Pharmacological Therapies

National Council Licensure Examination for Practical Nurses (NCLEX-PN)

10 to 16% of the exam · 16 activity statements · 2026 NCLEX-PN Test Plan

Pharmacological Therapies covers how the practical nurse checks, prepares, gives, calculates and evaluates medications, intravenous fluids and blood products, and how medications are counted, stored and taught. NCLEX-PN items test whether you apply the rights of medication administration, catch an unsafe prescription, gather the right data first, calculate accurately, recognize a dangerous response early and know which routes and tasks are the LPN/VN's and which belong to the RN.

You should be able to: After this guide you should be able to give medications safely as a practical nurse by the routes within your scope, calculate doses and flow rates accurately, gather and act on the right data before and after a dose, and know what to report to the RN or provider.

Every activity statement: the key point and the trap

1. Apply the medication rights each time you give a drug

The rights of medication administration: right client, drug, dose, route, time and documentation, plus right reason, right response and the client's right to refuse.

Trap: Accepting a client's yes to "Are you Mr. Lee?" or a room number as identification instead of two identifiers checked against the record.

2. Keep the medication list or record accurate and reconciled, including prescriptions, herbals and over-the-counter products

Medication reconciliation compares what the client was taking before with what is prescribed now, at admission, transfer and discharge, to catch omissions, duplications and interactions.

Trap: Writing down only prescription medications and leaving out herbal and over-the-counter products the client takes.

3. Monitor a blood product transfusion

Before a transfusion, confirm informed consent, a working large-bore IV, a current type and crossmatch, baseline vital signs and that the product is checked at the bedside by two qualified staff against the client's identifiers.

Trap: Slowing the transfusion and continuing to watch when reaction signs appear, instead of stopping it at once and keeping the line open with saline.

4. Work out and watch the IV flow rate

Flow rate in mL/h: divide the total volume (mL) by the total time (hours). For example 1,000 mL over 8 hours is 125 mL/h.

Trap: Opening the roller clamp wide to catch up an infusion that has fallen behind, which can overload the client.

5. Give medications by mouth

Give oral medication with the client sitting up; offer water unless restricted, and stay until it is swallowed.

Trap: Crushing an extended-release tablet to put in applesauce, which releases the whole dose at once.

6. Give medications through gastrointestinal tubes

Confirm tube placement and, where used, gastric residual before giving medication through a gastrointestinal tube, and keep the head of the bed raised.

Trap: Mixing several crushed tablets together and pushing them down the tube without flushes, which clogs the tube and makes dosing unreliable.

7. Give injections by the intramuscular, subcutaneous or intradermal route

Subcutaneous: a 45 to 90 degree angle, a 25 to 30 gauge short needle, small volumes (usually up to 1 mL); sites include the abdomen, upper outer arm and thigh, rotated to prevent lipohypertrophy.

Trap: Drawing up cloudy NPH before clear regular insulin, which can contaminate the regular vial with the longer-acting insulin.

8. Give medications into the ear, eye or nose, by inhalation, rectally, vaginally or on the skin

Eye drops: pull down the lower lid, drop into the conjunctival sac (not on the cornea), then press the inner corner for about a minute to limit systemic absorption; wait 5 minutes between different drops.

Trap: Dropping eye medication straight onto the cornea or skipping the mouth rinse after an inhaled corticosteroid.

9. Do controlled substance counts and report any mismatch

Count controlled substances with a second qualified nurse at shift change and when policy requires, matching the amount on hand to the record.

Trap: Changing the count record to make it match instead of reporting and investigating the discrepancy.

10. Look after pain management devices such as epidurals, PCA pumps and nerve block catheters

Patient-controlled analgesia (PCA) lets the client press a button for a set dose with a lockout interval; only the client presses the button, never family or staff.

Trap: Pressing the PCA button for a sleeping client to keep the pain controlled, which can cause a dangerous overdose.

11. Give secondary (piggyback) IV medications

An IV piggyback (secondary) is a small-volume infusion of a medication that runs into an existing primary line, often over 30 to 60 minutes.

Trap: Hanging the piggyback lower than the primary bag, so it does not infuse as intended, or ignoring compatibility with the running fluid.

12. Gather the data needed before giving a medication, such as contraindications and other drugs taken

Before giving a medication, gather the data the drug requires: allergies, current medications, the reason for the drug and the relevant vital signs or laboratory values.

Trap: Giving a rate-control or blood pressure medication without checking the pulse and blood pressure the prescription set as hold parameters.

13. Judge how a client responds to a drug, including adverse reactions, interactions, intended effects and critical lab values

After a medication, watch for the intended effect (for example a lower blood pressure, relief of pain, a fall in blood glucose) and document whether it worked.

Trap: Treating nausea and visual changes in a client on digoxin as unrelated complaints instead of possible toxicity.

14. Reinforce medication teaching with the client

Reinforce the teaching the RN or provider started: the drug's name, purpose, how and when to take it, and what to do about a missed dose.

Trap: Telling a client it is fine to stop an antibiotic on her own once symptoms improve, instead of taking it exactly as prescribed.

15. Keep medications safe through proper storage, expiry checks and compatibility checks

Store medications as labeled: some need refrigeration, some protection from light, and some are stable only for a set time once opened or reconstituted.

Trap: Giving a medication from an unlabeled syringe or cup because you believe you remember what it is.

16. Do the math needed to give medications

Set up the calculation so units cancel (dimensional analysis): desired dose over available dose, times the amount, leaves the unit you want.

Trap: Using the weight in pounds instead of kilograms in a weight-based dose, which more than doubles the calculated amount.

Key terms

Rights of medication administration: Right client, drug, dose, route, time and documentation, plus right reason, right response and the right to refuse.

Medication reconciliation: Comparing a client's prior medications with those prescribed now to catch omissions, duplications and interactions.

High-alert medication: A drug that can cause serious harm when given in error, such as insulin, heparin, opioids and potassium chloride.

Drop factor: The number of drops per mL a gravity tubing delivers, such as 10, 15, 20 or 60 gtt/mL.

Dimensional analysis: A calculation method that writes units as fractions so unwanted units cancel and the wanted unit remains.

Z-track method: An intramuscular technique that pulls the skin aside before injection so an irritating drug does not track back out.

Independent double check: Two nurses each verify a medication and its calculation separately, then compare results.

Acute hemolytic reaction: Destruction of transfused red cells, usually from ABO incompatibility, with fever, back pain, hypotension and dark urine.

PCA: Patient-controlled analgesia: a pump the client activates for a set dose within a lockout interval; only the client presses the button.

Trough level: The lowest blood level of a drug, drawn just before the next dose.

Therapeutic range: The blood level that gives benefit without toxicity; narrow for drugs such as digoxin and lithium.

Infiltration: Leakage of a nonvesicant IV solution into the tissue around the catheter.

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