

# CHOLECYSTECTOMY

Cholecystectomy is performed most frequently through laparoscopic incisions using laser. However, traditional open cholecystectomy is the treatment of choice for many patients with multiple/large gallstones either because of acute symptomatology or to prevent recurrence of stones.

## CARE SETTING

This procedure is usually done on a short-stay basis; however, in the presence of suspected complications, e.g., empyema, gangrene, or perforation, an inpatient stay on a surgical unit is indicated.

## RELATED CONCERNS

Cholecystitis with cholelithiasis  
Pancreatitis  
Peritonitis  
Psychosocial aspects of care  
Surgical intervention

## Patient Assessment Database/Diagnostic Studies

Refer to CP: Cholecystitis with Cholelithiasis.

## TEACHING/LEARNING

### Discharge plan

**considerations:** **DRG projected mean length of inpatient stay: 1 (laparoscopic)–4.3 days**  
May require assistance with wound care/supplies, homemaker tasks  
**Refer to section at end of plan for postdischarge considerations.**

## NURSING PRIORITIES

1. Promote respiratory function.
2. Prevent complications.
3. Provide information about disease, procedure(s), prognosis, and treatment needs.

## DISCHARGE GOALS

1. Ventilation/oxygenation adequate for individual needs.
2. Complications prevented/minimized.
3. Disease process, surgical procedure, prognosis, and therapeutic regimen understood.
4. Plan in place to meet needs after discharge.

### **NURSING DIAGNOSIS: Breathing Pattern, ineffective**

#### **May be related to**

Pain  
Muscular impairment  
Decreased energy/fatigue

#### **Possibly evidenced by**

Tachypnea; respiratory depth changes, reduced vital capacity  
Holding breath; reluctance to cough

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

##### **Respiratory Status: Ventilation (NOC)**

Establish effective breathing pattern.  
Experience no signs of respiratory compromise/complications.

ACTIONS/INTERVENTIONS	RATIONALE
<p><b>Respiratory Monitoring (NIC)</b></p> <p><b>Independent</b></p> <p>Observe respiratory rate/depth.</p> <p>Auscultate breath sounds.</p> <p>Assist patient to turn, cough, and deep breathe periodically. Show patient how to splint incision. Instruct in effective breathing techniques.</p> <p>Elevate head of bed, maintain low-Fowler's position. Support abdomen when coughing, ambulating.</p> <p><b>Collaborative</b></p> <p>Assist with respiratory treatments, e.g., incentive spirometer.</p> <p>Administer analgesics before breathing treatments/therapeutic activities.</p>	<p>Shallow breathing, splinting with respirations, holding breath may result in hypoventilation/atelectasis.</p> <p>Areas of decreased/absent breath sounds suggest atelectasis, whereas adventitious sounds (wheezes, rhonchi) reflect congestion.</p> <p>Promotes ventilation of all lung segments and mobilization and expectoration of secretions.</p> <p>Facilitates lung expansion. Splinting provides incisional support/decreases muscle tension to promote cooperation with therapeutic regimen.</p> <p>Maximizes expansion of lungs to prevent/resolve atelectasis.</p> <p>Facilitates more effective coughing, deep breathing, and activity.</p>

