

PERITONITIS

Inflammation of the peritoneal cavity, caused by either bacteria or chemicals, can be primary or secondary, and acute or chronic. *Primary peritonitis* is a rare condition in which the peritoneum is infected via the blood/lymphatic circulation. Secondary sources of inflammation are the GI tract, ovaries/uterus, urinary system, traumatic injuries, or surgical contaminants. Surgical intervention may be curative in localized peritonitis, as occurs with appendicitis/appendectomy, ulcer plication, and bowel resection. If peritonitis is diffuse, medical management is necessary before or in place of surgical treatment.

CARE SETTING

Inpatient acute medical or surgical unit

RELATED CONCERNS

Appendectomy, see Nursing Care Plan CD-ROM

Inflammatory bowel disease: ulcerative colitis, regional enteritis (Crohn's disease, ileocolitis)

Pancreatitis

Psychosocial aspects of care

Renal dialysis: peritoneal

Sepsis/septicemia

Surgical intervention

Total nutritional support: parenteral/enteral feeding

Upper gastrointestinal/esophageal bleeding

Patient Assessment Database

ACTIVITY/REST

May report: Weakness

May exhibit: Difficulty ambulating

CIRCULATION

May exhibit: Tachycardia, diaphoresis, pallor, hypotension (signs of shock)
Tissue edema

ELIMINATION

May report: Inability to pass stool or flatus
Diarrhea (occasionally)

May exhibit: Hiccups; abdominal distension; quiet abdomen
Decreased urinary output, dark color
Decreased/absent bowel sounds (ileus); intermittent loud, rushing bowel sounds (obstruction); abdominal rigidity, distension, rebound tenderness; hyperresonance/tympany (ileus); loss of dullness over liver (free air in abdomen)

FOOD/FLUID

May report: Anorexia, nausea/vomiting, thirst

May exhibit: Projectile vomiting
Dry mucous membranes, swollen tongue, poor skin turgor

PAIN/DISCOMFORT

May report: Sudden, severe abdominal pain, generalized or localized, referred to shoulder, intensified by movement

May exhibit: Distention, rigidity, rebound tenderness; distraction behaviors; restlessness; self-focus
Muscle guarding (abdomen); flexion of knees

RESPIRATION

May exhibit: Shallow respirations, tachypnea

SAFETY

May report: Fever, chills

SEXUALITY

May report: History of pelvic organ inflammation (salpingitis), puerperal infection, septic abortion, retroperitoneal abscess

TEACHING/LEARNING

May report: History of recent trauma with abdominal penetration, e.g., gunshot/stab wound or blunt trauma to the abdomen; bladder perforation/ruptured gallbladder, perforated carcinoma of the stomach, perforated gastric/duodenal ulcer, gangrenous obstruction of the bowel, perforation of diverticulum, UC, regional ileitis; strangulated hernia

Discharge plan **DRG projected length of inpatient stay: 4.9 days**

considerations: Assistance with homemaker/maintenance tasks

Refer to section at end of plan for postdischarge considerations.

DIAGNOSTIC STUDIES

CBC: WBCs elevated, sometimes more than 20,000. RBC count may be increased, indicating hemoconcentration.

Serum protein/albumin: May be decreased because of fluid shifts.

Serum amylase: Usually elevated.

Serum electrolytes: Hypokalemia may be present.

ABGs: Respiratory alkalosis and metabolic acidosis may be noted.

Cultures: Causative organism (often *Escherichia coli*, streptococci, staphylococcus, or rarely, pneumococcus) may be identified from blood, exudate/secretions or ascitic fluid, cloudy peritoneal dialysate.

Abdominal x-ray: May reveal gas distension of bowel/ileus. If a perforated viscera is the cause, free air will be found in the abdomen.

Chest x-ray: May reveal elevation of diaphragm.

Pelvic ultrasound: Can diagnose peritonitis caused by ruptured appendix or diverticulitis.

Paracentesis: Peritoneal fluid samples may contain blood, pus/exudate, amylase, bile, and creatine.

