

The background features a large, light-colored triangle pointing downwards from the top left, containing a pattern of small grey dots. To the left of this triangle are overlapping geometric shapes in shades of blue, red, and teal. On the right side, there is a vertical strip of overlapping blue, red, and teal shapes. The main text is centered in a dark blue, serif font.

Health Facts for You



**Tracheostomy care:
being prepared for
emergencies**

This guidebook will help you learn more about your taking care of your child's tracheostomy at home and during emergencies.

Pulse Oximeter

Your child will go home using a pulse oximeter or "pulse ox" to alert you to major changes in oxygen levels or heart rate. The pulse ox has heart rate and oxygen settings that the doctor decides is best for your child. A pulse ox can warn you if something happens that could hurt your child. This may include:

- Your child pulls out their trach tube.
- Their tube gets plugged.
- Their ventilator or oxygen is not giving your child enough air.

Your child uses a pulse ox all the time while in the hospital, but this changes at home. At home, a pulse ox is used during sleep, travel and when you are not directly looking at your child. For example, if you are the only one home with your child and you are cooking dinner, the pulse ox should be on. If you are reading to your child and paying close attention, it can be off.

How to Apply and Care for the Probe

A pulse ox uses a probe that attaches to your child's toe or finger. You will be taught how to apply it and take care of it.

- Apply sensor around a toe or finger, with the light directly over the nail bed.
- Rotate probe site at least 2-3 times each day.
- Look for any signs of skin breakdown or damage.
- To help extend the life of the probe, cover the probe with a sock if it's on the foot or secure the cord to your child's shirt sleeve to prevent it from pulling off.

Pulse Ox Supplies

- Pulse oximeter with electrical cord
- Patient cable
- Flex probes/sensors
- Replacement sticky strips

Alarms

The pulse ox will alarm if your child's oxygen level is below a pre-set level. It will also alarm if your child's heart rate is higher or lower than the pre-set rate. Each time you turn on the pulse ox, check your child's heart rate and breathing. Be sure that it is picking up your child's heart rate and oxygen levels.

Hearing and Responding to Alarms

You need to be able to hear the pulse ox alarms from anywhere in the house. The alarms need to be loud enough to wake you up. You may even want to buy a baby monitor to make sure the alarms will be heard while you are in your room. If your child's pulse ox is alarming, you need to check on your child within 10 seconds. This is your first priority. Make sure that your child is not having any trouble breathing before doing anything else.

It can be frustrating to hear lots of alarms in your home. You may be tempted to turn off your child's pulse ox, but using the pulse ox is an important way to know that your child is safe and breathing well. If you are not aware that your child is in trouble, you will not be able to respond and help.

What to Do When You Hear an Alarm

When you hear an alarm, check your child's:

- Color
- Chest movement
- Breathing rate and effort
- Make sure the trach tube is in place
- Make sure the tube is clear/patent

Check these things even though your first instinct may be to pick up your child. If you pick up your child before you check them, you may not know if your child had a change in color or if they stopped breathing.

You will learn more about how to respond to breathing problems in your CPR training. **If you have to start CPR on your child, call 911 right away.** Continue CPR until the ambulance arrives. The ambulance will take your child to the nearest emergency room.

Troubleshooting Alarms

If your child is okay, the alarm may mean that the probe is not on correctly or needs to be moved to a different finger or toe. Check the pulse ox probe and make sure it is attached well and in the right place. Other tips:

- If your child's pulse ox alarms often and your child is okay, call your child's doctor, the settings may need to be changed.
- Many problems with the pulse ox can be fixed by changing the probe or cable or changing placement.
- Always have an extra probe available. Call the equipment provider when you start to run low on supplies, so you do not run out.
- Call your equipment provider if you are still having problems with the pulse ox after changing the probe or cord.
- You can also call your equipment provider if you have any questions about how the pulse ox works.

Keeping Track of Alarms

You will need to keep track of the alarms. Record the date and time of each alarm, what you saw and what you did to fix the problem. Bring the flow sheets to your child's pulmonary clinic visit. Your doctor can review them to decide if the settings need to be changed.

