



Information Bulletin

Decannulization (Removal of a Tracheostomy Tube)

For many individuals it is a mystery on how and when their tracheostomy tube appeared. Often during an acute illness where intubation (insertion of an endotracheal tube through the nose or mouth) has been necessary to maintain a persons breathing drugs are administered to keep the patient relaxed and in a dream like state.

Often it is the spouse, child or significant other that gives physicians permission to insert a tracheostomy tube.

As mentioned above an endotracheal tube (one that goes through the nose or mouth into the lungs) is generally the initial way to ventilate a patient. The endotracheal tube has a limited use time because of complications. It is necessary to use tape to secure the tube to the patients face and this can be very irritating to the patient's skin. A patient cannot eat or drink with an endotracheal tube in place. Also in patients that have all or some of their teeth biting on the tube can also pose a hazard. If the endotracheal tube is placed through the nose there is an increased risk of sinus infection.

Once the decision is made to place a tracheostomy tube a surgeon is contacted by the attending physician to perform the procedure. An incision is made in the patient's neck just below the Adams apple through the trachea or windpipe. This area in the neck is very vascular with veins and arteries. There is always some risk of bleeding with this procedure. Once the incision is made a tracheostomy tube is placed through the incision site directly into the trachea itself. There is usually a balloon or inflatable cuff just above the end of the tracheostomy tube. This balloon or cuff is inflated with a syringe. The inflated balloon allows a seal for the airway. If this seal were not there the air from the ventilator would leak out of the patient's nose and mouth. The tracheostomy tube is secured in position with trach ties that go around the patient's neck. Now the nose and mouth are free of the breathing tube. It is important for caregivers to check under the trach ties frequently to ensure the integrity of the skin.

Once the tracheostomy tube has been inserted it then allows for the patient to use their upper airway. For many patients to resume use of the upper airway takes some rehabilitation. Speech language pathologists or Speech therapists often assist these

patients with exercises for the airway. By increasing the strength of these muscle's many patients can resume oral feeding and speaking through the use of talk valves.

Patients with endotracheal tubes and/or tracheostomy tubes cannot speak. Not because they don't know how but because the endotracheal tube passes through the vocal cords and the tracheostomy tube is inserted below the vocal cords. A simple understanding is we speak because air passes over the vocal cords and allows them to vibrate thus allow speech. Because no air is passing over the cords it's moving through the ventilator circuit or oxygen tubing no vibration. Using devices such as talk valves or by simply under inflating the balloon of the tracheostomy tube speech is often possible.

Many times it takes practice for a patient to become proficient at speech again. What was taken for granted now requires concentration. Often times when a talk valve is placed initially there is coughing associated with it. This is normal, there is now air flowing through the upper airway where none has been for quite some time. Calm words of encouragement and coaching to speak normally often help this pass quickly. Many patients remark that they can smell again once the talk valve is placed. The airflow through the nose makes this possible again. Many patients prior to the use of a talk valve have little desire to eat. We all enjoy certain foods and we smell them cooking or when the plate is brought to us. Imagine not being able to smell, everything would taste flat with very little flavor as our ability to smell enhances our ability to taste. So keep this in mind if someone states it all tastes like cardboard, it just may.

The use of the talk valve not only improves the taste of food but can actually enhance the swallowing effort of the patient by assisting glottic pressures to return to normal.

As rehabilitation progresses and the patient weans from the mechanical ventilator many start to focus on the tracheostomy tube. Patients often worry that in order for the tube to be removed they will have to undergo a surgical procedure. If you think about the miraculous properties of the human body it is easy to see that the bodies' natural tendency is to heal. If you have a cut or laceration whether or not it required sutures or stitches it eventually heals. It is the same with the stoma site of the tracheostomy patient.

Once a patient has made significant progress and a physician deems it safe for the tracheostomy to be removed it can be done several ways. Often the tracheostomy tube is downsized or a smaller sized tracheostomy tube is inserted. The smaller size tube allows the stoma site to shrink in size to accommodate the smaller sized tube. The smaller sized tube may be the same brand as the previous tube or often times metal tracheostomy tubes are utilized. During this down sizing capping trials are initiated. A capping trial depending on the physician's orders can last from hours to days. A capping trial is simply deflating the cuff or balloon of the tracheostomy tube if it still has one and placing a plug or cap in the opening of the tracheostomy tube. The purpose of the capping trial is to ensure that the patient is able to clear their own airway effectively without the need for suctioning and to assess if any stridor occurs. Stridor is a high-pitched sound from the upper airway that indicates there may be swelling, stricture or obstruction of the upper airway. If this occurs the capping trial is immediately discontinued. When stridor occurs

during a capping trial further evaluation of the airway by an Ear Nose and Throat specialist or ENT is usually ordered.

If there are no complications and the capping trials have been well tolerated the tracheostomy tube is then ordered removed by the physician. Once the tube is removed the stoma site is covered with a dressing and taped in place. During this phase of healing the patient often experiences a loss in speech volume and some leaking of air through the stoma site. Although this initially may be frightening for the patient reassurance that by applying gentle pressure over the dressing with their hand the volume of speech returns and the air leak diminishes. The dressing is usually changed daily and whenever necessary until the stoma site heals.

Occasionally the stoma site takes a significant amount of time to heal. The usual handling of this is simply to allow time to pass and let the site heal. Rarely will surgical closure of the site be necessary. It would be up to the physician whether this measure should be pursued.

Once the stoma has healed unfortunately there will be a scar. The degree of scarring varies from person to person. If an individual finds the scar uncomfortable things like necklaces, ties, scarves can easily hide it.