

DIANE'S NGN NCLEX 2026 VISUAL STUDY LIBRARY

Medication & Procedural *Safety* Master Reference

A consolidated, exam-ready reference covering medication administration, IV therapy, central lines, blood transfusion, TPN, oxygen, radiation safety, drug & chemotherapy toxicities, eye drugs, NG tubes, wound care, titrations, mealtime timing, conversions, and the criteria for activating the Rapid Response Team and Code Blue.

2026 NGN TEST PLAN

15 CLINICAL DOMAINS

LIGHT THEME • PRINT-READY

PAIRS WITH FLASHCARD DECK

SOURCE TRANSPARENCY

Sections 1–14 derived from Diane's uploaded reference notes (Blood Transfusion #1 & #2, Titration Medication, Radiation Therapy, Central Lines, IV Maintenance, Eye Drugs #2, Drug Toxicities, Oxygen Therapy, Cesium Implant, Chemotherapeutic Agent Toxicities, Conversions, Medication Administration, TPN, Medications and Mealtime, Wound Care, NG Tube).

SECTION 15 (RAPID RESPONSE & CODE BLUE CRITERIA)

Not present in uploaded notes. External sources: *Saunders Comprehensive Review for the NCLEX-RN (2026)*, *AHA 2020 Guidelines for CPR & ECC*, *Institute for Healthcare Improvement (IHI) Rapid Response Team criteria*, and *ATI RN Adult Medical-Surgical Nursing*.

Quick Navigation

1 Medication Administration	2 IV Therapy & Maintenance	3 Central Lines (CVC/PICC)
4 Blood Transfusion	5 TPN (Hyperalimentation)	6 Oxygen Therapy
7 Radiation Therapy	8 Drug Toxicities	9 Chemotherapy Toxicities
10 Eye Medications	11 NG Tubes & Wound Care	12 Titration Drips
13 Medications & Mealtime	14 Conversions	15 Rapid Response & Code Blue

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FOUNDATIONS • PHARMACOLOGY

Medication Administration

Client Identification

- ▶ Best method: **ID name–band + patient states name & DOB**
- ▶ Never administer drugs prepped by another nurse
- ▶ Drugs at bedside require a Provider's order
- ▶ Never recap needles

Liquid Preparations

- ▶ **Emulsion** = oil + H₂O
- ▶ Syrups/elixirs: caution in diabetics (sugars)
- ▶ Pour **opposite the label** (keep label clean)
- ▶ Measure liquid dose at **eye level**
- ▶ Drugs that stain teeth → give by **straw**

Parenteral Routes & Sites

ROUTE	ANGLE	NEEDLE / GAUGE	VOLUME / KEY SITE
IM (Adult)	90°	1–2 in, 21–22 g	Deltoid max 1 mL · sciatic nerve = #1 danger of dorsogluteal
IM (Child <3)	90°	Smaller gauge	Vastus lateralis preferred; max 2 mL/site; dorsogluteal NOT used (muscle underdeveloped)
SQ	45° (boards) / 90° short insulin needles	5/8 in, 25 g	Abdomen, upper arm, thigh
ID (intra-dermal)	5–15°	Tuberculin syringe	Inner forearm, upper back — skin testing
IV (blood)	—	18 gauge	Large vein, lower nondominant arm

Z-Track Technique

- ▶ Use for **irritating or staining** meds (e.g., iron)
- ▶ **Change the needle** before injecting (prevents tracking through skin)
- ▶ Pull skin **laterally**; inject; hold 10 seconds before releasing

Onset vs. Duration

- ▶ Oral: **slower onset, longer duration** than IM
- ▶ Parenteral acts outside the GI tract (T)
- ▶ If blood on aspiration: remove, apply pressure, discard, redraw fresh

Special Routes — Position & Technique

Eye Drops

Ear Drops

Nose / Vaginal / Rectal

- ▶ Drop into **lower conjunctival sac**, NOT cornea
- ▶ Dropper ½ inch above eye
- ▶ Pressure on nasolacrimal sac × 10 sec → ↓ systemic absorption
- ▶ Irrigation flows **inner → outer canthus** ("I to O")

