



suction

OUTLINE:-

- Definition
- Purpose
- Equipment
- Suction catheter size
- Negative suction pressures
- Before suctioning
- Ways of suctioning
- Procedure of Oropharyngeal suction
- Procedure of Nasopharyngeal suction
- Procedure of Endotracheal suction
- Complication



DEFINITION:-

- Remove secretion from upper airway and trachea through a catheter connected to a suction machine or wall suction outlet by applying a negative pressure.
- Secretions can be sputum, blood, vomitus, or meconium.



PURPOSE:-

- To maintain patient airway by removing secretion.
- To facilitate exchange of gases.
- To stimulate a productive cough.
- To provide effective ventilation.



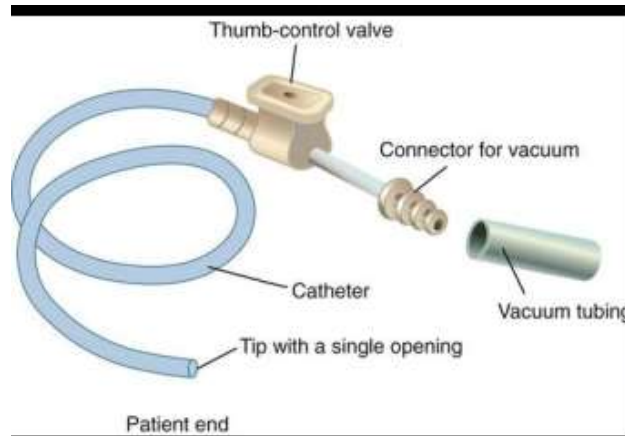
EQUIPMENT:-

- Towel or moisture resistant pad.
- Portable or wall suction machine with tubing, collection receptor.



- Sterile Suction Catheter (12-14 F for adults & 8-10 F for children).

- Oxygen source.

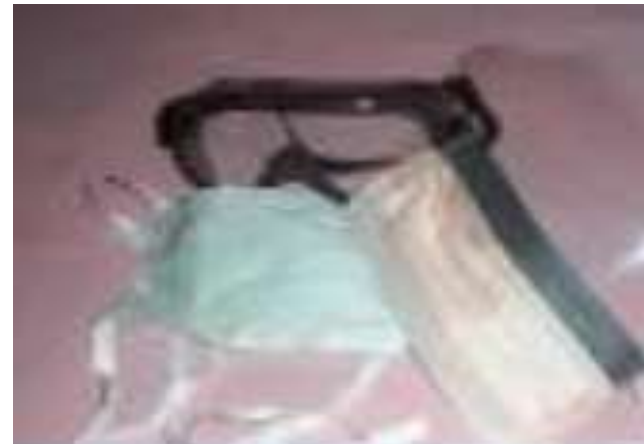


EQUIPMENT:-

- Sterile gauzes.
- Sterile gloves.



- Sterile disposable container for fluids.
- Sterile normal saline or water for lubricant.
- Face shield, if appropriate.



SUCTION CATHETER SIZES:-

Age	Size	Color
Neonate	8 French	Blue
6 Months	8 – 10 French	Blue & Black
1 -2 Years	10 French	Black
5 Years	12 French	White
8 – 10 Years	14 French	Green



NEGATIVE SUCTION PRESSURES:

- Infant: 60 mmHg up to 80 mmHg
- Young child: 80-100mmHg
- Older child: 100-120 mmHg.



BEFORE SUCTIONING:-

- Assess the child's need for suction by respiratory rate, breath sound and heart rate.
- Do chest physiotherapy.
- Check that all equipment is functioning.
- If the neonate has copious secretions coming from the mouth, turn the head to the side to allow secretions to collect in the cheeks where they can be removed easily.



- Ventilate the child with 100% oxygen before, during and after suctioning.