Tips for Pulse Ox Safety

- Keep the probe and cable out of reach of your child.
- Young infants often try to pull or chew on their probe or cable, breaking them and causing alarms.
- An older child may pull the probe causing more alarms.
- Some parents use socks to cover the probe on their child's toe.
- Remember your child's pulse ox runs on electricity.
- If your child chews on the probe, plays with the cable or gets the system wet, they are at risk for burns or electric shock.
- Supplies that are worn out or broken may cause a shock or burn.
- Always keep the unit away from water. Make sure you unplug it when you give your child a bath.
- Do not loan the pulse ox to others as the alarms are set for your child.

Emergencies

Children with trach tubes are at risk for 3 airway emergencies:

1. Mucus plug/obstruction,
2. Accidental decannulation, and
3. Cannot replace the tracheostomy tube.

A fully trained person must always be around to respond to alarms or one of these events.

Mucus Plug/Blockage (Obstruction)

What is it?

A **mucus plug** occurs when the trach tube becomes clogged with mucus preventing your child from breathing. This is a life-threatening emergency.

What do I do?

- **If the pulse ox alarms, look at your child.** Look for color, chest movement, breathing rate and effort. Look at the stoma and make sure the trach is in place.
- **Suction the trach tube.** If you can't clear the plug/blockage, or if desaturations continue, change the trach.

How can I prevent it?

- **Provide humidification:** Always make sure your child is receiving adequate humidification. Humidification will keep the mucous thin so it can be cleared by suctioning. Four ways to do this:
 - Heated humidity through a trach mask or vent
 - Passive humidity-HME or artificial noses
 - Saline Nebs
 - Saline drops
- **Suction your child's trach** to clean the secretions out. This will help prevent mucus to build up in the trach.
- **Ensure routine trach changes:** Uncuffed trach tubes should be changed once weekly and cuffed trach tube should be changed every 2 weeks, unless needed to be changed sooner.

Decannulation (Trach Comes Out)

What is it?

A **decannulation** is when your child's trach tube comes out. Without the trach tube in place your child will have trouble breathing.

What do I do?

- **If the pulse ox alarms, look at your child.** Look for color, chest movement, breathing rate and effort. Look at the stoma and make sure the trach is in place. If the trach is out of the stoma, it needs to be replaced immediately.
- **If you can see the trach and there is no debris on it,** replace it and make sure your child is able to breath. Use the manual resuscitator bag to provide breaths. Once your child's oxygen normalizes, then complete a trach tube change with a sanitized trach tube.
- **If the trach is out and you cannot see the trach tube or if there is debris on it,** grab a new/sanitized trach tube and replace it immediately. After the trach tube is in, help your child recover by using the manual resuscitator bag to give breaths. Call 911 if unable to replace the trach or if unable to get oxygen to normalize.

Cannot Replace the Trach Tube

What is it? This means that you cannot put the trach tube back in after taking it out. This can happen when doing a trach change or if the trach comes out by accident.

How can I be prepared? Make sure to have airway supplies ready and available before doing a trach change:

- back up trach tube,
- a step-down trach tube,
- manual resuscitator bag,
- saline,
- trach ties,
- lubrication, and
- remaining go bag contents listed in this booklet.

What if I can't replace the trach tube?

- **Look at and reposition your child.** Make sure they are on a shoulder roll and it is positioned behind their shoulders. Try and calm your child.
- **Ensure the trach tube is the right size** and has adequate lubrication on it. Before inserting, use your index finger to gently pull down on the skin below the stoma towards the belly button. This can help open the stoma. Try to replace the tube.

What if I still can't replace it after I've tried?

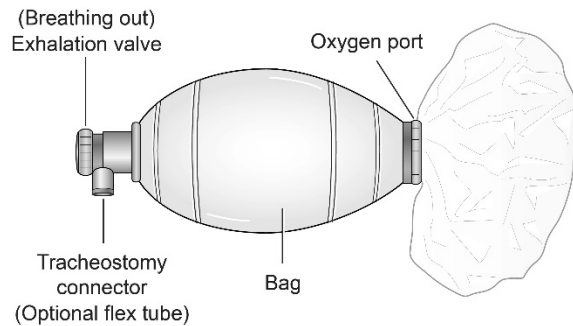
- **Call 911.**
- Prepare the step down trach tube.
- Follow the steps above and try to place the step down trach tube.
- If the tube goes in, secure it with a trach tie, provide breaths with the manual resuscitator to help your child breath better.

