Transtracheal Oxygen Therapy

Oxygen is commonly delivered to the lungs by a small plastic tube called a nasal cannula. The tube is placed under the nostrils and delivers oxygen to the lungs. Oxygen can also be delivered to the lungs in other ways.

Transtracheal oxygen therapy (TTOT) is another method of delivering oxygen directly to the lungs. A small plastic tube (catheter) is inserted in the lower neck, which goes into the windpipe (trachea). The procedure should not be confused with a tracheotomy; they are entirely different.

TTOT has been used for long-term oxygen therapy and to treat chronic hypoxemia (low blood oxygen) for nearly 30 years. Over 26,000 people have used transtracheal oxygen during this period of time, the majority of whom have experienced a significant improvement in the quality of their lives. Transtracheal oxygen is more than a device for getting oxygen. It is a program of care.

TTOT has been shown to reduce oxygen-flow requirements by as much as 55 percent at rest and 30 percent during exercise. Because less oxygen is required, portable oxygen systems last longer and people can use smaller and lighter units.

When Is TTOT Considered?

TTOT is considered for any person who is on long-term oxygen therapy, desires an improvement in oxygen-flow requirements, is willing to participate in the program and will care for their catheter. Talk to your health care provider about whether TTOT is a good option for you.

Suggested candidates for TTOT include people who:

- meet current guidelines for long-term oxygen therapy
- are currently mobile outside of the home at least part of the time and
- are motivated to remain active and will comply with oxygen
therapy and the proper care and cleaning of their catheter.

TTOT may also be appropriate for people who:
- require higher oxygen flows and want to remain active by using lower flows via TTOT or
- don’t want to wear nasal cannula (tubes) due to irritation of the nose or nosebleeds.

What are the Benefits of TTOT?
TTOT can improve quality of life for people who have chronic lung diseases. Examples include chronic obstructive pulmonary disease (COPD), advanced fibrotic lung diseases such as idiopathic pulmonary fibrosis (IPF), interstitial lung disease, bronchiectasis and a variety of other chest disorders.

TTOT may provide many benefits to people who require oxygen therapy. TTOT may:
- reduce the amount of oxygen flow needed to achieve healthy oxygen levels
- improve activity levels and mobility
- improve exercise capacity
- improve physical, social and mental function
- improve the response to oxygen treatment
- reduce length of hospitalization
- empowers a person to get back to doing things they used to do and
- reduce shortness of breath (dyspnea).

As with any medical procedure, there are risks involved. Consult with your health care provider about these risks.

What are the Phases of TTOT Care?

Phase 1 – Patient Screening
During this phase, you will have an opportunity to learn about the benefits and risks associated with TTOT. The doctors, nurses, respiratory therapists, and perhaps other people who have gone through the TTOT procedure will be available to answer your questions. The care team will perform a physical exam, take your medical history, and determine whether you are a good candidate to receive TTOT.

Phase 2 – The TTOT Procedure
If your doctor feels you are a candidate, you will be scheduled for the procedure. There are two types of procedures to insert the catheter into your neck. One of them requires an overnight stay, where the catheter is placed the same day. The other procedure uses a stent to create the hole for the catheter, and then a return appointment happens about a week later for the catheter to be placed.

Phase 3 – Care while the TTOT Tract is Healing
Once the catheter has been placed, the proper care and cleaning of the tract opening, catheter and hose is very important. The surrounding area will still be healing, so the catheter will be cleaned in place without removing it. Your care team may help remove mucus for you in the first several weeks until the tract has healed and you are able to
remove the catheter yourself.

**Phase 4 – Care when the TTOT Tract has Healed**
Depending on the type of TTOT procedure performed, your doctor will decide when your tract has fully healed. Once it has healed, you will be instructed on how to properly remove your catheter for cleaning. It’s important to follow the cleaning schedule you and your doctor create, as the catheter is a medical device. The catheter will need to be replaced with a new one every so often. You will also need to see your care team for follow-up visits.

**What is the Role of National Jewish Health?**
National Jewish Health offers a transtracheal oxygen program. Our care team can evaluate and manage patients for whom transtracheal oxygen may be a good option for their long-term oxygen therapy. Talk with your health care provider if you have questions or are interested in TTOT.

Note: This information is provided to you as an educational service of LUNG LINE® (1-800-222-LUNG). It is not meant to be a substitute for consulting with your own physician.

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