

Decision to Extubate

- Previous grade 1 intubation?
- No obvious risk factors for extubation failure?
- No obvious pre-intubation risk factors present?
- Is this the first extubation attempt?

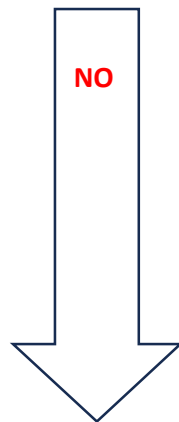


NO

Is the patient ready to Extubate?

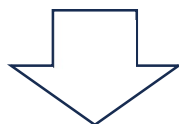
(see overleaf for more detailed suggestion)

- Is there a cuff leak?
- Spontaneous breathing trial for more than 30 mins?
- Minimal pressure support and PEEP?
- Sedation off for more than 1 hour?
- Is the Rapid Shallow Breathing Index <105? (RR/tidal volume in litres)
- Is the patient haemodynamically stable?
- No signs of delirium and GCS safe to extubate?
- Post-extubation oxygenation plan agreed (FM/HFNO/NIV)?
- Is the patient for re-intubation?



Nurse Led Extubation

1. Ensure location of medical team is known
2. Ensure nurse in charge and pod lead aware



Post Extubation

Were there any safety concerns or incidents?

Joint Extubation

Nurse + Medic present at bedside
Ensure roles are clearly defined.

Extubation Algorithm

Prepare Equipment
(see overleaf)

Pre-Oxygenate patient in 100% Oxygen for 3 minutes (unless contraindicated)

Aspirate NGT, Suction Oropharynx, subglottic and ETT.
Optimise Position

Deflate cuff and remove ETT

Oxygenate with agreed post extubation device

Stay at bedside until all present agree extubation has been deemed successful.

Troubleshooting overleaf.

Equipment Needed for Extubation

1. In-line suction and Yankauer
2. Water's Circuit
3. 20ml syringe for cuff deflation
4. Means of delivering oxygen post extubation

Re-intubation equipment nearby if high risk:

1. (Video)Laryngoscope with 2 blades
2. Bougie
3. 2 ET Tubes (size patient was intubated with and size below)
4. Is difficult airway trolley available with B@EASE?

Management of Post Extubation

Stridor

1. Manual CPAP
2. High Flow Nasal Oxygen
3. Mask CPAP/BiPAP
4. Consider re-intubation

Drugs

1. Dexamethasone 6mg IV then 6mg IV 6 hourly for 24 hours
2. Nebulised 1:1000 adrenaline 5mls
3. Budesonide Nebuliser 1-2mg

Extubation Appropriateness

Examples

(not an extensive list but will allow appropriateness to be established within MDT)

Airway

No significant airway swelling

Breathing

Sats >94% on <40% FiO₂

RR < 35/min

PEEP < 6cmH₂O

Tidal Volume >5ml/kg with PS < 5cmH₂O

PaO₂ >8kPa, PaCO₂ acceptable for patient

No excessive sputum

Adequate cough and ability to clear sputum

Circulation

HR <120bpm

Stable rhythm (sinus or AF/heart block if this is normal for patient)

Minimal vasopressor support needed to achieve

MAP target

Normal pH

Normothermic

Neuro

CAM negative and obeying commands

Pain well controlled

Sedation off for >1 hour.

Paralysis not given within 4 hours

Emergency Re-Intubation Plan

- What is the anticipated difficulty?
- Verbalise failed ventilation/intubation plan as below
- Are Anaesthetic/ENT teams needed?

Plan A

Re-intubation orally with appropriately sized ETT

Plan B

Supraglottic Airway e.g. iGel

Plan C

Revert to facemask/adjuncts to ventilate and OXYGENATE

Consider other techniques e.g. fiberoptic scope

Plan D

Rescue techniques e.g. cricothyroidotomy

- Defibrillator location known?
- Ensure ICU Consultant aware