

Paediatric Suctioning

SUCTIONING

- ⦿ Aim is to reduce work of breathing and improve gas exchange.
- ⦿ Maintain a patent airway by preventing aspiration by suctioning saliva or secretions.
- ⦿ Consent should always be obtained from the parents and child if appropriate.
- ⦿ Avoid KY jelly as this can occlude the nasal passage

SUCTION INDICATORS

- Child is not able to maintain their own airway by coughing or sneezing.
- Suctioning has associated risks, therefore, should only be used when there are excessive secretions affecting airway patency
- Evidence of retained secretions:
 - > Increased work of breathing
 - Increased respiration rate
 - Altered respiration pattern
 - Nasal flaring
 - Tracheal tug
 - Head bobbing
 - Grunting
 - Altered LOC
 - > Altered gas exchange
 - Decrease saturations
 - Pale or mottled skin
 - Cyanosis
 - Decrease O₂ or increased CO₂ in an ABG
 - > Visible or audible secretions
 - > Poor cough
 - > Difficulty feeding
 - > Increased oxygen requirements
 - > Reduced movement/ breath sounds

CONTRAINDICATORS AND PRECAUTIONS

- ⦿ Suctioning should not be carried out if any of the below are present:
 - > Facial trauma
 - > Stridor
 - > Bronchospasm
 - > Basal skull fracture or CSF leakage
 - > Occluded nasal passage, or unexplained bleeding
 - > Severe hypoxia/hypoxaemia
 - > Raised ICP
 - > Cardiovascular instability

ASSESSMENT

- ⦿ Auscultate and palpate the chest
- ⦿ Monitor heart rate
- ⦿ Respiration rate
- ⦿ Oxygen saturations
- ⦿ Skin colour and perfusion
- ⦿ Effectiveness of their cough
- ⦿ Work of breathing

CATHETER SIZE

Age of Patient	Size of suction Catheter in patient without artificial airway	Suction Pressure	Kpa
Neonates (0-3months)	5-6 French gauge (Fg)	60-80mmHg	6-10
< 3 years	6-8 Fg	75-90mmHg	10-12
3-13 years	8-10 Fg	90-150mmHg	12-20
>13 years	10-12 Fg	150mmHg	20

- If suctioning is not adequate either increase suction pressure or increase catheter size.
- A catheter should not be >50% of their airway.

EQUIPMENT

- ◉ Suction (wall or portable)
- ◉ Suction collection container
- ◉ Correct size catheter
- ◉ X2 non-sterile gloves
- ◉ Container of sterile water
- ◉ Oxygen, tubing and mask
- ◉ Sterile gauze
- ◉ Eye protection
- ◉ Surgical face mask
- ◉ Pulse oximeter

PROCEDURE

1. Explain procedure to child and parents.
2. Hand hygiene
3. Prepare equipment
4. Position the child in a safe and suitable position.
5. Ensure suction is turned on.
6. Have oxygen ready (if child has desaturated prior to suctioning, consider **pre**-oxygenation)
7. Occlude end of suction to check pressure.
8. Apply gloves and eye protection.
9. Place catheter in dominant hand, avoid touching the end of the catheter.
10. Non-dominant hand controls the suction.
11. Lubricate the catheter with either KY jelly, sterile water or patient's own saliva.
12. Insert catheter. Do not apply suction till ready to remove catheter. Suction for 5-10 seconds.
13. Whilst suctioning remove the catheter at a moderate rate.
14. If secretions are thick, clear the catheter by dipping into bowl of sterile water and apply suction.
15. Allow time for the child to recover between suctioning and complete an assessment before suctioning again.
16. Once suction is complete, wrap the catheter around your hand and pull the glove over the catheter.
17. Flush the suction tubing by placing in the sterile water.
18. Dispose of waste and hand hygiene.
19. Reassess for adequacy of treatment and document.

NASAL SUCTIONING

- ⦿ Advance catheter into nasal passage till you reach the back of the nose.
- ⦿ Insert catheter into nostril without suction.
- ⦿ Do not force against resistance.
- ⦿ May need both nostrils suctioned.

NASOPHARYNGAEAL

- ⦿ Measure the catheter to reach the nasopharynx.
 - > Measure from the nares to the tragus.
- ⦿ Insert catheter into the nostrils without suction.
- ⦿ Gently advance the catheter to the back of the nose. Slid the suction back and forth along the floor of the nose.
- ⦿ Consider inserting an NPA if frequent suctioning is required to prevent patient discomfort.



EFFECTIVENESS

- ⦿ Improved breath sounds
- ⦿ Removal of secretions
- ⦿ Improved pulse oximetry
- ⦿ Decrease work of breathing

POTENTIAL COMPLICATIONS

- Mechanical trauma
- Hypoxia/hypoxaemia
- Cardiac arrest/arrhythmia
- Hypotension
- Respiratory arrest
- Uncontrolled coughing
- Gagging/vomiting
- Bronchospasm/ bronchoconstriction
- Pain/discomfort
- Atelectasis
- Misdirection of catheter
- Increased ICP
- Pneumothorax

SUCTION MAINTENANCE

Step	Action
1	The <u>wall mounted suction units</u> are to be checked each shift by the nursing staff for their allocated patients
2	When in use change liner when $\frac{3}{4}$ full or every 72hrs and with each new patient / bed transfer.
3	Inner liners should be disposed of in biohazard rubbish bag using standard precautions
4	Maintenance requests are reported in the appropriate manner
5	Alternative suction is provided for any equipment failure i.e. portable suction unit
6	Infants or children <u>own portable suction</u> unit, it is the Registered Nurse's responsibility to check the unit each shift. If the individual suction unit is not working then report to appropriate service provider for replacement i.e. Invacare. If the container becomes overfull the suction will not work and the filter will need replacing, ensure that the filters remain dry.
7	Collection container needs to be cleaned when $\frac{3}{4}$ full or at least every 72hrs
8	The container needs to be cleaned in the sluice room, using warm soapy water, dried and reassembled.- Check all equipment is working correctly once reassembled
9	Registered Nurses need to ensure that individual suction bags / bedside equipment are stocked and ready to use at all times with spare suction catheters and yankeurs as per unit routine.
10	<u>Portable suction units</u> needed to be checked as per individual unit requirements when not in use
11	All portable suction units should be cleaned immediately after use and reassembled