<p><b>NURSING DIAGNOSIS: Fluid Volume, risk for deficient</b></p> <p><b>Risk factors may include</b></p> <p>Losses from NG aspiration, vomiting</p> <p>Medically restricted intake</p> <p>Altered coagulation, e.g., reduced prothrombin, prolonged coagulation time</p> <p><b>Possibly evidenced by</b></p> <p>[Not applicable; presence of signs and symptoms establishes an <i>actual</i> diagnosis.]</p> <p><b>DESIRED OUTCOMES/EVALUATION CRITERIA—PATIENT WILL:</b></p> <p><b>Hydration (NOC)</b></p> <p>Display adequate fluid balance as evidenced by stable vital signs, moist mucous membranes, good skin turgor/capillary refill, and individually appropriate urinary output.</p>
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ACTIONS/INTERVENTIONS	RATIONALE
<p><b>Fluid/Electrolyte Management (NIC)</b></p> <p><b>Independent</b></p> <p>Monitor I&amp;O, including drainage from NG tube, T-tube, and wound. Weigh patient periodically.</p> <p>Monitor vital signs. Assess mucous membranes, skin turgor, peripheral pulses, and capillary refill.</p> <p>Observe for signs of bleeding, e.g., hematemesis, melena, petechiae, ecchymosis.</p> <p>Use small-gauge needles for injections, and apply firm pressure for longer than usual after venipuncture.</p> <p>Have patient use cotton/sponge swabs and mouthwash instead of a toothbrush.</p> <p><b>Collaborative</b></p> <p>Monitor laboratory studies, e.g., Hb/Hct, electrolytes, prothrombin level/clotting time.</p> <p>Administer IV fluids, blood products, as indicated;</p> <p style="padding-left: 40px;">Electrolytes;</p> <p style="padding-left: 40px;">Vitamin K.</p>	<p>Provides information about replacement needs and organ function. Initially, 200–500 mL of bile drainage may be expected via the T-tube, decreasing as more bile enters the intestine. Continuing large amounts of bile drainage may be an indication of unresolved obstruction or, occasionally, a biliary fistula.</p> <p>Indicators of adequacy of circulating volume/perfusion.</p> <p>Prothrombin is reduced and coagulation time prolonged when bile flow is obstructed, increasing risk of bleeding/hemorrhage.</p> <p>Reduces trauma, risk of bleeding/hematoma.</p> <p>Avoids trauma and bleeding of the gums.</p> <p>Provides information about circulating volume, electrolyte balance, and adequacy of clotting factors.</p> <p>Maintains adequate circulating volume and aids in replacement of clotting factors.</p> <p>Corrects imbalances resulting from excessive gastric/wound losses.</p> <p>Provides replacement of factors necessary for clotting process.</p>

<p><b>NURSING DIAGNOSIS: Skin/Tissue Integrity, impaired</b></p> <p><b>May be related to</b></p> <p>Chemical substance (bile), stasis of secretions  Altered nutritional state (obesity)/metabolic state  Invasion of body structure (T-tube)</p> <p><b>Possibly evidenced by</b></p> <p>Disruption of skin/subcutaneous tissues</p> <p><b>DESIRED OUTCOMES/EVALUATION CRITERIA—PATIENT WILL:</b></p> <p><b>Wound Healing: Primary/Secondary Intention (NOC)</b></p> <p>Achieve timely wound healing without complications.  Demonstrate behaviors to promote healing/prevent skin breakdown.</p>
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ACTIONS/INTERVENTIONS	RATIONALE
<p><b>Wound Care (NIC)</b></p> <p><b>Independent</b></p> <p>Observe the color and character of the drainage.</p> <p>Change dressings as often as necessary. Clean the skin with soap and water. Use sterile petroleum jelly gauze, zinc oxide, or karaya powder around the incision.</p> <p>Apply Montgomery straps.</p> <p>Use a disposable ostomy bag over a stab wound drain.</p> <p>Place patient in low- or semi-Fowler's position.</p> <p>Monitor puncture sites (3–5) if endoscopic procedure is done.</p> <p>Check the T-tube and incisional drains; make sure they are free flowing.</p> <p>Maintain T-tube in closed collection system.</p> <p>Anchor drainage tube, allowing sufficient tubing to permit free turning and avoid kinks and twists.</p> <p>Observe for hiccups, abdominal distension, or signs of peritonitis, pancreatitis.</p> <p>Observe skin, sclerae, urine for change in color.</p> <p>Note color and consistency of stools.</p> <p>Investigate reports of increased/unrelenting RUQ pain; development of fever, tachycardia; leakage of bile drainage around tube/from wound.</p>	<p>Initially, drainage may contain blood and bloodstained fluid, normally changing to greenish brown (bile color) after the first several hours.</p> <p>Keeps the skin around the incision clean and provides a barrier to protect skin from excoriation.</p> <p>Facilitates frequent dressing changes and minimizes skin trauma.</p> <p>Ostomy appliance may be used to collect heavy drainage for more accurate measurement of output and protection of the skin.</p> <p>Facilitates drainage of bile.</p> <p>These areas may bleed, or staples and Steri-Strips may loosen at puncture wound sites.</p> <p>T-tube may remain in common bile duct for 7–10 days to remove retained stones. Incision site drains are used to remove any accumulated fluid and bile. Correct positioning prevents backup of the bile in the operative area.</p> <p>Prevents skin irritation and facilitates measurement of output. Reduces risk of contamination.</p> <p>Avoids dislodging tube and/or occlusion of the lumen.</p> <p>Dislodgment of the T-tube can result in diaphragmatic irritation or more serious complications if bile drains into abdomen or pancreatic duct is obstructed.</p> <p>Developing jaundice may indicate obstruction of bile flow.</p> <p>Clay-colored stools result when bile is not present in the intestines.</p> <p>Signs suggestive of abscess or fistula formation, requiring medical intervention.</p>