- ▶ Room temperature only (cold/hot → dizziness, N/V)
- ▶ Adult: pull pinna **UP and BACK**
- ▶ Child <3: pull **DOWN and BACK**
- ▶ Side-lying × 5 min after; dropper ½ in above canal

- ▶ Nose: supine × 5 min
- ▶ Vaginal: clean technique; void first; supine × 10 min
- ▶ Rectal: clean technique; **lubricate** water-soluble; insert 4 in adult / 2 in child; push against rectal wall; **side-lying × 5 min**
- ▶ Oil-based suppositories → refrigerate

"Rights" Right Patient · Right Drug · Right Dose · Right Route · Right Time · Right Documentation · Right Reason · Right Response · Right to Refuse

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PERIPHERAL ACCESS • FLUID THERAPY

IV Therapy & Maintenance

Insertion Essentials

- ▶ Wear **clean gloves** (body fluid exposure)
- ▶ Cleanse with **povidone-iodine**, NOT alcohol
- ▶ Best: **large veins of lower nondominant arm**

AVOID These Sites

- ▶ Veins of the back of the hand
- ▶ Legs
- ▶ Arm on side of **breast surgery**
- ▶ Limb with thrombophlebitis
- ▶ Arm with **dialysis fistula/shunt**

Flow Rates (Adult)

KVO

30–60 mL/hr

Keep vein open

Low Therapeutic

60–90 mL/hr

Moderate

100–150 mL/hr

High

175–250 mL/hr

>250 = emergency only, HCP monitored

Maintenance & Fluids

- ▶ Change IV & piggyback tubing **every 72 hr**
- ▶ **D5W** → best for tissue rehydration
- ▶ **NS (0.9%) or LR** → best for BP support

Complications — Recognition

- ▶ **INFILTRATION** Cool · Pale · Swollen · Hard · no blood return — "Ice"
- ▶ **PHLEBITIS** Warm · Red · Painful · streak — "Fire"



PRIORITY ACTION — ANY SUSPECTED COMPLICATION

Discontinue the IV immediately. Restart in a different extremity if possible. Document site, appearance, patient response.



VASCULAR ACCESS • CVC • PICC

Central Lines



#1 COMPLICATION OF CENTRAL LINES

INFECTION. Strict aseptic technique with every entry, dressing change, and tubing change. Sterile occlusive dressing only.

Maintenance

- ▶ Dressing changes: **QOD (every other day)**
- ▶ Dressing type: **sterile occlusive**
- ▶ Do **NOT** piggyback drugs into TPN lumen — use another lumen

Tubing Change & Air Embolism Prevention

- ▶ Teach patient to: **turn head away**, hold breath, perform **Valsalva** maneuver
- ▶ If line found accidentally open: position patient on **LEFT side** (traps air in right atrium, away from pulmonary artery)

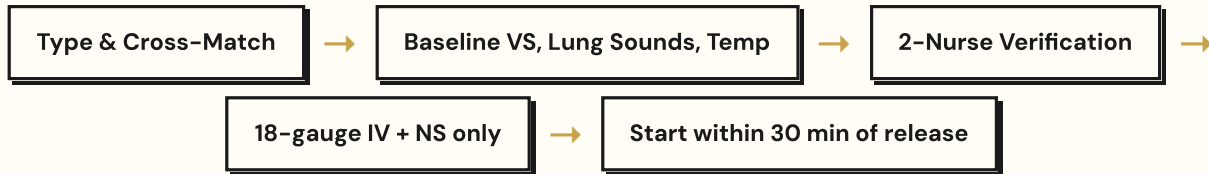
"Left + Trendelenburg" — Suspected air embolism = LEFT lateral with head down. This is your priority position.

