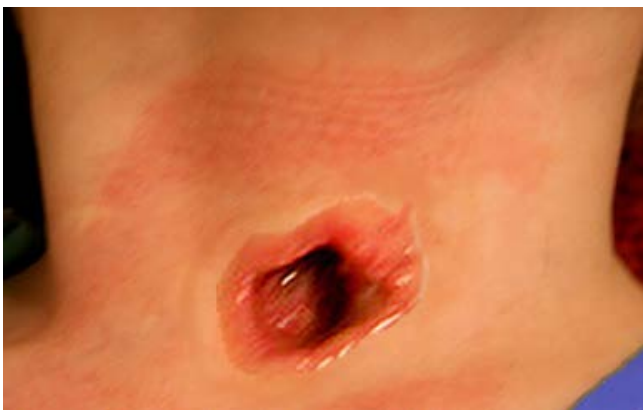


Stoma care and securing the tube

The management of a tracheostomy stoma depends to some degree on the type of surgical procedure used to create the tracheostomy tract. Traditionally tracheostomy was created through a linear incision in the front of the neck and commonly leads to a larger surface wound compared with percutaneous procedures. The stoma associated with a tracheostomy or laryngectomy can be considered as a full thickness, open wound, but one that is complicated by the moisture and mucus associated with respiratory secretions. When we add a large foreign body which slides about every time the patient moves, the potential for stoma problems is evident.

Secretions may ooze out of the surgical excision and stoma site which can result in wetness and cause irritation of the skin and can lead to skin maceration and/or excoriation. This moist environment may also act as a medium for bacterial growth and can prevent the stoma site from healing. The aim of stoma care is therefore to keep the area clean and dry, reducing the risk of skin irritation and infection.

Various types of dressing are available for the stoma. Dressings placed at the tracheostomy site should always be pre-cut by the manufacturers to avoid loose fibres from a cut dressing edge entering into the airway. Thicker dressings will absorb more secretions (e.g. Lyofoam™ Allevyn™) than some of the thinner, less obtrusive varieties available (e.g. Metalline™).



Strict management of these dressings is essential, as wound degradation will occur if wet or soggy dressings remain in contact with the surrounding skin. The tracheostomy wound should be inspected at least daily. Any pus should be swabbed and sent for microbiological culture. Excessive moisture or secretions may be due to an underlying respiratory infection that should be treated appropriately.

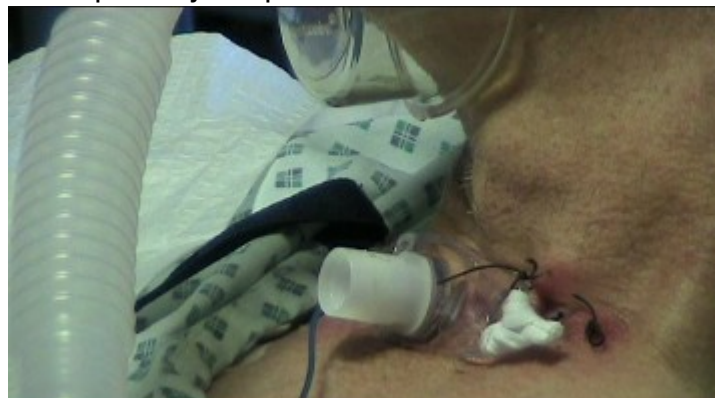
Inspection of the stoma should also include assessment of where the tapes or ties are in contact with the skin of the neck or face, including the back of the head. Sometimes, the patient's head position means that the tube will cause pressure areas on the skin of the neck or chest. Specialist advice and consideration of a different tube type may be required.



Securing the tube in position

Tracheostomy tubes can be secured with cloth or cotton ties, or Velcro holders. A balance must be struck between securing the tube in position and minimizing any risks of causing pressure ulceration (see image; with permission). One finger should be able to be inserted between the tape and the patient's skin to ensure the tube is adequately secured. Tube displacement is more common in the first few days following tracheostomy insertion. Consequently, many centres will suture the tube to the neck skin in addition to the tracheostomy tapes for the first 7-10 days until the tract becomes well established. This may make removing the tube in an

emergency more difficult should it become partially displaced and is not mandatory. Suturing also may make cleaning under the tube more difficult. The bedhead sign should make clear what sutures are in situ and how long they should remain for. The sutures pictured here are inflamed and should be removed if the stoma has matured.



Patient assessment

When selecting the most appropriate technique and product for securing the tracheostomy tube, consideration must be given to the risk factors that each patient is exposed to. A tracheostomy tube that becomes displaced is at risk of causing significant respiratory difficulties and/or airway obstruction. It is, therefore, vital to ensure the tracheostomy tube is appropriately secured at all times. Patients at risk of their tube becoming displaced are:

- Agitated or confused patients
- Patients with ventilator circuits attached
- Patients with tapes that are too loose allowing excessive tube movement

Regular checks of the tapes will help prevent the tube becoming displaced. The patient who has undergone reconstructive surgery to the neck area which may include a skin and/or muscle flap may well require their tracheostomy tube to be secured without applying pressure to the delicate flap area. For these patients, the tube is likely to be secured to the area directly surrounding the tracheostomy, by sutures. Care must be taken to ensure these sutures adequately support the tube in place and prevent tube misplacement.