WAYS OF SUCTIONING:-

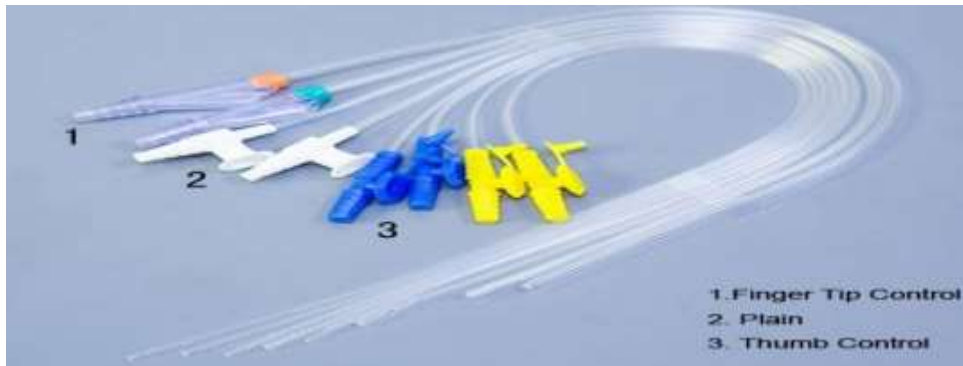


OROPHARYNGEAL SUCTIONING:-



OROPHARYNGEAL SUCTIONING:- PROCEDURE:-

- Explain the procedures to the family.
- Prepare all needed equipment (select appropriate Catheter size according to the Child`s age).



- Wash the hands.



PROCEDURE:-

- Put the patient in supine position & put towel on the patient`s chest.

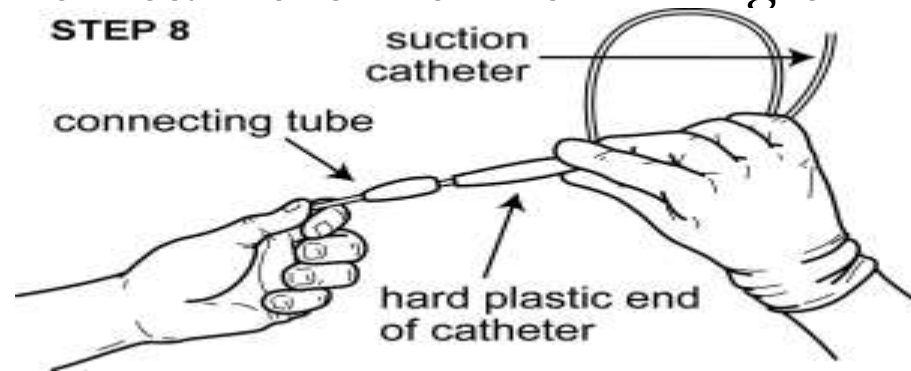


- Wear gloves and mask.



PROCEDURE:-

- Connect the suction catheter to the tubing of the suction device.



- Measure the catheter (tip of catheter) from the child's nose to the child's ear lobe and mark the catheter and check efficiency of catheter to ensure that it's patent.



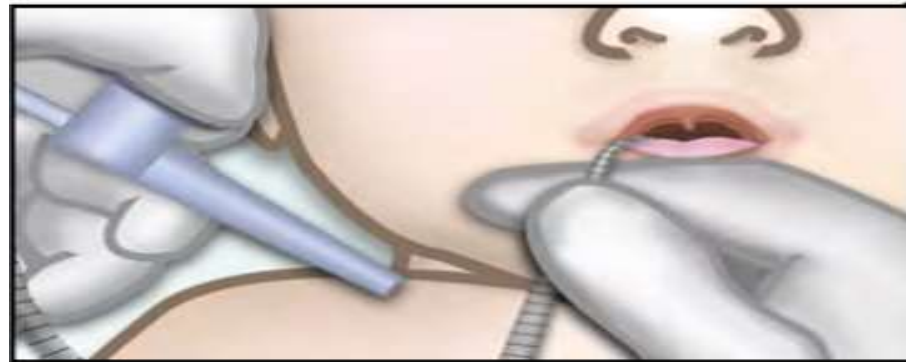
PROCEDURE:-

- Lubricate the catheter with distilled water or normal saline.
- Gently open the child's mouth and insert the catheter from one side without suction applied (Do not insert the catheter into the posterior pharynx in the conscious child).



