



# Home Oxygen Therapy Patient Information

## Table of Contents

Oxygen Therapy.....	page 2
Your prescription.....	page 2
Introduction.....	page 3
Concentrator Placement & Operation Inst.....	page 3
Location.....	page 3
Power cord.....	page 4
Initial startup.....	page 4
Power switch.....	page 4
Flow rate.....	page 4
Indicator Lights on Concentrator.....	page 5
Nasal Cannulas & Tubing.....	page 5-6
Humidity Bottles.....	page 6
Connecting humidity bottle.....	page 6-7
Oxygen Cylinders and regulators.....	page 8
Portable system.....	page 8
Setting up cylinders.....	page 8-9
Conserving regulators.....	page 10
Back up cylinder .....	page 10
Homefill Compressor .....	page 11-13
Oxygen Safety.....	page 14
Oxygen Supplies and Replacement.....	page 15
Maintenance.....	page 16
Maintenance check.....	page 16-17
Troubleshooting.....	page 17
Water in oxygen .....	page 17
No oxygen .....	page 18
Concentrator alarming.....	page 18
Liter flow.....	page 18
Contacting your physician.....	page 18

# Oxygen Therapy

**What is Oxygen Therapy:** Oxygen is 21% of the air we breathe. When our lungs are damaged, obstructed, or restricted, they cannot oxygenate the blood. Each cell in our bodies must have oxygen to live. Raising the oxygen percentage that we breathe in allows more oxygen to pass into the blood. To have oxygen, it must be prescribed by your doctor.

**Your Prescription:** Your physician has written a prescription for oxygen with a set liter flow, this prescribed liter flow should *never* be deviated without first consulting him/her.



*Note: If your physician changes your liter flow, notify us immediately.*



*Concentrator*



*Homefill System*



*Portable System:  
E tank with a cart*

## Introduction:

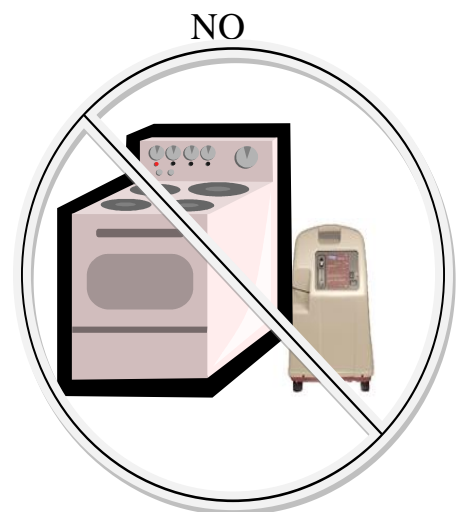
- Your oxygen concentrator is intended for individual use in the home.
- It is an electronically operated device that separates oxygen from room air.
- It provides a high concentration of oxygen directly to you through a nasal cannula. Clinical studies have documented that oxygen concentrators are therapeutically equivalent to other types of oxygen delivery systems.
- Your provider will show you how to use your oxygen concentrator.
- He/She should be contacted with any questions or problems regarding your oxygen concentrator.
- This manual will tell you about your concentrator and will serve as a reference as you use your concentrator.

## Concentrator Placement & Operation Instructions

**Select a Location:** Place the concentrator in a room that will be most convenient to you. Centralized locations are generally best.

- Your concentrator can be easily rolled from room to room on its casters.
- Usage in environments other than those described may result in the need for increased equipment maintenance.
- The air intake of the unit should be in a well-ventilated area to avoid airborne pollutants and/or fumes (do not put in closet).

**NOTE:** Ensure that your concentrator is at least 3 inches away from walls, 6 inches-12 inches away from draperies or furniture to assure sufficient air flow. Avoid deep pile carpets and heaters, radiators or hot air registers.



