Are you a member of the **Hypoxic Club**? If you are on oxygen 24 hours per day...then you are a club member whether you know it or not. The Hypoxic Club does NOT discriminate. Hypoxia (low blood oxygen levels) does not know or care where you live. It does not care how rich or poor you are. It does not care if you are male or female, nor your religion, or politics. It doesn’t care if you are famous, young, old, or somewhere in between. Members of the Hypoxic Club are not admitted overnight. Chronic hypoxia normally takes many years before a member is admitted into the club. No one particularly wants to be a member of the Hypoxic Club, as the membership dues are more than financial. The dues include aspects of your very activities of daily living and quality of life.

It’s pretty true that membership in the Hypoxic Club is a lifetime membership for almost all members. That doesn’t mean there aren’t dozens and dozens of things you can do to make membership much more bearable. The Hypoxic Club has many members with fantastic suggestions to help improve your quality AND quantity of life. There are numerous patient driven websites that you can access. For a very comprehensive list of resources we would highly recommend you Google Dr. Tom Petty’s book, “Adventures of an Oxy-Phile” pages 192-193. In fact, you should try to make the time to read the whole book!
This may seem an oversimplification, but it all begins with your oxygen. Although you may be on any number of other medications to help you breathe easier, the only “drug” ever proven to extend your life is your oxygen. It is probably the most important “drug” you are taking. A common analogy given is that of Diabetes. Diabetic patients monitor their blood sugar levels so they can very carefully manage their disease. Patients on oxygen 24 hours per day monitor their blood oxygen levels to keep them within the normal range for the altitude at which they live. This is especially important when you are up and moving. Dr. Tom Petty told all his patients to “titrate while you migrate.” Sage advice indeed for all patients on oxygen therapy. The Hypoxic Club has millions of members worldwide. An educated patient is an empowered patient so GET EDUCATED!
Dear Potential Transtracheal Oxygen Patient:

Thank you for your interest in transtracheal oxygen therapy (TTOT). The TTO program for oxygen therapy has been developed and refined since its inception in 1986, to provide you with a very safe and efficacious alternative to your nasal cannula. During this time, nearly 200 articles in medical literature have documented the many benefits transtracheal oxygen has to offer. The information that follows, describes some of the major areas where documented benefits have clearly been proven.

Improved Mobility

Greater exercise capacity: Since transtracheal oxygen is delivered directly into the lungs, it is more efficient than oxygen delivered by nasal cannula. Transtracheal patients tend to be more active, and usually recover quicker from activities requiring exertion.

Reduced shortness of breath: Numerous studies have shown that the flow of oxygen into the lungs, acts as an aid to breathing. This will vary from patient to patient, but many patients report they are breathing easier.

Longer lasting portable oxygen sources: Since most transtracheal patients reduce their oxygen flow rate requirements between 30 and 50%, your portable oxygen sources will last approximately twice as long enabling you to stay out longer, should you desire.

Improved self image: Everyone likes to look their best. The TTO system eliminates the unsightly nasal cannula from your face, and the TTOT system is easy to camouflage.

never remove and reinsert your catheter with oxygen flowing through it.

You should also have a DVD specific to your procedure. You can always reference your written instructions with actual patient demonstrations on the DVD. It is our hope that you attain all of the benefits that transtracheal oxygen have been proven to deliver to oxygen dependent patients.
For Technical Assistance call 1-800-527-2667

The care and maintenance of your transtracheal catheter.

Depending on your procedure, you will be receiving transtracheal oxygen the morning following the Fast Tract procedure, or about one week after your MST procedure. Remember that your catheter should never be out of your tract for more than a few minutes or it may begin to close. Whichever procedure you had, the proper care and maintenance of your catheter is very important. You were probably taught how to clean your catheter in place, as for the next few weeks that is what you will be doing. It should be clear that you need to keep your catheter as clean as possible to insure it functions optimally. If your humidifier pop off valve starts making a noise, it may be your catheter needs cleaning. This should remedy the situation. If you think your catheter is not functioning properly, first try cleaning it. If it still doesn’t seem to be working, put your nasal cannula back on and call your physician for instructions. Leave the catheter in until you are seen by qualified personnel. Your catheters are designed to be replaced every 90 days. Make sure your home oxygen supplier knows you have made the decision to become a transtracheal patient, as they will be responsible for supplying you with two new catheters and an oxygen hose every 90 days. If your catheter develops a break or crack in it call for a replacement. There are package inserts in all transtracheal catheter packages that describe step by step how to both clean your catheter in place initially...and once your tract has healed sufficiently, how to remove and replace your catheters once or twice daily for cleaning. The same is true of the transtracheal oxygen hose that connects your transtracheal catheter to your oxygen source. Remember to

True 24 hour Per Day Oxygen Therapy

This is after all, the clinical objective of oxygen therapy. However, when doctors studied if patients actually wore their oxygen 24 hours per day, they found that the average patient could or would only wear their oxygen 17-18 hours per day. We know it is not easy living with a nasal cannula. It is very uncomfortable and inconvenient. The transtracheal catheter eliminates the nasal cannula completely, and makes it possible to get your oxygen 24 hours per day, as prescribed by your doctor.

