

## **Introduction to the Surgical Patient**

### **Surgery**

The branch of medicine concerned with diseases and trauma requiring operative procedures

### **Classification of surgical procedures**

#### **Seriousness**

##### **Major**

Extensive reconstruction of or alteration in body parts

Examples: Coronary artery bypass, gastric resection

##### **Minor**

Minimal alteration in body parts

Examples: Cataracts, tooth extraction

## **Introduction to the Surgical Patient**

### **Urgency**

#### **Elective**

Patient's choice

Example: Plastic surgery

#### **Urgent**

Necessary for patient's health

Examples: Excision of tumor, gallstones

#### **Emergency**

Must be done immediately to save life or preserve function

Example: Control of hemorrhage

## **Introduction to the Surgical Patient**

### **Purpose**

#### **Diagnostic**

Confirm diagnosis

Example: Exploratory laparotomy

#### **Ablation**

Excision or removal of diseased body part or removal of a growth or harmful substance

Examples: Amputation, cholecystectomy

#### **Palliative**

Relieves or reduces intensity of disease symptoms

Example: Colostomy

## **Introduction to the Surgical Patient**

### **Purpose (*continued*)**

#### **Reconstructive**

Restores function or appearance to traumatized or malfunctioning tissue

Example: Internal fixation of fractures

#### **Transplant**

Replaces malfunctioning organs or structures

Examples: Kidney, cornea

#### **Constructive**

Restores function lost or reduced as result of congenital anomalies

Example: Repair of cleft palate

## **Perioperative Nursing**

### **Phases of the operative process which includes:**

#### **Preoperative**

Before surgery

#### **Intraoperative**

During surgery  
Postoperative  
Following surgery  
Perioperative Nursing  
Factors influencing patient outcomes:

Age

Young patients

Older patients

Physical condition

Healthy patients

Coexisting health problems

Nutritional factors

Carbohydrates and fat—energy producers

Proteins—build and repair

Perioperative Nursing

Psychosocial needs

Fear of loss of control (anesthesia)

Fear of the unknown (outcome, lack of knowledge)

Fear of anesthesia (waking up)

Fear of pain (pain control)

Fear of death (surgery, anesthesia)

Fear of separation (support group)

Fear of disruption of life patterns (ADLs, work)

Fear of detection of cancer

Perioperative Nursing

Socioeconomic and cultural needs

Social

Economic

Religious

Ethnic

Cultural

Education and experience

Age

Life experiences

Educational level

Medications

**Preoperative assessment must include home medications in use**

- Prescription medications**
- Over the counter medications**
- Herbal remedies**

**Potential impact of medications on the surgical experience?**

**Allergies**

**Preoperative Phase**

**Preoperative teaching**

- Include patient and family**
- 1 to 2 days before surgery**
- Clarify preoperative and postoperative events**
- Surgical procedure**
- Informed consent**
- Skin preparation**
- Gastrointestinal cleanser**
- Time of surgery**
- Area to be transferred, if applicable**

**Preoperative Phase**

**Preoperative teaching (*continued*)**

- Frequent vital signs**
- Dressings, equipment, etc.**
- Turning, coughing, and deep-breathing exercises**
- Pain medication (PRN)**

**Preoperative Phase**

**Preoperative preparation**

- Laboratory tests**
  - Urinalysis**
  - Complete blood count**
  - Blood chemistry profile**
    - Endocrine, hepatic, renal, and cardiovascular function**
  - Electrolytes**
- Diagnostic imaging**
  - Chest x-ray**
  - Electrocardiogram**

**Preoperative Phase**

**Informed consent**

- Competent**
  - Mentally able to understand**
    - Should not be under the influence of pain medications**
- Agrees to the procedure**
- Information clear**
- Risks explained**
- Benefits identified**
- Consequences understood**
- Alternatives discussed**
- Ability to understand (language, disabilities)**

**Preoperative Phase**

**Gastrointestinal preparation**

- NPO after midnight (6 to 8 hours)**
  - Documentation**
  - Comfort measures to reduce patient's feelings of "dryness"**

- Bowel cleanser**
  - Rationale for use**
  - Contraindications**
  - Agents used**
- Preoperative Phase**
- Skin preparation**
  - Removal of hair**
    - Shave**
    - Hair clip**
    - Depilatory**
  - Assess for skin impairment**
    - Infection**
    - Irritation**
    - Bruises**
    - Lesions**
  - Scrub with antiseptic solution applied**

