Knowledge test on catheterization procedures

Parallel forms A and B for knowledge-acquisition and knowledge-retention studies

English translation for reference. The Spanish version was the instrument administered. Student version — does not include the answer key.

General instructions

This test assesses theoretical knowledge of three catheterization procedures: urinary, nasogastric, and rectal. It was developed for this educational research in nursing students, aligned with the institutional protocol. Each item has a single correct answer. Scoring: 1 point per correct answer and 0 points for an incorrect or blank answer. Total score: 0–30 points; it can also be expressed as a percentage. Subscales: 0–10 points per procedure.

Approximate time: 20–25 minutes per form. Notes, electronic devices, and course materials were not permitted during the test.

Participant code: _____ Group: _____ Date: ____ / ____ / _____
Form: A / B

Mark only one answer per question. If you change an answer, clearly cross out the previous one and mark the final option.

Form A

Urinary catheterization

1. Which of the following is an appropriate indication for an indwelling urinary catheter in a hospitalized patient?

A) Routine management of urinary incontinence.
B) Staff convenience during the shift.
C) Accurate urine-output measurement in a critically ill patient.
D) Obtaining a urine sample when the patient can void spontaneously.

2. Immediately before inserting or manipulating a urinary catheter, the essential action is to:

A) Open all sterile supplies.
B) Perform hand hygiene.
C) Inflate the balloon to test its resistance.
D) Place the drainage bag on the floor.

3. In an acute hospital setting, urinary catheter insertion should be performed primarily with:

A) Clean technique and reusable supplies.
B) Aseptic technique and sterile equipment.
C) Non-sterile technique if the procedure is brief.
D) Clean gloves, without a sterile field.

4. To minimize urethral trauma, the catheter caliber should be:

A) The largest available to speed drainage.
B) The smallest caliber that allows adequate drainage.

C) Always the same for all adult patients.

D) Selected solely according to the student's preference.

5. When should a urinary catheter balloon be inflated?

A) Before inserting the catheter, to confirm it works.

B) As soon as the catheter barely enters the meatus.

C) After confirming the catheter is in the bladder, usually once urine return is observed.

D) Always, even if the patient reports severe pain.

6. After inserting an indwelling urinary catheter, securing it correctly serves primarily to:

A) Increase urine production.

B) Prevent urethral traction and movement.

C) Allow the bag to sit above the bladder.

D) Replace the need for daily hygiene.

7. The urine drainage bag should be kept:

A) Below bladder level and off the floor.

B) On the bed, level with the abdomen.

C) Above the bladder to prevent reflux.

D) Disconnected from the tubing to empty it faster.

8. If aseptic technique is broken, the closed system is disconnected, or a leak appears, the most appropriate measure is to:

A) Reconnect the system and continue if there is no pain.

B) Replace the catheter and drainage system using aseptic technique.

C) Irrigate the bladder routinely.

D) Raise the bag to prevent further leaks.

9. Which of the following should be documented after urinary catheterization?

A) Only that the procedure was performed.

B) Indication, date/time, caliber, balloon, inserter, tolerance, and initial urine characteristics.

C) Only the total urine volume over the next 24 hours.

D) The name of the colleague who prepared the supplies, with no further information.

10. During field preparation for urinary catheterization, the priority is to:

A) Maintain sterility of the supplies that will contact the urinary tract.

B) Reduce procedure time even if the field becomes contaminated.

C) Always use antiseptic lubricant even when not indicated.

D) Leave the catheter on the bed if the sterile field is small.

Nasogastric intubation

11. Which of the following situations requires extra caution or avoiding nasogastric insertion until medical assessment?

A) A conscious, cooperative patient.

B) Suspected basal skull fracture or major facial trauma.

C) Need for short-term enteral nutrition.

D) Absence of known allergy to the material.

12. Before starting nasogastric intubation, appropriate preparation includes:

A) Explaining the procedure, verifying identity/indication, and positioning the patient upright if possible.

B) Beginning insertion without informing the patient to reduce anxiety.

C) Lubricating only after the tube reaches the stomach.

D) Checking position only after the first feeding.

