




INTESTINAL OBSTRUCTION


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Intestinal obstruction

- Partial or complete blockage of the lumen of the small or large intestine causing an interruption in the normal flow of intestinal contents along the intestinal tract
- The block may be complete or incomplete, may be mechanical or paralytic, and may or may not compromise the vascular supply



Mechanical obstruction: An intraluminal obstruction or a mural obstruction from pressure on the intestinal walls occurs.

- (e.g.: intussusception, polypoid tumors and neoplasms, stenosis, strictures, adhesions, hernias, abscesses)

Functional obstruction: The intestinal musculature cannot propel the contents along the bowel.

- (e.g.: amyloidosis, muscular dystrophy, endocrine disorders such as diabetes mellitus, or neurologic disorders such as Parkinson's disease) The blockage also can be temporary and the result of the manipulation of the bowel during surgery.
- 90% - **small bowel obstruction**, ileum
- 10% - **large bowel obstruction**, sigmoid colon



**RISK
FACTORS/
ETIOLOGY**



Modifiable

- GI tract, abdominal surgery
- Hernia
- Inflammatory dse (Crohn's, diverticulitis, ulcerative colitis)
- Cancer
- Foreign bodies (fruit pits, gallstones, worms)
- Chronic, severe constipation
- SCI, vertebral fractures
- Thrombosis, embolism