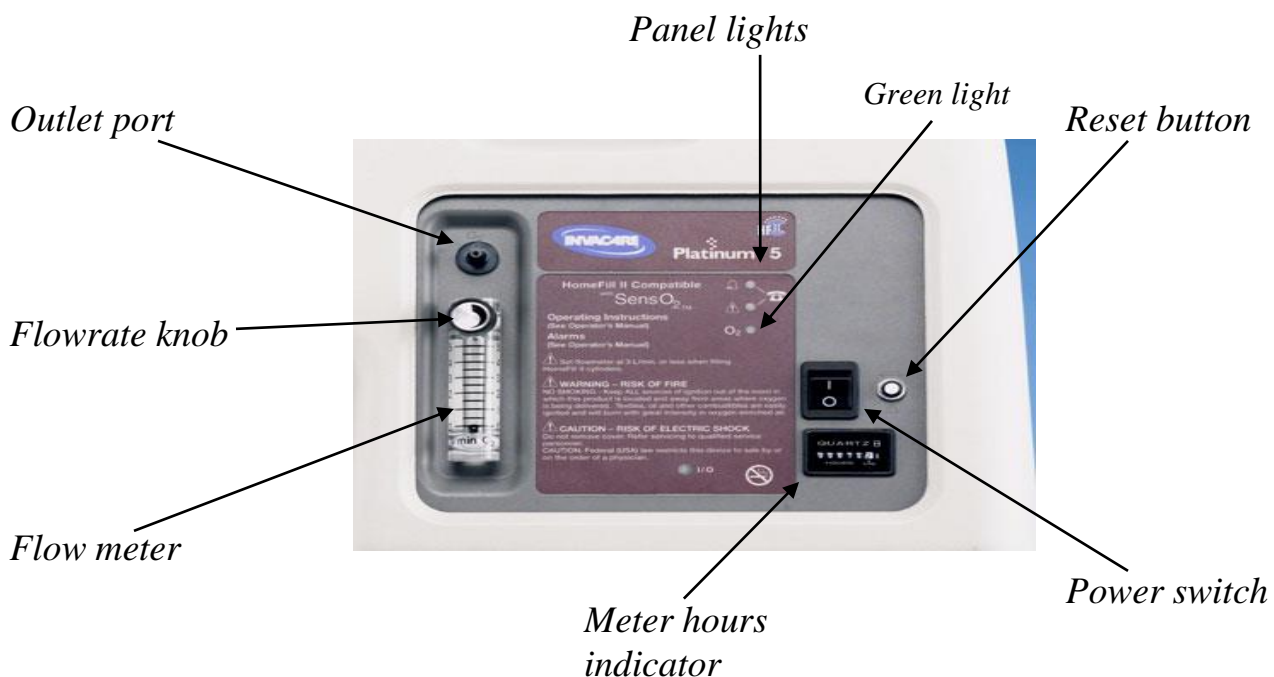
**Plug in Power Cord:** Plug power cord directly into an electrical outlet.

- **Never** plug the concentrator into an outlet that is powering other electrical items.
- **Do not** use extension cords or power strips with concentrator.

**Initial Startup of the Concentrator-** NOTE: Concentrator may be used during the initial start warm-up time (approximately 30 min) while waiting for the oxygen purity to reach maximum.

- When the unit is turned on, the GREEN light will come on (SYSTEM OK/oxygen greater than 85%).
- After five (5) minutes, the oxygen sensor will be operating normally and will control the indicator lights depending on oxygen concentration values.