PROCEDURE:-

- Turn on suction apparatus to appropriate negative pressure.
- Apply suction while rotating the suction catheter gently during removal.



- Wipe the catheter with sterile gauze and then clean the catheter with irrigating solution.



PROCEDURE:-

- Repeat suction as needed then apply suction from another side and withdraw the catheter gently with a rotating movement.
- Repeated suction and release is better than continuous suction.

N.B: Do not suction vigorously or deeply if bradycardia occurs during suction. Stop suction and re-evaluate.

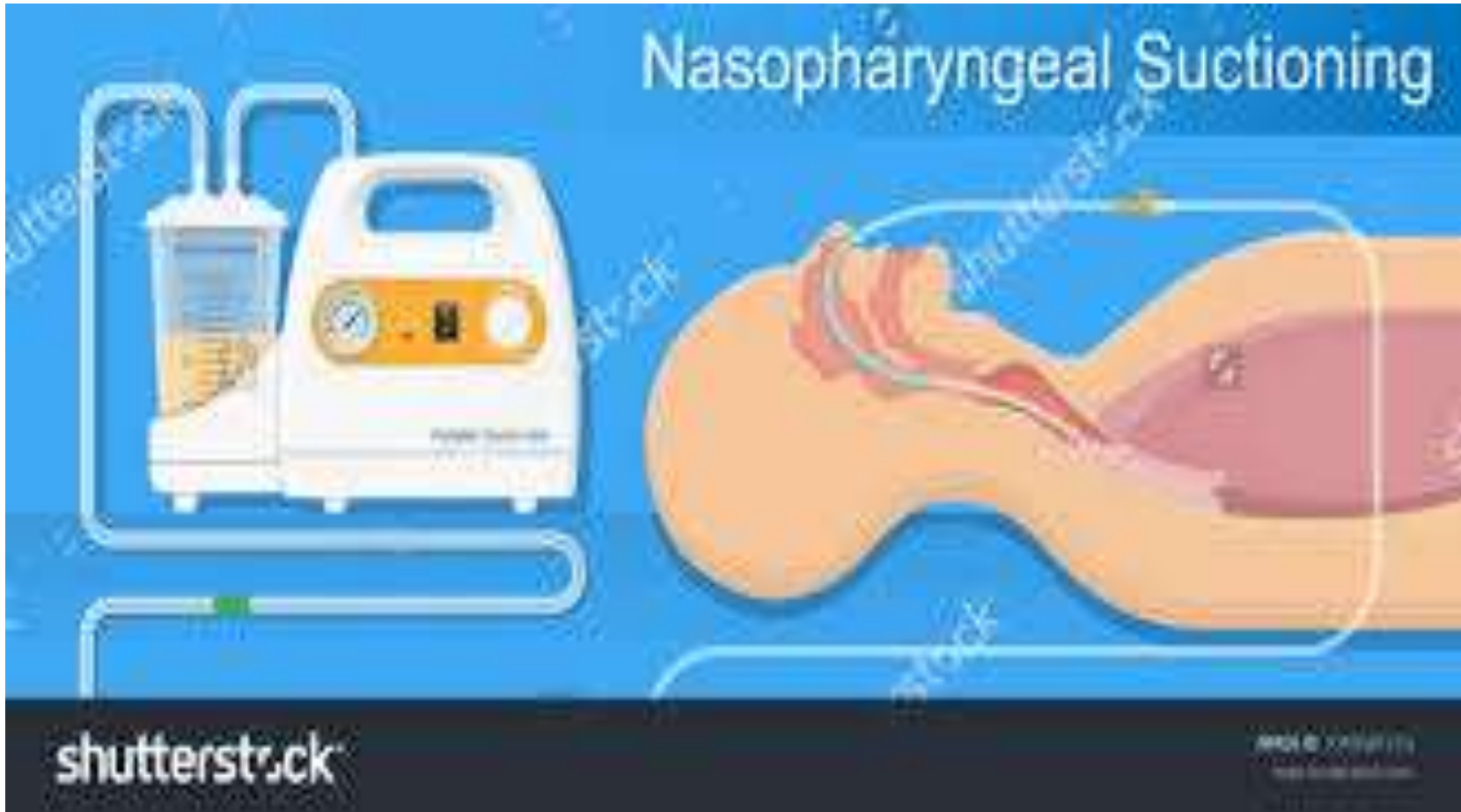


RECORD:-

- The child's response to the type of suctioning.