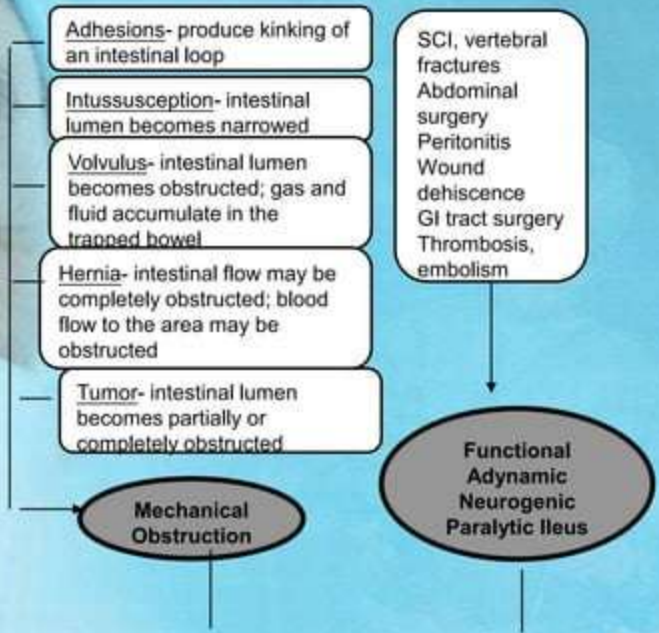


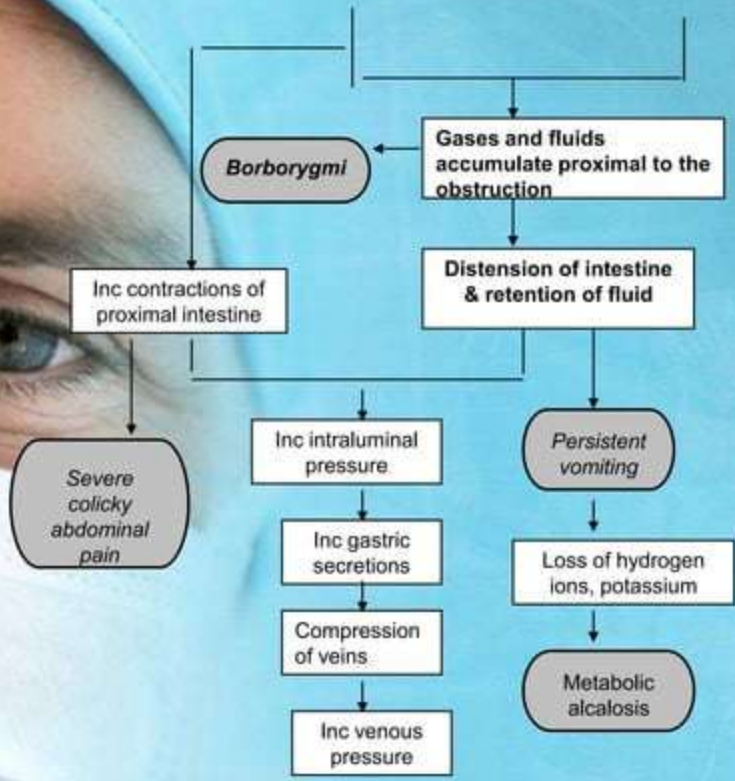
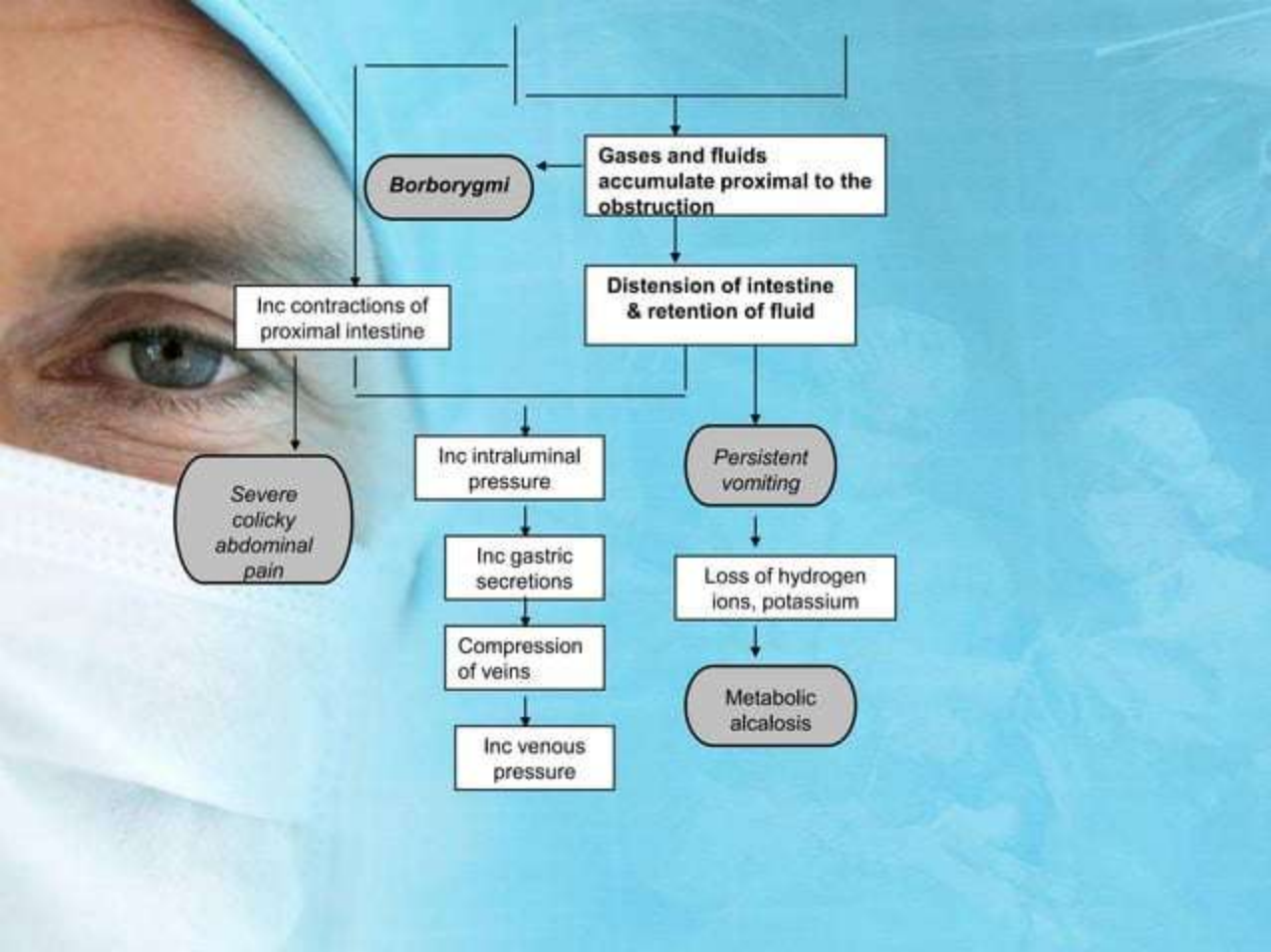
Non-modifiable