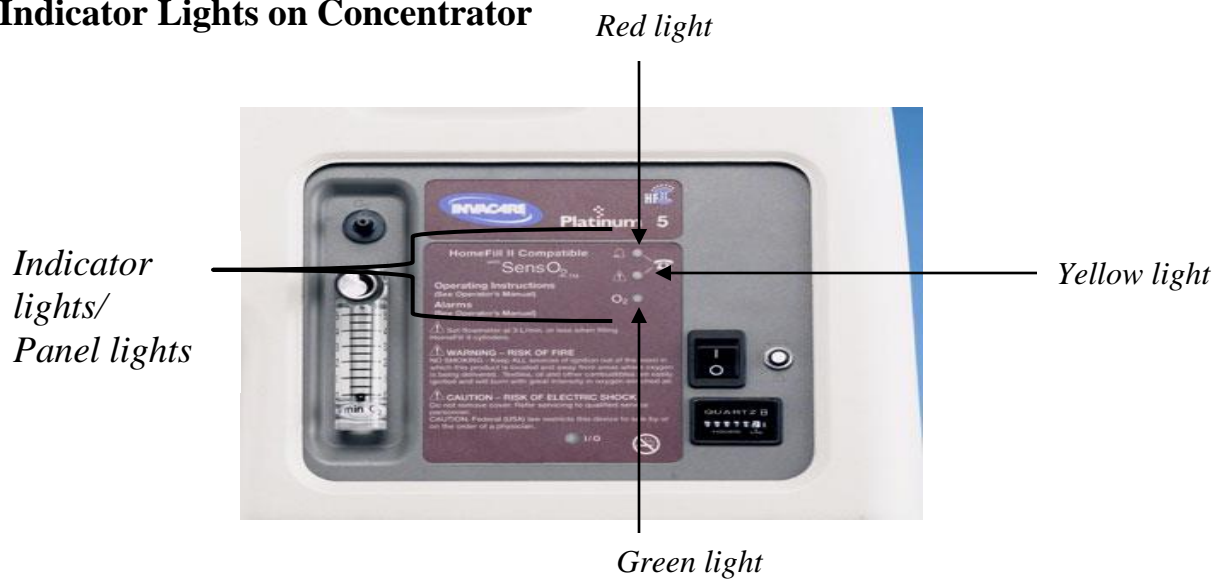
**Power Switch** - Press the power switch to the on position. All the panel lights and the audible alarm will come on for one second, indicating that the unit is functioning properly. After one second, only the GREEN system ok/power light will stay on.



**Flowrate-** NOTE: To properly read the flowmeter, locate the prescribed flowrate line on the flowmeter.

- Turn the flowrate knob to the setting prescribed by your physician or therapist.
- Next, turn the flow knob until the ball rises to the line.
- Center the ball on the *L/min O<sub>2</sub>* line prescribed.
- When reading your flow meter, you must read the middle of the float not the top.

## Indicator Lights on Concentrator



**GREEN light** - Normal Operation.

**YELLOW light** - Call supplier **IMMEDIATELY**. You may continue to use the concentrator unless instructed otherwise by your supplier. Be certain that backup oxygen is nearby.

**RED light** - Total unit shutdown. Switch **IMMEDIATELY** to backup oxygen supply. Call supplier **IMMEDIATELY**.

**GREEN light with YELLOW light flashing** - Call supplier **IMMEDIATELY**. Oxygen sensor malfunctioning; you may continue to use the concentrator.

**Nasal Cannulas & Tubing:** An appliance must be used to deliver oxygen to the patient. The most common are nasal cannulas and oxygen masks.

- Nasal cannulas are prongs that are inserted into the nose and are suited for most needs.
- Nasal cannulas have curved prongs, and the curve side should be down.
- These cannulas should be changed every two weeks or when they are soiled.
- Cannulas work the same whether the user is a mouth breather or a nasal breather.
- It is not recommended that you use more than 50 feet of tubing. If you exceed 50 feet, you will not get the proper amount of oxygen through your tubing and nasal cannula.