NURSING PRIORITIES

1. Control infection.
2. Restore/maintain circulating volume.
3. Promote comfort.
4. Maintain nutrition.
5. Provide information about disease process, possible complications, and treatment needs.

DISCHARGE GOALS

1. Infection resolved.
2. Complications presented/minimized.
3. Pain relieved.
4. Disease process, potential complications, and therapeutic regimen understood.
5. Plan in place to meet needs after discharge.

NURSING DIAGNOSIS: Infection, risk for (septicemia)

Risk factors may include

Inadequate primary defenses (broken skin, traumatized tissue, altered peristalsis)
Inadequate secondary defenses (immunosuppression)
Invasive procedures

Possibly evidenced by

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

DESIRED OUTCOMES/EVALUATION CRITERIA—PATIENT WILL:

Infection Status (NOC)

Achieve timely healing; be free of purulent drainage or erythema; be afebrile.

Risk Control (NOC)

Verbalize understanding of the individual causative/risk factor(s).

ACTIONS/INTERVENTIONS	RATIONALE
Infection Control (NIC)	
Independent	
Note individual risk factors, e.g., abdominal trauma, acute appendicitis, peritoneal dialysis.	Influences choice of interventions.
Assess vital signs frequently, noting unresolved or progressing hypotension, decreased pulse pressure, tachycardia, fever, tachypnea.	Signs of impending septic shock. Circulating endotoxins eventually produce vasodilation, shift of fluid from circulation, and a low cardiac output state.
Note changes in mental status (e.g., confusion, stupor).	Hypoxemia, hypotension, and acidosis can cause deteriorating mental status.
Note skin color, temperature, moisture.	Warm, flushed, dry skin is early sign of septicemia. Later manifestations include cool, clammy, pale skin and cyanosis as shock becomes refractory.
Monitor urine output.	Oliguria develops as a result of decreased renal perfusion, circulating toxins, effects of antibiotics.
Maintain strict aseptic technique in care of abdominal drains, incisions/open wounds, dressings, and invasive sites. Cleanse with appropriate solution.	Prevents access or limits spread of infecting organisms/cross-contamination.
Perform/model good handwashing technique. Monitor staff/patient compliance.	Reduces risk of cross-contamination/spread of infection.
Observe drainage from wounds/drains.	Provides information about status of infection.
Maintain sterile technique when catheterizing patient, and provide catheter care/encourage perineal cleansing on a routine basis.	Prevents access, limits bacterial growth in urinary tract.
Monitor/restrict visitors and staff as appropriate. Provide protective isolation if indicated.	Reduces risk of exposure to/acquisition of secondary infection in immunosuppressed patient.

ACTIONS/INTERVENTIONS	RATIONALE
<p>Infection Control (NIC)</p> <p>Collaborative</p> <p>Obtain specimens/monitor results of serial blood, urine, wound cultures.</p> <p>Assist with peritoneal aspiration, if indicated.</p> <p>Administer antimicrobials, e.g., gentamicin (Garamycin), amikacin (Amikin), clindamycin (Cleocin), via IV/peritoneal lavage.</p> <p>Prepare for surgical intervention if indicated.</p>	<p>Identifies causative microorganisms and helps in assessing effectiveness of antimicrobial regimen.</p> <p>May be done to remove fluid and to identify infecting organisms so appropriate antibiotic therapy can be instituted.</p> <p>Therapy is directed at anaerobic bacteria and aerobic Gram-negative bacilli. Lavage may be used to remove necrotic debris and treat inflammation that is poorly localized/diffuse.</p> <p>Surgery may be treatment of choice (curative) in acute, localized peritonitis, e.g., to drain localized abscess; remove peritoneal exudates, ruptured appendix/gallbladder; plicate perforated ulcer; or resect bowel.</p>