- Secretion characteristics (amount, color, odor, consistency).
- Any changes in heart or respiratory rates.
- Duration of suctioning.



NASOPHARYNGEAL SUCTIONING:-



NASOPHARYNGEAL SUCTIONING:-

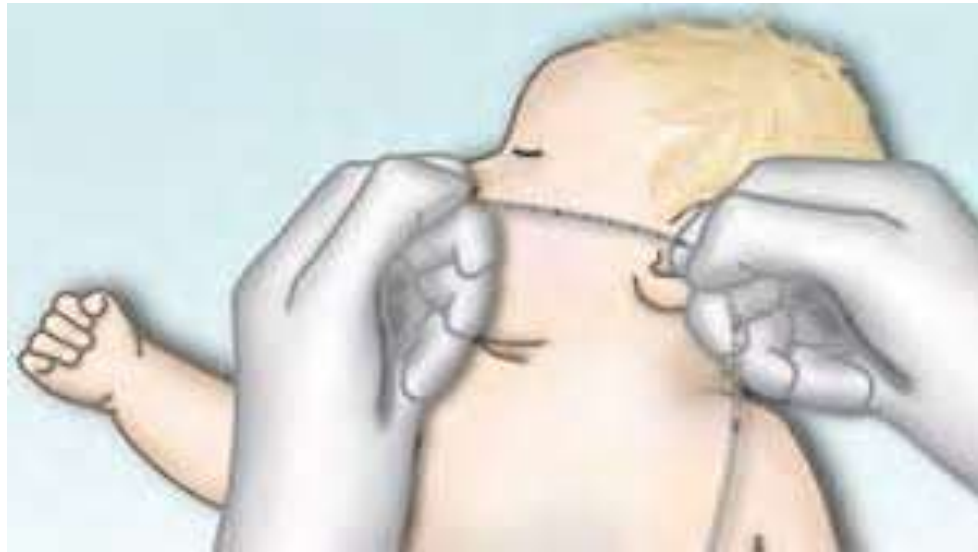
PROCEDURE:-

- Explain to child and family the need for suctioning.
- Wash hands.
- Wear gloves and mask.
- Use a proper size of catheter.
- Open the suction package and connect the catheter to the suction machine.



PROCEDURE:-

- Plug the suction tube to make sure that the suction machine is function.
- Measure the catheter (tip of catheter) from the child's nose to the child's ear lobe and mark the catheter.



- Tell the child to take deep breathing.



