GREASE/FLAMMABLES

Never use grease or oil on oxygen equipment. Keep equipment away from all flammable materials such as oil, grease, aerosols, paints, gasoline and solvents. Do not use petroleum jelly with oxygen.

CYLINDER STABILITY

Secure cylinders at all times. Oxygen cylinders need to be secured in a special base to keep the cylinder from falling over. The weight of the cylinder can damage property and people if it were to fall on something or someone. The cylinder valve could also be knocked off if the cylinder were to fall over. The high pressure coming out of the valve opening could then cause the cylinder to move about the room in a destructive, uncontrolled manner.

SMOKING

Do not permit smoking in the same room as your oxygen equipment. Place "No Smoking" signs on the front and back door of your residence and also at the entryway to the room where you will be using your oxygen.

It is possible for you to be in a large room such as a restaurant where smoking is permitted as long as lighted smoking materials are not within five feet. Ask to sit in the non-smoking section of the restaurant.

STORAGE

Do not place your oxygen equipment in a small or unventilated storage area. Do not place oxygen equipment in a small storage area such as a closet or car trunk. Any venting oxygen could create a fire hazard. Large, unventilated storage areas can be dangerous as well.

OIL-BASED TOILETRIES AND SMALL APPLIANCES

Never use oil-based face or hair creams, a hair dryer or an electric razor. It is possible in certain conditions that the combination of oxygen, oil-based toiletries and a spark from an electrical appliance, such as an electric blanket, hair dryer, electric razor or heating pad, could ignite and cause burns. Never use oil based hair lubricants, face and hand lotions, petroleum jelly products, or aerosol sprays. Always use water-based cosmetics or creams.

COOKING SAFEGUARDS

It is best to use a microwave oven or make other arrangements, but if you must cook, you may:
Step 1: Secure the cannula over your ears and behind your head instead of under your chin.
Step 2: Secure the oxygen tubing to the side of your clothing at your waist with a large safety pin. This method will keep the oxygen tubing away from the source of heat. Do not bend down close to the burner.

HAND WASHING TECHNIQUE

Hands must be clean prior to handling supplies and solutions. Wa… beginning any pr…

Step 1: Wet hands thoroughly with warm water.
Step 2: Use antibacterial soap.
Step 3: Wash hands for 1-2 minutes using a rotary motion and friction. Wash:
Back of palm of each hand
Between all fingers
Step 4: Rinse hands under running water.
Step 5: Dry on a clean cloth or paper towel.

YOUR OXYGEN CYLINDER SYSTEM

Patients who require smaller amounts of supplemental oxygen often use a high-pressure cylinder system.

With this system, oxygen gas is pressurized to a high level and stored in steel or aluminum cylinders. The pressure is measured in pounds per square inch (PSI). The higher the pressure, the greater the amount of oxygen that can be compressed into the space of the cylinder.

Oxygen cylinders are available in various sizes. Depending upon the size of the cylinder and the amount of oxygen you use, the oxygen

will last for different periods of time.

Patients needing a portable supply of oxygen use a smaller lightweight system. The weight of these portable cylinders ranges from 7 – 18 pounds. They have capacities ranging from 240 – 625 liters of oxygen — a supply of 2 – 5 hours at 2 liters per minute.

Three different sizes of smaller cylinders are commonly available: the D cylinder, the E cylinder and the A cylinder. The A and D cylinders are smaller. They are used with a carrying case with a shoulder strap. The E cylinder is a bit larger and is often used with a wheeled cart.

The oxygen is delivered to you through a nasal cannula or face mask. The tubing on the cannula or mask is attached to the outlet on the regulator. Sometimes, an extra length of tubing may be provided. This will allow you to move about at a farther distance from your cylinder.

YOUR STATIONARY CYLINDER SYSTEM

Your cylinder system consists of the following parts: the cylinder, which stores the pressurized oxygen, the cylinder cart, which stabilizes the cylinder to prevent accidental tipping, a regulator, which controls the flow of oxygen from the cylinder.

The regulator consists of the pressure gauge, which tells you how much oxygen is left in the tank and a flowmeter, which provides the desired flow rate of oxygen.

