ORIGINAL NGN STUDY WORKBOOK | LAY-FLAT COIL

Next-Gen NCLEX Pharmacology Suffixes, Antidotes & High-Alert Mechanisms

Drug Stem Recognition, Black-Box Warnings, Lab Monitoring & NGN Clinical Judgment Case Drills

Imprint: STILL HUMAN NURSING PRESS
Format: 8.5 x 11 in. 360-Degree Lay-Flat Coil Study & Field Workbook
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Educational & Examination Notice: Independent nursing pharmacology study guide designed for NCLEX-RN/PN preparation. Not clinical advice and not affiliated with NCSBN. Always consult current FDA drug labeling, Davis/Lexicomp monographs, and hospital prescribing policies before administering medications.

High-Yield Antidotes & Critical Lab Hold Thresholds

Topic / Rule	Specification / Threshold	Reference
Warfarin (Coumadin)	Vitamin K (Phytonadione); therapeutic INR typically 2.0-3.0	Hold/Call if INR > 4.0 or bleeding
Heparin (Unfractionated)	Protamine Sulfate; monitor aPTT (1.5-2.5x control)	Monitor platelets for HIT
Opioids (Morphine/Fentanyl)	Naloxone (Narcan); short half-life requires repeat monitoring	Hold if RR < 12/min
Acetaminophen	Acetylcysteine (Mucomyst); monitor AST/ALT	Toxic > 4 g/day healthy adult
Digoxin	Digoxin Immune Fab; therapeutic 0.5-2.0 ng/mL	Hold if apical HR < 60 bpm; watch K+
Magnesium Sulfate	Calcium Gluconate; monitor DTRs, RR, urine output	Hold if absent DTRs or RR < 12

How to Use This Lay-Flat Workbook:

1. Fold the plastic coil 360 degrees flat on your desk, kneeboard, or clinical station.
2. Work each Worked Scenario before reading the step-by-step solution.
3. Complete the Module Drill Questions without peeking at the Answer Key & Distractor Rationales.
4. Log missed topics in the Self-Audit Grid at the end of each module and drill them again 48 hours later.

Module 1: Cardiovascular & Anticoagulant Drug Stems (-pril, -sartan, -olol, -dipine, -statin)

Module 1 focuses on cardiovascular pharmacology suffixes commonly used in drug classification, including ACE inhibitors (-pril), ARBs (-sartan), beta-blockers (-olol), calcium channel blockers (-dipine), and statins (-statin). These drugs target hypertension and hyperlipidemia through distinct mechanisms - ACE inhibitors inhibit angiotensin conversion, ARBs block angiotensin receptors, beta-blockers reduce sympathetic activity, calcium channel blockers relax vascular smooth muscle, and statins inhibit cholesterol synthesis.

Learning Objectives

- Differentiate adverse effects between ACE inhibitors and ARBs.
- Identify contraindications and precautions related to beta-blockers.
- Recognize the reversal agents and antidotes for anticoagulants.
- Apply knowledge of drug suffixes to predict mechanisms and adverse effects.

High-Yield Reference Matrix

Concept / Rule	Threshold / Value	Practical Application
ACE inhibitors cause dry cough and angioedema	Common adverse effects	Avoid ACE inhibitors in patients with history of angioedema
ARBs spare cough/angioedema risk	Lower incidence	Preferred alternative when ACE inhibitors are contraindicated
Beta-blockers cause bronchospasm	Contraindicated in asthma/COPD	Hold beta-blockers pre-procedure
Calcium channel blockers cause hypotension	Monitor BP	Use cautiously in hypotensive patients
Statins lower LDL cholesterol	LDL target <100 mg/dL	Monitor liver enzymes
Anticoagulant reversal agents	Protamine sulfate for heparin	Idarucizumab for dabigatran

Worked Scenarios & Field Calculations

Module 1 Practice Drill Questions

1. Which adverse effect is commonly associated with ACE inhibitors?

A. Dry cough
B. Bronchospasm
C. Hypoglycemia
D. Constipation

2. Which drug suffix identifies calcium channel blockers?

A. -pril
B. -sartan
C. -dipine
D. -statin

3. Which reversal agent is used for dabigatran?

A. Protamine sulfate
B. Idarucizumab
C. Vitamin K
D. FFP

4. Which adverse effect is associated with beta-blockers?

A. Hypotension
B. Bronchospasm
C. Hyperglycemia
D. Diarrhea

5. Which drug class lowers LDL cholesterol?

A. ACE inhibitors
B. ARBs
C. Statins
D. Beta-blockers

6. Which suffix identifies beta-blockers?

A. -pril
B. -olol
C. -dipine
D. -statin

Module 3: CNS, Psychiatric, Pain & Narrow Therapeutic Index Medications

Module 3 focuses on medications targeting the central nervous system (CNS), psychiatric disorders, pain management, and drugs with narrow therapeutic indices requiring close monitoring. Lithium therapy requires maintaining serum levels between 0.6-1.2 mEq/L, balancing sodium intake due to its osmotic effect on lithium excretion. Selective serotonin reuptake inhibitors (SSRIs) carry risks of serotonin syndrome, especially when combined with other serotonergic agents. Monoamine oxidase inhibitors (MAOIs) require dietary restrictions to avoid tyramine-induced hypertensive crisis. Phenytoin and valproate toxicity are dose-dependent and monitored via serum levels, while vancomycin trough levels ensure therapeutic efficacy and prevent nephrotoxicity.

Learning Objectives

- Understand therapeutic ranges and monitoring requirements for lithium therapy.
- Recognize signs and management strategies for serotonin syndrome.
- Identify dietary restrictions associated with MAOI therapy.
- Apply principles of toxicity monitoring for phenytoin, valproate, and vancomycin.

High-Yield Reference Matrix

Concept / Rule	Threshold / Value	Practical Application
Lithium therapeutic range	0.6-1.2 mEq/L	Monitor serum levels regularly
Serotonin syndrome symptoms	Agitation, hyperthermia, muscle rigidity	Discontinue serotonergic agents
MAOI dietary restriction	Avoid tyramine-rich foods	Prevent hypertensive crisis
Phenytoin toxicity signs	> 20 mcg/mL	Monitor neurological symptoms
Vancomycin trough level	> 10-20 mcg/mL	Ensure efficacy against MRSA
Valproate toxicity signs	> 100 mcg/mL	Monitor for CNS depression

Worked Scenarios & Field Calculations

13. Which drug requires monitoring of creatinine clearance?

A. Vancomycin
B. Acetaminophen
C. Lisinopril
D. Metformin

14. Which drug suffix refers to antihypertensive agents?

A. -pril
B. -mab
C. -tid
D. Both A and C

15. What antidote treats iron overdose?

A. Naloxone
B. Flumazenil
C. Acetylcysteine
D. Deferoxamine

16. Which drug suffix refers to antidiabetic agents?

A. -mide
B. -pril
C. -tid
D. Both A and C

17. Which drug requires monitoring of liver enzymes?

A. Simvastatin
B. Lisinopril
C. Furosemide
D. Metformin

18. Which drug suffix refers to antihistamines?

A. -mab
B. -tid
C. -mide
D. None

ADDITIONAL WORKSPACE & CLASSROOM NOTES