

THE CUTTING
EDGE
OF PEDIATRICS

Texas Children's
Hospital

Tracheostomy Care in the PCP Office

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Texas Children's
Hospital

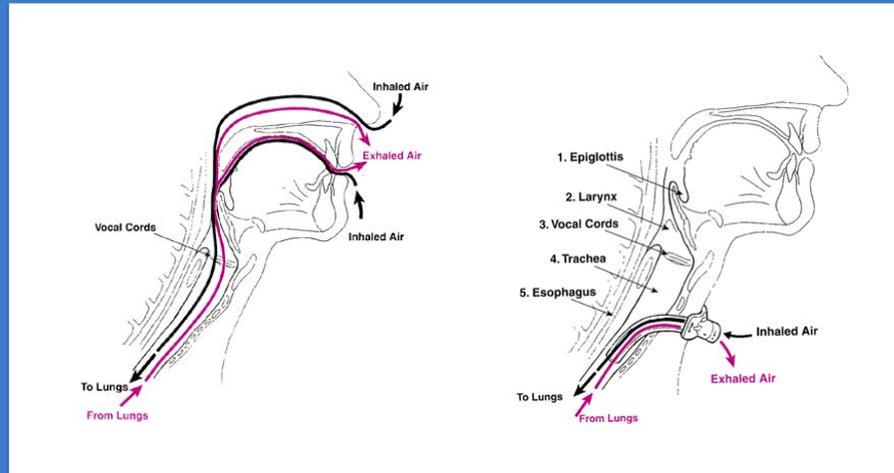
Imagine...

A 5-month-old child in your practice (you care for the siblings) is about to be discharged home after a long hospital stay with a tracheotomy

WHAT DO YOU NEED TO KNOW?

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Breathing with Tracheostomy



Diagrams from Passey-Muir corporation

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Q 1. Why does patient have trach?

Most common reasons:

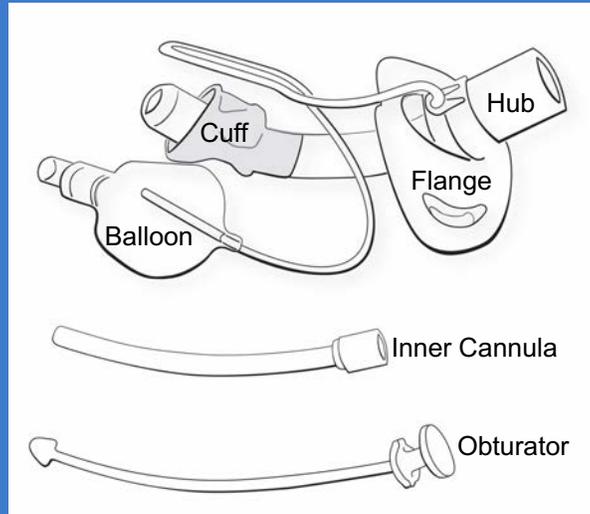
- Ventilator dependence
- Airway obstruction - BVCP, SGS, micrognathia, lymphatic malformation
- Inability to clear lower airway secretions – CP, immobility, muscular dystrophy
- Inability to swallow (aspiration)



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Parts of Trach Tube



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Q2. Type of Trach?

Neonatal Shiley 4.0 uncuffed



Pediatric Bivona 4.0 TTS



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Emergency Equipment – *Should Be with Patient at All Times*

- Trach tube – current size
- Downsize trach
- Supplies to change trach
- Suction machine
- Suction catheters
- Resuscitation bag with face mask and adapters



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Q3. Does the Family have Appropriate Equipment?

- Emergency trach supplies
- Medications
- Portable suction machine
- Ventilator, power cords and batteries
- Monitoring devices
- Portable oxygen
- Emergency contact numbers



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What is the Status of Home Equipment?

Home

- Pulse oximeter (when sleeping and prn)
- Humidified air (or oxygen)
- Suction machine
- Trach tubes & ties, suction catheters



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Q4. Who Will be Caring for the Patient with a Trach? (and have they been trained?)

