

Care of the Post-Operative Patient – 2024

How We Count Post-Operative Days

- Day of Surgery – when surgery takes place
- Post-operative Day #1 – POD#1
 - First full day after surgery
- Each subsequent day counted
 - POD#2, POD#3, POD#4 etc. until discharge
- Orders written on pathways for specific POD (important to know which day it is!)
 - Ex. Change dressing POD #2

Receiving patient from PACU

- Once patient stable, transferred to inpatient unit
- PACU nurse gives verbal report to receiving RN (SBAR)
 - General condition, type of surgery, level of consciousness, equipment, any problems
- First priority when arrive on unit **take vital signs immediately.**
- Check healthcare provider orders
- Good assessment skills and awareness of potential complications important to prevent problems!
 - Respiratory
 - Circulatory
 - Neurological
 - Dressings
 - Pain
 - Safety
 - Equipment
- Goal of post-operative care
 - Support healing and recovery
 - Prevent complications!
 - Post-op complications prolong recovery, cause unusual discomfort, and present hazard to well-being
 - Post-op complications related to:
 - Pain
 - Reaction to medications
 - Immobility

Potential Alteration in Respiratory Functions

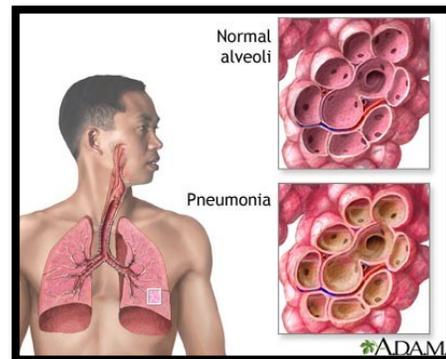
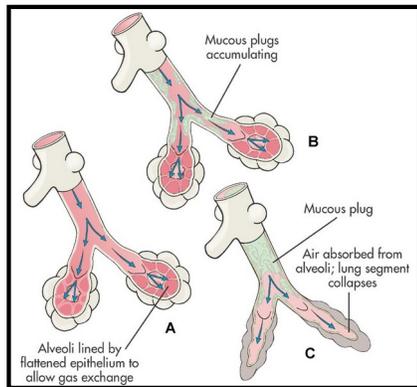
- Assessment
 - Evaluate airway and breathing
 - Position patient in **Lateral Recovery position** or **Supine with HOB elevated to 30 degrees**
- Evaluate chest symmetry
- Evaluate depth, rate, & character of respirations
- Restlessness often first sign of respiratory problem.



Re

1. Atelectasis: alveolar collapse causes

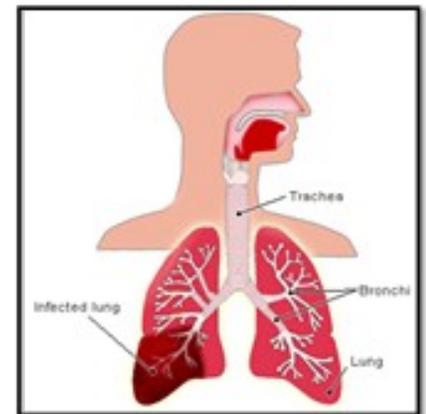
- Mucus blocks bronchioles → air beyond blocked → gradually absorbed → alveolus collapses
- Causes of Atelectasis : hypoventilation, ineffective cough, prolonged bedrest, intubation/anesthesia
- Signs and symptoms: pain, tachypnea, tachycardia, dyspnea, tracheal deviation, diminished breath sounds, low O2 sats



2. Pneumonia: Inflammation or infection of lungs. Infection in stagnant mucus in lungs. Progresses from atelectasis.

- Most common respiratory complications in the elderly, obese, malnourished, chronic respiratory disease
- Signs and symptoms: fever, dyspnea, pain, cough, crackles

3. Aspiration pneumonia: inhalation of gastric contents



Nursing Management of Respiratory Complications

- Deep breathing & coughing
 - *Begin as soon as patient is responsive and able to follow commands!*
 - Turn, cough, and deep breathe
 - “Turn” = Change position q 1-2 hours
 - to promote lung expansion & prevent secretion pooling
 - “Cough” – after a few deep breaths (splint!)
 - “Deep breathe” and Incentive spirometer – Maximize lung expansion
 - I/S 10 times every hour
- *EARLY AMBULATION.
 - **Most important intervention to prevent post-op complications**
 - Increases vital capacity of lungs
- Analgesics
- Reassurance

Potential Alterations in Cardiovascular Function

Assessment - Frequent vital sign monitoring, skin color, temperature, capillary refill, peripheral pulses, heart rate/rhythm

Cardiovascular Complications

Deep Vein Thrombosis – DVT

- Signs & Symptoms
 - Unilateral edema



- Redness
- Warmth
- Pain
- **Risk due to:**
 - Inactivity
 - Dehydration
 - Trauma
- Embolus – clot dislodges and travels