**Figure 42-2**

**Latex Allergies**

**Increased incidence of latex allergies presenting in the health care environment**

**Categories**

**Risk factors**

**Nursing interventions to reduce risk to the latex-sensitive patient**

**Preoperative Phase**

**Respiratory preparation**

**Incentive spirometry**

**Prevent or treat atelectasis**

**Improve lung expansion**

**Improve oxygenation**

**Turn, cough, and deep-breathe**

**At least every 2 hours**

**Turn from side-to-back-to-side**

**Two to three deep breaths**

**Cough two to three times (splint abdomen if needed)**

**Contraindicated: surgeries involving intracranial, eye, ear, nose, throat, or spinal areas**

**Figure 42-3**

**Preoperative Phase**

**Cardiovascular considerations**

**Prevents thrombus, embolus, and infarct**

**Leg exercises**

**Antiembolism stockings (TEDS)**

**Sequential compression devices**

**Vital signs**

**Blood pressure, temperature, pulse, and respiration**

**Frequency depends on hospital and physician protocol and stability of patient**

**Needed for baseline to compare with postoperative vital signs**

**Figure 42-4**

**Preoperative Phase**

**Genitourinary concerns**

**Normal bladder habits**

Instruct patient about postoperative palpation of bladder  
Urinary catheter may be inserted

**Surgical wounds**

Teach patient about incision(s)  
Size and location  
Type of closure  
Drains and dressings

**Preoperative Phase**

**Pain**

Nontraditional analgesia  
Imagery  
Biofeedback  
Relaxation  
Traditional analgesia  
Intermittent injections  
Patient-controlled analgesia (PCA)  
Epidural  
Oral analgesics (when oral intake allowed)

**Preoperative Phase**

**Tubes**

Teach patient about possibility of tubes  
Nasogastric tubes  
Wound evacuation units  
IV  
Oxygen

**Preoperative Phase**

**Preoperative medication**

Reduces anxiety  
Valium, Versed  
Decreases anesthetic needed  
Valium, meperidine, morphine  
Reduces respiratory tract secretions  
Anticholinergics—atropine  
If given on nursing unit, use safety measures  
Bed in low position and side rails up  
Monitor every 15 to 30 minutes

**Preoperative Phase**

**Anesthesia**

**General**

Analgesia, amnesia, muscle relaxation, and unconsciousness occur  
Inhalation, oral, rectal, or parenteral routes

**Regional**

Renders only a specific region of the body insensitive to pain  
Nerve block, spinal, or epidural anesthesia

**Preoperative Phase**

**Anesthesia (*continued*)**

**Local**

Topical application or infiltration into tissues of an anesthetic agent that  
disrupts sensation at the level of the nerve endings  
Immediate area of application

**Conscious Sedation**

**The administration of drugs to depress the CNS provides analgesia**

**Primary uses**

**Advantages**

**Preoperative Phase**

**Preoperative checklist**

Permits signed and on chart

Allergies

ID band(s) on patient

Skin prep done

Removal of dentures, glasses/contacts, jewelry, nail polish, hairpins, makeup

TED stockings applied

Preoperative vital signs

Preoperative medications

Physical disabilities and/or diseases

History and physical and lab reports on chart

**Preoperative Phase**

**Eliminating errors—wrong site or procedure**

Joint Commission guidelines to prevent error

Preoperative verification

Site marking

Verification by surgical team members during a  
“time-out”

**Preoperative Phase**

**Transport to the operating room**

Compare patient’s ID bracelet to the medical record

Assist patient to stretcher

Direct family to appropriate waiting area

**Preoperative Phase**

**Preparing for the postoperative patient**

Sphygmomanometer, stethoscope, and thermometer

Emesis basin

Clean gown, washcloth, towel, and tissues

IV pole and pump

Suction equipment

Oxygen equipment

Extra pillows and bed pads

PCA pump, as needed

**Intraoperative Phase**

**Holding area**

Preanesthesia care unit

Preoperative preparations

IV

Preoperative medications

Skin prep (hair removal)