What if the step down trach tube won't go in?

- Ensure EMS/ambulance is on the way.
- Look at your child to check color, ability to breath, and work of breathing.
- **If your child does not have a laryngotracheal separation,** use the manual resuscitator bag and mask to provide breaths through the mouth and nose. Use a finger or a piece of tape to cover the stoma while providing breaths with the mask. This will be taught how to do prior to leaving the hospital.
- If your child has a laryngotracheal separation, use the manual resuscitator bag and mask to provide breaths through the stoma.

Manual Resuscitator Bag

A manual resuscitator bag is used to provide air by hand if your child is not breathing. The bag can also be used to give large breaths after suctioning, a trach change or when a ventilator circuit is being changed.



The bag must always be near your child in case of an emergency.

Children who use a breathing machine (ventilator) can use a resuscitator bag:

- If there is a need to disconnect from the ventilator.
- If there is a power failure.
- If there is a problem with the ventilator.

How to Use the Bag

Before use:

- Squeeze the bag without blocking the connection. The bag should deflate and inflate without trouble. If it doesn't, check again to be sure it was put together in the right way. Replace any worn parts. Check the bag for leaks before using. Block the part that connects to the child and squeeze the bag with one hand. If the pressure relief valve doesn't hold air, check all connections are tight. If there still are problems, use a different bag.
- If your child needs oxygen, attach tubing from the bag to the oxygen

source. Turn the flowmeter to 5-6 liters per minute.

Bagging Your Child

- Attach the bag (and optional flex tube) to your child's trach tube.
- Begin to give your child breaths by gently squeezing the bag as you watch your child's chest rise. How deeply and how fast you squeeze the bag depends on the size of your child. Your health care team will talk with you about what's best for your child. You will have a chance to practice this on a doll, and your child.
- Give breaths at a rate of _____ breaths per minute. If you have been taught to bag when you suction, bag for _____ breaths between passes and _____ breaths when you finish. You may increase how often or how much you squeeze the bag, if your child is having trouble breathing.
- When you have finished, remove the bag from your child's trach tube.
- Turn off the flow meter if oxygen is used.

Cleaning the Bag

- Wipe off any mucus from the bag with a clean cloth before putting it away.
- Disposable bags are not cleanable. They are changed after 30 days once opened and used. Check with your equipment provider.
- A flex tube may be used between the bag and your child's trach tube. The flex tube must be detached and cleaned weekly in hot soapy water, rinsed, then disinfected by soaking in 1 part vinegar to 2 parts water for 20-30 minutes. Then rinse the tube, flex, and allow to dry.

Special Directions

Always have the bag in the same room as your child. Always keep a disposable back-up resuscitator bag in the Go Bag.

The resuscitator bag also includes a mask.

- A mask is used on the bag to provide breath to your child if the trach tube is blocked or not able to be replaced.
- Hold gauze over the stoma, if providing a bag and mask breaths to child with a tracheostomy.
- The mask must cover both the mouth and nose.
- The mask size needs to be changed to a larger mask as your child grows.
- Contact your equipment provider if you think your child may need a mask in a larger size.

CPR With Your Child's Tracheostomy

Children with trach tubes are at a higher risk of needing CPR. You will learn key points to do CPR on your child before going home. Each person who will be caring for your child must be able to do CPR.

Before Starting CPR

Ensure that the trach is in place. Suction your child's trach tube and try to give your child a breath with the resuscitation bag. If the chest doesn't rise, change your child's trach tube with a new tube.



CPR

- Yell for help. Call 911.
- Give 2 breaths with resuscitation bag through the trach.
- Push hard and fast on a firm surface. Give 30 compressions.
- Give 2 more breaths and then 30 more compressions
- Keep doing CPR until help arrives or your child becomes responsive.

Emergencies within the Home

It is important to plan for emergencies in the home such as fire and loss of power, especially when caring for your child and their tracheostomy.

Making a Fire Plan

Create a plan to escape your home in the event of a fire. Your plan should include exit routes and where to meet outside and what to bring with your child. It is important to bring all necessary equipment with you and your child when exiting the house; stocked go bag, suction, ventilator, pulse ox and medicines.

