Physiological Adaptation

National Council Licensure Examination for Registered Nurses (NCLEX-RN)

11 to 17% of the exam · 24 activity statements · 2026 NCLEX-RN Test Plan

Physiological Adaptation is care of clients with acute, chronic or life-threatening physical health conditions: drains and devices, emergencies, ventilation and oxygenation, dialysis, telemetry, fluid and electrolyte balance, perfusion and the complications that follow. The NCLEX tests it by asking you to read a device, a rhythm or a trend, decide which finding is dangerous, and choose the first safe action an entry-level nurse can take before calling for help.

You should be able to: You should be able to read a drain, device, rhythm or laboratory trend, tell the expected finding from the dangerous one, and choose the first safe nursing action for a client whose physiology is changing.

Every activity statement: the key point and the trap

1. Monitor and look after drainage devices, such as chest tubes or wound drains

Chest tube: keep the drainage system upright and below the level of the chest, with tubing free of kinks and dependent loops; never clamp it routinely or for transport.

Trap: Clamping the chest tube when bubbling appears or when the client walks, which can cause a tension pneumothorax.

2. Carry out emergency care procedures

Check responsiveness and breathing while checking a carotid pulse for no more than 10 seconds; if no pulse, call for help and an AED and start compressions.

Trap: Delaying compressions to obtain vital signs, start an IV or wait for the provider instead of beginning CPR and getting the AED.

3. Monitor and care for clients on mechanical ventilation

High pressure alarm: something resists airflow (secretions, coughing, biting the tube, kinked tubing, bronchospasm, pneumothorax); assess the client, suction if needed, and straighten tubing.

Trap: Silencing the alarm or calling the provider first instead of assessing the client and, if the cause is not found, ventilating manually.

4. Do wound care and change dressings

Assess before and after: size, depth, wound bed color, drainage amount and type, odor, the surrounding skin and pain; premedicate for pain before a painful dressing change.

Trap: Trying to push eviscerated organs back in or covering them with a dry dressing.

5. Assist with invasive procedures, such as a thoracentesis

The provider explains the procedure and obtains informed consent; the nurse may witness the signature, confirms the client understands and reports doubts before sedation is given.

Trap: Positioning a client for central line insertion or removal with the head up, which raises the risk of air embolism.

6. Give care and teaching for ostomies, such as a tracheostomy

Stoma assessment: a healthy stoma is moist and red to pink; a pale, dusky, purple or black stoma means poor blood flow and is reported at once.

Trap: Treating a dark purple or black stoma as normal postoperative bruising instead of reporting it immediately.

7. Give care after surgery

On arrival from the post-anesthesia unit, assess airway and breathing first, then circulation (vital signs, dressing, drains), level of consciousness and pain.

Trap: Attributing restlessness and a rising heart rate to pain and giving an opioid before ruling out bleeding or hypoxia.

8. Carry out and manage peritoneal dialysis

Warm the dialysate to body temperature with dry heat (a warmer, never a microwave) to prevent cramping and discomfort.

Trap: Treating cloudy effluent as a harmless change from diet instead of a sign of peritonitis.

9. Suction the client's airway

Suction when assessment shows a need (coarse crackles or gurgling, visible secretions, falling saturation, a high pressure alarm), not on a fixed schedule.

Trap: Applying suction while inserting the catheter or suctioning longer than 15 seconds.

10. Help clear the lungs, for example with incentive spirometry

Incentive spirometer: sit upright, exhale normally, seal the lips around the mouthpiece, inhale slowly and deeply, hold the breath at least 3 seconds, then exhale; about 10 times an hour while awake.

Trap: Teaching the client to blow out forcefully into an incentive spirometer, which is an inspiratory device.

11. Manage care for a client on cardiac telemetry

When the monitor shows an alarming rhythm, look at the client first: an alert client talking normally with a flat line on the screen has a lead off, not asystole.

Trap: Acting on the monitor (calling a code, giving a drug) before looking at the client to rule out artifact or a loose lead.

12. Manage care for a client with poor breathing or oxygenation

Early hypoxia shows as restlessness, anxiety, confusion, tachycardia and tachypnea; cyanosis and bradycardia are late signs.

Trap: Giving a sedative to a newly restless client instead of assessing for hypoxia.

13. Keep the client's body temperature in the right range

Normal adult oral temperature is about 98.6 F (37 C); older adults may have little or no fever despite serious infection.

Trap: Giving an antipyretic for heat stroke, or cooling a febrile client so fast that shivering raises the temperature.

14. Start and monitor phototherapy

Phototherapy treats newborn hyperbilirubinemia; treatment thresholds come from the bilirubin level for the infant's age in hours and risk factors.

