

# PERIOPERATIVE CARE

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# Perioperative Care

## Learning Objectives

Define key terms.

Define the three phases of perioperative care.

Describe the methods of classifying a surgical procedure and give an example of each one.

Describe the different types of anesthesia.



# Perioperative Care

## Learning Objectives-continued

Utilise the nursing process in the care of a surgical patient.

Describe the nursing intervention for each of the three phases.

Identify factors and health conditions that may influence or alter the well-being of an surgical patient.



## Perioperative Care (contd)

- n Describe the nurses' legal responsibilities in the preparing the patient for surgery.
- n Identify the appropriate nursing care in assessing and monitoring for complications.
- n Utilize effective communication techniques in teaching client and family about surgery.



# Perioperative Care

## Case Study

Lula White keeps her appointment with the surgeon. She has experienced abdominal pain/ cramping and a heavy menstrual flow for over 2 years, resulting in weakness and chronic anemia. Ms. White has talked it over with her husband and they both agreed on her undergoing a total hysterectomy. Ms. White is 48 years, married for 21 years with 4 children. The oldest child graduated from high school this year and the youngest is in the 6th grade.

At today's office visit, the surgeon arranges for Ms. Hudson to have lab work drawn through the Outpatient Dept. Laboratory.

1. What lab work would be ordered pre-op and the purpose for the lab work? What other tests may be required prior to surgery?
2. Describe what information would you obtain in present and past health history.



# Perioperative Care

## Case Study - continued

- n 3. What kind of information should the doctor discuss with Ms. White prior to the surgical procedure?
- n 4. How would you classify this type of surgery?
- n Ms. White is mildly overweight. In the past history, she reports smoking for years but stopped 10 years ago. She denies drugs or other tobacco products. Ms. White took oral contraceptives about five years ago until she developed hypertension and blood clots in her lower leg. She remains on diazide and took coumadin 3-4 years ago in treatment of blood clot. What risk factors might you be concerned with?



# Perioperative Care

## Three Phases

n Preoperative

n Intraoperative

n Postoperative



# Perioperative Care

## Categories and Purposes

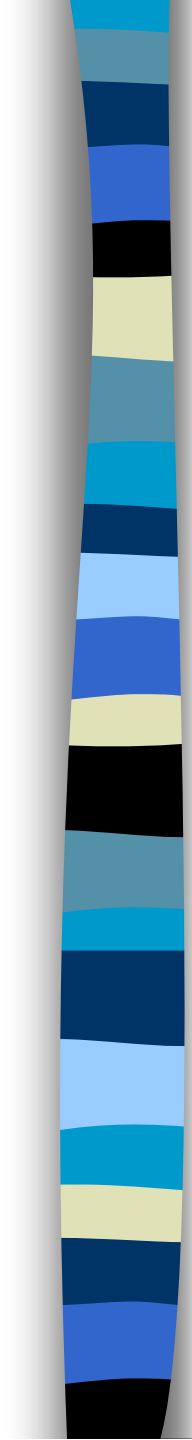
- n Reason/Purpose
  - Diagnostic, curative, restorative, palliative, cosmetic
- n Degree of Urgency
  - urgent, elective, optional
- n Degree of Risk
  - major, minor
- n Anatomic location
- n Extent of surgery- minimal, open, simple and radical



# Preoperative Phase- Assessment

## n Risk Factors

age, nutritional, health status, fluid and lytes imbalances, radiation, cardiopulmonary, chemotherapy, meds, family history, prior surgical experiences (positive/negative), type of surgery, location site



**Preoperative care** is  
the preparation and  
management of a  
patient prior to surgery.



# Preoperative Phase- Assessment

## n Nursing History

- past & present, meds, diet, allergies (latex), personal habits, occupation, finances, family support, knowledge of surgery, attitude

## n Physical Exam

## n Diagnostic Tests

- CBC, electrolytes, creatinine, urinalysis, x-ray exams, EKG, Blood Type, PTT, PT, Platelet
- Blood donations