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HEMATOLOGY • COMPATIBILITY • SAFETY

Blood Transfusion

Before Starting



Setup Rules

- ▶ Compatible solution: **0.9% NS only**
- ▶ Dextrose causes RBCs to **hemolyze/clump**
- ▶ Two nurses verify blood
- ▶ Blood on unit < **30 min** before starting
- ▶ If transfused via central line → **warm** the blood (prevents hypothermia, dysrhythmia)
- ▶ No meds in blood; no piggyback into blood line

Infusion Pacing

- ▶ Stay with patient × first **15 minutes**
- ▶ Rate first 15 min: ≤ **2 mL/min**
- ▶ Most life-threatening reactions occur in the first **50 mL**
- ▶ Max hang time: **4 hours** (bacterial growth risk)
- ▶ VS: pre-start, at 15 min, then q30–60 min until done

Three Reaction Types — Compare

REACTION	CAUSE	HALLMARK SYMPTOMS
Hemolytic EMERGENCY	Recipient immune system attacks donor RBCs (ABO mismatch)	Low back pain , fever, chills, hypotension, tachycardia, flushing, tachypnea, hemoglobinuria
Febrile	Sensitivity to donor WBCs	Chills, fever, headache, flushing, tachycardia, anxiety
Allergic	Reaction to donor plasma proteins	Hives (urticaria), itching, flushing; severe: dyspnea, bronchospasm, anxiety
Circulatory Overload	Volume > cardiovascular capacity	Cough, dyspnea, crackles , distended neck veins, tachycardia



REACTION SUSPECTED — PRIORITY ACTIONS (IN ORDER)

1. **STOP the transfusion immediately.**
2. Maintain IV line with **0.9% NS using new tubing.**
3. Notify the provider and the blood bank.
4. Send the blood bag and tubing back to blood bank.
5. Collect **blood AND urine samples** (check for hemoglobinuria).
6. Monitor VS frequently; treat symptoms per orders.

NCLEX TRAP — WRONG

"Slow the transfusion and monitor closely" when reaction symptoms appear.

CORRECT ACTION

STOP the transfusion. Keep the line open with NS via new tubing. Only *circulatory overload* is managed by slowing/diuretics — true reactions require full stop.

"Type, Tag, Two" Type & cross before · Tag verified by two nurses · Two mL/min for the first 15 minutes.



PARENTERAL NUTRITION · HYPERALIMENTATION

Total Parenteral Nutrition (TPN)

Composition & Access

- ▶ Aka **hyperalimentation**
- ▶ Contains: hypertonic glucose, amino acids, water, minerals, vitamins
- ▶ **Central line preferred.** Peripheral (PPN) only 48–72 hr max
- ▶ Lipids: piggyback into **port closest to insertion site**
- ▶ **Never shake** lipid emulsion (damages molecules)

Rate Rules — Never Speed Up or Slow Down

- ▶ Running behind? **Do not speed up** → hyperosmolar imbalance
- ▶ Patient leaving unit? **Do not slow down** → hypoglycemia
- ▶ If bag empty & new one delayed → hang **D10W** at same rate to prevent hypoglycemia



MONITORING PRIORITY

Accu-check (blood glucose) every 6 hours. Plus urine glucose/acetone. High dextrose load = constant glucose vigilance.

CONFUSING PICTURE

Patient with confusion, dehydration signs during TPN.

THINK HYPEROSMOLAR

Usually caused by infusing too quickly. Verify rate, check BG, notify HCP.

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RESPIRATORY • DELIVERY DEVICES

Oxygen Therapy

Hypoxia — Early Signs

- ▶ **Restlessness** (the earliest!)
- ▶ Tachycardia

O₂ Toxicity Signs

- ▶ Confusion
- ▶ Headache

Flow Rate Ceilings

- ▶ Nasal cannula max: **6 L/min**
- ▶ **COPD max: 2.5 L/min** — higher rates may cause apnea (loss of hypoxic drive)
- ▶ Masks deliver higher concentrations than NC

Skin & Maintenance

- ▶ Assess nares + **behind/top of ears** q6–8 hr
- ▶ Always **humidify** O₂ (prevents drying mucosa)
- ▶ Check flow rate ≥ once/shift

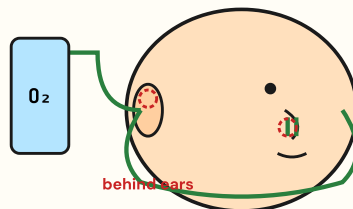
Safety

- ▶ O₂ is NOT explosive — but it **supports combustion**
- ▶ No smoking even with O₂ off — device must be physically removed from room



COPD APNEA RISK

High-flow O₂ in COPD can suppress the hypoxic drive → apnea. Target SpO₂ **88–92%** for chronic CO₂ retainers (Saunders 2026).



