

**FEUER NURSING REVIEW**

**PHARMACOLOGY  
STUDY BOOK**

**NCLEX®-RN/LPN**  
**2023 EDITION**

# Feuer NCLEX RN/LPN

## PHARMACOLOGY REVIEW

*Presented by :*  
Professor Elizabeth A Berro MA RN PNP CHSE

**1**

## GOAL

**REVIEW AND APPLY KNOWLEDGE REGARDING  
DRUG THERAPY**

**2**

**1**

## **Feuer Nursing Review: Pharmacology**

### **Review Topics**

1. Nurses Role in Medication Administration
2. Basic Pharmacology
3. Common Drugs
4. IV Therapy
5. Calculations

**3**

## **Nurses Role in Medication Administration**

**4**

### The Nurse's Role in Medication Administration

- ♦ How does the drug work? - mechanism of action
- ♦ Therapeutic Response?- Purpose
- ♦ What effect and when?- Efficacy
- ♦ Adverse Effects?- Harmful drug responses
  - ♦ Common Side Effects?- Expected responses
  - ♦ Toxic Side Effects?- Emergency responses
  - ♦ Allergic Responses?- Recognition and Response
  - ♦ Idiosyncratic Reactions?- Recognition and Response

5

### Stevens Johnson Syndrome

NSAIDS, Allopurinol, Phenytoin, Carbamazepine,  
barbiturates, anticonvulsants, and sulfa antibiotics



6

## Feuer Nursing Review: Pharmacology

### THE 7 RIGHTS

- ♦ Right client - Two methods of ID
- ♦ Right drug - (3 times- retrieve, take med, return) 16% of errors
- ♦ Right dose - 41% of errors
- ♦ Right documentation
- ♦ Right route - 16% of errors
- ♦ Right time
- ♦ Right to refuse treatment - (client's Bill of Rights)

7

### THE JOINT COMMISSION'S "DO NOT USE" LIST: BRIEF REVIEW

| Do Not Use                                              | Potential Problem                                                | Use Instead                                           |
|---------------------------------------------------------|------------------------------------------------------------------|-------------------------------------------------------|
| U, u (unit)                                             | Mistaken for "0" (zero), the number "4" (four) or "cc"           | Write "unit"                                          |
| IU (International Unit)                                 | Mistaken for IV (intravenous) or the number 10 (ten)             | Write "International Unit"                            |
| Q.D., QD, q.d., qd (daily)                              | Mistaken for each other                                          | Write "daily"                                         |
| Q.O.D., QOD, q.o.d, qod (every other day)               | Period after the Q mistaken for "I" and the "O" mistaken for "I" | Write "every other day"                               |
| Trailing zero (X.0 mg)*<br>Lack of leading zero (.X mg) | Decimal point is missed                                          | Write X mg<br>Write 0.X mg                            |
| MS                                                      | Can mean morphine sulfate or magnesium sulfate                   | Write "morphine sulfate"<br>Write "magnesium sulfate" |
| MSO <sub>4</sub> and MgSO <sub>4</sub>                  | Confused for one another                                         |                                                       |

8

## Feuer Nursing Review: Pharmacology

### REVIEW QUESTION

A client presents to an urgent care center.

Vital signs include respiratory rate 15.

heart rate 68, blood pressure -126/74.

The client is complaining of hives and pruritus after taking an antibiotic.

The spouse states that the client does not have any allergies.

Which action should be taken first by the nurse?

1. Obtain a list of recent medications used.
2. Start an IV and administer oxygen.
3. Prepare to administer epinephrine.
4. Obtain equipment needed for allergy testing.

9

### REVIEW QUESTION

A client complains of dry mouth after starting a new medication that has anticholinergic side effects. Which action by the nurse is most appropriate?

1. Instruct the client to stop the medication and notify their primary care provider.
2. Assess the client's serum drug level.
3. Assess the client's skin turgor.
4. Instruct the client to suck on hard candy.

10

## Feuer Nursing Review: Pharmacology

### REVIEW QUESTION

A nurse is caring for an adult client with Congestive Heart Failure. Which of the following findings would indicate a therapeutic response from a dosage of intravenous furosemide?

1. Change from atrial fibrillation to NSR, 6 hours after administration.
2. Serum potassium decreased to 3.2 mEq/L 4 hours after administration.
3. Urine specific gravity 1.040, 2 hours after administration.
4. Respiratory rate decreased to 18, 30 minutes after administration.

11

### REVIEW QUESTION

A nurse is caring for a client on a medication regimen including Rifampin. The client reports a reddish discoloration of his urine. The nurse's best response is which of the following?

1. Increase your fluid intake to at least 32 ounces of water per day.
2. Obtain a urine analysis, culture and sensitivity.
3. Inform the client that other body fluids may also become discolored.
4. Discontinue the medication and assess the urine for clots or mucous plugs

12

# Basic Pharmacology

**13**

# Basic Pharmacology

What's the Goal of Drug Therapy?

**14**



## **Brief Review of Pharmacokinetics “How Drugs Move”**

- ✦ Absorption - administration site to blood stream
- ✦ Distribution - moves to site of action
- ✦ Metabolism - detoxification of medication
- ✦ Excretion - elimination from the body

**15**

## **Pharmacokinetics**

- ✦ Critical Concentration - The amount of a drug that is needed to cause a therapeutic effect
- ✦ Loading Dose - A higher dose than that usually used for treatment
- ✦ Dynamic Equilibrium - The actual concentration that a drug reaches in the body
- ✦ Peak/ Trough - Peak Highest blood level. If too high?
- ✦ Trough - Lowest blood level. If too low?

**16**

## Distribution

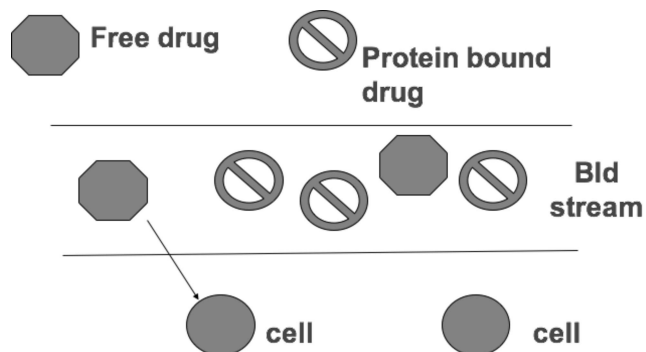
- ✦ Moving drug from the bloodstream to the tissues
- ✦ Depends on blood flow, protein binding, solubility

T/F: A malnourished client receiving a highly protein bound drug has an increased risk of toxicity.

17

## Protein Bound Drugs

- ✦ Loading Dose
- ✦ Drug Interactions



Coumadin, Dilantin, propranolol, rifampin, amitriptyline

18