Elimination of the Complications of Nasal Cannula

TTOT eliminates the sore nose, ears, sinus problems, dry eyes at night, nasal congestion and runny nose associated with the nasal cannula. These complications make it difficult to wear your nasal cannula 24 hours per day.

Physiologic Benefits

Reduced red blood cell count: Some patients with chronically low blood oxygen levels have increased red blood cells, as the body attempts to compensate for the low oxygen levels. This causes the blood to get thicker and places a strain on the heart. TTOT can normalize this situation because oxygen is delivered on a 24-hour basis. It is simply the body’s way of saying, “I don’t need these extra red blood cells to transport oxygen any longer”. This in turn reduces stress on the heart in pumping blood throughout the body.

Improved blood flow through the lungs: When a patient’s blood oxygen level is chronically low, the small blood vessels in the lungs constrict. This in turn makes it harder for the heart to pump blood through the lungs. TTOT provides superior oxygen delivery on a 24-hour basis. This in turn significantly reduces the constriction effect, and thereby reduces the workload of the heart.
Physiologic Benefits

**Improvements in oxygenation during sleep:** Because the TTO catheter is never out of the windpipe, your oxygen will be delivered all night while you sleep, unlike the nasal cannula that can fall out of place at night. Many patients report sleeping better on TTOT.

**Decreased work of breathing:** Because TTOT delivers oxygen directly into the lungs, it bypasses the nose, mouth, and nearly all the trachea (windpipe). This is called “dead space”. By decreasing the deadspace, many TTOT patients experience a reduction in their work of breathing (how much energy they must use to breathe). This can make a big difference in how mobile and active a patient can be.

**Reduced Hospital Days**

Several studies have documented reduced hospitalizations when patient hospital days are compared before and after starting TTOT. Hospital costs have also been documented to be decreased. This is probably due to the fact that patients are truly getting their oxygen 24 hours per day. This in turn is beneficial to other organ systems of the body such as the heart, kidneys, liver, and brain.

**Improved Survival**

A study done at a community hospital involving over 160 patients, confirmed that TTO patients lived significantly longer (average of 24 months) than clinically similar (age, sex, lung disease, and lung function) nasal cannula patients.

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**What can you expect following your procedure that is normal?**

Regardless of which procedure you had it is absolutely normal to expect some minor discomfort or pain at your procedure site. You should find the discomfort improve day by day until there is no further discomfort. During your procedure a “stent” was placed in your windpipe. This is seen as a foreign object by your body, and so you can expect to have a tickle cough. This too should improve day by day. Since the tube in your throat is open to the outside, you can expect to hear a bubbling sound when you talk or cough coming out of the tube for the first few days. With the MST technique it is unlikely, but possible, to have a very small amount of bleeding from the tract site, or have small streaks of blood in your sputum. This is normal and nothing to worry about. With the Fast Tract procedure, the opening made into your windpipe will be slightly larger than the tube (stent) in the opening that was made. For this reason, you may have difficulty speaking for a time while the tract is healing. You can place your finger or hand over the tract site and apply gentle pressure when speaking. This should improve daily until there is no difficulty speaking at all.

**What should you watch for following your procedure that is not normal?**

With either the MST or Fast Tract procedure there would be cause for concern if you are having severe cough that does not respond to your prescribed cough medications. With either procedure there is the possibility of air escaping out into the tissues of your upper chest or neck. This can sometimes be felt with your fingers as bubbles popping. If this happens, call your doctor immediately. You should not be more short of breath than you were before the procedure. If you find you are getting more short of breath then usual or begin to wheeze, call your doctor immediately. Use your oximeter to monitor your blood oxygen saturations. Your saturations should continue to read out where they did before your procedure. If indeed you do find (especially with the Fast Tract
the next day brings your portable oxygen with them so you can get home safely.

What to do AFTER your Modified Seldinger (MST) procedure.