**Intraoperative Phase**

**Role of the nurse**

Circulating nurse

Prepares equipment and supplies

Arranges supplies—sterile and nonsterile

Sends for patient

- Visits with patient preoperatively: verifies operative (op) permit, identifies patient, and answers questions
- Performs patient assessment
- Checks medical record
- Assists in transfer of patient
- Positions patient on operating table

#### **Intraoperative Phase**

##### **Circulating nurse (*continued*)**

- Counts sponges, needles, and instruments before surgery
- Assists scrub nurse in arranging tables for sterile field
- Maintains continuous astute observations during surgery to anticipate needs of patient, scrub nurse, surgeon, and anesthesiologist
- Provides supplies to scrub nurse as needed
- Observes sterile field closely
- Cares for surgical specimens

#### **Intraoperative Phase**

##### **Circulating nurse (*continued*)**

- Documents operative record and nurse's notes
- Counts sponges, needles, and instruments when closure of wound begins
- Transfers patient to the stretcher for transport to recovery area
  - Must be careful to slowly change patient's position to prevent hypotension
- Accompanies patient to the recovery room and provides a report

#### **Intraoperative Phase**

##### **Scrub nurse**

- Performs surgical hand scrub
- Dons sterile gown and gloves aseptically
- Arranges sterile supplies and instruments
- Checks instruments for proper functioning
- Counts sponges, needles, and instruments with circulating nurse
- Gowns and gloves surgeons as they enter operating room
- Assists with surgical draping of patient

#### **Intraoperative Phase**

##### **Scrub nurse (*continued*)**

- Maintains neat and orderly sterile field
- Corrects breaks in aseptic technique
- Observes progress of surgical procedure
- Hands surgeon instruments, sponges, and necessary supplies during procedure
- Identifies and handles surgical specimens correctly
- Maintains count of sponges, needles, and instruments so none will be misplaced or lost

#### **Postoperative Phase**

##### **Immediate postoperative phase**

###### **Postanesthesia care unit**

- Vital signs checked every 15 minutes
- Respiratory and GI function monitored
- Wound evaluated for drainage and exudate
- Pain medication given as needed
- Transfer to nursing unit must be approved by the anesthesiologist or surgeon

#### **Figure 42-13**

##### **Postoperative Phase**

**Later postoperative phase**

**Nursing unit**

**Immediate assessments**

**Vital signs**

**IV**

**Incisional sites**

**Tubes**

**Postoperative orders**

**Body system assessment**

**Side rails up**

**Call light in reach**

**Postoperative Phase**

**Later postoperative phase (*continued*)**

**Immediate assessments (*continued*)**

**Position on side or HOB up 45 degrees**

**Emesis basin at bedside**

**Note amount and appearance of emesis**

**NPO until ordered and patient is fully awake**

**Assess for signs and symptoms of shock**

**Postoperative Phase**

**Later postoperative phase (*continued*)**

**Incision**

**Dressing**

**Reinforce for first 24 hours**

**Circle the drainage and write date and time**

**Dehiscence**

**Separation of a surgical wound**

**3 days to 2 weeks postoperatively**

**Sutures pull loose**

**Evisceration**

**Protrusion of an internal organ through a wound or surgical incision**

**Figure 42-15**

**Postoperative Phase**

**Later postoperative phase (*continued*)**

**Incision (*continued*)**

**Nursing intervention for dehiscence or evisceration**

**Cover with a sterile towel moistened with sterile saline**

**Have patient flex knees slightly and put in Fowler's position**

**Contact the physician**

**Postoperative Phase**

**Later postoperative phase (*continued*)**

**Ventilation**

**Hypoventilation**

**Drugs**

**Incisional pain**

**Obesity**

**Chronic lung disease**

**Pressure on the diaphragm**

**Atelectasis**

**Pneumonia**

**Postoperative Phase**



**Later postoperative phase (*continued*)**

**Prevention of atelectasis and pneumonia**

Turn, cough, and deep-breathe every 2 hours

Analgesics

Early mobility

Frequent positioning

**Pulmonary embolism**

Signs and symptoms: sudden chest pain, dyspnea, tachycardia, cyanosis, diaphoresis, and hypotension

