# Endotracheal Extubation

## Purpose
To provide guidelines for endotracheal extubation in the Neonatal Nursery.

## Policy Statement
Patients are weaned from ventilator support as soon as possible since the incidence of complications increases as mechanical ventilation time increases. Patients are usually weaned to low oxygen levels and low ventilator settings before extubation attempts, but there are no clinically useful tests to determine if they are ready for removal of a secure airway. The Synactive Theory of Development proposes that modification of the environment to support the infant’s subsystems will assist in the achievement of successful extubation. Therefore, the timing of extubation and environmental conditions are evaluated and modified to best support the infant.

## Applicability
All Covenant Health Neonatal Nursery staff.

## Equipment
- T-Piece Resuscitator connected to blended oxygen source and appropriate size of mask
- Follow-up respiratory assistance such as nasal CPAP ordered and ready
- In-line suction catheter of appropriate size to suction ETT
- Suction catheter for removal of secretions from the nasal passages and oropharynx
- Wall suction set at 60-80 mmHg
- Stethoscope

## Procedure

<table>
<thead>
<tr>
<th>Action</th>
<th>Rational</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Obtain order for extubation and notify Respiratory Therapist. Ensure that an individual skilled in intubation is readily available before proceeding</td>
<td>Respiratory therapist needs to prepare equipment and will remove ETT or assist with procedure. The infant may need to have the ETT replaced if removal not tolerated.</td>
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<tr>
<td>2. In consultation with team, determine the best time for the procedure. Encourage parent’s involvement to do skin to skin during extubation. Consider an appropriate time when the area around the baby is quiet, and time when the baby is not in deep sleep.</td>
<td>Creation of environmental conditions to support baby’s subsystem stability.</td>
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<tr>
<td>Procedure</td>
<td>Action</td>
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<tr>
<td>3.</td>
<td>The infant is not given the feed scheduled immediately before extubation or is NPO for 1 hour. Ensure the stomach is empty by passing a gastric catheter. Suction any milk.</td>
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<td>4.</td>
<td>Ensure respiratory equipment is available according to orders e.g. CPAP, low flow oxygen, biphasic CPAP. Ensure t-piece with appropriate size mask is connected to blended gas source with appropriate O₂ concentration</td>
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<tr>
<td>5.</td>
<td>Suction ETT, oropharynx, and nares.</td>
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<tr>
<td>6.</td>
<td>Turn down lights and keep area quiet.</td>
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<td>7.</td>
<td>Allow baby to settle for 5-20 minutes.</td>
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<td>8.</td>
<td>Gently loosen tapes. Hold ETT in place and wait until baby settles after this stressful procedure.</td>
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<td>9.</td>
<td>Using manual ventilation give the infant a inspiration. <strong>The Neonatologist/Designate or RRT removes the ETT.</strong></td>
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<td>10.</td>
<td>Administer oxygen close to the face by</td>
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<tr>
<td>11.</td>
<td>Assess patient for changes in respiratory effort and rate, distress, stridor, and general appearance (colour, activity, level of consciousness), especially in the first hours following extubation. Notify Neonatologist/Designate if stridor or moderate-severe work of breathing present.</td>
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<td>12. Parent continues to hold for as long as the baby is stable and parent is comfortable.</td>
<td>Minimize disruptions during stabilization period.</td>
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<tr>
<td>13. Assess need for blood gas and obtain order for resumption of feeds as needed. Avoid disturbing procedures in the immediate extubation period.</td>
<td>Disturbing procedures destabilize the baby and may reduce extubation success.</td>
<td></td>
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</tbody>
</table>

### Documentation

- Name of individual who completed procedure, infants’ response and tolerance to procedure. To be documented on Infant Care Flowsheet.

### References


### Revisions

- July 2005
- July 2016
Endotracheal Exubation

Date Approved
July 2016

Policy No.

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Signing

Original signed

GAIL CAMERON
SENIOR DIRECTOR OPERATIONS
WOMEN'S & CHILD HEALTH
COVENANT HEALTH
GREY NUNS & MISERICORDIA HOSPITALS

Original signed

DR. PAUL BYRNE
MEDICAL DIRECTOR
NEONATAL PROGRAM
COVENANT HEALTH
GREY NUNS HOSPITAL

Original signed

DR. SHARIF SHAIK
MEDICAL DIRECTOR
NEONATAL PROGRAM
COVENANT HEALTH
MISERICORDIA HOSPITAL

August, 2016

DATE

September, 2016

DATE

DATE