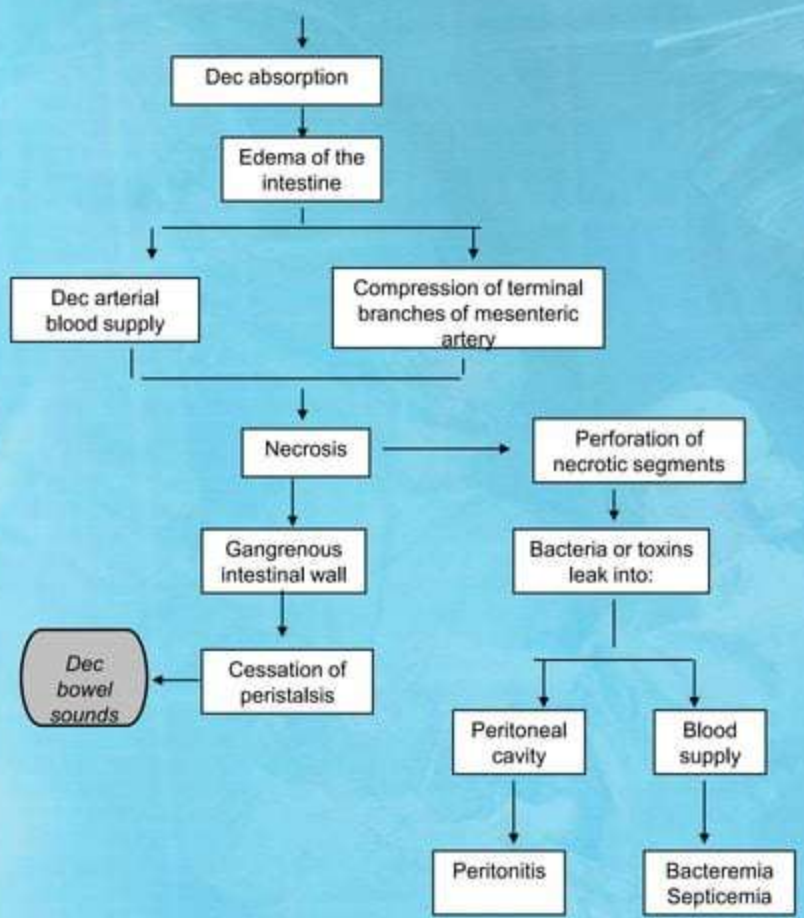
- Age: young – congenital bowel deformities (atresia, imperforate anus)
- Old age
- Family history of colorectal cancer