YOUR PORTABLE CYLINDER SYSTEM

Your portable cylinder system consists of the following parts: the cylinder, which stores the pressurized oxygen and a regulator, which controls the flow of oxygen from the cylinder. Most smaller portable cylinders are used with a carrying case.

The larger portable cylinder may be used with a wheeled cart. The regulator consists of the pressure gauge, which tells you how much oxygen is left in the cylinder and a flowmeter, which provides the desired flow rate of oxygen.

Note: Use extreme caution if you use a humidifier bottle with a portable system. If the system is tipped over, water could run down the tubing into the patient's nose.

OPERATING YOUR PORTABLE CYLINDER SYSTEM

The following step-by-step instructions will help you operate your portable cylinder system.

Attaching the Regulator to a Full Cylinder

To attach the regulator assembly to a full D or E cylinder, follow the steps below:

Step 1: Remove any protective tape. Open the cylinder valve slightly by turning counterclockwise. You may have to use a cylinder wrench. This will blow off any dust in the orifice of the cylinder outlet. Close the valve tightly.

Caution: Make sure the valve opening is not directed at yourself or anyone else when opening the cylinder.

Step 2: Slip the regulator over the cylinder valve and neck of the full cylinder. Line up the pins on the regulator with the holes on the neck of the cylinder. Check to make sure the washer is on the larger pin.

Step 3: Hand-tighten the tee screw by turning clockwise. Use a cylinder wrench to tighten if necessary.

Step 4: Attach the oxygen tubing to the nipple adapter.

Turning On Your Oxygen

To turn on your portable cylinder system, follow the steps below:

Step 1: Slowly open the cylinder valve by turning counterclockwise. You may have to use a cylinder wrench.

The needle on the pressure gauge will register the amount of oxygen in the cylinder. A full D or E cylinder shows approximately 2,000 PSI on the gauge.

Step 2: If your oxygen system has a dial gauge, adjust the liter control knob until the needle on the gauge registers at the prescribed number.

Note: Cylinder and regulator must be in upright position to read indicator ball and flow rate.

Step 3:Your doctor has prescribed the oxygen rate for you. Never change this liter flow without instructions from your doctor.

Step 4: Fit the nasal cannula.

Nasal Cannula

Insert the two prongs of the cannula into your nostrils. Make sure the prongs curve into your nostrils.

Slide the tubing over and behind your ears.

Adjust the tubing to fit comfortably under your chin by sliding the adjuster upward. Be careful not to adjust it too tightly.

Turning Off Your Oxygen

When your are finished using your oxygen, turn off your portable cylinder system following the steps below:

Step 1: Remove the nasal cannula or oxygen mask.

Step 2: Close the cylinder valve by turning clockwise all the way. You may have to use a cylinder wrench. This stops the flow of oxygen from the cylinder.

The needle on the pressure gauge will drop to zero. The needle or the indicator ball on the flowmeter will drop to zero.

Step 3: When both the pressure gauge and the flowmeter register zero, turn the liter control knob counterclockwise until it is tight.

OXYGEN CYLINDER SUPPLY TIMES

Your oxygen flow is measured in liters per minute (LPM). Average oxygen usage time is based on continuous flow rate. These figures are approximate and are to be used only as a general guide. Individual usage time may vary.

PRESSURE GAUGE READING	Liter Flow Per Minute				
	1	2	3	4	5
	Approximate Time Remaining:				
2000 psi	4 days/6 hrs.	2 days	1 day/12 hrs.	1 day	19 hours
1500 psi	3 days/3 hrs.	1 day/12 hrs.	1 day	17 hours	14 hours
1000 psi	2 days	1 day	15 hours	12 hours	9 hours
500 psi	1 day	12 hours	7 hours	6 hours	4 hours

H Cylinder Oxygen Supply Time Guide

PEDIATRIC

PRESSURE GAUGE READING	Liter Flow Per Minute				
	1\16	1\8	1\4	1\2	3\4
	Approximate Time Remaining:				
2000 psi	68 days	34 days	17 days	8 days/12 hrs.	5 days/12 hrs.
1500 psi	52 days	26 days	13 days	6 days/12 hrs.	4 days/6 hrs.
1000 psi	34 days	17 days	8 days/12 hrs.	4 days/6 hrs.	2 days/18 hrs.
500 psi	16 days	8 days	4 days	2 days	1 day/9 hrs.

