Skills

Inserting a Nasogastric Tube

Quick Sheet

ALERT

- Remember to route tubes and catheters having different purposes in different, standardized directions (e.g., IV lines routed toward the head; enteric lines toward the feet). This is especially important in the care of neonates.
- Do not reposition the NG tube of a patient who has undergone gastric surgery because that could rupture the suture line.
- When feasible, investigate alternatives to NG placement (e.g., endoscopic or intraoperative placement, orogastric placement) in patients with basilar skull fracture or craniofacial injuries.
- Use only clean enteral syringes (greater than or equal to 20 mL with ENFit device) to administer medication through an enteral access device or use oral syringes until enteral syringes with the new connector are available.
- Change in Practice Alert: To enhance patient safety and prevent tubing misconnections, a new industry-wide design standard for enteral feeding connectors is being adopted. The ENFit connector is being phased in for feeding tubes, feeding syringes, and feeding administration sets.

1. Verify the health care provider's orders.
2. Perform hand hygiene. Don appropriate personal protective equipment (PPE) based on the patient's need for isolation precautions or the risk of exposure to bodily fluids.
3. Gather the necessary equipment and supplies.
4. Provide for the patient's privacy.
5. Introduce yourself to the patient and family, if present.
6. Identify the patient using two identifiers, such as name and birth date or name and account number.
7. Explain the procedure to the patient and ensure that he or she agrees to treatment. Assess the patient's cough and gag reflexes.
8. Position the patient upright in the high Fowler's position, unless contraindicated. If the patient is comatose, raise the head of the bed, as tolerated, into the semi-Fowler's position. If necessary, have NAP help with the positioning of confused or comatose patients. If the patient must lie supine, place him or her in the reverse Trendelenburg position.
9. Apply the pulse oximeter, and measure the patient's vital signs.
10. Assess the patency of each nare.
11. To determine the length of the tube to be inserted, measure the distance from the tip of the nose to the earlobe, and then from the earlobe to the xiphoid process of the sternum.
    a. Adults: Added correct additional length for adult or child to ensure gastric placement. Mark the required tube length with tape or indelible ink.
    b. Children: Add half the distance from the xiphoid process to the umbilicus to this measurement to place the tube more distally in the stomach. Mark the required tube length with tape or indelible ink.
12. If the tube has a surface lubricant, dip it into a glass of room-temperature water to activate it. For other tubes, apply a water-soluble lubricant, according to the manufacturer's instructions.
13. Apply clean gloves.
14. Prepare the NG or nasoenteric tube for intubation:
    a. Using a 30-mL to 60-mL catheter-tip syringe, inject 10 mL of water into the tube. If you are using a stylet, make certain it is securely positioned within the tube.
15. Explain the procedure to the patient, and then gently insert the tube through one nostril to the back of the throat (posterior nasopharynx), aiming back and down toward the ear. The patient may gag.
16. As the tube passes the nasopharynx, have the patient bend his or her head toward the chest.
17. Advance the tube along the floor of the nasal passage, aiming down toward the patient's ear. If resistance is felt, pull the tube tip back slightly, angle it more downward to find the opening to the nasopharynx, and then advance the tube. If resistance continues, try to rotate the tube and then advance it. If resistance persists, withdraw the tube, allow the patient to rest, lubricate the tube again, and insert it into the other naris.
18. If drinking water is not contraindicated and the patient prefers, provide small sips of water along with encouragement to swallow as the tube is inserted and advanced. Advance the tube as the patient swallows. With or without water, emphasize that the patient needs to mouth breathe and swallow throughout the procedure.