Nursing Interventions for Prevention

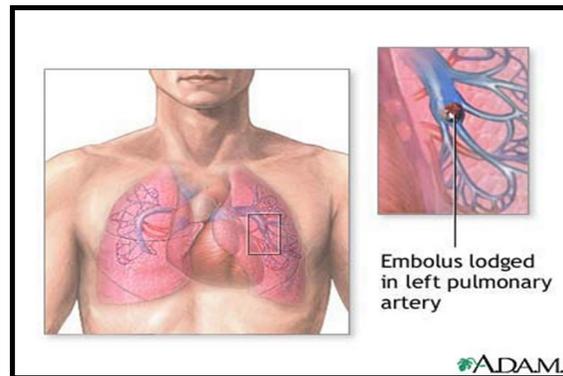
- **Early ambulation**
- SCDs and/or TEDs
- Leg Exercises

If Thrombus Occurs...

- Venous duplex scan in vascular lab to confirm clot
- Bed rest (initially) to prevent dislodgment
- Do **NOT** check Homans sign
- Anti-coagulant therapy

Pulmonary Embolus

- Clot lodged in pulmonary circulation
 - Blocks blood supply to lower lobe
- Signs and Symptoms
 - Dyspnea
 - Tachypnea
 - Tachycardia
 - Restlessness/agitation (“Impending doom”)
 - Sudden sharp chest pain
 - Hemoptysis
- Size of emboli correlates with outcome – Can be fatal
- Report any signs or symptoms to primary healthcare provider immediately



Syncope (Fainting)

- Causes
 - Postural hypotension
 - Vascular pooling
 - Sudden change in position
- Nursing Interventions
 - Change positions slowly.
 - Raise HOB, progress to sitting, dangle, stand
 - Safety for fall prevention
 - If patient faints, assist to floor to prevent injury

Fluid and Electrolyte Imbalances

Fluid retention

- 1-3 days post-op
- Stress response from surgery

- Body retains fluid as protective measure
- Compensates to maintain BP & blood volume

Fluid Overload

- Particularly with
 - Elderly
 - Underlying cardiac or renal disease

Fluid Deficit

- Untreated pre-op dehydration
- Intra-op blood loss
- Slow/inadequate fluid replacement
- Vomiting/bleeding/wound drainage

Hypokalemia

- Results from urinary & GI losses (Vomiting and diarrhea)
- Low K+ levels affect contractility of heart

Nursing Interventions for Fluid and Electrolyte Imbalances

- Accurate Intake & Output, VS, and head-to-toe assessments
- Monitor lab values closely
 - Especially Potassium
 - IV fluids based on patient needs (i.e. hydration, electrolytes)

Urinary Complications

- Assessment - Color, amount, consistency, odor of urine; indwelling catheters – patency

Low Urine Output (oliguria)

- Expected for 1st 24 hours post-op
- Possible causes:
 - Fluid retention
 - Fluid loss (bleeding, drains, etc.)
 - Renal failure (less common)

Urinary Retention

- Possible causes:
 - Anesthesia
 - Pain
 - Immobility/Bedrest
- Nursing management
 - Assess for bladder distention
 - Normal position to void, if possible
 - Provide privacy
 - Fluids (IV or PO)
 - If have a catheter, *make sure not kinked!*
- If no void in 6-8 hrs. post-op or after Foley d/c, Notify MD!

Gastrointestinal Complications

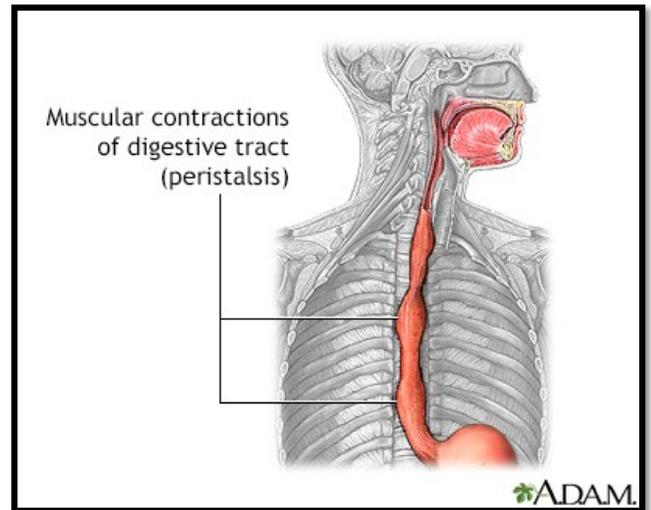
- **Expect** decreased *peristalsis* for 24 hours after abdominal surgery, 3-4 days after GI surgery
- Assessment
 - Auscultate for bowel sounds
 - May be diminished or absent immediate post-op
 - Inspect for abdominal distention
 - Gently palpate for firmness
 - Passing gas may be first sign of bowel function

Nausea and Vomiting

- Results from anesthesia and narcotics
- Decreased peristalsis
- Treatment = antiemetics
- Must wait for bowel sounds to return before oral fluids.