H Cylinder Oxygen Supply Time Guide

D Cylinder Oxygen Supply Time Guide

PRESSURE GAUGE READING	Liter Flow Per Minute				
	1	2	3	4	5
	Approximate Time Remaining:				
2000 psi	5 hours	2 hours	1 hr./15 min.	1 hour	Not recommended
1500 psi	3 hrs./30 min.	1 hr./30 min.	50 minutes	45 minutes	Not recommended
1000 psi	2 hours	1 hour	30 minutes	20 minutes	Not recommended
500 psi	1 hour	15 minutes	5 minutes	0	Not recommended

PEDIATRIC D Cylinder Oxygen Supply Time Guide

PRESSURE GAUGE READING	Liter Flow Per Minute				
	1\16	1\8	1\4	1\2	3\4
	Approximate Time Remaining:				
2000 psi	3 days	1 day/12 hrs.	20 hours	9 hrs./30 min.	6 hrs./30 min.
1500 psi	2 days/12 hrs.	1 day/6 hrs.	15 hours	7 hrs./15 min.	4 hrs./45 min.
1000 psi	1 day/12 hrs.	18 hours	9 hours	4 hrs./30 min.	3 hours
500 psi	18 hours	9 hours	4 hours	2 hours	1 hrs./15 min.

E Cylinder Oxygen Supply Time Guide

PRESSURE GAUGE READING	Liter Flow Per Minute				
	1	2	3	4	5
	Approximate Time Remaining:				
2000 psi	8 hours	4 hours	2 hrs./30 min.	2 hours	1 hr./30 min.
1500 psi	6 hrs./30 min.	3 hours	2 hours	1 hr./30 min.	1 hour
1000 psi	4 hours	2 hours	1 hr./15 min.	1 hour	30 minutes
500 psi	2 hours	1 hour	25 minutes	15 minutes	5 minutes

PEDIATRIC E Cylinder Oxygen Supply Time Guide

PRESSURE GAUGE READING	Liter Flow Per Minute				
	1\16	1\8	1\4	1\2	3\4
	Approximate Time Remaining:				
2000 psi	6 days	3 days	1 day/10 hrs.	16 hours	11 hours
1500 psi	4 days/12 hrs.	2 days/6 hrs.	1 day	12 hours	8 hrs./30 min.
1000 psi	2 days/20 hrs.	1 day/10 hrs.	17 hours	8 hours	5 hrs./30 min.
500 psi	1 day/10 hrs.	17 hrs.	8 hours	4 hours	2 hrs./30 min.

REPLACING A CYLINDER

Step 1: Remove the nasal cannula or oxygen mask.

Step 2: Close the cylinder valve by turning clockwise all the way. You may have to use a cylinder wrench.

Step 3: When both the pressure gauge and the flowmeter register zero, turn the liter control knob counterclockwise until it is tight.

Step 4: Loosen the regulator at the tee screw. If necessary, use the key to loosen the screw.

Step 5: Remove the regulator by lifting it up over the cylinder valve.

Step 6: Remove the tape from the valve of the new cylinder.

Step 7: If necessary, remove the old washer and replace it with a new washer. Do not use any sharp instruments (e.g. knife) to remove the old washer; it may scratch and cause an oxygen leak.

Step 8: Open the cylinder valve slightly by turning counterclockwise. This will blow off any dust in the orifice of the cylinder outlet. Close the valve tightly.

CAUTION: Make sure the valve opening is not directed at yourself or anyone else when opening the cylinder.

Step 9: Replace the regulator. Slip the regulator over the valve of the new cylinder. Line up the pins on the regulator with the holes in the cylinder valve.

Step 10: Tighten the tee screw. First, hand tighten the tee screw. Use the key to firmly tighten the screw.

Step 11: Open the cylinder valve by turning the key counterclockwise. If there is a leak you may hear a hissing sound. Use the cylinder wrench to tighten the connection. If the leak persists, the washer may be damaged and should be replaced. If the leak still persists, call the Wright & Filippis respiratory department.

CLEANING AND MAINTENANCE PROCEDURES

Your oxygen cylinders and regulator are durable, dependable pieces of equipment and will continue to operate efficiently with proper maintenance.

