Achievable

NCLEX-RN DUMP SHEET

IV therapy, blood, and oxygen

IV fluid tonicity

Type	Examples	Effect and use
Isotonic	0.9% NS, LR, D5W (isotonic in the bag)	Expands intravascular volume — hydration, hypotension, post-op
Hypotonic	0.45% NS, 0.33% NS	Water shifts **into cells** — hypernatremia, cellular dehydration (caution)
Hypertonic	3% NS, D5NS, D5 0.45% NS, D10W	Pulls fluid **out of cells** — severe hyponatremia, cerebral edema

IV complications

Complication	Signs	Action
Infiltration	Cool, swollen, pale	Stop, elevate, warm or cold compress
Phlebitis	Red, warm, tender vein	Discontinue, warm compress, document
Extravasation	Burning, stinging, blistering	Stop, aspirate if appropriate, follow protocol
Infection	Redness, pus, fever	Notify provider, cultures, antibiotics
Air embolism	Sudden dyspnea, chest pain, ↓BP	**Clamp the line**, oxygen, **left lateral Trendelenburg**, rapid response
Fluid overload	Crackles, edema, ↑BP, JVD	Slow or stop, raise HOB, notify, diuretics as ordered

- Avoid the arm with an AV fistula, significant injury, or post-breast-surgery per policy
- **Central access (CVAD)** — PICC (tip in the SVC, watch external length for migration), CVC (high infection risk, verify tip before use), implanted port (accessed with a **Huber needle**)
- Use central access for long-term therapy, **vesicants**, TPN, or poor peripheral access
- **Clamp the catheter during removal** — air embolism risk. Apply an occlusive dressing immediately

Blood products

Product	Use
PRBCs	Oxygen-carrying capacity — anemia, hemorrhage
Platelets	Thrombocytopenia, active bleeding
Fresh frozen plasma	Clotting factors — liver disease, DIC
Cryoprecipitate	Fibrinogen — hypofibrinogenemia, DIC
Albumin	Volume expansion, hypoalbuminemia

Transfusion protocol

- **Before** — verify order and consent, confirm type/screen and crossmatch, baseline vitals, **20-gauge or larger** for PRBCs, prime with **0.9% normal saline only**, use a blood filter
- **Two qualified staff (or approved electronic verification)** check name, ID number, blood type, unit number, expiration. **This step is nondelegable and is never skipped**
- **During** — start slowly, **stay with the client for the first 15 minutes**, recheck vitals at 15 minutes then per protocol, **complete within 4 hours**
- **Never prime or flush a blood line with LR or dextrose**

Reaction	Signs	Action
Hemolytic (most dangerous)	Back/chest pain, fever, ↓BP, red urine	**Stop immediately**, new tubing + NS, notify, rapid response
Febrile non-hemolytic	Fever, chills	Stop, notify, antipyretics as ordered
Allergic (mild)	Rash, itching, hives	Stop, notify, antihistamine as ordered
Anaphylactic	Wheezing, dyspnea, ↓BP	Stop, rapid response, oxygen, epinephrine as ordered
Sepsis	High fever, chills, ↓BP	Stop, cultures, antibiotics
TACO (overload)	Crackles, edema, dyspnea, ↑BP, JVD	Stop, raise HOB, notify, diuretics as ordered

- **Any suspected reaction: stop the transfusion first, then treat.** Never restart with the same tubing
- Return the bag and tubing to the blood bank, document, and file an incident report

Oxygen delivery and equipment

- **Nasal cannula** — typically **1—6 L/min**; higher rates dry the nares. **Humidify above 4 L/min**
- Oxygen supports combustion — "No Smoking" signage, **5—10 feet from heat sources**, no petroleum products, tanks secured upright
- **Oxygen toxicity** risk rises with high FiO_2 and exposure beyond 24—48 hours: restlessness, non-productive cough, chest pain
- **Pulse oximetry measures oxygenation; capnography measures ventilation.** Normal $ETCO_2$ **35—45 mmHg** — a rising $ETCO_2$ precedes a falling SpO_2 in respiratory depression
- Pulse ox is unreliable with poor perfusion, cold extremities, nail polish, or motion
- **Suction ≤10—15 seconds per pass**, only as needed — hypoxia, mucosal trauma, and vagal dysrhythmias
- **When an alarm sounds, assess the client first.** Never silence without assessment. **Bed rails are not restraints unless they restrict voluntary movement**