<p>NURSING DIAGNOSIS: Fluid Volume, deficient [mixed]</p> <p>May be related to</p> <p>Fluid shifts from extracellular, intravascular, and interstitial compartments into intestines and/or peritoneal space</p> <p>Vomiting; medically restricted intake; NG/intestinal aspiration</p> <p>Fever/hypermetabolic state</p> <p>Possibly evidenced by</p> <p>Dry mucous membranes, poor skin turgor, delayed capillary refill, weak peripheral pulses</p> <p>Diminished urinary output, dark/concentrated urine</p> <p>Hypotension, tachycardia</p> <p>DESIRED OUTCOMES/EVALUATION CRITERIA—PATIENT WILL:</p> <p>Fluid Balance (NOC)</p> <p>Demonstrate improved fluid balance as evidenced by adequate urinary output with normal specific gravity, stable vital signs, moist mucous membranes, good skin turgor, prompt capillary refill, and weight within acceptable range.</p>
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ACTIONS/INTERVENTIONS	RATIONALE
<p>Fluid/Electrolyte Management (NIC)</p> <p>Independent</p> <p>Monitor vital signs, noting presence of hypotension (including postural changes), tachycardia, tachypnea, fever. Measure central venous pressure (CVP) if available.</p>	<p>Aids in evaluating degree of fluid deficit/effectiveness of fluid replacement therapy and response to medications.</p>

ACTIONS/INTERVENTIONS	RATIONALE
<p>Fluid/Electrolyte Management (NIC)</p> <p>Independent</p> <p>Maintain accurate I&O and correlate with daily weights. Include measured/estimated losses, e.g., gastric suction, drains, dressings, Hemovac, diaphoresis, and abdominal girth for third spacing of fluid.</p> <p>Measure urine specific gravity.</p> <p>Observe skin/mucous membrane dryness, turgor. Note peripheral/sacral edema.</p> <p>Eliminate noxious sights/smells from environment. Limit intake of ice chips.</p> <p>Change position frequently, provide frequent skin care, and maintain dry/wrinkle-free bedding.</p> <p>Collaborative</p> <p>Monitor laboratory studies, e.g., Hb/Hct, electrolytes, protein, albumin, BUN, Cr.</p> <p>Administer plasma/blood, fluids, electrolytes, diuretics as indicated.</p> <p>Maintain NPO with nasogastric/intestinal aspiration.</p>	<p>Reflects overall hydration status. Urine output may be diminished because of hypovolemia and decreased renal perfusion, but weight may still increase, reflecting tissue edema/ascites accumulation. Gastric suction losses may be large, and a great deal of fluid can be sequestered in the bowel and peritoneal space (ascites).</p> <p>Reflects hydration status and changes in renal function, which may warn of developing acute renal failure in response to hypovolemia and effect of toxins. <i>Note:</i> Many antibiotics also have nephrotoxic effects that may further affect kidney function/urine output.</p> <p>Hypovolemia, fluid shifts, and nutritional deficits contribute to poor skin turgor, taut edematous tissues.</p> <p>Reduces gastric stimulation and vomiting response. <i>Note:</i> Excessive use of ice chips during gastric aspiration can increase gastric washout of electrolytes.</p> <p>Edematous tissue with compromised circulation is prone to breakdown.</p> <p>Provides information about hydration, organ function. Varied alterations with significant consequences to systemic function are possible as a result of fluid shifts, hypovolemia, hypoxemia, circulating toxins, and necrotic tissue products.</p> <p>Replenishes/maintains circulating volume and electrolyte balance. Colloids (plasma, blood) help move water back into intravascular compartment by increasing osmotic pressure gradient. Diuretics may be used to assist in excretion of toxins and to enhance renal function.</p> <p>Reduces hyperactivity of bowel and diarrhea losses.</p>

NURSING DIAGNOSIS: Pain, acute

May be related to

- Chemical irritation of the parietal peritoneum (toxins)
- Trauma to tissues
- Accumulation of fluid in abdominal/peritoneal cavity (abdominal distension)

Possibly evidenced by

- Verbalizations of pain
- Muscle guarding, rebound tenderness
- Facial mask of pain, self-focus
- Distraction behavior, autonomic/emotional responses (anxiety)

DESIRED OUTCOMES/EVALUATION CRITERIA—PATIENT WILL:

Pain Control (NOC)

- Report pain is relieved/controlled.
- Demonstrate use of relaxation skills, other methods to promote comfort.