13. A common way to estimate nasogastric tube insertion length is to measure:

A) From nose to ear and from ear to xiphoid process, per protocol.

B) From chin to umbilicus only.

C) Half of the patient's height.

D) The length of the dominant arm.

14. During nasogastric tube insertion, the patient develops persistent coughing, respiratory distress, and cyanosis. What should be done?

A) Continue, because coughing confirms the tube is advancing.

B) Inflate the tube balloon.

C) Stop the procedure, withdraw or pull back the tube, and assess the patient.

D) Give water immediately to push the tube down.

15. Before using a newly placed nasogastric tube, the most appropriate check is to:

A) Auscultate insufflated air over the epigastrium as the sole method.

B) Confirm position by aspirate and pH indicator paper; use radiography if needed per protocol.

C) Observe that the patient does not complain.

D) Verify only that the tube is taped to the nose.

16. Which of the following should NOT be considered reliable as the sole confirmation of nasogastric tube position?

A) pH of the aspirate with indicator paper.

B) Radiography when indicated.

C) Auscultation of insufflated air ('whoosh test') as the sole criterion.

D) Application of the local confirmation protocol.

17. If no aspirate is obtained or the pH does not confirm a safe position, the correct action is to:

A) Use the tube if the external mark appears correct.

B) Not use the tube and follow the confirmation protocol, including radiography if appropriate.

C) Start low-volume feeding to test tolerance.

D) Always remove the tube without consulting.

18. Once nasogastric tube position is confirmed, external fixation should allow:

A) Prevention of displacement and monitoring of the external mark.

B) Complete concealment of the tube under clothing.

C) Skipping further checks before use.

D) Increasing the internal caliber of the tube.

19. When should the position of a nasogastric tube intended for enteral feeding be checked?

A) Only on the day of insertion.

B) After insertion and before each use, per protocol.

C) Only if the patient reports abdominal pain.

D) After administering the feeding.

20. Documentation of nasogastric intubation should include, at minimum:

A) Only the tube size.

B) Nostril used, external length/mark, confirmation method, tolerance, and any incidents.

C) Only the time it was placed.

D) The color of the tape used.

Rectal catheterization

21. Before performing rectal catheterization or an instrumental rectal procedure, the priority is to:

A) Verify indication, explain the procedure, assess contraindications, and preserve privacy.

B) Always perform it without consent because it is a minor procedure.

C) Avoid asking about pain or bleeding so as not to alarm the patient.

D) Use the same caliber in all patients.

22. Which of these situations requires stopping and consulting before continuing a rectal procedure?

A) An informed, cooperative patient.

B) Need for privacy.

C) Active rectal bleeding, severe pain, or recent rectal surgery.

D) Presence of a companion authorized by the patient.

23. The usual position to facilitate a rectal procedure in an adult is:

A) Left lateral/Sims position, with knees slightly flexed.

B) Prone with arms raised.

C) Seated without support.

D) Standing throughout the technique.

24. A rectal tube should be inserted:

A) With adequate lubrication, gently, and without forcing against resistance.

B) Quickly and without lubricant to reduce discomfort.

C) Until resistance is met and then pushed with greater pressure.

D) Without gloves if the procedure is brief.

25. If severe pain, marked resistance, or bleeding occurs during a rectal procedure, one should:

A) Continue to completion to avoid repeating the technique.

B) Stop the procedure, assess the patient, and report the incident.

C) Insert the tube more deeply.

D) Administer fluids through the tube without checking anything else.

26. A common purpose of rectal catheterization, per indication/protocol, may be to:

A) Promote passage of gas or administer an indicated enema.

B) Replace complete abdominal assessment.

C) Confirm the position of a nasogastric tube.

D) Measure hourly urine output.

27. Regarding infection control during a rectal procedure, it is correct to:

A) Use gloves, perform hand hygiene before and after, and dispose of materials per protocol.

B) Reuse the same tube if rinsed with water.

C) Skip hand hygiene if gloves were used.

D) Place contaminated material on the bed to record it later.

28. To preserve patient dignity during a rectal procedure, one should:

A) Expose only the necessary area and cover the patient the rest of the time.

