Assess for the presence of risk factors:

- *H pylori* infection
  - *H pylori* infection and NSAID use account for most cases of PUD.
- Nonsteroidal anti-inflammatory drugs
  - Similar to *H pylori* infection, NSAID use is a common cause for PUD.
  - Corticosteroids can potentiate the ulcer risk in patients who use NSAIDs concurrently.
- Severe physiologic stress
  - Burns, CNS trauma, Surgery, Severe medical illness
- Hypersecretory states (uncommon)
  - Gastrinoma (Zollinger-Ellison syndrome) or multiple endocrine neoplasia (MEN-I)

Diseases associated with an increased risk of PUD include cirrhosis, chronic obstructive pulmonary disease, renal failure, and organ transplantation.

Source: http://www.emedicine.com/MED/topic1776.htm#section~Workup

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### Are Risk Factors Present?

**YES**

- Epigastric pain (the most common symptom)
- Occurs 2-3 hours after meals
- Relieved by food or antacids
- Patient awakens with pain at night.
- Nausea
- Vomiting,
- Dyspepsia, including belching, bloating, distention, and fatty food intolerance
- Heartburn
- Chest discomfort
- Anorexia, weight loss
- Hematemesis or melena resulting from gastrointestinal bleeding

**NO**

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### Are positive findings present?

**NO**

**YES**

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### Follow plan of care for potential complication of PUD

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### Follow plan of care for Risk for ineffective therapeutic regimen management: PUD meds, procedures and lifestyle modifications

- Disease process and course and progression
- Review procedures/testing; endoscopy, FOBT, *H pylori* testing
- If *H Pylori* positive, take eradication therapy (Antibiotic, PPI, Bismuth subsalicylate for example) as prescribed
- Avoid NSAIDS and aspirins whenever possible
- Avoidance of triggers and factors that exacerbate PUD (smoking/ETOH, increased intra-abdominal pressure)
- Take prophylactic therapy (prostaglandin analogue or a PPI) as prescribed
- Teach s/s of Potential complications:
  - Perforation, Obstruction Bleeding
- Review diagnostic testing and Periodic assessment

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### Initiate client education for Health Seeking Behaviors to identify:

- risk factors avoidance
- Don’t smoke, use alcohol or NSAIDS indiscriminately
- Signs and symptoms for early detection of disease
Collaborative Problem

OUTCOMES/BENCHMARKS:
No hematemesis, melena, tarry stool
Hgb and Hct WNL
140>SBP > 100
100> HR >60
Urine output > 30 ml/hr

Potential Complication: GI bleeding

ASSESS s/s of the GI Bleeding
Weakness, dizziness, syncope
associated with hematemesis (coffee ground vomitus),
melena (black stools with a rotten odor)
Hematemesis or melena resulting from gastrointestinal bleeding

Assess for contributing factors:
GERD, PUD, H Pylori infection, esophageal varices, gastritis, gastric cancer
Mallory-Weiss tear by history
NSAID use
Corticosteroid use
Anticoagulant therapy
Antiplatelet therapy

Monitor for presence of the disorder
Monitor for tachycardia, hypotension and tachypnea
Monitor pulse oximetry for adequate tissue perfusion
Monitor H&H to evaluate blood loss
Monitor BMP to evaluate renal comorbidity and elevated BUN from blood in upper intestine
Monitor LFT to evaluate liver comorbidity
Monitor for presence of blood in emesis and stool
Obtain aspirate from nasogastric lavage to evaluate for presence of blood
Monitor reports from endoscopy

Monitor for presence of contributing factors
Monitor bleeding times and platelet count to identify coagulopathy
Monitor for results of H Pylori testing

Additional assessment includes monitoring from presence of complications of an exacerbation of the disorder
Monitor I/O for decreased urine output
Monitor for hemodynamic instability indicating shock

DO
Perform nursing actions that correct the disorder
Prepare client for haemostatic measures to correct GI bleeding
Keep NPO
Ensure adequate airway
Apply nasal cannula oxygen and titrate to keep pulse oximetry > 90-95%
Insert Salem Sump NGT and connect to low continuous suction as prescribed (maintain patency according to MD order and hospital protocol)
Establish IV access and administer IV Normal saline as prescribed
Prepare to transfuse client with PRBCs to maintain hemoglobin between 8-10
Administer IV proton Pump Inhibitor as prescribed to maintain gastric pH > 6
Administer eradication therapy if H Pylori is present

Perform nursing actions to control contributing factors
Withhold any prescribed agents that promote bleeding & call MD
Administer FFP to correct deficient clotting factors
Administer Vitamin K for prolonged PT time as prescribed

CALL
For hemodynamic instability, declining Hemoglobin and Hematocrit, evidence of rebleeding, s/s of shock
- Initiate more frequent hemodynamic monitoring
- Perform shock management & call ready response team and MD