*Oxygen tubing*



*Nasal Cannulas*



*Oxygen mask w/ tubing*

**Humidity Bottles:** Humidity bottles are disposable devices that bubble oxygen through a column of water.

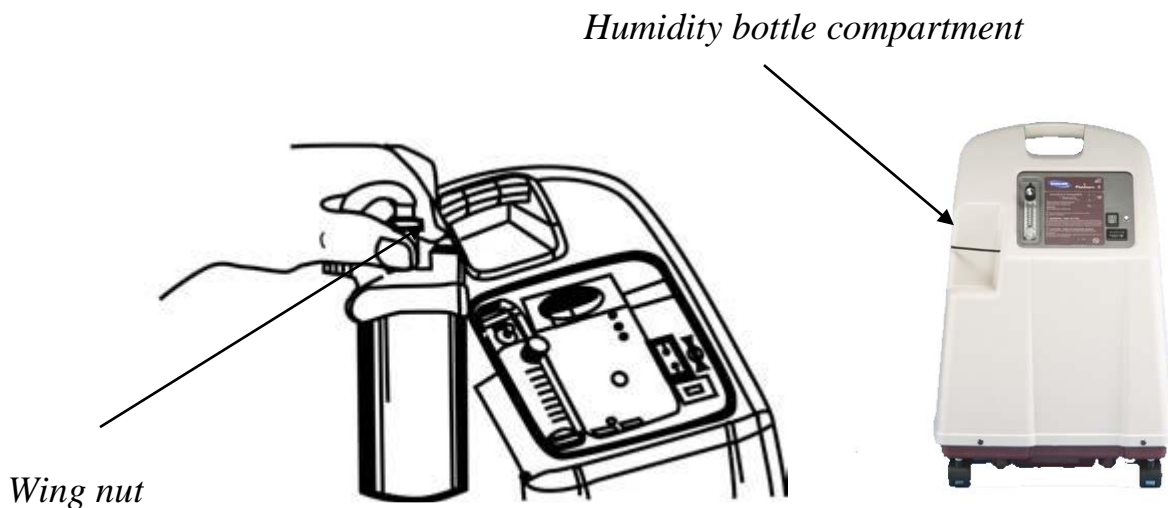
- Humidity bottles are used because oxygen that is delivered has no moisture in it therefore can cause dryness and irritation around the nasal area.
- This water attaches itself to the oxygen molecules.
- These devices should be filled with *distilled* water only, ***do not use tap water!*** This distilled water can be purchased inexpensively through your local drug or grocery store.
- When filling your humidity bottle, always empty out old water before adding new water.
- Clean humidity bottle every day with warm soapy water.
- Change your humidity bottle at least monthly.
- Portable oxygen systems do not come with humidifier attachments.

**Connecting the Humidity Bottle (If prescribed):** Fill humidity bottle with distilled water to the level indicated on the side of the bottle (or do not fill over ½ full).

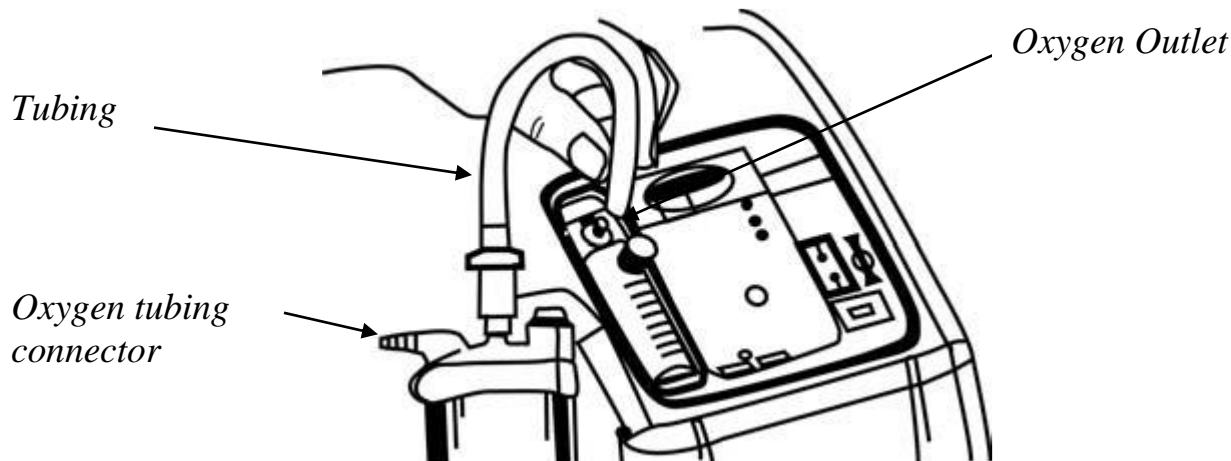
*Wing nut*



- **WARNING: DO NOT** over fill humidity bottle. Replace the humidity bottle cap and securely tighten.
- **DO NOT** reverse the oxygen input and output connections. Water from the humidity bottle will travel through the nasal cannula back to the patient.
- Place the humidity bottle in the humidifier compartment.



- Attach tubing with the wing nut to the humidity bottle by turning the wing nut counterclockwise to the humidity bottle until it is securely fastened.



- Attach oxygen tubing from the humidity bottle to oxygen outlet connector on the oxygen concentrator.
- Attach the cannula/patient supply tubing to the humidity bottle outlet.