Nasal Cannula

Max: 6 L/min
COPD Max: 2.5 L/min
Assess nares + ears q6–8h

NASAL CANNULA — SKIN PRESSURE POINTS

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ONCOLOGY · RADIATION SAFETY

Radiation Therapy

TYPE	HOW DELIVERED	NURSE RISK
External (beam / X-ray)	Tumor bombarded externally; nothing in body	None (unless nurse is in treatment room)
Sealed Internal	Solid implant in body cavity (e.g., cesium for cervical CA)	HIGHEST
Unsealed Internal	Liquid radioactive substance IV (e.g., radioactive iodine)	Moderate — body secretions



THREE PRINCIPLES OF RADIATION PROTECTION

TIME (≤ 30 min/shift) · **DISTANCE** (talk from doorway) · **SHIELDING** (lead apron)

Sealed Implant (Cesium / Cervical Cancer) — Specific Care

Positioning & Activity

- ▶ **Absolute bed rest**
- ▶ Move **side to side only**
- ▶ HOB ≤ 45° max
- ▶ Provide care from **head of bed**
- ▶ Foley required (bladder distension would displace implant)
- ▶ Low-residue diet (prevent BM displacement)

Staff & Visitor Rules

- ▶ Pregnant nurses: **NEVER** care for sealed implant
- ▶ Pregnant nurses + unsealed: maybe, avoid body fluids
- ▶ Conversation: **from doorway only**
- ▶ No perineal care (radiation hazard)
- ▶ If implant dislodged → **forceps only** · NEVER hands or gloves · place in lead container



REPORT TO PROVIDER

Profuse vaginal discharge · Elevated temp · Nausea · Vomiting → indicate infection or perforation.

External Radiation — Skin Care

AVOID

- ▶ Ointments with metals (zinc oxide)
- ▶ Talcum powder
- ▶ Soaps
- ▶ Heat/cold on treatment field

DO

- ▶ Wash with plain water only
- ▶ Pat dry (no rubbing)
- ▶ Cornstarch is OK for itch
- ▶ Do NOT wash off radiation field markings

- ▶ Sun exposure

Radioactive Iodine (Unsealed)

- ▶ Wear gloves with any contact with urine
- ▶ Special disposal of urine
- ▶ Increase fluids to flush isotope

"Side · Sit-up · Speech" Side-to-side · HOB $\leq 45^\circ$ · Speak from the doorway.

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THERAPEUTIC DRUG MONITORING

Drug Toxicities — Digoxin · Lithium · Theophylline

DRUG	CLASS / USE	THERAPEUTIC LEVEL	TOXIC LEVEL	HALLMARK TOXIC SIGNS
Digoxin (Digitalis)	Cardiac glycoside · ↑ contractility	0.5–2.0 ng/dL	> 2.0 ng/dL	N/V + headache (earliest) · yellow/green halos · bradycardia · dysrhythmias
Lithium	Mood stabilizer · Bipolar	0.6–1.2 mEq/L	> 2 mEq/L	Tremor , N/V, thirst, hyponatremia warning
Theophylline	Bronchodilator · Asthma	10–20 mcg/mL	> 20 mcg/mL	N/V (coffee-ground emesis) · tachycardia · tremors · LIFE-THREATENING

Digoxin Pearls

- ▶ Hold if HR < 60 (adult)
- ▶ Watch for **hypokalemia** — potentiates toxicity
- ▶ Antidote: **Digibind (digoxin immune fab)**

Lithium Pearls

- ▶ Watch for ↓ **sodium** — increases toxicity
- ▶ Adequate hydration + steady Na intake
- ▶ Caution: NSAIDs & diuretics ↑ levels

Theophylline Pearls

- ▶ Narrow therapeutic window
- ▶ Avoid caffeine (additive stimulation)
- ▶ Smoking ↑ metabolism — adjust dose

"2 & 2 & 20" Digoxin toxic > 2 ng/dL · Lithium toxic > 2 mEq/L · Theophylline toxic > 20 mcg/mL.