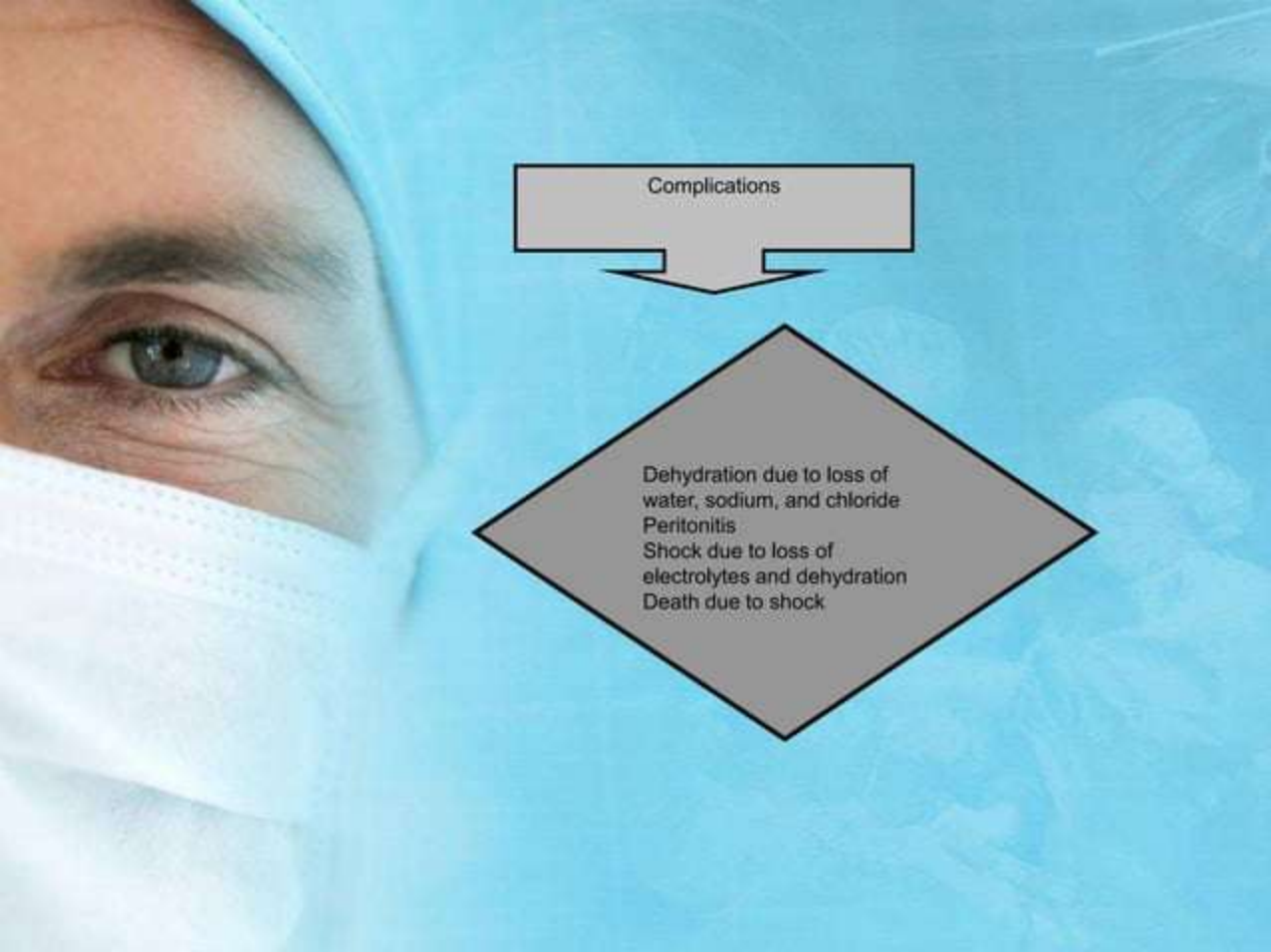


PATHOPHYSIOLOGY









Complications


Dehydration due to loss of
water, sodium, and chloride
Peritonitis
Shock due to loss of
electrolytes and dehydration
Death due to shock



ASSESSMENT



- Hiccups are a common complaint in all types of bowel obstruction



Mechanical Obstruction of the Small Intestine

Subjective Findings:

Complain of colicky pain, nausea, vomiting, and constipation

If obstruction is complete, may report vomiting of fecal contents.

Vomit:

- stomach contents
- bile-stained contents of the duodenum and jejunum
- darker, fecal-like contents of ileum


A close-up photograph of a person's face, showing their right eye looking towards the camera. They are wearing a light blue surgical cap and a white surgical mask that covers the lower half of their face. The background is a solid light blue color.

