

## Tracheostomies on Intensive Care

Many patients on the Intensive Care Unit need a ventilator to help with their breathing. This is usually done using a plastic tube (endotracheal tube) which passes through the mouth and throat into the windpipe (trachea) and allows the ventilator to blow air into the lungs.

**Endotracheal Tube**



### What is a tracheostomy?

A tracheostomy is a hole in the front of the neck into the windpipe. A tracheostomy tube is then inserted through the hole. The patient can then breathe on their own or be ventilated through the tube.

**Tracheostomy Tube**



### Why does my relative need a tracheostomy?

There are several reasons why a tracheostomy may be beneficial:

- A tracheostomy tube is usually more comfortable than a tube in the mouth. Most patients with a tracheostomy require little or no sedation. This means that they can be more awake, more comfortable and may allow them to breathe for themselves at an earlier stage. This may reduce the time attached to a ventilator.
- A tube in the mouth can cause physical damage to the delicate structures through which it passes, including the voice box (larynx), leading to problems later with speaking. A tracheostomy tube is inserted below the voice box and this is potentially less damaging.
- The nurse looking after your relative will be able to clean their mouth properly, reducing the risk of infections.
- Nursing staff and relatives may be able to understand communication better by lip reading. Some tracheostomies can allow speech as a patient improves and needs less help from the breathing machine (weaning).
- Secretions in the chest that can block the flow of air and cause chest infections can be removed more easily by sucking them out through the tracheostomy tube.

### Are there any risks?

Like any procedure, there are risks. Every effort will be made to minimise the risk of these complications occurring. Most of the complications are minor and of no great significance. However, very occasionally, life threatening complications may arise. The major risks associated with the procedure are:

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- **Bleeding.** The front of the neck contains several blood vessels which may bleed during the formation of a tracheostomy. These can usually be dealt with very simply, but occasionally require a surgical operation in the operating theatre. In extreme circumstances a blood clot could block the airway and need an emergency procedure to remove it.
- **Deterioration in lung function.** The procedure requires the patient to be lying flat and the ventilator settings must be altered. This can cause a temporary worsening of lung function. Usually this recovers within a couple of hours. A more serious but much less common complication is called a pneumothorax. This is when air is in the chest but outside the lung, causing the lung to collapse. It usually requires a drain to be placed through the skin between the ribs and into the chest.
- **Tracheal stenosis.** Patients who have had a tracheostomy are potentially at risk from developing scarring of the inside of the trachea, which can lead to narrowing. This is called tracheal stenosis. Patients with tracheal stenosis may develop noisy breathing as the air passes through the narrowed part of the trachea and this will require referral to an Ear, Nose and Throat surgeon for investigation and treatment. This might include surgery to the windpipe. However, this can also occur with a normal breathing tube (ET tube).

You will have the opportunity to speak to a doctor about the benefits and risks of a tracheostomy in more detail before the procedure is performed.

### Where will the tracheostomy operation be performed and who will do it?

Most tracheostomies can be performed in the Intensive Care Unit, but occasionally they may be carried out in the operating theatre. This will happen if we think the shape of the neck will make the procedure particularly difficult, if the patient is at high risk of bleeding (but still needs the operation), if we think the tracheostomy will be permanent or the patient needs another operation at the same time. An anaesthetist will ensure your relative is anaesthetised, comfortable and safe. If the operation is to be done on the Intensive Care Unit, it will be performed by one of the Intensive Care Unit Doctors, whom you may have met. If the operation is to be done in theatre, then an Ear, Nose and Throat (ENT) surgeon will perform the operation.

### Can my relative speak with a tracheostomy?

Not straight away. Their lips may move, but usually you will not hear any sounds. This is because a balloon is inflated around the tracheostomy tube which prevents any air going up past the tracheostomy and through the voice box, thereby allowing the ventilator to work effectively. As your relative improves and requires less support from the ventilator, the Intensive Care staff may deflate this balloon as part of the process of weaning off the ventilator and this may allow your relative to produce some sounds. Occasionally, the tracheostomy may be changed to a special type of tube which can help with speech if it looks like your relative may need the tracheostomy for a longer period of time. This is not possible for all patients; it depends on the condition of the individual.

### When does the tracheostomy come out?

Most tracheostomies inserted in patients in the Intensive Care Unit are temporary and removed when no longer required. This may be before or after the patient leaves Intensive Care. The tracheostomy is usually removed sometime after the patient is off the ventilator but is sometimes left in longer especially if the patient is sleepy or has difficulty in getting rid of chest secretions. After the tracheostomy tube is removed, a dressing is applied to the hole and secured with tape. The hole will usually close within a week to ten days after removal, leaving a small scar.