If you are unable to exit the house due to the planned route being blocked or inability to move your child, stay with your child in a room with a door and create a fire block by rolling a blanket or towel up and placing under the closed door. This will prevent smoke from entering the room from the bottom of the door. Call 911 and tell them where you are located in the home. If there is oxygen in the home, inform the fire department where it is.

Planning for Power Outages

It is essential be prepared for all emergencies, including extended loss of power. To prepare for this, make sure all equipment is plugged in and charged at all times whenever possible to ensure maximum battery charge in the event of a

power outage. Develop a plan of where to go in the event of a prolonged outage to a place that has power.

Traveling with Your Child

You and your family need to plan ahead when you are out of your home with your child. Whether you are staying close to home or traveling further away, you need to be prepared for any situation.

Families of children with tracheostomies have one bag just to carry all their emergency supplies. This is called a “Go Bag.” You will create your own Go Bag before you leave the hospital.

Do not leave your house without your child’s Go Bag, pulse ox, suction machine, and oxygen if needed.

This bag is only for your child’s emergency tracheostomy supplies. You must be able to find supplies quickly. If you have extra things in your Go Bag it is hard to quickly find the things you need in an emergency.

When items are used in your Go Bag, restock it so it is ready for your next outing.

Items your **Go Bag** should include:

- Current size tracheostomy tube
- ½ size smaller size tracheostomy tube
- Dressings
- Trach ties
- Artificial nose (HME)
- Suction machine
- Suction catheters
- De Lee Suction catheter
- Saline packets
- Sterile water
- Water soluble lubricant
- Resuscitation bag and mask

- Hand sanitizer
- Emergency contacts and doctor’s phone numbers
- Suction card (a card marked with the depth to suction your child)
- Cell phone
- Ventilator circuit (if your child has a ventilator) and any special adaptors specific to your child’s set up
- Nebulizer Kit



Ask yourself these questions before leaving your home.

- What will we need while we are gone?
- Where is our Go Bag and suction machine?
- When was the last time the suction machine was fully charged?
- How many suction catheters will we need?

Safely Transporting Your Child with Respiratory Equipment

Be sure to follow these key points to keep your child safe when traveling with your child.

- Your child is safest in the back seat of your car.
- It is best to have a second person in the back seat with your child when you travel. This person can watch your child for any changes and respond to any needs such as suctioning. You may not have the ability or time to get out of heavy traffic to care for your child's needs.
- Your child should be in a car seat or restraint device that is appropriate for your child's age and physical condition. Staff at the Kohl's Safety Center can help you decide the best option for your child.
- Use a car safety seat with a three-point or a five-point harness and no tray, shield or armrest for a child with a tracheostomy.
- Babies and young children who cannot walk need a sturdy stroller that is large enough to hold all the equipment your child needs.
- Older children who can't walk need a wheelchair or other system that can support your child and hold all of the equipment your child needs.
- Any equipment needed by your child should be placed below the window line of your car and tied down.