Objective Findings: Physical Assessment

Inspection - distended abdomen

Auscultation - bowel sounds, borborygmi, and rushes (*occasionally loud enough to be heard without a stethoscope*)

Palpation - abdominal tenderness. *Rebound tenderness may be noted in patients with obstruction that results from strangulation with ischemia*



Mechanical Obstruction of the Large Intestine

Subjective Findings:

History of constipation *with a more gradual onset of signs and symptoms than in small-bowel obstruction*

Several days after constipation begins, may report the sudden onset of colicky abdominal pain, producing spasms that last less than 1 minute and recur every few minutes

History reveal constant hypogastric pain, nausea and, in the later stages, vomiting



Objective Findings: Physical Assessment

Vomitus - orange-brown and foul smelling, *characteristic of large-bowel obstruction*

Inspection - abdomen may appear dramatically distended, *with visible loops of large bowel*

Auscultation - loud, high-pitched borborygmi

Partial obstruction usually causes similar signs and symptoms, in a milder form

Leakage of liquid stools around the partial obstruction is common

A close-up photograph of a person's face, showing their right eye and part of their nose. They are wearing a white surgical mask and a light blue surgical cap. The background is a solid light blue color.

Nonmechanical Obstruction


Subjective Findings:

- Describes diffuse abdominal discomfort *instead of colicky pain*
- Reports frequent vomiting, which may consist of gastric and bile contents but, rarely, fecal contents
- Complain of constipation and hiccups
- If obstruction results from vascular insufficiency or infarction, the patient may complain of severe abdominal pain.



Objective Findings: Physical Assessment

- Inspection - abdomen is distended
- Auscultation discloses decreased bowel sounds early in the disease; *this sign disappears as the disorder progresses*

A close-up photograph of a person's face, showing their right eye looking towards the camera. They are wearing a light blue surgical cap and a white surgical mask that covers the lower half of their face. The background is a solid light blue color.

Laboratory and Diagnostic Tests

- Fecal material aspiration from NG tube
- Abdominal X-ray, CT scan, MRI
 - May show presence and location of small or large intestinal distention, gas or fluid
 - “Bird beak” • lesion in colonic volvulus
 - Foreign body visualization
- Contrast studies
 - Barium enema may diagnose colon obstruction or intussusception.
 - Ileus may be identified by oral barium



