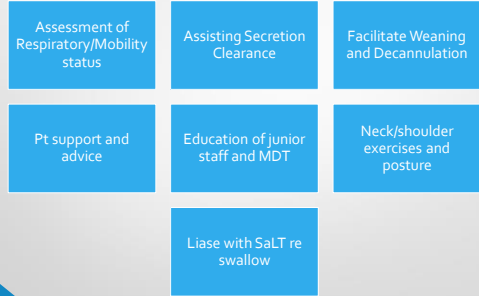


Suction and The Role of Physiotherapy

Senior Physiotherapist in Respiratory Care
SJH

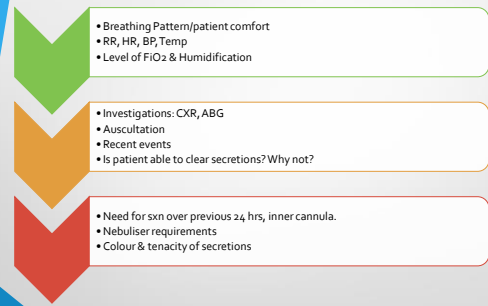
The Role of Physiotherapist



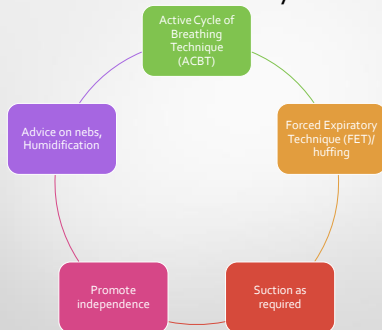
Indications for tracheostomy



Assessment of Respiratory Status



Secretion clearance- Physio's Role



Suction

The mechanical aspiration of pulmonary secretions from a patient with an artificial airway in place. The procedure involves pt preparation, the suctioning event(s) and follow up care.

*Endotracheal Suction Guidelines - ICU Working Party
Clinical Interest Group of ISCP
www.iscp.ie*

Catheter Size for Suction

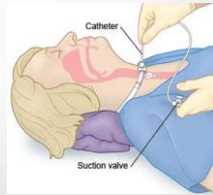
Trache tube size (mm) X 3

2

E.G. $8 \times 3 = 24 = 12$

2 2

Ensures catheter is less than ½ the internal diameter of the trachea tube



Equipment required

- Apron + gloves
- Fluid Shield mask if appropriate
- Suction circuit/portable machine
- Catheters
- Sterile gloves
- Oxygenation equipment
- SaO₂ monitor



Preparation of Patient

- Explain the procedure to the pt- how long it will last, what it will feel like and why you are doing it.
- The patient should receive hyperoxygenation by the delivery of 100% oxygen for > 30 secs prior to the suction event.
- The patient may be monitored using a pulse oximeter.

The Suction Event

- Description- the placement of a suction catheter through the artificial airway into the trachea and **the application of a negative pressure as the catheter is being withdrawn.**
- Sterile technique
- Continuous suction technique
- < 15 secs per suction event. Fast in, slow out.
- Suction pressure maximum safe limits 100-150mmHg

Follow Up care

- The pt should be monitored for adverse reactions.
- Breathing control, position of ease.
- The patient should be hyperoxygenated by delivery of 100% oxygen > 1 min.

Indications to Suction

- Audible secretions or evidence of secretions on auscultation.
- Visible secretions in the airway.
- Clinically apparent increase in work of breathing.
- Need to maintain patency and integrity of the airway.
- Deterioration of ABGs/Obs.
- Suction is an invasive procedure and should **NOT** be carried out on a routine basis.

Precautions

- Disordered coagulation
- Cardiovascular instability
- Suspected/confirmed increase in intracranial pressure
- Bronchospasm

Covid 19 **positive**/ suspected

- Full PPE- including FFP2 or FFP3, eye shield, gown and gloves
- Closed suction circuit advised – renewed weekly
- HME Swedish nose with oxygen port can be applied
- Reduce frequency of checking inner cannula to avoid disconnecting the circuit unless clinically indicated
- Surgical mask may be worn by patient during tracheostomy care with cuff deflated

Closed suction circuit



Swedish nose



Covid **negative**/ not suspected

- Ffp2 or ffp3, eye shield, apron and gloves should be worn for all tracheostomy care including suctioning
- Reduce frequency of checking inner cannula
- NB. Suction only as needed

Hazards include:

- Hypoxia/hypoxemia
- Tissue trauma to the trachea and/or bronchial mucosa
- Cardiac arrest
- Respiratory arrest
- Cardiac Dysrhythmias
- Pulmonary atelectasis
- Infection
- Bronchospasm/ Bronchoconstriction
- Pulmonary haemorrhage
- Elevated Intracranial pressure
- Hypertension
- Hypotension



Assessment of Outcome

- Improvement in breath sounds
- Decrease in work of breathing
- Improvement in ABGS or SaO₂
- Removal of pulmonary secretions

Role in Weaning

- Facilitation of process
- Monitoring of chest status
- Promotion of independent secretion clearance
- Reassurance and support



References

- Tracheostomy Care and Management Guidelines
SJH September 2020
- Endotracheal Suction Guidelines
ICU Working Party, Clinical Interest Group of ISCP