## n Radiographic

## n Bloodless Surgery/Discharge



# Preoperative Care

- n Psychological Response
- n Informed Consent - Nurse witness
- n Mentally competent
- n If minor, a guardian, parent, or court order will sign permit; state will dictate age.
- n Sociological



# Nursing Process – Preoperative Care

## n Assessment

- History, Physical Exam, Lab/Radiology, Health Status, Risk Factors, Meds

## n Nursing Diagnosis

## n Planning

- Goal statement
- EOC (expected outcome criteria)



# Preoperative -Implementation

- n Informed Consent
- n Nutrition/fluids - IV
- n Elimination -enemas
- n Hygiene – skin scrub; remove nail polish, hair pins, hospital gown
- n Vital Signs
- n Height/ Weight
- n Special orders - (insert tubes, medications)
- n Promote Comfort - Anti-anxiety meds
- n Skin preparation



# Preoperative Care - Nursing Care

## **Pre-op Teaching** -

- leg and deep breathing exercises; ROM exercises
- Moving patient ; coughing and splinting

## **Monitor** -

- pt and diagnostic tests.
- TEDS, Elastic Wraps, Pneumatic Compression devices, early ambulation



# Preoperative - Implementation

- n **Day of Surgery** - complete pre-op checklist sheet in medical record, VS, skin prep removal of prosthetics, hair pins, dentures, bowel and bladder prep, TEDS, IV, NG Tube, ID band, and pre-op medications.



# Pharmacology

- n Purpose - facilitate effective anesthetics, minimize respiratory tract secretions and relax, reduce anxiety.
- n Types - Opiates, Anticholinergics, Barbiturates, Prophylactic antibiotics



# Perioperative Care Pharmacology

## **n Hazardous to Surgery**

- n Certain antibiotics
- n Anti-depressants
- n Phenothiazines
- n Diuretics
- n Steroids
- n Anticoagulants



# Preoperative - Evaluation

- n Evaluate goals and outcome criteria



# Intraoperative Care

- n From the holding room to the operating room and then to recovery room.
- n Implementation of anesthesia for analgesic, sedative, and muscle relaxant purposes as well as control Autonomic Nervous System.



# Intraoperative Care

- n Holding area - enter prior to OR; nurse continues to prepare patient(insert foley or start IV)
- n Nurse assist in transfer to and from OR, maintain proper body alignment.



# Intraoperative Care Staff

- n Surgeon, surgical assistant
  - Surgical scrub, gowning, surgical asepsis
  
- n Anesthesia
  - Anesthesiologist, CRNA



# Periopereative Nursing Staff

- n Holding Area Nurse
- n Circulating Nurse
- n Scrub Nurse/Surgical Technologist
- n Specialist Nurse



# Perioperative Care

## Preoperative -Anesthesia

n **Types**

- General
- Regional
- Local



# Intraoperative Care

- n Common General Anesthetics
  - n Inhaled General Anesthetics
    - Nitrous oxide, cyclopropane
  - n Inhaled liquid
    - halothane, enflurane, isoflurane
  - n Intravenous Anesthetic
    - Pentothal (thiopental)



# Nursing Concerns-Preop

- n Patent Airway
- n Therapeutic Response to Anesthesia
- n Proper Positioning
- n Maintain Surgical Asepsis



# Intraoperative Care-Complication

n Hypoventilation

n Cardiac dysrhythmia

n Oral Trauma -  
endotracheal  
intubation

n Hypothermia

n Hypotension

n Peripheral nerve  
damage

n *Malignant  
hyperthermia*



# Intraoperative - Complications 2

- n Malignant hyperthermia - due to abnormal and excessive intracellular collection of  $\text{Ca}^+$  resulting in hypermetabolism and increased muscle contraction.
- n Signs and Symptoms - high fever, tachycardia, muscle rigidity, heart failure, pseudotetany, and CNS damage.