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ONCOLOGY • ORGAN-SPECIFIC TOXICITY

Chemotherapeutic Agent Toxicities

DRUG	SIGNATURE TOXICITY	KEY CUE
Cytosan (cyclophosphamide)	Hemorrhagic cystitis	Bloody urine — push fluids, give mesna
Bleomycin	Pulmonary fibrosis	SOB, dry cough — monitor lungs
Adriamycin (doxorubicin)	Cardiotoxicity	Heart failure symptoms — baseline EF
Cisplatin	Peripheral neuropathy, ototoxicity, constipation	Tinnitus, hearing loss, paresthesias
Vincristine	Peripheral neuropathy, constipation	Foot drop, jaw pain, paralytic ileus
Methotrexate	Toxic to nearly every organ EXCEPT heart	Aspirin worsens toxicity — avoid!
DTIC (dacarbazine)	Flu-like symptoms	Fever, myalgia, malaise

Peripheral Neuropathy Cues

- ▶ Foot drop
- ▶ Numbness / tingling (paresthesia)
- ▶ **Jaw pain**
- ▶ Hoarseness
- ▶ Constipation (paralytic ileus — neurotoxic)

Universal Chemo Watch-Fors

- ▶ Bone marrow suppression: ANC, Hgb, platelets
- ▶ Tumor lysis syndrome (rapid cell breakdown)
- ▶ N/V — premedicate with antiemetics
- ▶ Mucositis — soft toothbrush, no alcohol mouthwash

"Heart-Lung-Bladder-Nerve" Adria = Heart · Bleo = Lung · Cytosan = Bladder · Cisplatin/Vincristine = Nerve.

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OPHTHALMIC PHARMACOLOGY

Eye Medications

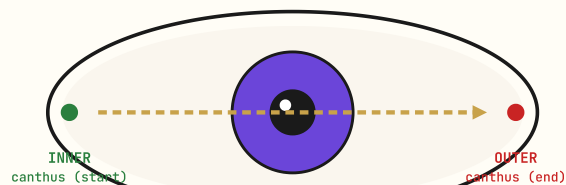
CLASS	ACTION	EXAMPLES	SIDE EFFECTS
Mydriatics	Dilate pupil ("D" for Dilate)	Neo-Synephrine, Atropine	Photophobia, tachycardia
Anticholinergics	Dilate + cycloplegia (paralyze iris/accommodation)	Atropine	Photophobia, tachycardia
Miotics	Constrict pupil — ↓ IOP for glaucoma	Pilocarpine, Timolol	Contact dermatitis
Carbonic Anhydrase Inhibitors	↓ aqueous humor production → ↓ IOP	Diamox (acetazolamide)	Diuresis (most common)

Administration

- ▶ Drops → **lower conjunctival sac**
- ▶ Ointment → lower inner eyelid, then close eyes
- ▶ Irrigation → **inner canthus → outer canthus**
- ▶ Pressure on nasolacrimal sac × 10 sec to reduce systemic absorption

Key Distinctions

- ▶ "My-D-riatic" — Dilate
- ▶ Miotic — constrict (think "Mi-O = make it Off/small")
- ▶ Cycloplegia = paralysis of iris/pupil
- ▶ Drugs ending in **-olol** often used as miotics in glaucoma



Irrigation Direction: "I to O"

EYE IRRIGATION — INNER TO OUTER CANTHUS

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GI DECOMPRESSION • SKIN INTEGRITY

NG Tubes & Wound Care

Nasogastric Tubes

Uses

- ▶ **Gavage** — feed
- ▶ **Lavage** — continuous irrigation (overdose, hemorrhage)
- ▶ **Decompression** — suction empty stomach contents
- ▶ Hemorrhage lavage: **iced tap water** until clear
- ▶ Max suction: **25 mm Hg**

Placement & Care

- ▶ Measure: **tip of nose → back of ear → xiphoid**
- ▶ Position: sitting up, head extended; flex neck once tube is at throat
- ▶ Verify (in order): (1) external length, (2) pH gastric contents, (3) auscultate
- ▶ Salem sump = vented (protects mucosa)
- ▶ Replace long-term NG q 2–3 weeks
- ▶ Frequent **mouth care** (mouth breathing)
- ▶ After removal: oral hygiene, then sip water



BEFORE FEEDING OR MED VIA NG

Always verify placement first. Aspirate gastric contents and check pH (gastric pH typically < 5).