B) Keep the door open to facilitate assistance.

C) Avoid explaining what will be done.

D) Ask the patient not to ask questions.

29. After a rectal procedure, appropriate monitoring includes:

A) Assessing comfort, pain, distension, passage of gas/stool, and skin condition.

B) Not reassessing the patient if the technique was quick.

C) Removing all privacy measures before cleaning the patient.

D) Documenting only if a serious complication occurred.

30. Documentation of a rectal procedure should include:

A) Indication, device type/caliber if applicable, tolerance, outcome, incidents, and follow-up care.

B) Only the patient's bed number.

C) Only if the patient reports pain.

D) Only the start time.

Answer sheet — Form A

Mark one option per question.

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Form B

Urinary catheterization

1. Which of the following is considered an inappropriate use of an indwelling urinary catheter?

A) Acute urinary retention.

B) Strict urine-output monitoring in a critically ill patient.

C) Managing incontinence for convenience when alternatives exist.

D) A justified perioperative need in urologic surgery.

2. Insertion and care of urinary catheters should be performed by:

A) Anyone, if the supplies are ready.

B) Personnel trained in correct insertion and maintenance technique.

C) Only unsupervised students, for practice.

D) Family members without prior training.

3. After inserting an indwelling urinary catheter, the key measure to reduce infection is to maintain:

A) A closed drainage system.

B) The bag above bladder level.

C) The catheter unsecured to avoid pressure.

D) The tubing disconnected to ease emptying.

4. To maintain adequate urine flow, one should:

A) Keep the tubing free of kinks and obstructions.

B) Raise the drainage bag above the abdomen.

C) Clamp the catheter routinely every hour.

D) Rest the drainage bag on the floor.

5. The drainage bag should be positioned:

A) Always below the bladder, with no contact with the floor.

B) Always on the bed.

C) At head height for better volume control.

D) Disconnected when the patient walks.

6. Securing a urinary catheter has as its main objective:

A) Preventing displacement and urethral traction.

B) Increasing pressure within the bladder.

C) Replacing meatal hygiene.

D) Avoiding documentation of the procedure.

7. If a urine sample from an indwelling catheter is needed for analysis/culture, the correct technique is to:

A) Take it from the drainage bag even if it has been collecting for hours.

B) Aspirate it from the sampling port after disinfecting it, using aseptic technique.

C) Disconnect the tubing and let urine flow into the container.

D) Puncture any area of the bag with a non-sterile needle.

8. Routine bladder irrigation in an indwelling catheter:

A) Is recommended in all patients.

B) Is not recommended unless clinically indicated, such as obstruction risk per protocol.

C) Replaces maintenance of the closed system.

D) Should always be done with antimicrobials.

9. An essential measure to reduce catheter-associated risk is to:

A) Keep it for the whole admission, for safety.

B) Review its necessity daily and remove it as soon as it is no longer indicated.

C) Change it at fixed intervals even without problems.

D) Use it to measure urine output in all patients.

10. If, during balloon inflation, the patient reports severe pain or there is resistance, one should:

A) Continue inflating until the volume is complete.

B) Stop, deflate if inflation had begun, reassess placement, and follow the protocol.

C) Push the catheter forcefully.

D) Ignore the pain because it is expected.

Nasogastric intubation

11. A possible indication for a short-term feeding nasogastric tube is:

A) A patient who cannot swallow safely or meet needs orally, without contraindication.

B) A patient who refuses to eat by personal preference without assessment.

C) Suspected basal skull fracture.

D) Replacement of all hydration routes even when the patient eats properly.

12. Before inserting a nasogastric tube, the student should:

A) Verify indication, identity, allergies/material, explain the technique, and assess the nasal route.

B) Insert it immediately to reduce anxiety.

C) Confirm position by auscultation before placing it.

D) Administer feeding to ease passage.

13. To promote safety and tolerance during nasogastric insertion, if there is no contraindication, the patient is usually placed:

A) Upright or in high Fowler position.

B) In deep Trendelenburg.

C) Prone.

D) Standing and walking.