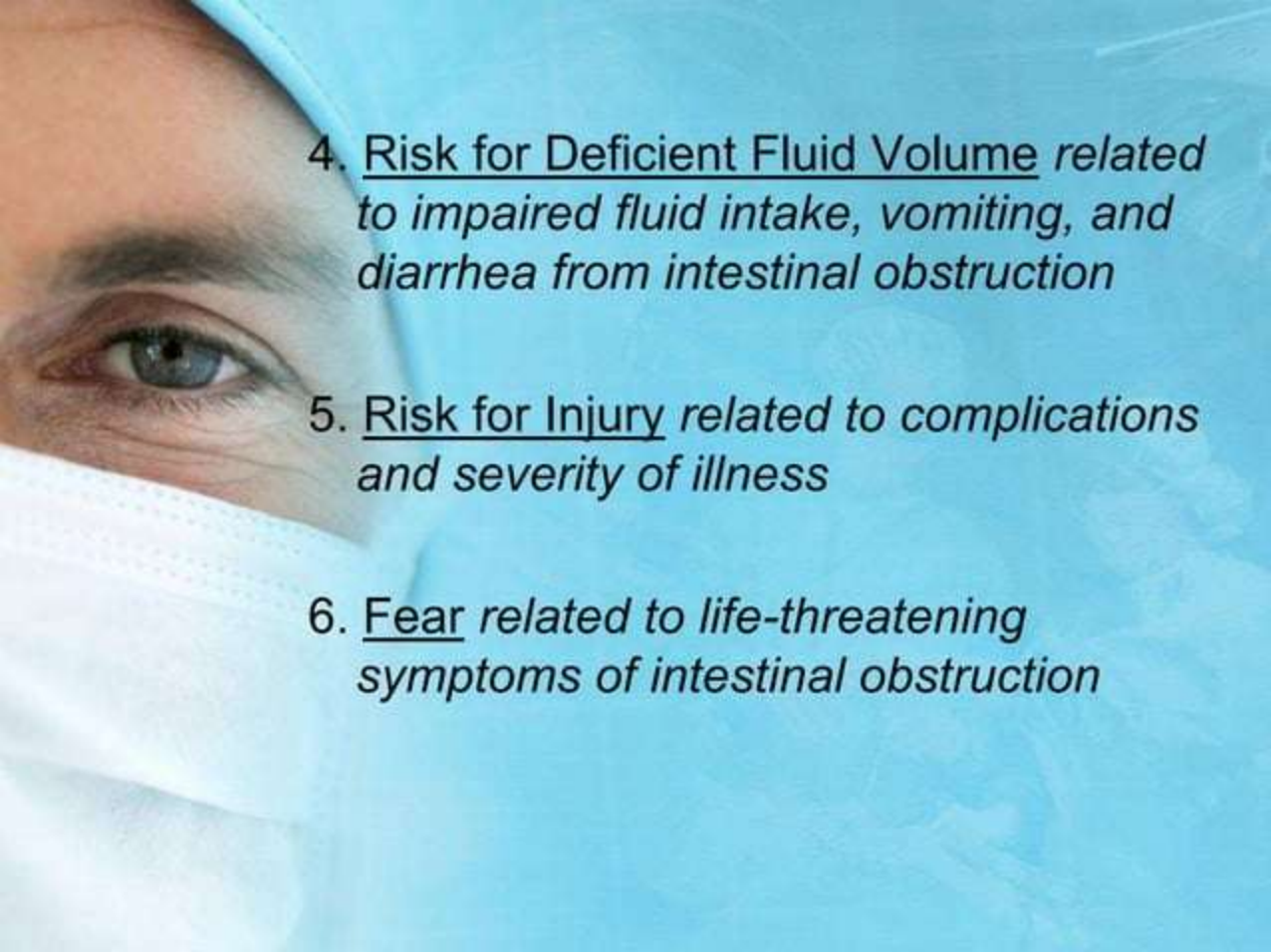
- Laboratory tests
 - May show decreased sodium, potassium, and chloride levels due to vomiting
 - Elevated WBC counts due to inflammation; marked increase with necrosis, strangulation, or peritonitis
 - Serum amylase may be elevated from irritation of the pancreas by the bowel loop
- Flexible sigmoidoscopy or colonoscopy may identify the source of the obstruction such as tumor or stricture



NURSING DIAGNOSES



1. Ineffective Tissue Perfusion: GI related to interruption of arterial and venous flow
2. Acute Pain related to obstruction, distention, and strangulation of intestinal tissue
3. Constipation related to presence of obstruction and changes in peristalsis

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4. Risk for Deficient Fluid Volume related to impaired fluid intake, vomiting, and diarrhea from intestinal obstruction
 5. Risk for Injury related to complications and severity of illness
 6. Fear related to life-threatening symptoms of intestinal obstruction



INTERVENTIONS




Nursing Management

- Primary Prevention
- Encourage well balanced and high-fiber diet.
- Encourage regular exercise.
- Encourage elderly for regular check-up.

A close-up photograph of a person's eye, looking slightly to the left. The person is wearing a light blue surgical cap and a white surgical mask that covers the lower half of their face. The background is a solid light blue color.