Wound Care

Healing Types

- ▶ **First intention:** edges held by sutures/steri-strips
- ▶ **Second intention:** left open, heals by **granulation**
- ▶ Sutures removed by day 7
- ▶ Contusion = bruise (internal) · Laceration = cut

Dressing & Drain Principles

- ▶ **Occlusive** dressing = airtight/watertight seal
- ▶ **Open to air** ↓ infection (no dark/warm/moist environment)
- ▶ Tape removal: pull **toward the wound**
- ▶ Tincture of benzoin to skin **BEFORE** tape
- ▶ Montgomery straps = repeated dressings without re-taping
- ▶ Penrose drain: advance by pulling out 1 inch, cut off excess
- ▶ Saturated dressing → capillary action allows bacteria in

Cleaning Sequence & Hand Hygiene

- ▶ Clean from **incision outward** (clean → dirty)
- ▶ After removing contaminated dressing: **wash hands & don sterile gloves**
- ▶ Avoid dressing changes at mealtime (odors)
- ▶ Debridement = removal of necrotic tissue

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CRITICAL CARE · CONTINUOUS INFUSIONS

Titration Drips

Titration = nurse adjusts flow rate (usually hourly) based on HCP-defined parameters instead of a fixed rate.
Always on an IV pump.

DRUG	INDICATION	TITRATE TO / MONITOR	KEY CAUTION
Insulin drip	Hyperglycemia / DKA	Blood glucose	Cannot piggyback — needs separate line/lumen
Dopamine	Hypotension	BP	Harmful to kidneys — avoid in CKD
Dobutamine (Dobutrex)	HF, ↑ contractility, ↑ BP	BP + urine output	"DobU" — U for Urine (kidney-safe)
Labetalol	Hypertension	HR + BP	Watch for bradycardia
Midazolam (Versed)	Anesthesia, severe seizure	LOC	Respiratory depression
Propofol (Diprivan)	Sedation	LOC + triglycerides + enzymes (anything ending in -ASE)	Lipid-based; propofol infusion syndrome
Nitroglycerin	CHF post-MI, HTN	BP	Headache, hypotension

"DopA vs DobU" DopA = bad for kidneys · DobU = good for Urine output.

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PHARMACOLOGY • ABSORPTION TIMING

Medications & Mealtime

WITH Meals (⚠️ GI upset / aid absorption)

- ▶ Tagamet · Apresoline
- ▶ Iron (with juice — Vit C aids absorption)
- ▶ Steroids · NSAIDs
- ▶ Aldactone (K-sparing diuretic)
- ▶ Pancreatin / Pancrelipase — every meal & snack
- ▶ Griseofulvin — with **high-fat** meal
- ▶ Metformin
- ▶ Potassium supplements (or full glass of water)

EMPTY Stomach

- ▶ Capoten — 1 hr before meals
- ▶ Sucralfate (Carafate) — 1 hr before + bedtime
- ▶ Tetracycline — no dairy
- ▶ Rifampin · INH (isoniazid)
- ▶ **Synthroid** — AM, 30–60 min before breakfast
- ▶ **Bisphosphonates** (alendronate) — AM, full glass H₂O, **stay upright 30 min**

Antacids & Insulin Timing

- ▶ Antacids: **1–3 hrs after meals + bedtime**
- ▶ **Regular insulin**: 30 min before meals
- ▶ **Rapid-acting (Lispro)**: 15 min before or WITH meals
- ▶ Digoxin: with or without food (timing not critical)

Hydration-Specific

- ▶ Sulfonamides: lots of water
- ▶ Codeine: lots of water (prevent constipation)
- ▶ Ipecac: 200–300 mL water (emetic — NOT for caustic/petroleum poisons)

"Synthroid Sunrise" Levothyroxine — first thing AM, empty stomach, 30–60 min before food, full glass of water, upright.