## Oxygen Cylinders and Regulators

**Portable System:** If your physician orders a portable system, the supplier will initially set you up with oxygen cylinders, a cart, and a regulator. An oxygen key and a tank rack will also be included.

*Regulator*



*Oxygen key*



*Cart*



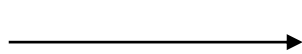
*Oxygen tanks*



## Setting up Cylinders

- Make sure all cylinders are secured in a rack, stand, or cart.
- Do not leave cylinders standing up without a stand, they could fall over and potentially injure someone or the valve could become damaged causing the cylinder to move in a destructive manner.
- This could cause very serious injury if hit by the cylinder.
- Place regulator onto cylinder post.

*Regulator*

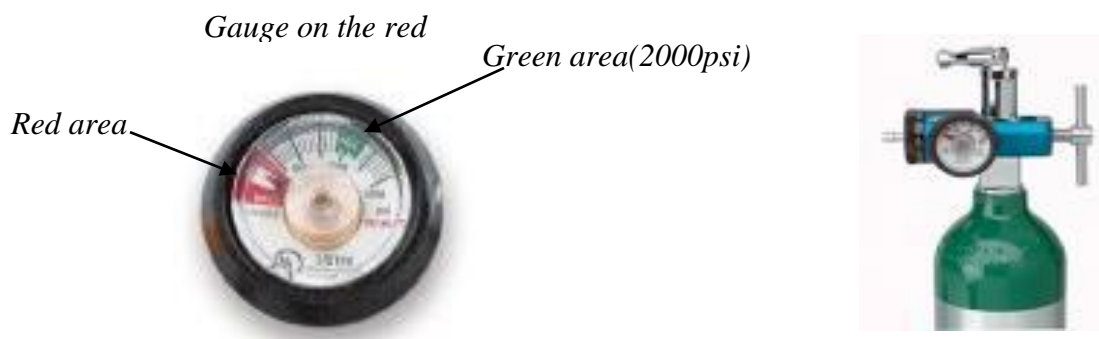


*Oxygen tank*



**Note-** there are pins on the regulator and the three holes on the cylinder neck, rest the regulator pins in the holes of the cylinder and tighten the screw handle (you'll note a slight indentation on the neck that it should align with).

- Attach tubing to regulator port.
- Regulator should be in the off position.
- Open flow from the tank by turning valve counterclockwise with oxygen key.
- Slowly turn liter flow to prescribed level. Listen for hissing noise to make sure the regulator is on properly. If you hear a noise, shut off the tank with oxygen key, slowly turn off regulator and check regulator washer and reposition regulator.
- Check gauge on regulator make sure tank reads 2000 psi. You can still use the tank if it reads under 2000 psi.
- When gauge reads on the red area, you need to change tanks.



### **Another Type of Regulator**

**Conserving Regulators-** An oxygen conserving device is used in the place of the oxygen continuous flow regulator on a portable system.

- The purpose of this unit is to deliver oxygen from a cylinder in a bolus or pulse dose when breathing in.
- This allows oxygen cylinders to last longer.
- Your physician must prescribe this type of device.
- Patient must be tested and qualify to have a conserving device.
- Follow same procedures as previous regulator for attaching to cylinder.



*Conserving regulator*

**Back-up oxygen cylinder-** Are to be used in the event of concentrator malfunction or power outage.

- Typically, these cylinders will provide you with 3- 5 hours of oxygen on continuous flow.
- **Contact us immediately if you need to use your back up cylinder for any reason.**

*M60*



*E tank with cart and regulator*



### **Another Type of Portable System**

**Homefill-** A compressor unit that allows patients to fill their own high-pressure cylinders from a concentrator.



**Easy Connections and Controls**



**HomeFill Compressor  
Shown with Perfecto 2**



- Ideally used on conserving device mode to allow greater duration of the homefill tanks.
  - Patients must be tested on conserving device by a license clinician prior to using conserving device mode.
- Must be used with an Invacare concentrator.
- Patients can fill cylinders while receiving oxygen from the concentrator.
- Homefill tanks can be as small as a coffee cup.

# Connecting/Disconnecting the Cylinder to/from the Compressor

## Connecting the Cylinder to the Compressor

### **⚠ WARNING**

**NEVER** use tools of any kind to connect/disconnect the cylinder and the compressor. Otherwise, severe injury and/or damage may occur.