About an hour after your MST procedure you will be discharged to your home. Since your new tract is still healing you will continue to receive your oxygen using your nasal cannula. The small “stenting” device in your neck is NOT designed to be connected to oxygen so please do not try. You may develop small mucus crusts around your new tract. You can clean these with Q-tips and water or if you prefer ½ strength hydrogen peroxide. It is important that you do not put any topical preparations around your tract. This includes antibiotic ointments or creams. Keep it clean and dry. You will normally be prescribed an antibiotic for 1-2 weeks. Take this and all other medications such as cough suppressants as ordered by your doctor. It is extremely unusual to need more than plain Tylenol for pain following this procedure. Contact your physician if you are having any significant pain. It is probably a good idea to take your temperature once or twice a day. If you begin to run a fever, call your physician right away.

What to do AFTER your Fast Tract procedure.

Since you have truly had a minor surgical procedure that is quite different from the MST, you will need to make sure you also keep your new tract as clean and dry as possible. You can use cotton tipped applicators and a diluted hydrogen peroxide solution if you wish to wipe away mucus crusts that might develop. Since your tract opening will be healing, do not put any special ointments or lotions around your tract site. Continue to take all medications as ordered by your doctor. While there is very little risk of infection, it is prudent to take your temperature once or twice a day. If you develop a fever, call your doctor immediately. Minimizing cough is a high priority, so take your cough medicine as prescribed. You shouldn’t need any stronger pain medication than Tylenol. If you do have greater pain, please call your physician.

Catheter Placement Techniques:

There are currently two different insertion techniques used to provide TTOT to patients.

Modified Seldinger Technique (MST)

The MST is the older of the two procedures, It is the technique used when TTOT was first introduced to pulmonary medicine over 30 years ago. It is almost always done by a Pulmonologist in an outpatient setting, and uses only local anesthetic. Oxygen via a transtracheal catheter is initiated one week after initial stent insertion, and the tract that is formed takes about 6-8 weeks to mature (heal) completely. During the time it takes the tract to heal, the patient routinely visits the doctor’s office or respiratory therapy department once a week to have the catheter removed, cleaned, and reinserted over a wire guide by the physician or respiratory therapist. Once the tract is fully matured, the patient is taught to remove and clean their catheter on a daily basis.

The Fast Tract Procedure

The Fast Tract procedure is a true surgical approach and is typically performed by an ENT surgeon in the main operating room. The FT procedure utilizes a combination of I.V. medicine and local anesthetic and requires an overnight stay in the hospital. Oxygen via the catheter is started the very next morning and tract that has been created is fully mature in just 2-3 weeks. Which procedure works best for you is a decision made in consultation with your pulmonologist or ENT surgeon.

As you can see, TTOT offers many benefits to patients requiring continuous supplemental oxygen. Further information to assist you and your physician in deciding if you would be a good candidate for TTOT is available at our website www.tto2.com or by calling Technical Services at 800-527-2667.
It is important that you discuss TTOT with your doctor. There are a few contraindications that must be evaluated, and ultimately the decision must be made by the doctor and the patient together. If you have any further questions, please feel free to call Transtracheal Systems at 800-527-2667, or visit our website at www.tto2.com.

Discuss TTOT with your doctor.

TTO delivers oxygen directly into your lungs.

What to do BEFORE your Modified Seldinger or Outpatient Procedure.

If you are scheduled for the Modified Seldinger Technique (MST) your procedure will in all likelihood be done in the endoscopy suite or some other treatment room in the hospital. Make sure you have confirmed the time and place of your procedure. You will typically be discharged home within a few hours. Your doctor may tell you to stop taking certain medications such as those containing aspirin or blood thinners. Be sure to take any of your medications as ordered by your physician. Ask your doctor if there are any specific instructions regarding eating or drinking after midnight the night before your procedure. As you would with any minor surgical procedure, make sure you discuss any allergies you have to any medication with your doctor...before your procedure. Even though only local anesthesia (like at the dentist) is going to be used, you may wish to have a spouse, or family member come with you to drive you home. Speaking of driving, once you are receiving transtracheal oxygen, it would be a good idea to carry an extra transtracheal catheter and hose, cleaning supplies, and a spare nasal cannula with you.

What to do BEFORE your procedure known as the Fast Tract.

The Fast Tract procedure differs from the MST in that it is always performed in the true operating room and, you will spend the night in the hospital. Since this is a more surgical approach, you will be instructed exactly when and where you need to report. When you will have to stop eating and drinking fluids will actually depend on the time of your procedure. You will be given this information prior to your procedure. Your doctor will also tell you which medications to continue taking and which to stop taking prior to your procedure. These may include aspirin containing products and blood thinners if you take them. It is also important to make sure your doctor knows of any allergies you may have to any medication...before your procedure. Just to be safe, make sure whoever will be taking you home...