



NATIONWIDE CHILDREN'S
When your child needs a hospital, everything matters.™

Helping Hand™

Health Education for Patients and Families

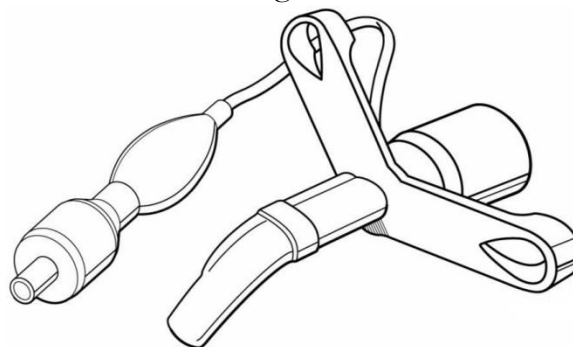
Tracheostomy Care With a Water-filled Cuff

There are several kinds of tracheostomy (tray ke OS toe me) “trach” tubes. The type of trach tube your child has depends on the reason he needs the trach.

A cuffed trach has a balloon cuff around the lower end of the trach tube (Picture 1). It is often used for children who need to use a ventilator (breathing machine) or BiPAP machine. When the balloon is filled, air will not leak around the trach tube. Some water-filled cuffed trach tubes (for example, Bivona® TTS™ Tight to the Shaft cuff) are non-disposable. Sterile water is used to fill (inflate) the cuff. A TTS™ cuffed trach is easier to insert and remove because the balloon empties (deflates) completely. When completely deflated, it flattens tight to the shaft of the tube.

Supplies

- Tracheostomy tube
- 10 milliliter (mL) syringe
- 30 mL bottle sterile water
- Water-based lubricant



Picture 1 A cuffed trach tube has a balloon that is filled after the tube is put into the child's trachea.

Inflate cuff

1. Fill syringe with 5 mL if using a neonatal or pediatric trach; to 10 mL water if using an adult size trach.
2. Attach syringe to the balloon that hangs on the outside of the trach.
3. Inject water into the outside balloon until it is firm but soft.

Deflate cuff

Attach the syringe to outside balloon. Pull back the plunger to remove the water completely until balloon is flat.

When to inflate and deflate the cuff

Talk to your child's doctor about when to inflate and deflate the cuff of the tracheostomy tube. Usually the cuff is inflated so air does not leak around the trach tube. The cuff is usually filled when your child is on a breathing machine (ventilator) or other positive pressure device, such as a CPAP or BiPAP machine. This helps your child get the full benefit from the breathing device. However, a water-filled cuff causes higher pressure on the wall of the windpipe (trachea). This may cause damage if the cuff is not deflated regularly. If your child can tolerate it, stay with him and deflate the cuff every 8 hours for 15 to 20 minutes each time. If he cannot tolerate it, discuss this with your healthcare provider.

When your child is off the ventilator, deflate the cuff.

How to change a trach with a cuff

1. Wash hands and gather all supplies.
2. Fill the syringe with 5 mL water for a child-size cuff, 10 mL water for an adult size cuff.
3. Attach syringe to new trach tube.
4. Push water into the balloon to check for leaks.
5. Check the cuff for any leaks. If the cuff does not leak, remove the water from cuff completely.
6. Put obturator into trach tube.
7. Lubricate the tip of the trach and the balloon with a water-based lubricant.
8. Deflate the cuff on the trach that is currently inserted before removing it.
9. Remove trach ties.
10. Take out the old trach tube.
11. Insert the new trach and immediately remove the obturator.
12. Secure trach ties.
13. Connect ventilator tubing.
14. Reattach the syringe (filled with sterile water) to the balloon.
15. Fill the cuff with the sterile water until the outside balloon is firm but soft.
16. Remove the syringe.