# Adjunctive Anesthetic Agents

n Opioid analgesic

- Alfenta
- Demerol and Morphine

n Benzodiazepine

- Valium, Versed

n Anticholinergic

- Atropine, scopolamine

n Sedative-hypnotic

- Atarax, Vistaril, Seconal, Nembutal



# Intraoperative-Drug Interaction

- n Antihypertensives- hypotension
- n Beta-Blockers- myocardium decreased
- n Tetracycline--renal toxicity
- n Enflurane - liver disease lead to toxicity



# Anesthesia

## n Local/Regional

- Epidural
- Infiltration
- Nerve Block
- Spinal
- Topical

## n Anesthetic agents

- Xylocaine, Novocain, carbocaine

## n Topical

- Dermoplast (benzocaine)
- cocaine
- ethyl chloride



# Anesthesia

- n Geriatric concerns
- n Address safety issues - sensory decline
- n Hepatic, cardiac respiratory and renal decline
- n Assess for preexisting problems such as cardiac, renal, hepatic, or respiratory.

# ANESTHESIA

**R**espiratory paralysis

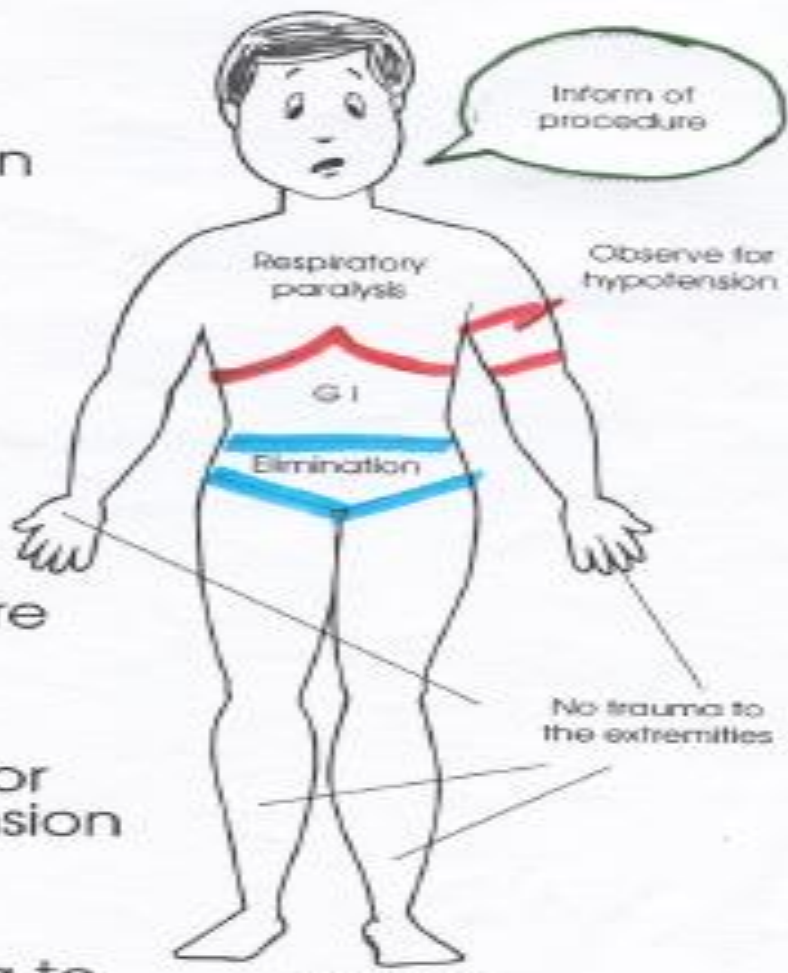
**E**limination

**G**I

**I**nform of procedure

**O**bserve for hypotension

**N**o trauma to the extremities





# Intraoperative Care

- n Treatment of Malignant Hyperthermia
  - discontinue inhalent anesthetic, Give Dantrium, oxygen, dextrose 50%, diuretic, antiarrhythmics, sodium bicarbonate, and hypothermic measures-cooling blanket, iced IV saline or iced saline lavage of stomach, bladder, rectum.



# Postoperative Care

## Learning Objectives/Outcomes

- n Define the time line for the postoperative period.
- n Describe nursing care during the PACU.
- n Describe nursing care during the post operative period.
- n Identify proper technique in care of surgical wounds.
- n State complications in wound healing.



