Chapter 4

Principles of Drug Administration

Use the Nursing Process in Drug Administration

- Assess client
- Plan drug administration
- Implement drug administration
- Evaluate effects

Nurse Responsibilities

- Know actions and side effects of drug
- Prepare drug safely
- Administer drug safely
- Evaluate client’s response

Five Rights of Drug Administration

- Right client
- Right medication
- Right dose
- Right route of administration
- Right time of delivery

Increase Client’s Drug Compliance

- Client should be given full information
  - Name of drug
  - Reason for drug
  - Expected drug actions

Increase Client’s Drug Compliance (continued)

- Side effects
- Potential interactions with other substances
Drug-Administration Abbreviations

- Do not use these abbreviations: qd, qhs, qod

Special Drug-Administration Abbreviations

- STAT
- ASAP
- PRN

Three Systems of Measurement Used in Pharmacology

- Metric—most common
- Apothecary—oldest
- Household

Nurse Must Be Able to Convert Among All Three Systems

- Metric, Apothecary, and Household

Approximate Measurement Equivalents

Common Protocols and Techniques for All Routes of Administration

- Review medication order, and check for allergies
- Wash hands and apply gloves, if indicated.
- Identify client
- Inform client
- Position client
- Document

Enteral Route Includes Drugs Given

- By mouth: tablets, capsules, sublingual and buccal
- Via nasogastric tube or gastrostomy tube
**Administration Guidelines by Mouth**

- Assess the client’s level of consciousness and ability to follow instructions
- Remain with the client until all medication is taken
- Offer a glass of water, if the client desires

**Administration Guidelines by Nasogastric and Gastrostomy**

- Administer liquid forms when possible
- Assess and verify tube placement
- Keep the head of the bed elevated for 1 hour
- Flush tubing after medication administration

**Topical Drugs Are Applied to Skin or Mucous Membranes**

- Applications—dermatologic preparations, instillations and irrigations, inhalations
  - Eye and ear
  - Nose and respiratory tract
  - Urinary tract
  - Vaginal
  - Rectal

**Administration Guidelines by Topical Route**

- Transdermal: rotate sites to prevent skin irritation
- Eye (ophthalmic): client supine with head tilted back
- Ear (otic): avoid placing drops directly on tympanic membrane
- Nasal and respiratory: instruct the client to open and breathe through mouth

**Administration Guidelines by Topical Route**

- Vaginal: client in supine position with knees bent and separated
- Rectal: client on left side

**Parenteral Drugs Are Administered via Needle**

- Types: intradermal, subcutaneous, intramuscular, intravenous
- Require aseptic technique
- Nurse must have knowledge of anatomical locations
- Nurse must know correct equipment to use
- Nurse must know procedure for disposing of hazardous equipment
**Parenteral Locations**

- Intradermal: dermal layer of skin
- Subcutaneous: deepest layers of the skin
- Intramuscular: specific muscles
- Intravenous: directly into bloodstream

**Enteral Drug Administration**

**Advantages**

- Convenient and least costly
- Safe
- Fast absorption
- Sublingual: rapid onset

**Disadvantages**

- Difficulty swallowing by some clients
- May be inactivated if tablets or capsules crushed or opened
- Can irritate mucosa
- Can be inactivated by enzymes
- Depends on client gastrointestinal motility and mobility
- Contraindicated if client unconscious

**Topical Drug Administration**

**Advantages**

- Fewer side effects
- Absorbed slowly
- Rectal safe for comatose clients

**Disadvantages**

- Unless ordered, not applied to compromised skin
- Rectal may be difficult to retain
- Slow absorption

**Parenteral Drug Administration**

**Advantages**

- Rapidly absorbed
- Rapid onset of action
- Not inactivated by enzymes or metabolized in liver
Parenteral Drug Administration
Disadvantages

- Possibility of introduction of pathogenic microbes
- Once injected, cannot be retrieved