- Ideally- 24/7 observation by someone who knows how to suction and change the trach in an emergency
- Options
 - Parents
 - Relatives
 - Home nursing
 - Chronic care facility



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Trach Emergencies

3% mortality due to trach complications

- Plugging
- Decannulation



The younger the patient the higher the risk

- Airway smaller
- Less room around trach if it is plugged
- Infant unable to get help

Higher risk if airway obstruction above trach tube

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Recognizing Breathing Problems in Trach Patients

- Flared nostrils
- Rapid breathing or use of accessory muscles to breathe (retractions)
- **Noisy breathing/ squeaky noise from trach**
- Clammy and sweaty skin
- Restlessness
- Cyanosis

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If There are Signs of Respiratory Distress

1

Suction to the correct depth.

2

Bag through the tracheostomy.



3

Change the trach tube. If the regular size does not work try the smaller sized tracheostomy. If the smaller size doesn't work, bag the mouth with the mask (and call 911).

4

Start CPR and call 911 if the child becomes unresponsive.

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Remember Q1. Why Should You Care Why the Trach Was Put In?

- Most children with trachs can be given breaths with a mask over the nose and mouth if you cannot get the trach tube into the stoma
- *In an airway emergency- you should know if it is possible to mask ventilate/intubate*

Tracheostomy/Airway Information

Child's Name	
Current Trach Size	
Trach Down Size	
Suction Depth	
ENT Surgeon	
Last D.L.B.B	
Airway Status	
Grade View Larynx	
Intubation Instructions	

If you need assistance:
 An ENT nurse or provider can be reached 24 hrs a day at 832-822-3250.
 Please call with concerns or questions regarding your child's tracheostomy.



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Prevention of Accidental Decannulation

- Make sure the trach ties are secure
- Only one finger-width between the trach collar and child's neck
- Replace ties if any signs of wear, such as thinning of the tie
- Do not allow child to pull at the trach



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Prevention of Plugging

- Adequate humidification
 - The nose warms, moistens and filters air
 - With a trach, air directly into the lungs through the trach tube
 - Extra humidity is needed to prevent trach tube from clogging with mucus
- Appropriate size trach
- Adequate fluid intake
- A mucus plug may be removed by suctioning
- If the plug cannot be removed by suctioning, change the trach tube



When in doubt, change it out

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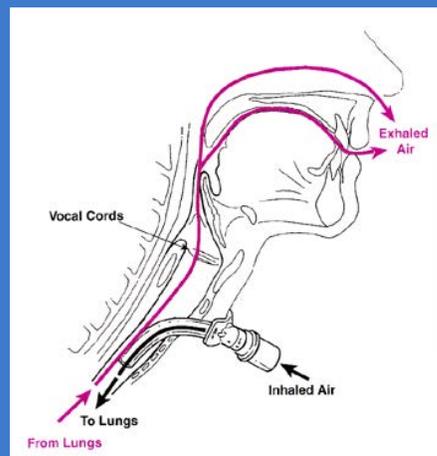
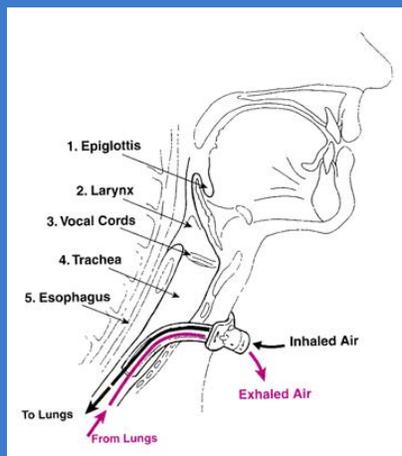
Managing Thick Secretions

- Use humidified trach collar more than night/naps
- Monitor overall hydration status
- if mucous is yellow or green consider culture and antibiotics
- If signs of respiratory illness, culture tracheotomy tube and consider antibiotics

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Use of Speaking Valve



Diagrams from Passey-Muir corporation

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 **Routine Visit Trach Check List**

Questions to Ask Family

Any problems with bleeding, plugging, infections, accidental decannulation, trach supplies or care personnel?

Family using pulse oximeter and humidified air at naps and night?

Family changing tracheotomy tube monthly? Any problems with trach changes?

Inspect
Skin under trach and trach ties

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 **Conclusion: Children with Tracheotomy Tubes**

What you should know:

1. Why was trach placed? (and can the child be mask ventilated/intubated from above in an emergency?)
2. The type and size of trach tube
3. Does the patient have appropriate equipment?
4. Are caregivers trained in tracheostomy care?
5. What to do in case of a trach emergency?

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