Equipment in addition to standard bedside equipment:

- Dressing trolley.
- Gloves, disposable apron, and protective eye wear.
- Sterile dressing pack.
- 0.9% sterile saline solution (warmed ideally)
- Sterile gauze squares
- Tracheostomy dressing (pre-cut)
- Tracheostomy securing device: either Velcro tube holder or cotton ties (2 pieces approx 50-80cm each)
- Blunt ended scissors
- Barrier cream
- Suction unit with appropriate suction catheters

Procedure

Two people should be present when changing the tapes to help prevent accidental decannulation. It should be clearly communicated throughout the procedure, which person is responsible for holding the tracheostomy tube. The procedure must be undertaken using an aseptic technique to prevent contamination and the risk of infection. Videos of dressing and tube tie changes can be found below, along with the e-learning sessions at www.tracheostomy.org.uk.

- [Video of dressing and tube tie change](#)
- [Dressings and ties captivate presentation here](#)

Documentation

Any dressing or tape change should be documented in the nursing and/or medical notes as appropriate. Any complication identified (e.g. infection and swabs taken) should be considered for further management and this also documented.

Granulation tissue

Overgranulation or hypergranulation at the site of the tracheostomy can be caused by an ill-fitting tube, excessive movement of the tube and /or in response to an infection at the wound site. This tissue can cause bleeding or pain at the wound site and in severe cases make tracheostomy tube changes difficult.

A polyurethane dressing significantly reduces the rate of hypergranulation.

Treatment may include local application of silver nitrate. This requires local skin to be protected with petroleum jelly, and may require repeat applications until the overgranulation tissue has shrunk



sufficiently. This image shows granulation tissue visible around a TEP valve which is visible via the laryngectomy stoma.

Patients undergoing radiotherapy to the neck

Carrying out a tracheostomy dressing and tape change for a patient undergoing radiotherapy to the neck must be carried out with caution and particular consideration to the increased discomfort that the patient may experience.

Radiotherapy may cause radiotherapy burns, moist or dry desquamation and broken areas of skin. It is advisable to liaise with the radiotherapists to assess skin integrity and to advise on suitable skin treatments. Appropriate analgesia may also be required prior to tapes and dressing changes. It is also the practitioner's responsibility to identify appropriate timing of tapes and dressing changes and not to be considered simply routine care to avoid unnecessary discomfort or skin damage.

Summary

The table below summarises key actions related to stoma care and their rationales (adapted from NPSA expert working group)

Action	Rationale
Explain and discuss the procedure with the patient as appropriate.	Reduce anxiety and gain consent and co-operation
Wash hands and put on gloves, apron and eye protection if patient high risk	
Prepare sterile dressing trolley	Prerequisite for maintaining asepsis
Position the patient with their neck slightly extended. Remove any clothing that will impede procedure.	To help access to the neck area for the procedure.
Practitioner 1 holds the tracheostomy tube, whilst Practitioner 2 removes the tapes and dressing.	To stabilise the tracheostomy tube and reduce the risk of dislodgement of tracheostomy tube.
Discard old tapes and dressings into the waste bag.	
Assess the stoma for signs of infection, inflammation, or trauma, and record accurately on the appropriate documentation. Take a swab if there are any signs of infection: Sign of infection include: <ul style="list-style-type: none"> • Purulent discharge • Pain • Odour • Abscess formation • Cellulitis and discolouration 	To assess for skin excoriation, haematoma, signs of infection. To facilitate early recognition and treatment of infection.
Observe for signs of Hypergranulation	Granulomas may cause scarring, bleeding, pain and cause difficulty at tube changes
Perform hand hygiene and Change gloves to proceed with aseptic wound care and dressing application	To adhere to aseptic technique
Sterile gauze squares soaked in saline should be used to clean the wound and around the tube to remove secretions and crusting. Gently pat dry	Saline is the preferred wound cleansing solution.

Day-to-day management of Tracheostomies & Laryngectomies

The tube should be held firmly throughout with minimal movement of the tube	Tube movement can cause coughing and discomfort and may increase the risk of accidental decannulation.
Apply a thin layer of barrier cream if the skin is at risk of excoriation from moisture from humidification and/or secretions.	To promote skin integrity.
Apply a clean tracheostomy dressing.	To bring secretions away from the wound, and also to provide comfort from the tube constantly resting on the neck.
Re-secure the tube using an appropriate tie. Allow 1 finger's distance between the tie and the neck skin	Secure the tube effectively