ACTIONS/INTERVENTIONS	RATIONALE
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<p><b>Wound Care (NIC)</b></p> <p><b>Collaborative</b></p> <p>Administer antibiotics as indicated.</p> <p>Clamp the T-tube per schedule.</p> <p>Prepare for surgical interventions as indicated.</p> <p>Monitor laboratory studies, e.g., WBC.</p>	<p>Necessary for treatment of abscess/infection.</p> <p>Tests the patency of the common bile duct before tube is removed.</p> <p>Drainage of blocked duct or fistulectomy may be required to treat abscess or repair fistula.</p> <p>Leukocytosis reflects inflammatory process, e.g., abscess formation or development of peritonitis/pancreatitis.</p>
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<p><b>NURSING DIAGNOSIS: Knowledge, deficient [Learning Need] regarding condition, prognosis, treatment, self-care, and discharge needs</b></p> <p><b>May be related to</b></p> <p>Lack of exposure; information misinterpretation  Unfamiliarity with information resources  Lack of recall</p> <p><b>Possibly evidenced by</b></p> <p>Questions; statement of misconception  Request for information  Inaccurate follow-through of instructions</p> <p><b>DESIRED OUTCOMES/EVALUATION CRITERIA—PATIENT WILL:</b></p> <p><b>Knowledge: Illness Care (NOC)</b></p> <p>Verbalize understanding of disease process, surgical procedure/prognosis, and potential complications.  Verbalize understanding of therapeutic needs.  Correctly perform necessary procedures and explain reasons for the actions.  Initiate necessary lifestyle changes and participate in therapeutic regimen.</p>
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<p><b>ACTIONS/INTERVENTIONS</b></p> <p><b>Teaching: Disease Process (NIC)</b></p> <p><b>Independent</b></p> <p>Review disease process, surgical procedure/prognosis.</p> <p>Demonstrate care of incisions/dressings and drains.</p>	<p><b>RATIONALE</b></p> <p>Provides knowledge base on which patient can make informed choices.</p> <p>Promotes independence in care and reduces risk of complications (e.g., infection, biliary obstruction).</p>
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ACTIONS/INTERVENTIONS	RATIONALE
<p><b>Teaching: Disease Process (NIC)</b></p> <p><b>Independent</b></p> <p>Recommend periodic drainage of T-tube collection bag and recording of output.</p> <p>Emphasize importance of maintaining low-fat diet, eating frequent small meals, gradual reintroduction of foods/fluids containing fats over a 4- to 6-mo period.</p> <p>Discuss use of medication such as florantyrone (Sancho) or dehydrocholic acid (Decholin).</p> <p>Discuss avoiding/limiting use of alcoholic beverages.</p> <p>Inform patient that loose stools may occur for several months.</p> <p>Advise patient to note and avoid foods that seem to aggravate the diarrhea.</p> <p>Identify signs/symptoms requiring notification of healthcare provider, e.g., dark urine; jaundiced color of eyes/skin; clay-colored stools, excessive stools; or recurrent heartburn, bloating.</p> <p>Review activity limitations depending on individual situation.</p>	<p>Reduces risk of reflux, strain on tube/appliance seal. Provides information about resolution of ductal edema/return of ductal function for appropriate timing of T-tube removal.</p> <p>During initial 6 mo after surgery, low-fat diet limits need for bile and reduces discomfort associated with inadequate digestion of fats.</p> <p>Oral replacement of bile salts may be required to facilitate fat absorption.</p> <p>Minimizes risk of pancreatic involvement.</p> <p>Intestines require time to adjust to stimulus of continuous output of bile.</p> <p>Although radical dietary changes are not usually necessary, certain restrictions may be helpful; e.g., fats in small amounts are usually tolerated. After a period of adjustment, patient usually will not have problems with most foods.</p> <p>Indicators of obstruction of bile flow/altered digestion, requiring further evaluation and intervention.</p> <p>Resumption of usual activities is normally accomplished within 4–6 wk.</p>

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

Diarrhea—continuous excretion of bile into bowel, changes in digestive process.  
 Infection, risk for—invasive procedure (discharge with T-tube in place).