Is There Anything I Can Do To Postpone A Tracheostomy?

- Noninvasive Ventilation
- Airway Clearance

Today’s options are much smaller

There are multiple mask types
Is There Anything I Can Do To Postpone A Tracheostomy?

Sip and Puff Ventilation

Airway Clearance Devices

Why Do Some People Need A Tracheostomy?

- Prolonged mechanical ventilation
- NIV no longer meets your needs
- Upper airway obstruction (temporary or permanent)
- Secretion management (neuromuscular disease)
- Improved patient comfort

What Are The Advantages of a Tracheostomy?

- Can save your life
- Quality of life can be great
- Frees up face/hands for eating, etc.
- May decrease need for continuous ventilation
- Provides direct access to your lungs for:
  - Secretion removal
  - Mechanical ventilation
  - Medication delivery
What Are The Disadvantages of a Tracheostomy?

- Increased risk of infection, bleeding, scar tissue
- Requires a surgical procedure
- Emotional and psycho-social issues - altered body image
- Communicating and swallowing may be altered
- Sense of taste and smell can be lost
- The natural warming, humidification and filtering of air that usually takes place in the upper airway is lost
- Need for home health services/skilled caregivers
- Increased equipment needs
- Cost of care can be a burden

***MOST IMPORTANT: you decide

Upper Respiratory Tract

- Nasal Cavity
- Oral Cavity
- Pharynx
- Larynx

Tracheostomy or Tracheotomy?
Which One Is It?

- Tracheostomy is defined as the surgical opening of the trachea.

Tracheostomy or Tracheotomy?
Which One Is It?

- Tracheostomy also refers to a surgical procedure: the creation of a stoma at the skin surface, but most often is referring to the tube that is inserted

How Is A Tracheotomy Performed?

- Percutaneous – at the bedside (usually while the patient is in critical care)
- Open – in an operating room
Open Tracheotomy

- The oldest surgical procedure
- The patient goes to the operating room
- Vertical incision is made between 3-4 or 4-5 cartilage rings
- Tube is inserted and sutured in place for safety

What Does The Tube Look Like, And Where Does It Go?

Parts of a tracheostomy tube - ISO STANDARDS
- Neck flange
- Tube shaft
- 15 mm connector-hub
- Cuff
- Inflation line
- Pilot balloon
- Pilot port with one way valve

There are many choices of tubes!!!!!

Tracheostomy Tubes
- Single Lumen/Cannula
- Double Lumen/Cannula

Fenestrated Tracheostomy Tube
**Day to Day Needs Of A Tracheostomy Patient**

- **Patient Information** – “Neck Breather Alert”
  - Reason for tracheotomy/date of initial tracheotomy
  - Brand, type, size tube – spare tubes at bedside
  - Local fire and rescue, police, and your electric company should be alerted to your needs
- **Assessment:**
  - Sputum characteristics – signs of infection
  - Cough strength, mucus production
  - Check security of tube holder/ties

**Day to Day Needs Of A Tracheostomy Patient – Swallowing**

- Presence of a tracheostomy tube may:
  - Make swallowing more difficult
  - May increase the risk of aspiration (as high as 85%)
- Assessment, evaluation, and therapy by a Speech Language Pathologist may make oral intake possible.
- If oral intake is not an option, alternative feeding options should be discussed.
Day to Day Needs Of A Tracheostomy Patient

**Humidification**

- HME – artificial nose
- Trach Collar – used with aerosol generating device
- Drink plenty of fluids, eat sensibly, and avoid people who have colds and flu
- Take care nothing enters the tracheostomy (leaves, bugs, hairs, shaving cream, cotton swabs, powders, dust, fumes, etc)

**NaCl Nebulizer therapy**

**NaCl instillation**

- Bibs that heat and filter

**Bibs that heat and filter**

Day to Day Needs Of A Tracheostomy Patient

**Trach Care**

- Bronchiol-pulmonary Hygiene
  - Suctioning
  - Assistive coughing and breathing techniques
  - Devices
    - Acapella/PEP/Therapy Vest
    - Cough Assist
- Inner Cannula Change Cleaning
  - Disposable inner cannula is changed daily and PRN
  - Non-disposable inner cannula is cleaned 2 X day and PRN

**Acapella/PEP/Therapy Vest**

**Cough Assist**

**Inner Cannula Change Cleaning**

Day to Day Needs Of A Tracheostomy Patient

**Oral Care**

- Give special care to nose and mouth
- Unable to sense mouth odor
- Good mouth care stimulates salivation and taste buds

Day to Day Needs Of A Tracheostomy Patient

**Stoma Care**

- Trach site must be cleaned daily
  - After the trach stoma has healed, plain soap and water can be used to clean the skin around the trach
- **NEVER USE**: powders, lotions
- Antibiotic ointment may be used for redness
- Moleskin can be wrapped around ties to prevent rubbing
- Change/wash fabric tube ties daily – can use twill tape, Velcro fasteners

**Antibiotic ointment may be used for redness**

**Moleskin can be wrapped around ties to prevent rubbing**

**Change/wash fabric tube ties daily – can use twill tape, Velcro fasteners**
Day to Day Needs Of A Tracheostomy Patient

Routine Tracheostomy Tube Changes

- First tube change is done by a surgeon [preference]
  - To assure stoma and tract established
- Routine change of tube - physician will advise:
  - Change monthly if double lumen tube
  - Change weekly if single lumen tube
  - To reduce complication of granulation tissue
  - To decrease risk of infection
  - To comply with tube manufacturers guidelines

NOTE*** There is no current consensus/guideline for adults [local practices]

Day to Day Needs Of A Tracheostomy Patient

Personal Hygiene

When showering:
  - Cover tracheostomy with HME or shower guard
  - Angle spray away from stoma

How Will I Communicate?