Postoperative Ileus (Paralytic Ileus)

- *Temporary paralysis* of the bowel
- Caused by manipulation during surgery
- Motility of large bowel may be decreased for 3-5 days, t
- Immobility & use of opioids post-op prolongs duration
- Signs and Symptoms
 - o **Abdominal distention**
 - o Pain
 - o Nausea/vomiting
 - o Bowel sounds: high pitched sounds above & absent below area of obstruction



Nursing Management

- Early Ambulation!!!!
- NPO until bowel sounds auscultated
 - o Chewing gum can help
 - o Encourage to report when passing gas
- May need NG tube to empty stomach/bowel contents

Integumentary Complications

- Skin = largest organ of the body - 1st line of defense against bacterial invasion
- Incision: wound in which each tissue layer is cut & separated smoothly by sharp-bladed instruments.
 - Margins of wound are regular and even
 - Nearby tissues are undamaged

Wound Healing

- Occurs by primary, secondary, or tertiary intention
- **Primary intention:** when wound edges are well-approximated
- **Secondary Intention:** Edges NOT neatly approximated
 - Healing & granulation take place from edges inward and bottom upwards
 - Wound may have to be debrided for healing
- **Tertiary Intention**
 - Delayed suturing of wound
 - Wound left open for infection to clear
 - Primary wound that needed to be re-opened
 - Results in delayed healing, larger/deeper scar

Factors Influencing Wound Healing (See separate handout on Edvance360)

- Nutrition, Age, Obesity, Size of Wound, Meds, Oxygenation, Smoking, Diabetes, Stress to Incision

Assessment of a Post-operative Incision

- Drainage (exudate)
- **Sanguineous:** bloody drainage
- **Serosanguineous:** combination of plasma & blood. Pinkish to light red.
- **Serous:** clear, watery plasma
- **Purulent:** thick, infected. Type of organisms influences color (yellow, green, brown)
- Presence of odor
- Amount of drainage
- Proximity of edges
- Cleanliness of wound
- Measurements of wound
- Erythema or edema
- Nature of surrounding tissue
- Presence of drains

Complications of Wound Healing

Hemorrhage

- Most common 1st 48 hours after surgery
- **Circle, date and time any drainage on dressing**
- External – obvious
 - Always check under patient
 - Monitor dressings
- Internal – not visible unless have drain
 - Signs and symptoms
 - **Restlessness**, decrease in blood pressure, increase in pulse, pain, distention, edema in area
- Can lead to hypovolemic shock and death

Infection

- **In surgical wounds**, infection apparent in **3-5 days**
- **In traumatic wounds**, apparent in **2-3 days**
- Signs and symptoms
 - Fever **greater than** 100.4
 - Pain or tenderness at site
 - Erythema of wound edges
 - WBC's elevated
 - Drainage (green, yellow, brownish)
- Nursing interventions
 - Good hand hygiene
 - Sterile technique, sterile equipment with cleaning & dressing changes
 - Antibiotics prn
 - High protein, good nutrition

Dehiscence



- Partial or total separation of wound edges
- Usually **occurs 3 – 11 days** post-op
 - Risk factors:
 - o Obesity
 - o Coughing or moving w/out splinting
 - o Poor nutrition
 - o Diabetes
 - o Infection
 - Signs or symptoms
 - o Sudden increase in brown, pink or clear drainage
 - o Feels “something popped or gave way”
- Requires surgical intervention

Evisceration

- Wound edges separate and abdominal contents protrude to outside
- Notify surgeon
- Stay with patient; call for help
- Position in low Fowler’s with knees flexed
- Put on sterile gloves
- Place sterile towels soaked in sterile normal saline over protruding tissue to prevent drying
- Monitor vital signs closely
- Emotional support

Age-Related Considerations During the Post-Operative Period:

- o Older are more susceptible to cold temperatures
- o Responses to medications & anesthetics can delay the return of orientation postop
- o Decreased liver and kidney function
- o Perspire less
 - o Dry, itchy fragile skin
- o At risk for delayed wound healing
- o Decreased respiratory function
 - o More susceptible to PNA

Discharge planning and follow-up care

- Begins on admission/preoperative and is an ongoing process!
- Gives patient awareness of events before occur
- Facilitates self-care responsibilities
- Educate caregiver/family as well
- Instructions in written format
- Case managers to handle insurance end & any extra equipment/at home services

Discharge planning includes:

- Care of wound site and dressings
- Medications
- Activities and limitations

- Dietary
- Symptoms to be reported / Follow-up Care
- Address individual questions/concerns

Potential Post-op Nursing Problems

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