**DO NOT** drop oxygen cylinders. Use two hands when handling/transporting oxygen cylinders. Otherwise, injury or damage may occur.

**DO NOT** use a liquid leak detector to test for leaks.

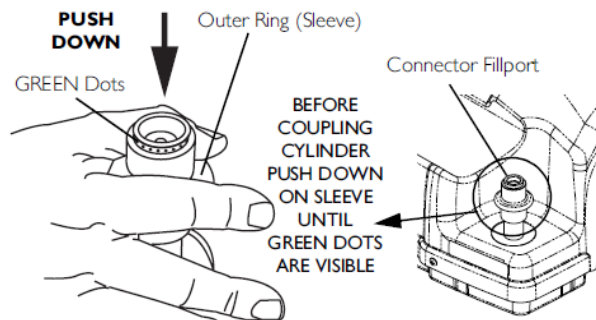
*NOTE: For this procedure, refer to FIGURE 4.1 on page 24 and FIGURE 4.2 on page 26.*

1. Examine the cylinder gauge. If the cylinder pressure is less than 1500 psig, proceed to STEP 2 (FIGURE 4.2).

*NOTE: If the cylinder pressure is greater than 1500 psig., DO NOT attempt to top off this cylinder. It may not fill.*

2. Set the regulator flow dial on the cylinder to Off (FIGURE 4.2).
3. Remove the cylinder and connector fillport covers (if present).
4. Momentarily push DOWN on the outer ring (sleeve) of the connector fillport until GREEN dots are visible to reset the connector (FIGURE 4.1).

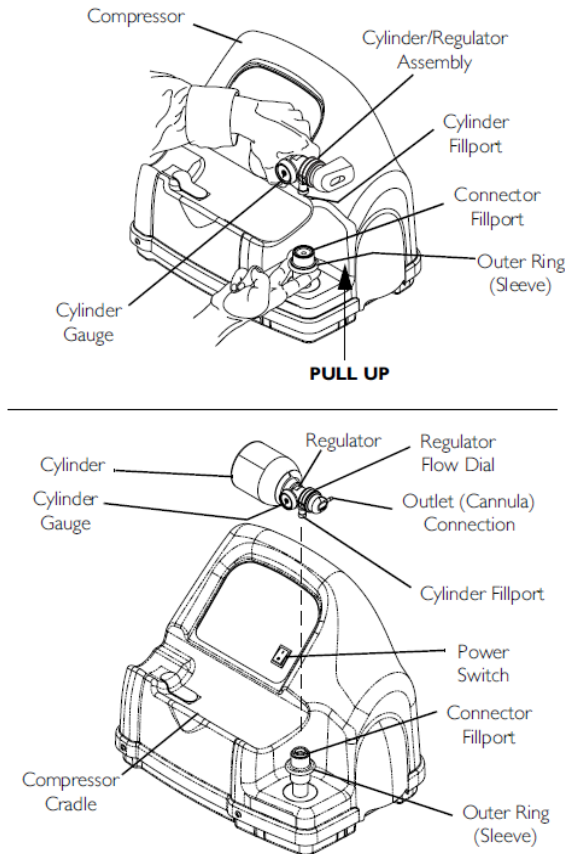
*NOTE: If the outer ring (sleeve) is in the UP position (GREEN dots not visible), the connector fillport will not be able to accept the cylinder fillport. Pushing DOWN momentarily will reset the connector fillport (GREEN dots visible) to accept the cylinder fillport.*



**FIGURE 4.1** Resetting Connector Fillport

5. Grasp the cylinder/regulator assembly in the area behind the cylinder gauge (FIGURE 4.2).
6. Position the cylinder in the compressor cradle (FIGURE 4.2).
7. Align the cylinder fillport with the connector fillport (FIGURE 4.2).
8. Pull UP on the outer ring (sleeve) of the connector fillport while pushing DOWN on the cylinder/regulator assembly to couple the cylinder fillport into the connector fillport (FIGURE 4.2).

*NOTE: The cylinder is properly connected when an audible “click” is heard.*



NOTE: Fillport covers not shown for clarity.