14

DOSAGE CALCULATION • QUICK REFERENCE

Conversions

Weight

$$1 \text{ kg} = 1000 \text{ mL}$$

$$1 \text{ kg} = 2.2 \text{ lb}$$

$$1 \text{ g} = 1000 \text{ mg}$$

Volume

$$1 \text{ L} = 1000 \text{ mL}$$

$$1 \text{ oz} = 30 \text{ mL}$$

$$1 \text{ tsp} = 4\text{--}5 \text{ mL}$$

$$1 \text{ tbs} = 15 \text{ mL}$$

Length

$$1 \text{ in} = 2.5 \text{ cm}$$

Spoons

$$1 \text{ tbs} = 3 \text{ tsp}$$

"Big to Small $\times$ • Small to Big $\div$ " When converting from larger to smaller units, multiply. From smaller to larger, divide.

15

EMERGENCY ACTIVATION • EXTERNAL SOURCES

Rapid Response Team & Code Blue Criteria

SOURCE NOTE

This section is not in Diane's uploaded notes. Sourced from Saunders Comprehensive Review 2026, AHA 2020 Guidelines for CPR & ECC, IHI Rapid Response Team criteria, and ATI Medical-Surgical Nursing.

● RAPID RESPONSE TEAM (RRT)

Patient deteriorating but NOT in arrest. Goal: prevent code.

- ▶ HR < 40 or > 130 bpm (acute change)
- ▶ Systolic BP < 90 mmHg (acute change)
- ▶ RR < 8 or > 28 breaths/min
- ▶ SpO₂ < 90% despite supplemental O₂
- ▶ Acute change in **LOC / mental status**
- ▶ New onset chest pain
- ▶ Seizure (new or prolonged)
- ▶ Suspected stroke (**FAST** findings)
- ▶ Significant uncontrolled bleeding
- ▶ Urine output < 50 mL over 4 hours
- ▶ **Staff or family member is worried** — gut-feeling criterion
- ▶ Failure to respond to treatment

● CODE BLUE

Patient is in cardiac and/or respiratory arrest. Goal: resuscitate.

- ▶ **No pulse** (cardiac arrest)
- ▶ **No respirations** or only agonal gasping (respiratory arrest)
- ▶ **Unresponsive** + absent pulse / breathing
- ▶ Need for **CPR / defibrillation**
- ▶ Pulseless VT / VF
- ▶ Asystole / PEA



NURSE PRIORITY ACTIONS — CODE BLUE

1. **Check responsiveness** — shake & shout
2. **Call for help / activate Code Blue**
3. **Check pulse + breathing** (≤ 10 sec)
4. **Begin CPR** — 30:2 (single rescuer adult) at 100–120 compressions/min, depth ≥ 2 inches
5. **Attach AED / defibrillator** as soon as available
6. Continue until ROSC or team takes over

NCLEX TRAP

Calling Code Blue for a patient who is hypotensive and confused but still has a pulse and is breathing.

CORRECT

This is an **RRT** activation — the patient is deteriorating but has not yet arrested. RRT exists precisely to prevent progression to Code Blue.

"RRT Saves · Code Revives" Rapid Response = prevent arrest · Code Blue = treat arrest.



PATTERN RECOGNITION · MNEMONICS

Memory Boosters — All Domains

I to O

Eye irrigation: Inner canthus to
Outer canthus.

D for Dilate

MyDriatic = dilate the pupil.

Up & Back / Down & Back

Adult ear: UP & back. Child < 3:
DOWN & back.

2 · 2 · 20

Digoxin tox > 2 · Lithium tox > 2
· Theophylline tox > 20.

Type · Tag · Two

Type & cross · Tag verified by
2 nurses · 2 mL/min first 15
min.

Left + Trendelenburg

Suspected air embolism from
open central line → LEFT side,
head down.

Side · Sit-up · Speech

Cesium implant: side-to-side ·
HOB ≤ 45° · speak from
doorway.