# Immediate Anesthetic Care

- n Respiratory Status - patent airway
- n Cardiovascular - regular, strong heart rate and stable BP (VS); peripheral pulses; Vital Signs
- n Neurological – level of consciousness; orientation, sensation
- n Fluid and Electrolyte, Acid Base Balance



# Post – op Drug Therapy

## n Pain

- Pain Assessment
- Opioids in IV small doses
- Hypotension, respiratory ↓
- ↓ GI motility
- GI bleed (Motrin)
- Narcan/Romazicon

## n Complementary and Alternative Therapies

- Positioning, Massage, relaxation and diversion, guided imagery, biofeedback, music, etc.



# Post – Operative Care Nutrition

- n Clear Liquids
  - n Full Liquids
    - n Soft
      - n Regular



# Nursing Care Post Op

## Physical Assessment (continued)

- n Renal Function
- n Gastrointestinal
- n Dressings
- n Pain
- n Thermoregulation



# Elderly Care in Postop

## n Respiratory System

- diminished airway reflexes and cough

## n Cardiovascular

- myocardium weakness

## n Hypothermia

- less subcutaneous tissue, muscle, slow metabolic rate

## n Pain

- more intense, confusion, impaired circulation and sensory



# Complications in Postop

- n Hypotension
- n Dysrhythmia
- n Venous Thrombosis
- n Pulmonary Embolism
- n Hiccoughs
- n Abdominal distention - paralytic ileus
- n Immobility with skin integrity
- n Urinary retention
- n Urinary tract infection
- n Wound infection, dehiscence, hemorrhage, evisceration,



# Postop Care

## n Psychological

- Anxiety
- Altered body image
- Finances, Family responsibility
- Future changes



# Immediate Anesthetic Care

- n Airway/breathing ex.
- n VS, Pulses
- n IV
- n ABG's
- n Pulse oximetry
- n Pupil Respond
- n Level of conscious
- n Safety
- n Dressings
- n Drains/Tubes
- n I&O; renal function
- n Medications
- n Laboratory work
- n Hemodynamics
- n Position/ROM
- n Comfort



# Discharge Plans

- n Patient/Family Education and Psychosocial Support is throughout.
  - Return MD Visit
  - Dressing Care and Comfort
  - Optimum respiratory, circulatory function, diet, meds (antibiotics, analgesic)
  - Adequate hydration and body temperature
  - Adequate renal function, safety in ADL



# Postoperative Care

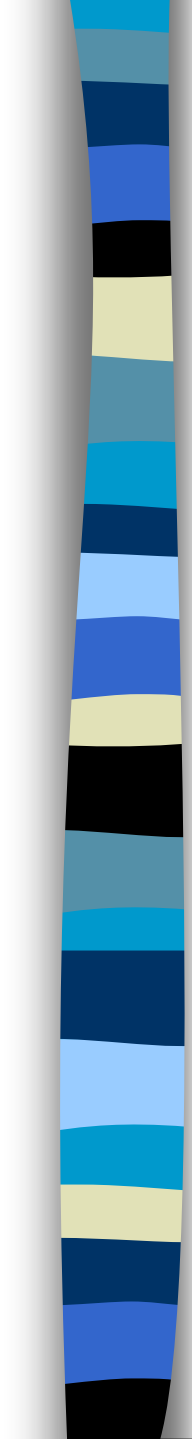
## n Postoperative Care

- Same care as immediate anesthetic care
- Decrease frequency of vital signs to every 4 hours, IV's will be discontinued in time, increase ADL, decrease in breathing exercises and breathing treatments, advance diet.
- Recovery Period - 4 to 6 weeks



# Summary

- n Specific Nursing Duties for each phase:
  - Preoperative, Intraoperative, Postoperative
- n Throughout Perioperative Care, the nurse will always:
  - Monitor patient's response to therapeutic regime, prevent complications, patient education and promote optimum well-being



Adopted from  
Shelton State Community College  
J. WILLIAMS, 2006

THANK YOU

**Motec**  
**Life-UK**