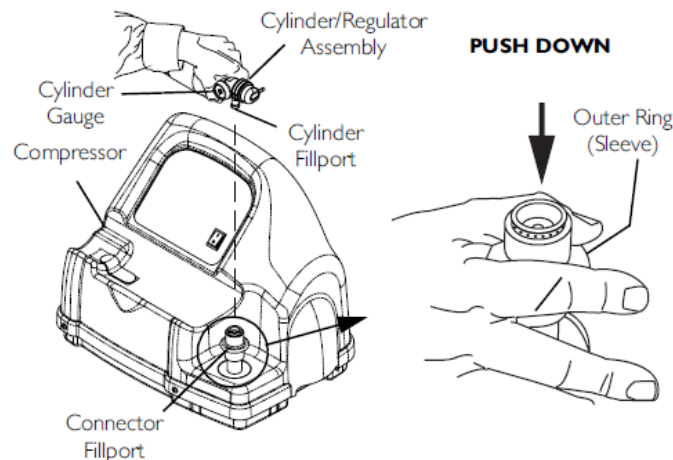
**FIGURE 4.2** Connecting the Cylinder to the Compressor

**⚠ WARNING**

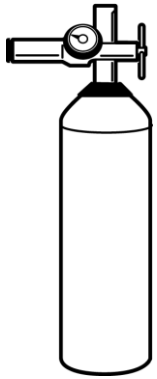
**NEVER use tools of any kind to connect/disconnect the cylinder and the compressor. Otherwise, severe injury and/or damage may occur.**

NOTE: For this procedure, refer to FIGURE 4.3.

1. Press the compressor power switch to the Off (O) position.
2. Grasp the cylinder/regulator assembly in the area behind the cylinder gauge.
3. With the other hand, grasp the outer ring (sleeve) of the connector fillport and push DOWN.
4. Lift up on the cylinder/regulator assembly to remove from the connector fillport.



# Oxygen Safety Guidelines



**PURPOSE:** The purpose of oxygen safety is to prevent any injury or adverse condition from occurring. By using the following safety rules you will create a very safe environment when you use your oxygen.

- Oxygen is *not* flammable, but it will add much needed fuel to fires and cause them to burn hotter and faster.
- Oxygen **will not** explode or burn.
- It is mandatory that your residence have a functioning smoke detector.
- NO smoking or flames (including cigarettes or cigars) are allowed within 10 feet of any oxygen delivery device.



- Keep all flammable materials away from an oxygen source. This includes: oil, grease, solvents, creams, lotions, petroleum products, paper, clothes, aerosol containers, and alcohol of any kind, including on your hands or clothes.



## Oxygen Safety Guidelines Cont...

- Keep all devices that are powered by electricity or that can produce sparks, at least five feet away from any oxygen delivery device.
- Do not use Nylon®, wool, or any synthetic material for clothing or bedding. Cotton is the preferred material.
- Do not try to fix, repair or lubricate any oxygen device or delivery equipment.
- Keep all tubing and equipment uncovered and tangle-free and stored in an uncluttered and unconfined space.
- Never allow any untrained person or child to touch or manipulate oxygen equipment.
- Always store tanks or cylinders in approved carts or holders, on their sides, and in well-ventilated places. Never store tanks or cylinders in the trunk of a car or in closets.

