those treated with cimetidine (Tagamet). Smoking stimulates gastric acidity and is associated with increased risk of peptic ulcer development/recurrence.</p>

ACTIONS/INTERVENTIONS	RATIONALE
<p><b>Teaching: Disease Process (NIC)</b></p> <p><b>Independent</b></p> <p>Refer to support groups/counseling for lifestyle/behavior changes, reduction of associated risk factors, e.g., substance abuse/stop-smoking clinics.</p>	<p>Alcohol users have a higher incidence of gastritis/esophageal varices, and cigarette smoking is associated with peptic ulcers and delayed healing.</p>

**POTENTIAL CONSIDERATIONS following acute hospitalization (dependent on patient's age, physical condition/presence of complications, personal resources, and life responsibilities)**

Therapeutic Regimen: ineffective management—decisional conflicts (e.g., use of NSAIDs for arthritic/chronic pain condition), perceived benefits (e.g., cessation of smoking), economic difficulties (cost of medication).