19. When the tip of the tube is approximately 25 cm to 30 cm (10 inches to 12 inches), assess for air coming out of the tubing. If the tube entered the trachea instead of the esophagus, air exchange may be heard. If air is present, withdraw the tube and start again. If there is no air, continue to advance the tube to the distance marker.
20. Check the tube position at the back of the patient's throat with a penlight and tongue blade. Ensure the tube is not coiled in the posterior pharynx.
21. Anchor the tube to the patient's cheek with tape.
22. Verify placement of the nasogastric tube per the organization's practice. See the video skill "Managing a Nasogastric Tube."
23. Clamp the tube.
24. Once the placement of the NG tube has been verified, secure it to the patient's face. Anchor the tube to the patient's nose, avoiding pressure on the nares. Mark the exit site on the tube with tape or indelible ink. Select one of the following options for anchoring:
    a. Tape:
        i. Optional: Apply a tincture of benzoin or other skin adhesive to the tip of the patient's nose. It should feel tacky.
        ii. Remove your gloves. Cut a piece of hypo-allergenic tape 10 cm (4 inches) long, or prepare a membrane dressing or other securing device. Make two horizontal slits on both sides in the middle of the tape and fold sections so the adhesive side of the tape is closed in the middle. Split one end of the tape in half horizontally.
        iii. Securely apply the other end of the tape to the nose, leaving split ends free.
        iv. Carefully wrap the two split ends of tape around the tube.
    b. Membrane dressing:
        i. Optional: Apply a tincture of benzoin or another skin protectant to the patient's cheek and to the area of the tube to be secured.
        ii. Place the tube against the patient's cheek, and secure it with the membrane dressing, out of the patient's line of vision.
    c. Tube fixation device:
        i. Optional: Apply the wide end of the patch to the bridge of the patient's nose.
        ii. Slip the connector around the feeding tube where it exits the nose.
25. Label the tubing at a site close to the patient and at a site close to the source when there are different access sites or several bags.
26. Fasten the end of the NG tube to the patient's gown using a clip or a piece of tape. Do not use safety pins to pin the tube to the gown.
27. Help the patient into a comfortable position.
28. Obtain a chest or abdominal x-ray to verify placement.
29. Apply clean gloves, and administer oral hygiene. Clean the tubing at the nostril with a washcloth dampened in mild soap and water.
30. Dispose of used supplies.
31. Remove and dispose of used gloves. Perform hand hygiene.
32. Help the patient into a comfortable position, and place toiletries and personal items within reach.
33. Place the call light within easy reach, and make sure the patient knows how to use it to summon assistance.
34. To ensure the patient's safety, raise the appropriate number of side rails and lower the bed to the lowest position.

Skills

Managing a Nasogastric Tube

Quick Sheet

ALERT

- **Remember to route tubes and catheters having different purposes in different, standardized directions (e.g., IV lines routed toward the head; enteric lines toward the feet). This is especially important in the care of neonates.**
- **Do not reposition the NG tube of a patient who has undergone gastric surgery because that could rupture the suture line.**
- **Use only new enteral syringes (greater than or equal to 20 mL with ENFit® device) to administer medication through an enteral access device or use oral syringes until enteral syringes with the new connector are available.**
- **Change in Practice Alert: To enhance patient safety and prevent tubing misconnections, a new industry-wide design standard for enteral feeding connectors is being adopted. The ENFit connector is being phased in for feeding tubes, feeding syringes, and feeding administration sets.**

1. Verify the health care provider's orders.
2. Check the length of the tube in previous documentation, and follow agency policy and procedure.
3. Gather the necessary equipment and supplies.
4. Perform hand hygiene, and provide for patient privacy.
5. Introduce yourself to the patient and family, if present.
6. Identify the patient using two identifiers, such as name and birth date or name and account number.
7. Explain the procedure to the patient and ensure that he or she agrees to treatment.
8. Prepare equipment at the patient's bedside, and apply clean gloves. Don additional PPE based on the patient's need for isolation precautions or the risk of exposure to bodily fluids.
9. Assess the patient for nausea or abdominal pain. Check bowel sounds. Ensure that suction is turned off prior to auscultating for bowel sounds.
10. Trace tubing or catheter from the patient to point of origin (1) before connecting or reconnecting any device or infusion, (2) at any transition (e.g., new setting), and (3) as part of the hand-off process.
11. Verify NG tube placement.
    a. Certain times based on situation and feedings/suction orders:
        i. For patients tube-fed intermittently, test placement immediately before each feeding and before administering medications. Measure the external distance from the naris to the end of the tube and compare it with the previously recorded length in the patient's record.
        ii. For patients on continuous tube feeding, follow your agency's policy regarding pH testing. The American Association of Critical-Care Nurses (AACN) recommends that continuous feedings be stopped for several hours before pH testing in order to obtain reliable readings.
        iii. Wait at least 30 minutes after the medication is administered, whether by tube or mouth. if the enteral feeding and medication must be separated because of the risk of altered drug bioavailability.
    b. Draw 10 to 30 mL of air into a 30-mL or larger syringe, and attach the syringe to the end of the feeding tube. Flush the tube with air before attempting to aspirate fluid. If necessary, reposition the patient from side to side. Use more than one bolus of air if required to flush the tube.
    c. Draw back the syringe plunger slowly, and obtain 5 to 10 mL of gastric aspirate. Observe the appearance of the aspirate.
    d. Gently mix the aspirate in the syringe. Expel a few drops into a clean medicine cup. Measure the pH by dipping a pH strip into the fluid or by applying a few drops of aspirate to the strip. Compare the color of the strip to the color on the manufacturer's chart.
        i. The pH of gastric fluid from a patient who has fasted at least 4 hours is usually 5 or less compared with the pH of intestinal aspirate or respiratory secretions, which in many cases have a pH value of 7 or greater.[4,5]
        ii. Because food and medications may increase the pH of gastric secretions, gastric aspirates with a pH of 6 or greater may occur. Therefore, a pH value of 6 or greater does not always mean the tube tip is in the wrong place.[4]
        iii. The pH of aspirate from the small intestine of a fasting patient is usually greater than 6.
        iv. The pH of aspirate from a patient on continuous tube feeding may be 5 or higher.
        v. The pH of pleural fluid from the tracheobronchial tree is generally greater than 6.
    e. If after repeated attempts aspirate cannot be obtained from a tube confirmed by x-ray to be in the desired position, and if there are no risk factors for tube dislocation, monitor the external length of the tube and observe the patient for evidence of respiratory distress.
12. Flushing the NG tube:

a. Irrigate routinely and before, between, and after final medication (before feedings are reinstituted), and before an intermittent feeding.
    i. Draw up the amount and type of irrigant prescribed by the practitioner or per the organization's practice into a catheter-tip or ENFIT syringe.[4] If using a bottled solution such as sterile water for irrigation, ensure that the patient's personal bottle is labeled per the organization's practice.
    ii. Do not use irrigation fluids from bottles that have been used on other patients. Each patient should have an individual bottle of solution. Change the irrigation bottle every 24 hours. Irrigation trays, which hold both the irrigation fluid and the syringe, are considered open systems and may be more easily contaminated than sterile water bottles.
    iii. Clamp the feeding tube while disconnecting it from the administration tubing or while removing the plug at end of the tube. Place the end of the connection tubing on a clean towel.
    iv. Insert the tip of the catheter or ENFIT syringe into the end of the feeding tube. Unclamp the NG tube, and slowly depress the plunger to instill the fluid into the tube.
    v. If you are unable to instill the fluid, reposition the patient onto his or her left side and try again.
    vi. When the water has been instilled, remove the syringe. Reconnect the tubing, record the amount and type of fluid instilled, and reinstitute the tube feeding, or administer a medication as ordered. Flush each medication completely through the tube.
    vii. Remove and discard your gloves. Dispose of used supplies. Perform hand hygiene.
13. Help the patient into a comfortable position, and place toiletries and personal items within reach.
14. Place the call light within easy reach, and make sure the patient knows how to use it to summon assistance.
15. To ensure the patient's safety, raise the appropriate number of side rails and lower the bed to the lowest position.
16. Dispose of used supplies and equipment. Leave the patient's room tidy.
17. Remove and dispose of gloves, if used. Perform hand hygiene.

Skills

Removing a Feeding Tube

Quick Sheet

ALERT

- A health care provider's order is needed to remove a feeding tube.
- Remember to route tubes and catheters having different purposes in different, standardized directions (e.g., IV lines routed toward the head; enteric lines toward the feet). This is especially important in the care of neonates.
- Use only clean new enteral syringes (greater than or equal to 20 ml with ENFit® device) to administer medication through an enteral access device or use oral syringes until enteral syringes with the new connector are available.

1. Verify the health care provider's orders.
2. Gather the necessary equipment and supplies.
3. Perform hand hygiene, don appropriate personal protective equipment (PPE) based on the patient's need for isolation precautions or the risk of exposure to bodily fluids, and provide for the patient's privacy.
4. Introduce yourself to the patient and family, if present.
5. Identify the patient using two identifiers, such as the patient's name and birth date or name and account number, according to your agency's policy. Compare these identifiers with the information on the patient's identification bracelet.
6. Place the patient in semi-Fowler or high-Fowler position as tolerated. Raise the bed to a comfortable working level.
7. Place a clean towel over the patient's chest and provide facial tissues.
8. Clamp the NG tube.
    a. If the tube is connected to suction, turn off suction and disconnect the NG tube from it.
    b. If the tube is connected to an enteral feeding system, turn off the feeding pump and disconnect the NG tube from the tubing.
9. Explain the procedure to the patient and ensure that he or she agrees to treatment; put on clean gloves.
10. Remove the tape, membrane dressing, or tube-fixation device with which the feeding tube is secured.
11. Instruct the patient to take a deep breath and hold it.
12. Grasp the tube and then pull it out steadily and smoothly. Inspect the tube to ensure that it is intact. If it is not intact, notify the practitioner.
13. Instruct the patient to breathe normally.
14. Offer tissues to the patient to blow his or her nose.
15. Offer mouth care to the patient.
16. Help the patient into a comfortable position, and place toiletries and personal items within reach.
17. Place the call light within easy reach, and make sure the patient knows how to use it to summon assistance.
18. To ensure the patient's safety, raise the appropriate number of side rails and lower the bed to the lowest position.
19. Dispose of used supplies and equipment. Leave the patient's room tidy.
20. Remove and dispose of gloves, if used. Perform hand hygiene.
21. Document and report the patient's response and expected or unexpected outcomes.