Airflow With A Tracheostomy Tube

- Intercom system
- Bells on ankles/shoes to hear a child
- Tricycle horn, squeaker toy, bell
- Finger occlusion
- Call system, light or bell (adapted as necessary)
- Picture, word and/or alphabet communication board
- Facial expression or eye gaze board (limited mobility)
- Magic slate writing board
- Pencil and paper
- Simple gesture
- Signing
- Lip reading
- Speaking Valves

Leak Speech For Ventilator Patients

- Cuff is deflated to allow airflow through the mouth
- May be some loss of ventilation, adjust volumes to compensate
  - Too much volume can be harmful to the lungs
- Vocalize during inspiration – why is this unnatural?

The Passy-Muir® Tracheostomy & Ventilator Swallowing and Speaking Valve
Physiologic Benefits of Passy-Muir® valve

- Restores Voice/Communication
- Improves Swallowing
- Restores Physiologic PEEP
- Improves Secretion Management
- Improves Oxygenation
- Promotes Weaning and Decannulation
- May Decrease Risk of Aspiration
- Improves Smell & Taste

Other Resources:

- www.passy-muir.com
- www.hopkinsmedicine.org/tracheostomy/living
- www.Trachostomy.com
- http://www.ventusers.org
care%20guide.pdf

Linda Dean, RRT
Clinical Specialist
Passy-Muir Inc.
ldean@passy-muir.com
(949) 833-8255

Definitions:

- Airway: The passage that allows air (oxygen) to get to the lungs
- Ashen: A word that describes a pale, gray color to the skin
- Bacitracin: An antibiotic ointment used for redness or irritation around the tracheostomy
- Breathing: The process of taking air through the airway and into the lungs, supplying the body with oxygen vital for survival
- Cannula: A collection device for secretions and saline, attached to the suction machine
- Cannula: The part of the trach tube that is inside the airway
- Catheter: A thin tube used to suction secretions out of the tracheostomy. Catheters come in different sizes (example, 6 French)
- Circulation: The process of blood being pumped by the heart and traveling through the body via blood vessels, arteries and veins
- Dusky: A blue color to the skin, lips or nail beds that signifies a decrease of oxygen in the body

Other Resources:

- www.passy-muir.com
- www.hopkinsmedicine.org/tracheostomy/living
- www.Trachostomy.com
- http://www.ventusers.org
care%20guide.pdf

Linda Dean, RRT
Clinical Specialist
Passy-Muir Inc.
ldean@passy-muir.com
(949) 833-8255

Definitions:

- Airway: The passage that allows air (oxygen) to get to the lungs
- Ashen: A word that describes a pale, gray color to the skin
- Bacitracin: An antibiotic ointment used for redness or irritation around the tracheostomy
- Breathing: The process of taking air through the airway and into the lungs, supplying the body with oxygen vital for survival
- Cannula: A collection device for secretions and saline, attached to the suction machine
- Cannula: The part of the trach tube that is inside the airway
- Catheter: A thin tube used to suction secretions out of the tracheostomy. Catheters come in different sizes (example, 6 French)
- Circulation: The process of blood being pumped by the heart and traveling through the body via blood vessels, arteries and veins
- Dusky: A blue color to the skin, lips or nail beds that signifies a decrease of oxygen in the body
Definitions:

- **Resuscitation Bag**: A device that allows you to push oxygen into the lungs via the airway. The resuscitation bag may be connected to an oxygen tank.
- **Rescue Breathing**: The process of delivering one breath every 5-10 seconds into the tracheostomy because he/she is unable to breathe independently.
- **Respiratory Distress**: A condition demonstrated by difficulty breathing, retractions, dusky or ashen color, fast breathing.
- **Retractions**: Sucking in of the neck or chest between the ribs (a sign of respiratory distress).
- **Shiley, Bivona, Portex, Traco**: Brands of tracheostomy tubes
- **Sterile Water**: Tap water that is boiled and stored in sterile container. It may also be purchased.
- **Stoma**: The opening in the neck where the trach tube is inserted
- **Suctioning**: The process of removing secretions from the tracheostomy by applying suction through a catheter.

Trach Safety:

- Use caution around water – shower guards
- Foreign objects small enough to inhale
- Avoid turtleneck shirts and plastic bibs
- Use care with gauze padding – can become an obstruction
- Environmental Control: dust, lint, mold, pet hair, and smoke in the home
- Systemic hydration – drink plenty of water
- Avoid aerosol sprays
- Transport with care on windy, cold days
- Practice infection control: vaccines, hand washing, crowds, screen visitors
- Watch for change in secretions – signs of infection
- Disinfect toys – dishwasher
- Disinfect respiratory equipment – white vinegar

Equipment Recommended For Home:

- **Spare Trach Tubes** (same size and smaller sizes)
- **Suction Catheters**
- **Suction Machines** (40 to -100mmHg)
- **Sterile Water**
- **Resuscitation Bag and face mask** – proper sized
- **Bulb Syringes**
- **HMEs** (artificial noses)
- **Compressor for humidification**
- **Trach Collar and Tubing**
- **Q-Tips**
- **Hydrogen Peroxide**
- **Gloves**
- **Oxygen**
- **Apnea Monitor**
- **Pulse Oximeter**