

# MEDfacts

An Educational Health Series From National Jewish Health®



## Oxygen Therapy

Oxygen is in the air we breathe and is necessary to live. When we breathe in, oxygen enters the lungs and it goes into the blood. When the lungs cannot transfer enough oxygen into the blood, an oxygen therapy program may be necessary. The major reason why oxygen therapy is used is to assure that there is enough oxygen in the blood to provide for the body's needs.

There are many diseases where oxygen therapy may be useful. Many infants, children and adults have benefited from the use of oxygen therapy for acute health care needs and chronic lung conditions. Oxygen therapy is used to normalize the oxygen level in blood during sleep, rest, activity and during acute illnesses in the hospital.

### What are the benefits of oxygen therapy?

There are many benefits of oxygen therapy. Oxygen therapy can assist with the growth and development in children with chronic lung conditions. In adults with chronic lung disease, studies have shown that long-term oxygen therapy has improved quality and length of life. Oxygen can decrease shortness of breath when you are active and allow you to do more.

### How will I know if I need oxygen?

It is sometimes difficult for you to know when oxygen therapy is required. If your oxygen level is low in your blood, you may experience symptoms such as: shortness of breath, irritability, morning headaches or ankle swelling. If you notice any of these symptoms, see your health care provider. They can review your overall medical condition and decide what treatment you need.

Parents and other caregivers need to be aware that infants and children with chronic lung disease also may require oxygen therapy. If your child experiences frequent headaches, behavior changes, increased irritability, increased sleepiness or a slowing of

## REGISTER NOW

to Receive **FREE** Health  
Tips, Research Findings,  
Ways to Support Our  
Mission, News &  
More in Your E-Mail Box

Visit [njhealth.org/e-news](http://njhealth.org/e-news)  
for more information.

## Follow us online!

facebook

[facebook.com/NJHealth](http://facebook.com/NJHealth)

YouTube

[youtube.com/NationalJewish](http://youtube.com/NationalJewish)

twitter

[twitter.com/njhealth](http://twitter.com/njhealth)

growth, contact your health care provider. They can review your child's overall medical condition and decide what treatment is necessary.

### What tests can be done to determine the need for oxygen?

There are two methods to test the oxygen level in the blood: oximetry and arterial blood gases. Your oxygen level may be measured as a percentage of oxygen in your blood. This is called oxygen saturation. Oxygen therapy may be necessary if your level is below 90 percent. One or both of these methods may be used to determine your need for oxygen therapy.

Oximetry is one way to measure oxygen saturation in your blood. A small clip is placed on the finger, toe, earlobe or an infant's foot. This is a simple, convenient, painless way to determine your need for oxygen. This test may be done at rest, during sleep and while you are walking for a thorough evaluation.

The second method of testing is the arterial blood gas. While this blood test is more complex, the results can provide your health care provider with more information about how your lungs are working. For this test, blood is drawn from an artery in your wrist and both oxygen and carbon dioxide levels are measured.

### How do I get an oxygen therapy prescription?

When the test determines that oxygen is needed, your health care provider will write a prescription for oxygen. The prescription will tell you how much oxygen to use and when to use it. The amount of oxygen you need to use is called the flow rate. You need to understand when to use the oxygen and how much to use during sleep, rest and activity. Remember, oxygen is a medication and should be used only as prescribed. Oxygen is a medical therapy and, therefore, should be paid for by Medicare and other insurance companies. Please check with your insurance carrier to verify your oxygen benefit.

### What types of oxygen systems are available?

There are three systems which can supply oxygen: concentrators, compressed gas systems and liquid systems. Each system has advantages and disadvantages. It is important to choose the system which best fits your lifestyle.



- **Concentrators** are commonly used because they are convenient for both the patient and the oxygen supply company. Concentrators plug into an electrical outlet and take oxygen from the room air. These systems can add to the monthly cost of electricity, may be noisy and may produce additional heat. If you live in a rural area or have frequent power outages, you may need a back-up system. If you are active, you may need an additional system to use when you go outside your home.

- **Compressed gas systems** are readily available across the country. Steel or aluminum cylinder tanks, which contain oxygen gas, are available in several sizes. The smaller sizes are portable; however, this system may be bulkier than other portable systems.



- **Liquid systems** have two parts - a large stationary container and a portable unit with a small lightweight tank. You can refill your portable unit from the stationary unit. The oxygen supply company will visit periodically to refill the stationary unit.

If your needs change, the type of system can also be changed. The oxygen supply company should explain and demonstrate whichever system you choose.

### How does the oxygen get from the system to my body?

Oxygen is commonly delivered by a small plastic tube called a cannula. The cannula is placed under the nostrils and delivers oxygen to the airways. Oxygen can also be delivered by a face mask or by a number of other devices.

An alternative to a nasal cannula is a Transtracheal Oxygen Catheter. This can be used when oxygen therapy is used continuously for a long time at a high flow rate. A thin tube is surgically placed in your neck so oxygen is delivered directly into your windpipe (trachea). Talk with your health care provider if you are considering transtracheal oxygen.