14. If, during insertion, the tube coils in the mouth, the appropriate action is to:

A) Continue pushing until the measured length is reached.

B) Withdraw or pull back the tube and restart the technique per protocol.

C) Secure it anyway if the patient tolerates it.

D) Start feeding to check whether it passes.

15. Nasogastric tube position can initially be confirmed by:

A) Gastric aspirate with appropriate pH per protocol; radiography if it cannot be safely confirmed.

B) Only observing that there is no cough.

C) Only the visible external length.

D) Only auscultating bubbling after insufflating air.

16. The position of a nasogastric tube intended for feeding should be checked:

A) After placement and before each use.

B) Only before removing it.

C) After administering medication.

D) Only at shift change.

17. If the patient takes medication that may alter gastric pH and the check is doubtful, one should:

A) Use the tube if it is well secured.

B) Follow the local protocol for safe confirmation, including radiography if appropriate.

C) Ignore the pH because it provides no information.

D) Administer a small amount of water and assess for cough.

18. The external mark on the nasogastric tube serves to:

A) Monitor possible displacement after the initial position is confirmed.

B) Replace any position check.

C) Choose the tube caliber.

D) Measure blood pressure.

19. The appearance of dyspnea, persistent cough, or desaturation during nasogastric intubation indicates that one should:

A) Stop the procedure and assess the patient.

B) Advance faster to finish sooner.

C) Secure the tube and continue.

D) Administer feeding slowly.

20. Documentation after placing a nasogastric tube should record:

A) Route/nostril, caliber, external length, checking method, tolerance, and incidents.

B) Only the student's name.

C) Only that a tube was placed.

D) Another patient's pain score.

Rectal catheterization

21. Before an instrumental rectal procedure, which situation should prompt reconsidering the technique and consulting?

A) A patient with indication and consent.

B) Suspected obstruction, perforation, active bleeding, or severe rectal pain.

C) Need to preserve privacy.

D) A patient in the lateral position.

22. Appropriate communication before rectal catheterization includes:

A) Explaining the purpose and expected sensations and requesting cooperation, respecting privacy.

B) Avoiding talking so the patient does not worry.

C) Informing only after the procedure.

D) Asking the patient to tolerate any pain.

23. The Sims or left lateral position is used because it:

A) Facilitates rectal access and improves comfort/safety of the procedure.

B) Prevents any sensation of discomfort.

C) Replaces the use of lubricant.

D) Allows performing the technique without gloves.

24. The use of lubricant in rectal catheterization has as its main purpose to:

A) Reduce friction, pain, and risk of mucosal injury.

B) Increase abdominal pressure.

C) Avoid documenting the procedure.

D) Confirm that there is no bleeding.

25. The rectal tube should be inserted:

A) Gently, following the anatomy, without forcing if there is resistance.

B) With abrupt movements to cross the sphincter.

C) To any depth chosen by the student.

D) Without observing the patient's response.

26. The dwell time of a rectal tube or rectal device should be:

A) That indicated by prescription/protocol and as limited as possible per objective.

B) Indefinite if the patient does not complain.

C) Always 24 hours in all patients.

D) Decided by the student without supervision.

27. If the patient develops dizziness, pallor, sweating, or bradycardia during rectal manipulation, one should suspect:

A) A vagal response; stop the technique, assess, and notify per protocol.

B) An expected improvement of the procedure.

C) A need to insert the tube more deeply.

D) A lack of lubricant only.

28. At the end of the rectal procedure, contaminated material should be:

A) Removed with gloves and discarded per protocol, followed by hand hygiene.

B) Left on the bedside table to review later.

C) Reused if not visibly soiled.

D) Kept in the pocket to avoid losing it.

29. After a rectal procedure, appropriate monitoring includes:

A) Assessing comfort, pain, distension, passage of gas/stool, and skin condition.

B) Not reassessing the patient if the technique was quick.

C) Removing all privacy measures before cleaning the patient.

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30. Documentation of a rectal procedure should include:

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B) Only the patient's bed number.

C) Only if the patient reports pain.

D) Only the start time.

Answer sheet — Form B

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