Ice = Infiltration

Cool, pale, swollen, no return.
Fire = phlebitis (warm, red,
streak).

DopA vs DobU

DopA bad for kidneys · DobU
good for Urine.

Heart-Lung-Bladder-Nerve

Adria · Bleo · Cytoxan ·
Cisplatin/Vincristine.

RRT Saves · Code Revives

RRT prevents arrest · Code
Blue treats arrest.

Restlessness = Hypoxia

The earliest sign — always
assess oxygenation first.



TEACHING PRIORITIES • DISCHARGE PLANNING

Patient & Family Education

IV / Blood Products

- ▶ Report immediately: back pain, chest tightness, chills, itching, SOB
- ▶ Do not adjust the IV rate yourself
- ▶ Tell the nurse if the site becomes painful, swollen, red, or cool

TPN at Home

- ▶ Maintain steady infusion rate — never speed up or slow down
- ▶ Daily weights, blood glucose monitoring
- ▶ Inspect catheter site daily; report redness, drainage, fever

Radiation Therapy

- ▶ Wash skin with plain water only — pat dry
- ▶ No talc, perfumed lotions, or metal-containing ointments
- ▶ Avoid sun on radiation field
- ▶ Do not erase skin markings

Oral Medications & Timing

- ▶ Synthroid: morning, empty stomach, full glass of water, stay upright
- ▶ Bisphosphonates: morning, full water, upright 30 min
- ▶ Iron: with juice (Vit C); separate from antacids/dairy
- ▶ Antibiotics like tetracycline: avoid dairy

Glaucoma / Eye Drops

- ▶ Wash hands first; tilt head back, look up
- ▶ Drop into lower sac — never the cornea
- ▶ Close eye 1–2 min; press nasolacrimal corner 10 sec
- ▶ Wait 5 min between different drops

Oxygen at Home

- ▶ No open flames, smoking, or sparks anywhere in the room
- ▶ Humidify O₂; check nares/ears for breakdown
- ▶ COPD: do not increase flow without provider order



CLINICAL JUDGMENT · 6-STEP NCJMM

Integrated Practice Scenario

Scenario: A 68-year-old client with bladder cancer is receiving the second unit of packed RBCs after a Cytosax infusion yesterday. Fifteen minutes into the transfusion, the client reports lower-back pain and chills. VS: T 101.4°F, HR 122, RR 26, BP 92/58, SpO₂ 94%. The IV is in the right antecubital; urine in the Foley bag is pink-tinged.

STEP 1 – RECOGNIZE CUES

Low back pain · chills · fever · tachycardia · tachypnea · hypotension · pink urine (possible hemoglobinuria) · transfusion in progress · prior Cytosax (hemorrhagic cystitis risk also present).

STEP 2 – ANALYZE CUES

The cluster of low-back pain + fever + chills + hypotension + tachycardia + tachypnea during a transfusion = **hemolytic transfusion reaction** (most likely). Cytosax complicates the picture (hemorrhagic cystitis can also produce pink urine), but the temporal relationship to the blood and the classic cluster point to hemolytic reaction as the priority.

STEP 3 – PRIORITIZE HYPOTHESES

#1 Hemolytic reaction (life-threatening, requires immediate intervention) · **#2 Febrile non-hemolytic reaction** · **#3 Cytosax-related hemorrhagic cystitis** (still important, but not the acute priority).

STEP 4 – GENERATE SOLUTIONS

STOP the transfusion · maintain line with NS via new tubing · notify provider and blood bank · send bag/tubing back · obtain blood and urine samples · monitor VS closely · prepare for possible epinephrine / fluids / vasopressors / diphenhydramine per orders · document.

STEP 5 – TAKE ACTION

First action: STOP the transfusion. Close the clamp on the blood, switch to new NS tubing, run NS slowly to KVO, stay with the patient, call the provider, call the blood bank.

STEP 6 – EVALUATE OUTCOMES

Expected: VS stabilize, pain & chills resolve, urine clears, lab results confirm/refute hemolysis. If no improvement or worsening (e.g., further hypotension, oliguria) → consider RRT activation; if pulseless / unresponsive → Code Blue.

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