ACTIONS/INTERVENTIONS	RATIONALE
<p>Pain Management (NIC)</p> <p>Independent</p> <p>Investigate pain reports, noting location, duration, intensity(0–10 scale), and characteristics (dull, sharp, constant).</p> <p>Maintain semi-Fowler’s position as indicated.</p> <p>Move patient slowly and deliberately, splinting painful area.</p> <p>Provide comfort measures, e.g., massage, back rubs, deep breathing. Instruct in relaxation/visualization exercises. Provide diversional activities.</p> <p>Provide frequent oral care. Remove noxious environmental stimuli.</p>	<p>Changes in location/intensity are not uncommon but may reflect developing complications. Pain tends to become constant, more intense, and diffuse over the entire abdomen as inflammatory process accelerates; pain may localize if an abscess develops.</p> <p>Facilitates fluid/wound drainage by gravity, reducing diaphragmatic irritation/abdominal tension, and thereby reducing pain.</p> <p>Reduces muscle tension/guarding, which may help minimize pain of movement.</p> <p>Promotes relaxation and may enhance patient’s coping abilities by refocusing attention.</p> <p>Reduces nausea/vomiting, which can increase intra-abdominal pressure/pain.</p>
<p>Collaborative</p> <p>Administer medications as indicated Analgesics, narcotics;</p>	<p>Reduce metabolic rate and intestinal irritation from circulating/local toxins, which aids in pain relief and promotes healing. <i>Note:</i> Pain is usually severe and may require narcotic pain control. Analgesics may be withheld during initial diagnostic process because they can mask signs/symptoms.</p>

ACTIONS/INTERVENTIONS	RATIONALE
<p>Pain Management (NIC)</p> <p>Collaborative</p> <p>Antiemetics, e.g., hydroxyzine (Vistaril);</p> <p>Antipyretics, e.g., acetaminophen (Tylenol).</p>	<p>Reduce nausea and vomiting, which can increase abdominal pain.</p> <p>Reduce discomfort associated with fever/chills.</p>

<p>NURSING DIAGNOSIS: Nutrition: imbalanced, risk for less than body requirements</p> <p>Risk factors may include Nausea/vomiting, intestinal dysfunction Metabolic abnormalities; increased metabolic needs</p> <p>Possibly evidenced by [Not applicable; presence of signs and symptoms establishes an <i>actual</i> diagnosis.]</p> <p>DESIRED OUTCOMES/EVALUATION CRITERIA—PATIENT WILL:</p> <p>Nutritional status (NOC) Maintain usual weight and positive nitrogen balance.</p>
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ACTIONS/INTERVENTIONS	RATIONALE
<p>Nutrition Management (NIC)</p> <p>Independent</p> <p>Auscultate bowel sounds, noting absent/hyperactive sounds.</p> <p>Monitor NG tube output. Note presence of vomiting, diarrhea.</p> <p>Measure abdominal girth.</p> <p>Assess abdomen frequently for return to softness, reappearance of normal bowel sounds, and passage of flatus.</p> <p>Weigh regularly.</p>	<p>Although bowel sounds are frequently absent, inflammation/irritation of the intestine may be accompanied by intestinal hyperactivity, diminished water absorption, and diarrhea.</p> <p>Large amounts of gastric aspirant and vomiting/diarrhea suggest bowel obstruction, requiring further evaluation.</p> <p>Provides quantitative evidence of changes in gastric/intestinal distension and/or accumulation of ascites.</p> <p>Indicates return of normal bowel function and ability to resume oral intake.</p> <p>Initial losses/gains reflect changes in hydration, but sustained losses suggest nutritional deficit.</p>