Nursing interventions: HOB up 45 degrees, O<sub>2</sub>, notify physician

**Postoperative Phase**

**Later postoperative phase (*continued*)**

**Pain**

**Analgesics**

Offer every 3 to 4 hours

Acute pain—first 24 to 48 hours

Methods of medication administration

**Comfort measures**

Decrease external stimuli

Reduce interruptions and eliminate odors

**Postoperative Phase**

**Later postoperative phase (*continued*)**

**Assessment of pain**

Subjective: The patient's description of discomfort (scale of 1 to 10)

Objective: Detectable signs of pain (restlessness, moaning, grimacing, diaphoresis, vital sign changes, pallor, guarding area of pain)

**TENS unit**

Applies electrical impulses to the nerve endings and blocks transmission of pain signals

**Postoperative Phase**

**Later postoperative phase (*continued*)**

**Urinary function**

Assess every 2 hours for distention

Report no urine output after 8 hours

Measures to promote urination:

Running water

Hands in warm water

Ambulate to bathroom

Males stand to void

Accurate intake and output

30 mL per hour minimum

**Postoperative Phase**

**Later postoperative phase (*continued*)**

**Venous stasis**

Normal flow of blood through the vessels is slowed

**Assessment**

Palpate pedal pulses and note skin color and temperature

Assess for edema, aching, cramping in the calf

Homans' sign

- Prevention of venous stasis
  - Leg exercises every 2 hours
  - Antiembolism stockings (TEDS)
  - Sequential compression devices (SCD)

**Postoperative Phase**

**Later postoperative phase (*continued*)**

**Activity**

- Effects of early postoperative ambulation
  - Increased circulation, rate and depth of breathing, urination, metabolism, peristalsis

**Assessment**

- Level of alertness, cardiovascular and motor status

**Nursing interventions**

- Encourage muscle-strengthening exercises
- Dangling
- Two people to assist with ambulation

**Postoperative Phase**

**Gastrointestinal status**

- 3 to 4 days for bowel activity to return

**Assess bowel sounds**

**Potential complications**

**Paralytic ileus**

- A decrease or absence of peristalsis

**Management**

**Postoperative Phase**

**Gastrointestinal status (*continued*)**

**Constipation**

- 2 to 3 days after solid foods are started, patient should have stool

- Suppository or tap water enema

**Ambulation**

**Singultus (hiccup)**

- Involuntary contraction of the diaphragm followed by rapid closure of the glottis

- Irritation of the phrenic nerve

- Causes could be abdominal distention or internal bleeding

**Postoperative Phase**

**Fluids and electrolytes**

**Fluid loss during surgery**

**Blood**

- Insensible (lungs and skin)

**Sodium and potassium depletion**

**Blood loss**

- Body fluid loss (vomiting, NG tube, etc.)

- Catabolism (tissue breakdown from severe trauma or crush injuries)

**Postoperative Phase**

**Fluids and electrolytes (*continued*)**

**Nursing interventions**

- Monitor electrolyte values

- Monitor intake and output

- Maintain IV therapy

- Assess IV for patency and rate, erythema, edema, heat, and pain

When oral fluids are ordered, encourage small amounts frequently, encourage 2,000 to 2,400 mL per 24 hours, avoid iced and carbonated beverages

Use antiemetics as ordered, if needed

#### **Nursing Process**

##### **Assessment**

History

Physical condition

Risk factors

Emotional status

Preoperative diagnostic data

##### **Nursing Process**

##### **Nursing diagnoses**

Airway clearance, ineffective

Body temperature, risk for imbalanced

Breathing pattern, ineffective

Communication, impaired verbal

Coping, ineffective

Fluid volume, risk for deficient

Grieving, anticipatory

Infection, risk for

Mobility, impaired physical

Oral mucous membrane, impaired

Self-care deficit

Skin integrity, risk for impaired

##### **Nursing Process**

##### **Planning**

Begins before surgery and follows through the postoperative period

Include the patient in planning

##### **Implementation**

Nursing interventions before and after surgery physically and psychologically prepare the patient for the surgical procedure.

##### **Evaluation**

The effectiveness of the plan of care is evaluated by the nurse

##### **Nursing Process**

##### **Discharge: Providing general information**

Care of wound site

Action and possible side effects of any medications; when and how to take them

Activities allowed and prohibited

Dietary restrictions and modifications

Symptoms to be reported

Where and when to return for follow-up care

Answers to any individual questions or concerns

#### **Figure 42-18**