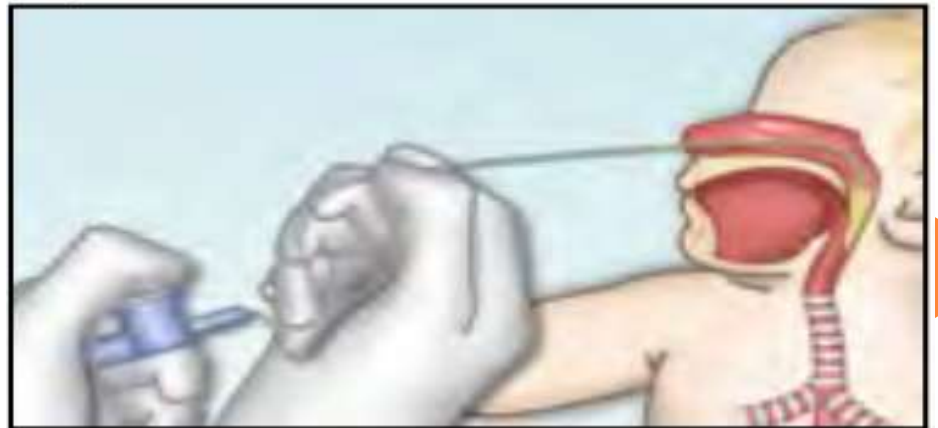
Procedure:-

○ If using usual catheter:-

- * Lubricate the catheter by distal water or normal saline and gently insert it into the nostril without suction applied.
- Turn on suction apparatus to appropriate negative pressure.
- Apply suction and withdraw the catheter gently on rotating movement.
- Wipe the catheter by sterile gauze then clean it by irrigating solution.



- If using a catheter with suction control:-
- Make sure the suction machine is plugged in and working
- Place the tip of the catheter in the saline and place your thumb over the suction control "Opening in the catheter" to obtain suction.
- With your thumb off the opening "suction control" {no suction}, insert the suction catheter in one nostril up to the measured distance.
- Place your thumb on the "suction control" to obtain suction.
- Rotate the catheter as you remove it with slow steady motion.



Procedure:-

- Wipe the catheter by sterile gauze then rinse the suction catheter in the saline with your thumb on "suction control".
- Allow the child to take deep breathing.
- Inserts the catheter and suctioning should take no longer than 5 to 10 second with sufficient time between each attempt.
- Record the child's response to suctioning, the type, amount, odor, color and consistency of secretion.
- Reassess respiratory rate, heart rate, and chest sound.



**Endotracheal suction
- Procedure**

ENDOTRACHEAL SUCTIONING:-

PROCEDURE:-

- Explain to child and family the need for suctioning.
- Measure the child's cardiac monitor and pulse oximetry.
- Assess child chest sound's, respiratory and heart rates and do chest physiotherapy.
- Prepare all needed equipment. Check that the suction device is functioning.
- Wash your hands.



PROCEDURE:-

- Put the patient in supine position & put towel on the patient`s chest.
- Catheter can be selected according to the ET tube size.
- Connect the suction catheter to the tubing of the suction device.



PROCEDURE:-

- Set the suction pressure to appropriate negative pressure.



- Ventilate the child with 100% oxygen for 30 seconds.



PROCEDURE:-

- Wear mask and sterile gloves with sterile technique.
- Lubricate the catheter with sterile water by using dominant hand.
- With a help of an assistant disconnect the ventilator and insert the catheter in to the ET tube until resistance is felt by using dominant hand and using aseptic technique.



PROCEDURE:-

- Resistance is felt when the catheter impacts the carina or bronchial mucosa, the suction catheter should be withdrawn 2cm out before applying suction.
- Turn on suction machine by using non dominant hand.
- Apply suction and withdraw the catheter gently with rotating movement for 5-10 seconds.



PROCEDURE:-

- Wipe the catheter with sterile gauze then clean it with irrigating solution.
- Ventilate with 100% oxygen between attempts and after the procedure.
- Repeat suction as needed



PROCEDURE:-

- Return the child to the ventilator.
- Comfort the child after the procedure.
- Auscultate anterior lungs bilaterally.
- Remove towel from child`s chest, remove gloves and wash hands.

Document:-

- The child's response to suctioning.
- The type of suction and amount, color, odor and consistency of secretion.
- Report any changes in heart rate, respiratory rate and breathe sounds.



COMPLICATION:-

- Hypoxia / hypoxemia.
- Tracheal and bronchial mucosal trauma.
- Bronchospasm.
- Pulmonary atelectasis.
- Anxiety and stress
- Pulmonary hemorrhage / bleeding



Thank You



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