ACTIONS/INTERVENTIONS	RATIONALE

<p>Nutrition Management (NIC)</p> <p>Collaborative</p> <p>Monitor BUN, protein, prealbumin/albumin, glucose, nitrogen balance as indicated.</p> <p>Advance diet as tolerated, e.g., clear liquids to soft food.</p> <p>Administer TPN as indicated.</p>	<p>Reflects organ function and nutritional status/needs.</p> <p>Careful progression of diet when intake is resumed reduces risk of gastric irritation.</p> <p>Promotes nutrient utilization and positive nitrogen balance in patients who are unable to assimilate nutrients in a normal fashion.</p>
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<p>NURSING DIAGNOSIS: Anxiety [specify level]/Fear</p> <p>May be related to</p> <p>Situational crisis Threat of death/change in health status Physiological factors, hypermetabolic state</p> <p>Possibly evidenced by</p> <p>Increased tension/helplessness Apprehension, uncertainty, worry, sense of impending doom Sympathetic stimulation; restlessness; focus on self</p> <p>DESIRED OUTCOMES/EVALUATION CRITERIA—PATIENT WILL:</p> <p>Anxiety Control (NOC)</p> <p>Verbalize awareness of feelings and healthy ways to deal with them. Report anxiety is reduced to a manageable level. Appear relaxed.</p>

<p>ACTIONS/INTERVENTIONS</p> <p>Anxiety Reduction (NIC)</p> <p>Independent</p> <p>Evaluate anxiety level, noting patient’s verbal and nonverbal response. Encourage free expression of emotions.</p> <p>Provide information regarding disease process and anticipated treatment.</p> <p>Schedule adequate rest and uninterrupted periods for sleep.</p>	<p>RATIONALE</p> <p>Apprehension may be escalated by severe pain, increasingly ill feeling, urgency of diagnostic procedures, and possibility of surgery.</p> <p>Knowing what to expect can reduce anxiety.</p> <p>Limits fatigue, conserves energy, and can enhance coping ability.</p>
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Refer to CP: Psychosocial Aspects for Care, for additional interventions.

NURSING DIAGNOSIS: Knowledge, deficient [Learning Need] regarding condition, prognosis, treatment, self-care, and discharge needs

May be related to

Lack of exposure/recall
 Information misinterpretation
 Unfamiliarity with information resources

Possibly evidenced by

Questions; request for information
 Statement of misconception
 Inaccurate follow-through of instruction

DESIRED OUTCOMES/EVALUATION CRITERIA—PATIENT WILL:

Knowledge: Disease Process (NOC)

Verbalize understanding of disease process and potential complications.
 Identify relationship of signs/symptoms to the disease process and correlate symptoms with causative factors.

Knowledge: Treatment Regimen (NOC)

Verbalize understanding of therapeutic needs.
 Correctly perform necessary procedures and explain reasons for actions.

ACTIONS/INTERVENTIONS	RATIONALE
<p>Teaching: Disease Process (NIC)</p> <p>Independent</p> <p>Review underlying disease process and recovery expectations.</p> <p>Identify signs/symptoms requiring medical evaluation, e.g., recurrent abdominal pain/distension, vomiting, fever, chills, or presence of purulent drainage, swelling/erythema of surgical incision (if present).</p> <p>Discuss medication regimen, schedule, and possible side effects.</p> <p>Recommend gradual resumption of usual activities as tolerated, allowing for adequate rest.</p> <p>Review activity restrictions/limitations, e.g., avoid heavy lifting, constipation.</p> <p>Demonstrate aseptic dressing change, wound care.</p> <p>Emphasize importance of medical follow-up.</p>	<p>Provides knowledge base from which patient can make informed choices.</p> <p>Early recognition and treatment of developing complications may prevent more serious illness/injury.</p> <p>Antibiotics may be continued after discharge, depending on length of stay.</p> <p>Prevents fatigue, enhances feeling of well-being.</p> <p>Avoids unnecessary increase of intra-abdominal pressure and muscle tension.</p> <p>Reduces risk of contamination. Provides opportunity to evaluate healing process.</p> <p>Necessary to monitor resolution of infection and resumption of usual activities.</p>

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

Fatigue—decreased metabolic energy production, increased energy requirements to perform ADLs, states of discomfort.

Pain, acute—chemical irritation of the peritoneum, prolonged healing process.