Transporting Tanks in Your Car

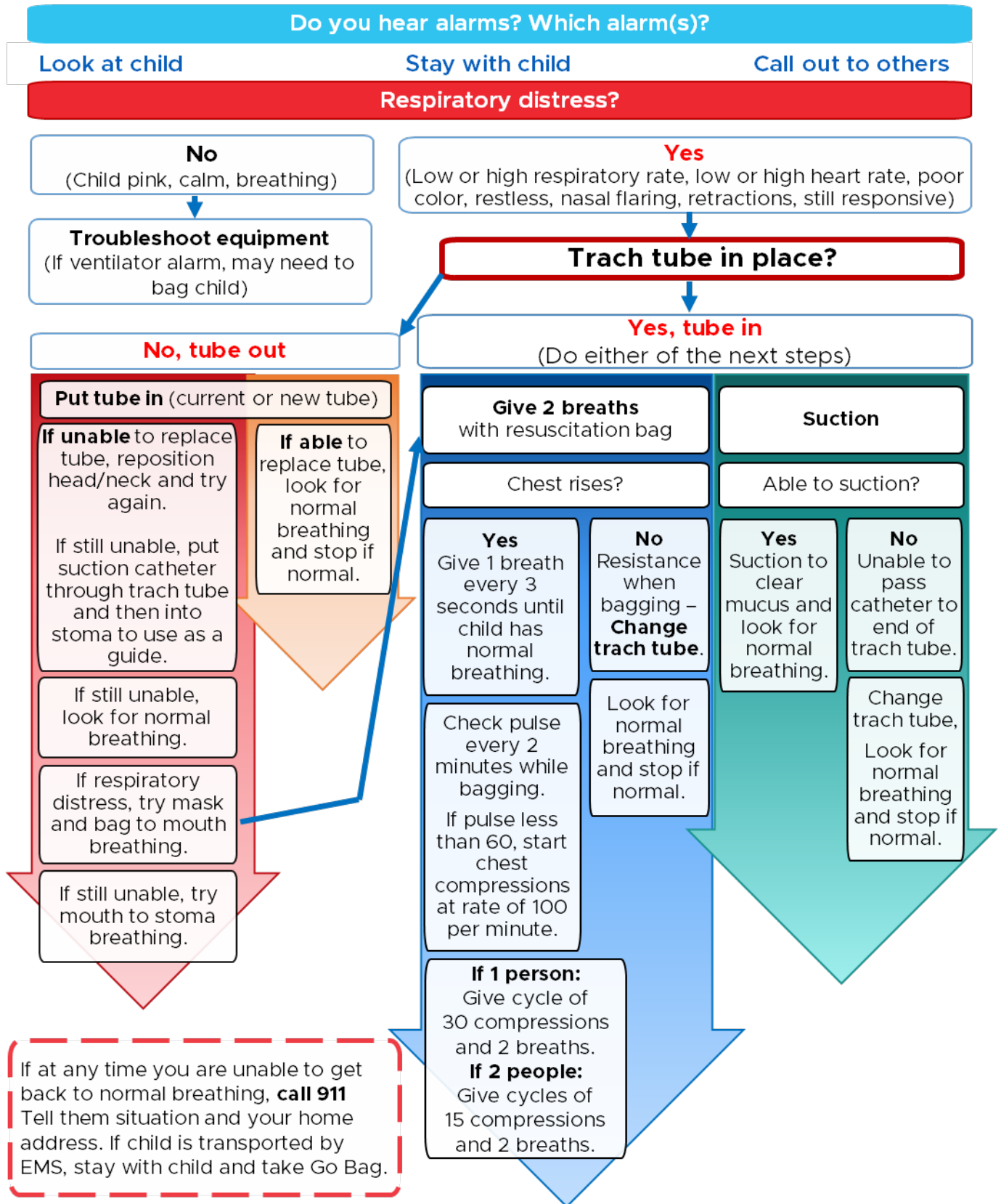
- Secure in the back seat.
- Place side-lying on the floor, pointing towards the doors.
- Tanks should be padded to prevent rolling and to protect the tank stem from damage.
- Never travel with a tank in the front seat or trunk of the car.
- Make sure you have enough battery power for your electrical equipment or 12-volt battery plug-ins in your car.

Call 911 for Medical Emergencies

- If your child is in respiratory distress or you have a medical emergency, call 911.
- It is best for an ambulance to take your child to the nearest emergency department. Even though you know more about your child's needs, it is much safer for your child to be driven to the nearest emergency department in an ambulance. There is more space to give your child the needed care.
- Ambulance drivers are trained to drive in an emergency. You should go with your child and bring the "Go bag" or other special equipment that might be needed.

Your health care team may have given you this information as part of your care. If so, please use it and call if you have any questions. If this information was not given to you as part of your care, please check with your doctor. This is not medical advice. This is not to be used for diagnosis or treatment of any medical condition. Because each person's health needs are different, you should talk with your doctor or others on your health care team when using this information. If you have an emergency, please call 911. Copyright © 3/2024 University of Wisconsin Hospitals and Clinics Authority. All rights reserved. Produced by the Department of Nursing HF#8339.

Emergency care for a child with a tracheostomy tube



If at any time you are unable to get back to normal breathing, **call 911**. Tell them situation and your home address. If child is transported by EMS, stay with child and take Go Bag.