

# Tracheostomy Procedure within the Intensive Care Unit

An information guide



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Many patients on the Intensive Care Unit (ICU) need a ventilator (breathing machine) to help with their breathing. The ventilator has to be connected to the patient by a tube in the trachea (windpipe).

This is usually done using a plastic tube in the mouth (tracheal tube) which passes through the larynx (voice box) to reach the trachea.

It is safe to leave the tube in place for several days, although most patients find the presence of a tube in the throat to be very uncomfortable, and require sedation (medication to make you sleepy) to make the tube acceptable.

The prolonged presence of a tube in the throat makes it difficult to keep the mouth clean, and can also lead to physical damage to the mouth, larynx and trachea.

A **tracheostomy** can be useful as it avoids some of these problems. We are recommending a tracheostomy as we believe that you/your relative will need help to breathe from the ventilator for some time to come.

## What is a tracheostomy?

A tracheostomy is a hole in the front of the neck into the trachea (windpipe).

A tube can then be inserted through this hole into the trachea in order to allow the patient to be connected to a ventilator and to allow access for the removal of mucous.

## **Why do I/my relative need a tracheostomy?**

There are a number of reasons why a tracheostomy may be beneficial:

- A tracheostomy tube is far 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 and more comfortable and it may allow them to breathe for themselves at an earlier stage. This can actually reduce the time spent attached to a ventilator.
- A tube in the mouth can cause physical damage to the structures through which it passes, including the larynx (voice box), leading to problems with speaking later on.
- There are specific reasons why some patients may particularly benefit from a tracheostomy. These are usually because of the particular illness which has caused the need for ventilation. The doctors in ICU will discuss any specific reasons with you.

## **Is it safe? Are there any risks?**

Generally speaking, a tracheostomy is safe, but, like any procedure, there are some risks and complications. A tracheostomy is only performed when the potential benefits outweigh the potential risks.

The risks of having a tracheostomy may be associated with the procedure itself, the fact that an opening is made into the trachea (windpipe) and to the presence of a tube in the trachea.

Most of the complications are minor and of no great significance. However, very occasionally, a severe complication may arise which may require further reduction treatment.

The **major** risks associated with the procedure are: -

- **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.
- **Pneumothorax.** This is rare and can be treated. This is when air is in the chest but outside the lung, causing the lung to collapse. It can occur because of damage to the pleura (the lining surrounding the lung) or the trachea (windpipe) itself. It usually requires a drain to be placed in the chest.
- **Infection.** The tracheostomy can become contaminated with bacteria, either from the patient's own skin or from the secretions coughed up by the patient. Serious infection is rare.
- **Death.** Death as a consequence of a tracheostomy is uncommon at less than 1% of all cases.

### **How is a tracheostomy done?**

A tracheostomy may be performed 'percutaneously' (meaning "through the skin") or 'surgically'. Whichever method is used, you/your relative will be given a general anaesthetic.

The **percutaneous technique** involves making a small cut in the skin on the front of the neck and inserting a needle through this into the trachea. A guide wire is then passed through this needle, and the hole around it is stretched until the tracheostomy tube can be inserted into the trachea. This is normally done in the Intensive Care Unit.

The open **surgical technique** involves making a larger incision into the neck and cutting down into the trachea, allowing a tracheostomy tube to be inserted into the trachea. This is normally done in the operating theatre.

Most tracheostomies are now performed using a percutaneous technique, but the technique is not suitable for all patients. Your doctor will be happy to explain in more detail which technique is appropriate for you/your relative.

Prior to your tracheostomy procedure taking place consent is gained from yourself (the patient), or a specific form will be used if you (the patient) are unable to give consent, and the doctors will talk to your family to explain the reasons for the procedure.

### **What happens afterwards?**

Most tracheostomies in ICU are temporary and removed when no longer required. This may be before or after the patient leaves ICU. The tracheostomy is usually removed after the patient is off the ventilator and can breathe on their own, but is sometimes left in longer, especially if the patient is sleepy, needs oxygen or has difficulty clearing mucous off their chest.

The patient will have no audible voice (usually temporary) whilst the tube is in place but will use other methods to communicate. Sometimes a valve can be attached to the tracheostomy that allows the patient to speak. This is not possible for all patients; it depends on the condition of the individual.

Having a tracheostomy in place usually means that eating and drinking by mouth is not possible. Alternative methods of maintaining nutrition and hydration will be used.

After the tracheostomy tube is removed, a dressing is applied to the hole and secured with tape.

The hole will usually close fairly quickly, and within a week to ten days after removal, the hole will have sealed off, leaving only a small scar.

## **Are there any long-term problems?**

Patients who have had a tracheostomy are potentially at risk from developing scarring of the inside of the trachea (windpipe), which can lead to narrowing of the trachea. This is called tracheal stenosis and can also occur with the tracheal tube.

Very rarely, when the narrowing becomes significant, patients with tracheal stenosis may develop noisy breathing called stridor. This happens as the air passes through the narrowed part of the trachea.

In the event of this happening, the patient may be referred to an ear, nose, and throat surgeon for investigation and treatment.

If you have any more questions or concerns about the tracheostomy procedure, please ask any of the nursing or medical staff on the unit who will be happy to answer your questions.

## **Useful websites**

[www.patient.co.uk](http://www.patient.co.uk)

[www.nhs.uk/conditions/Tracheostomy](http://www.nhs.uk/conditions/Tracheostomy)

[www.tracheostomy.org.uk](http://www.tracheostomy.org.uk)

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