If you need oxygen with activity, your health care provider may consider an oxygen saving device for you. These devices include reservoir or demand delivery. Ask your health care provider for more information on these devices.

## What are some common concerns about oxygen?

You may be concerned about how oxygen therapy may change your lifestyle, how oxygen affects your body and whether oxygen therapy is safe. You may worry that oxygen treatment will prevent you from leaving your home, but many convenient portable systems are available. In fact, oxygen therapy allows you to be more active by providing the oxygen that your body needs. Oxygen therapy does not cause any harm to your lungs or your body, if used as prescribed. You will not develop an addiction to oxygen. Oxygen therapy is very safe and the only thing you need to remember about safety is to keep your face and your oxygen away from flames. Talk with your health care provider if you have specific safety concerns.

## Can I travel with oxygen?

Many people travel while using oxygen. Advance planning is important when planning a trip.

### Traveling with Oxygen

#### What is the cost of oxygen while traveling?

Most insurance companies pay for oxygen in 30 day increments. No other oxygen company can bill your insurance for oxygen, as your local oxygen vendor is billing. If you are taking a trip, you should ask your oxygen company about the company travel policy. Some oxygen companies have national locations and can accommodate your travel at no extra expense to you. Locally owned oxygen companies may also locate oxygen companies at your destination and pay the travel oxygen expense for you. You may have to pay the travel oxygen expense out of your pocket. This cost will vary by destination and company policy.

#### Are there portable oxygen concentrators for travel?

Portable oxygen concentrators are oxygen machines that produce oxygen with the use of a battery, electricity, or DC power, for example, the cigarette lighter in your car. There are a number of these concentrators on the market. Examples of portable oxygen concentrators include:

- Inogen One
- Lifestyle
- Freestyle
- Sequal Eclipse, and
- Respironics Evergo.

All these portable units provide a demand flow, or pulsed oxygen delivery. The Sequal Eclipse is the only portable concentrator that also allows a constant flow of oxygen. The battery time varies per product, as does the liter flow available. If you would like additional information regarding portable concentrators, or other oxygen systems, contact your oxygen provider. Each manufacturer also has websites:

[www.inogenone.com](http://www.inogenone.com)

[www.respironics.com](http://www.respironics.com)



[www.airsep.com](http://www.airsep.com)

[www.sequal.com](http://www.sequal.com)

### **What should I consider when traveling by air?**

Many airlines are allowing the use of Portable Oxygen Concentrators to provide in flight oxygen. There are a number of these devices approved for airline use, including Inogen One, Lifestyle, Freestyle, Sequal Eclipse and Respironics Evergo. Contact your individual airline to obtain a list of approved devices and required documentation for use of portable concentrators on the airplanes. You will be required to use the battery on the portable concentrator during the flight. Ask your provider to rent or loan you enough batteries to last the duration of your flight.

There are also airlines that will allow the use of airline provided oxygen on board a flight. The price for oxygen purchased from the airline varies per carrier. Call the airline to inquire about availability of oxygen, oxygen use guidelines, and appropriate documentation required for oxygen use in flight. You can also find information regarding oxygen use on an airline on each airline's website. Every airline requires a minimum of forty eight hours notice to accommodate the use of oxygen in flight.

### **What should I consider when traveling by train?**

You can bring your own oxygen on board a train, at no charge. Amtrak has specific weight requirements that can be obtained on [www.amtrak.com](http://www.amtrak.com), or you can inquire at the time you make your reservation.

### **What should I consider when traveling by ship?**

As of November, 2007, you can bring your own oxygen on board cruise ships, except Holland America. There is an oxygen service called Care Vacations that provide oxygen on board Holland America, for a fee. If you are bringing your own oxygen on board a cruise ship, the cruise ship does not charge you. You may incur a charge if you have to obtain oxygen from an oxygen company that is not affiliated with your home oxygen vendor.

### **What should I consider when traveling internationally?**

There are a number of companies assisting with oxygen for international travel. You will be provided with oxygen concentrators and compressed gas oxygen systems when traveling internationally. Resources for international travel include, but are not limited to, Advanced Aero Medical, 1-800-346-3556, or [www.aeromedic.com](http://www.aeromedic.com), Care Vacations, for cruise travel, 1-877-478-7827, or [www.carevacations.com](http://www.carevacations.com), or [www.breathineasy.com](http://www.breathineasy.com).

The internet holds many resources for travel with oxygen, local and internationally. You also can find resources for support groups on websites provided by the American Lung Association and other medical related websites.

### **Where else can I get information about using oxygen?**

Information about oxygen therapy may be available in your community from your health care provider, your oxygen supply company, your local American Lung Association, a

support group of other people using oxygen in your community or LUNG LINE® at National Jewish.

National Jewish Health offers a variety of programs that can help people with chronic lung conditions. National Jewish Health offers medical evaluations to determine oxygen needs and how best to meet them, other medical therapies and a team of specialists working together to evaluate your medical condition.

Note: This information is provided to you as an educational service of National Jewish. It is not meant to be a substitute for consulting with your own physician.

©Copyright April 1995, 2005, 2006, 2007, 2008 National Jewish Health, PTE.085