Secondary Prevention

- Insert an NG tube *to decompress the bowel as ordered.*
- Maintain the function of the nasogastric tube
- Assess and measure the nasogastric output
- Maintain fluid and electrolyte balance *by monitoring electrolyte, blood urea nitrogen, and creatinine levels.*
- Begin and maintain I.V. therapy as ordered.
- Monitor nutritional status

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- A close-up photograph of a person's eye, wearing a light blue surgical cap and a white surgical mask. The person has light-colored eyes and is looking slightly to the right. The background is a light blue gradient.
- Continually assess his pain. *Colicky pain that suddenly becomes constant could signal perforation.*
 - Assess improvement (return of normal bowel sounds, decreased abdominal distention, subjective improvement in abdominal pain and tenderness, passage of flatus or stool).
 - Look for signs of dehydration (*thick, swollen tongue; dry, cracked lips; dry oral mucous membranes*).
 - Watch for signs of metabolic alkalosis
 - Report discrepancies in intake and output, worsening of pain or abdominal distention, and increased nasogastric output.



- Watch for signs and symptoms of secondary infection, *such as fever and chills.*
- Administer analgesics, broad-spectrum antibiotics, and other medications as ordered.
- Keep the patient in semi-Fowler's or Fowler's position as much as possible. *These positions help to promote pulmonary ventilation and ease respiratory distress from abdominal distention.*
- Monitor urine output carefully *to assess renal function, circulating blood volume, and possible urine retention due to bladder compression by the distended intestine.*
- If the patient's condition does not improve, prepare pt for surgery.




Tertiary Prevention

- After surgery, provide all necessary postoperative care. *Care for the surgical site, maintain fluid and electrolyte balance, relieve pain and discomfort, maintain respiratory status, and monitor intake and output.*
- Explain the rationale for NG suction, NPO status, and I.V. fluids initially.
- Advise patient to progress diet slowly as tolerated once home.
- Advise plenty of rest and slow progression of activity as directed by surgeon or other health care provider.
- Teach wound care if indicated.
- Encourage patient to follow-up as directed and to call surgeon or health care provider if increasing abdominal pain, vomiting, or fever occur prior to follow-up.



Medical Management


- Correction of fluid and electrolyte imbalances with normal saline or Ringer's solution with potassium as required.
- NG suction *to decompress bowel*.
- Treatment of shock and peritonitis.


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- Analgesics and sedatives, *avoiding opiates due to GI motility inhibition.*
 - Antibiotics *to prevent or treat infection.*
 - Ambulation for patients with paralytic ileus *to encourage return of peristalsis.*
 - TPN may be necessary *to correct protein deficiency from chronic obstruction, paralytic ileus, or infection.*



Surgical Management

- *Consists of relieving obstruction.*
- Closed bowel procedures: lysis of adhesions, reduction of volvulus, intussusception, or incarcerated hernia
- *Enterotomy for removal of foreign bodies or bezoars*


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- Resection of bowel *for obstructing lesions, or strangulated bowel with end-to-end anastomosis*
 - Intestinal bypass around obstruction
 - Temporary ostomy may be indicated

A close-up photograph of a person's face, showing their right eye looking towards the camera. They are wearing a light blue surgical cap and a white surgical mask that covers the lower half of their face. The background is a solid light blue color.

CARE OF THE PATIENT WITH AN OSTOMY

Pre-operative Nursing Responsibilities

- Prepare patient by explaining the surgical procedure, stoma characteristics, and ostomy management with a pouching system.

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Post-operative Nursing Responsibilities

- Monitor the stoma color and amount and color of stomal output every shift; document, and report any abnormalities.
- Periodically change a properly fitting pouching system over the ostomy to avoid leakage and protect the peristomal skin. Use this time as an opportunity for teaching.
- Assess peristomal skin with each pouching system change, document findings, and treat any abnormalities (skin breakdown due to leakage, allergy, or infection) as indicated.
- Teach the patient and/or caregiver self-care skills of routine pouch emptying, cleansing skin and stoma, and changing of the pouching system until independence is achieved.
- Instruct the patient and family in lifestyle adjustments regarding gas and odor control; procurement of ostomy supplies; and bathing, clothing, and travel tips.
- Encourage patient to verbalize feelings regarding the ostomy, body image changes, and sexual issues.

A collage of medical professionals in a surgical setting, overlaid with a grid pattern. The text "THANK YOU!" is prominently displayed in the center.

THANK YOU!