## Oxygen Supplies and Replacement

**Nasal cannula-** needs changed every 2 weeks.

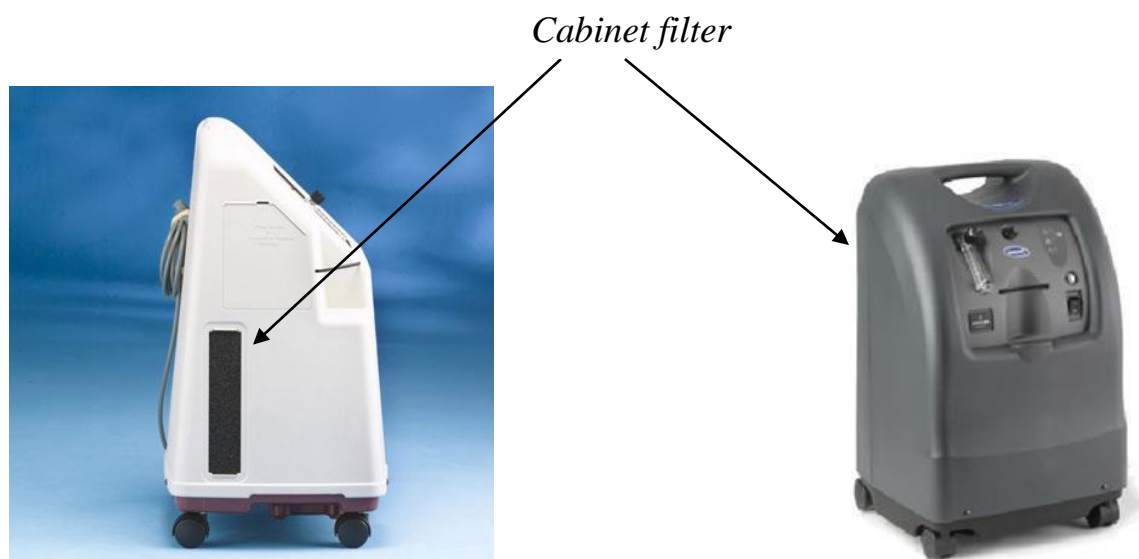
**Humidity bottles-** need to be replaced monthly. Clean daily with hot, soapy water. Only fill with distilled water.

**Tubing and connectors-** need replaced every 3 months.

**Cabinet filters-** replace every 6 months to 1 year. Check weekly, vacuum out or wash with water and pat dry if needed.

## Maintenance

**Cleaning the cabinet filter-** NOTE: There may be two cabinet filters, one located on each side of the cabinet or one located on the back depending on the unit you have.



- Remove each filter and clean at least once a week depending on environmental conditions.
- Clean the cabinet filters with a vacuum cleaner or wash in warm soapy water and rinse thoroughly.
- Dry the filters thoroughly before reinstallation.
- Clean the cabinet with a damp cloth or sponge once a week.

**MAINTENANCE CHECK:** CarePro Home Medical equipment provider performs all maintenance checks of oxygen equipment.

- Basic user maintenance pertains to the external particle filters on concentrators. These need to be cleaned weekly with soap and water.
- The external parts of oxygen equipment must be kept clean and free from oil, grease and dirt.
- Never utilize any solvent to clean equipment.
- If anything appears to be wrong with your equipment, call CarePro Home Medical equipment provider immediately.



- **If your power should go out and your oxygen concentrator does not restart, push the reset button on your unit.**



## Troubleshooting

If for any reason your oxygen flow or your concentrator are not working switch to using your back-up tank until you have finished troubleshooting the problem or your service provider has come to fix the problem.

### Water in Oxygen line-

- Remove oxygen cannula from your face.
- Disconnect humidity bottle from your concentrator. Hook oxygen line directly to concentrator.
- Turn your flow on the concentrator to the highest setting. This will cause the accumulated moisture to evaporate from the tubing.
- Return your flow to the prescribed setting and reattach humidity bottle.
- Put cannula back on.
- If moisture persists, call the supplier.

## **No Oxygen Coming From Cannula-**

- Check the liter flow gauge to make sure the ball is at the prescribed setting.
- Check tubing for kinks or pinched areas around furniture.
- Put cannula prongs into a glass of water to see if there are bubbles coming out.
- Check humidity bottle to make sure lid is properly screwed on. Unscrew and take off lid and retighten lid.
- If you have done all the above and there is no flow coming through the cannula call provider.

## **Concentrator Alarming-**

- Shut off concentrator and unplug.
- Push reset button in.
- Plug in concentrator and turn on.
- Adjust liter flow if not at correct setting.
- If concentrator is alarming or not running check circuit breaker in house to make sure it is not tripped.
- If concentrator is alarming or not running call supplier.

## **Unable to dial prescribed liter flow-**

- Check tubing and nasal cannula for an obstruction or kink.
- Check humidity bottle for obstruction, take apart clean or replace and reattach.
- If flow is still not able to be set call supplier.

## **All other problems or concerns call CarePro Home Medical.**

If you are experiencing any physical change in your condition,  
contact your physician's office.

In case of a medical emergency call **911**.