As necessary, you should wipe your regulator, cylinder and/or carrying case with a clean, damp cloth. Never use wax, cleaning sprays or polish. Many of these products are flammable.

Never use any grease, oil or other lubricants on your regulator. These compounds are volatile and could pose a safety hazard. Never attempt to repair your regulator yourself. Should you have any problems with your oxygen cylinder system at any time, call Wright & Filippis immediately. We maintain service for equipment problems.

CARE OF YOUR OXYGEN TUBING

Minimal care is required of your oxygen tubing and nasal cannula. You should discard and replace your nasal cannula every two weeks. Discard and replace your tubing every 90 days. Do not use alcohol or oil-based products on or near your cannula.

Moisture may accumulate inside the oxygen tubing, especially if you are using a humidifier bottle. Excess moisture may reduce oxygen flow. If this happens you may try the following procedure:

Step 1: Remove the humidifier bottle from the cylinder.

Step 2: Attach a nipple adapter to the outlet tube.

Step 3: Remove the oxygen tubing from the humidifier bottle and attach it to the nipple adapter.

Step 4: Allow the oxygen to run directly through the tubing. Within a few minutes, the tubing will be dry.

Step 5: When the tubing is dry, disconnect it, remove the nipple adapter, reconnect the humidifier bottle to the cylinder and reattach the oxygen tubing to the humidifier bottle.

Step 6: Recheck the liter flow to make sure the oxygen is flowing at the prescribed level.

REORDERING OXYGEN

Always be aware of the amount of oxygen remaining in your cylinder. Please call Wright & Filippis* at least 24 hours in advance to order tanks. Place orders on Thursday for a Friday delivery so that you have enough tanks for the weekend.

TRAVEL TIPS

Early planning and careful preparation are the keys to an enjoyable trip. The following tips should help you plan and prepare for any trip.

Contact your doctor to make sure your proposed trip is medically safe and to obtain additional copies of your prescription.

Contact Wright & Filippis* for assistance with getting oxygen refills along your driving route or at your final destination.

Have cash available to pay for oxygen refills or equipment.

If traveling by Carl RV:

· Remind passengers not to smoke in the car/RV.
· Securely fasten cylinders.
· Keep one window partially open to provide fresh air circulation.
· Do not store oxygen in the trunk of your car.
· Do not store oxygen in an area where the temperature will reach 120 degrees Fahrenheit.
· In a recreational vehicle, do not store near gas or open flame.

If traveling by Bus/Train:

· Contact the reservation office for specific information about the use of oxygen and special accommodations.
· Most companies require at least two weeks notice if you are going to be using oxygen on your trip.

If traveling by Airplane:

• Most airlines require at least four weeks notice if you are going to be using oxygen on your trip.
· Ask your doctor what flow rate to use during your flight.
· Request a direct flight, if available.
· All airlines require you to use their oxygen on the plane.
· If there are layovers, ask if the airline will supply oxygen during the layovers.
· Ask what the airline will charge for oxygen during the flight.
· Arrange for your oxygen supply at your final destination.

* respiratory department

TROUBLESHOOTING CHART

TROUBLE	PROBABLE CAUSE	REMEDY
No oxygen coming from cannula	Empty cylinder	Check pressure gauge for oxygen contents. If cylinder is empty, remove regulator and attach to new full cylinder. Call Wright & Filippis* for additional oxygen
	Decreased awareness of oxygen flow	Place cannula prongs in a clean glass of water. If you observe bubbles coming from your cannula, your unit is working correctly.
	Faulty cannula	Remove cannula and check tubing for kinks or obstructions. Replace with new cannula if needed.
	Loose connections	Check all connections
	Cylinder valve is closed or liter control knob is off	Check cylinder valve to make sure it is open. Check flowmeter to make sure it is on.
	Faulty regulator	Call Wright & Filippis*. NEVER attempt to fix the regulator yourself.
Oxygen cylinder hisses and is leaking oxygen	Regulator not attached tightly	Turn the oxygen off. Check and retighten connection between regulator and cylinder.
	Faulty or missing washer	Replace washer.
	Faulty regulator	Call Wright & Filippis*. NEVER attempt to fix the regulator yourself.

* respiratory department