Trap: Leaving the eye shields on during feeding or applying lotion to dry skin under the lights.

15. Manage care for a client with a pacemaker or similar device

On a paced rhythm, a pacing spike appears before the P wave (atrial) or the QRS (ventricular), or both.

Trap: Encouraging full overhead arm exercises on the device side soon after insertion, which can dislodge the lead.

16. Monitor and look after arterial lines

Level the transducer at the phlebostatic axis (fourth intercostal space, midaxillary line) and zero it to atmosphere; re-level after the client changes position.

Trap: Pushing a medication through the arterial line flush port.

17. Manage care for a client with fluid or electrolyte imbalance

Reference ranges vary by laboratory; typical adult values: sodium 135 to 145 mEq/L, potassium 3.5 to 5.0 mEq/L, total calcium 8.5 to 10.5 mg/dL, magnesium 1.3 to 2.1 mEq/L.

Trap: Giving potassium IV push, or treating a hyperkalemic client by restricting fluids instead of protecting the heart first.

18. Manage care for a client with changes in hemodynamics, perfusion or clotting

Mean arterial pressure (systolic plus twice the diastolic, divided by 3) of at least 65 mm Hg is generally needed to perfuse the organs.

Trap: Elevating the legs of a client with peripheral arterial disease, which further reduces arterial flow.

19. Judge whether treatment is working for an acute or chronic condition

Evaluation compares the client's current findings with the expected outcomes set in the plan: improved, unchanged or worse.

Trap: Judging a treatment effective from the client's report alone when the measured data (weight, labs, vital signs) show no change or worsening.

20. Identify the disease process behind an acute or chronic condition

Left-sided heart failure backs fluid into the lungs (dyspnea, crackles, pink frothy sputum); right-sided backs it into the body (jugular vein distention, edema, liver enlargement).

Trap: Confusing syndrome of inappropriate antidiuretic hormone with diabetes insipidus by mixing up which one lowers sodium.

21. Manage care for a client on hemodialysis or continuous renal replacement

Arteriovenous fistula or graft: palpate the thrill and auscultate the bruit each shift; their absence suggests clotting and is reported.

Trap: Taking a blood pressure or starting an IV in the arm with the fistula.

22. Spot signs of complications and act on them

Sepsis: infection with fever or low temperature, tachycardia, tachypnea, altered mental status, hypotension and lactate above about 2 mmol/L; obtain blood cultures before antibiotics, then start antibiotics, IV crystalloid and vasopressors as prescribed, without delay.

Trap: Starting insulin in diabetic ketoacidosis before fluids and before checking potassium, which can cause life-threatening hypokalemia.

23. Teach the client about an acute or chronic condition

Assess what the client knows, wants to know, reading level and language first; use a qualified interpreter when needed, not a family member.

Trap: Telling a client with type 1 diabetes to skip insulin when not eating during an illness.

24. Monitor and look after internal monitoring devices, such as an intracranial pressure monitor

Normal intracranial pressure in an adult is about 5 to 15 mm Hg; a sustained value above 20 mm Hg needs treatment and is reported.

Trap: Raising or lowering the head of the bed with an open ventricular drain without re-leveling it, which causes overdrainage or false readings.

Key terms

Tidaling: The rise and fall of water in a chest tube's water seal chamber with breathing; expected until the lung re-expands.

Water seal: The chest drainage chamber that lets air leave the pleural space but not return.

Negative pressure wound therapy: A sealed foam dressing attached to controlled suction that removes exudate and promotes healing.

Evisceration: Protrusion of organs through a separated surgical wound; an emergency.

Phlebostatic axis: Fourth intercostal space at the midaxillary line, the level of the right atrium, where hemodynamic transducers are leveled.

Failure to capture: A pacemaker spike that is not followed by depolarization of the chamber it paces.

Mean arterial pressure: The average pressure perfusing the organs; usually kept at 65 mm Hg or more.

Cerebral perfusion pressure: Mean arterial pressure minus intracranial pressure; the pressure driving blood to the brain.

Cushing's triad: Rising systolic pressure with widening pulse pressure, bradycardia and irregular respirations; a late sign of increased intracranial pressure.

Thrill and bruit: The vibration felt and the whooshing sound heard over a working arteriovenous fistula or graft.

Dialysis disequilibrium syndrome: Headache, confusion or seizures from rapid fluid and solute shifts during early dialysis.

Peritonitis: Infection of the peritoneum; in peritoneal dialysis, first seen as cloudy effluent.

Hyperoxygenation: Giving 100% oxygen before and after suctioning an artificial airway to prevent hypoxia.

Teach-back: Asking the client to explain or show what was taught, to confirm understanding.

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