PATIENT INSTRUCTIONS

Oxygen Cylinder and Concentrator Systems

APRIA HEALTHCARE®

Your Prescription

Your doctor has prescribed your oxygen to be used in the following manner:

_____ liters per minute during **normal activity.**

_____ liters per minute **with sleep.**

_____ liters per minute when **exercising.**

_____ liters per minute **continuously.**

You have size _____ cylinders.

Please note that the information provided here is meant to supplement, not replace, any special directions provided by your physician.

Oxygen is a prescribed drug. Never increase or decrease your oxygen flow rate without the specific approval of your doctor. If your doctor changes your oxygen flow rate or hours of use, notify Apria Healthcare immediately.

Equipment and Accessories

Part Number	Description

Table of Contents

Oxygen

All people need oxygen in order to live. Oxygen is a gas that we can't see, taste, or smell, yet is always there in the air which surrounds us. The amount of oxygen in the air is always 21 percent.

Oxygen is inhaled into our lungs and is then transported through the blood to all parts of the body. Oxygen helps convert food to heat and energy. This process is called metabolism. When the respiratory system is working properly, oxygen is inhaled and transported to the cells with ease. Carbon dioxide, a by-product of metabolism, is then returned to the lungs and exhaled.

Using Supplemental Oxygen

The 21 percent concentration of oxygen in the air around us is enough for people with normally functioning lungs and heart. However, a person with lung or heart problems may often benefit from breathing air which has a higher concentration of oxygen in it.

When the body does not get enough oxygen, a person may experience difficulty in breathing, fatigue, loss of memory, headaches and/or confusion. Using supplemental oxygen may help provide relief from these symptoms.

Oxygen Safety Precautions

Oxygen is very safe to use when you create the proper conditions.

By using the following safety rules, you will create a very safe environment when you use your oxygen.

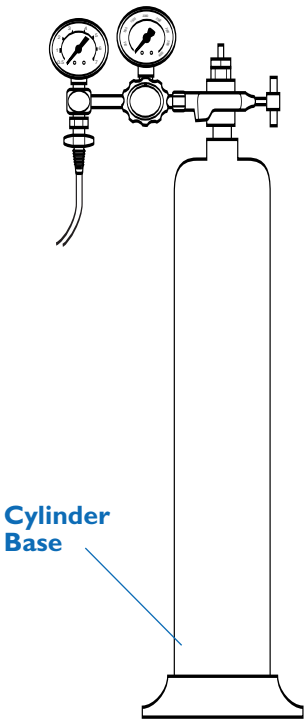
Oxygen will not explode or burn. However, oxygen is still extremely dangerous around fire or flames and will cause anything that is burning to burn hotter and faster.

Warning ⚠ Heat

Keep oxygen equipment and oxygen tubing at least five (5) feet away from any source of heat.

Keep the oxygen equipment and oxygen tubing away from open flames, stoves, space heaters, large windows or any source of heat.

Cylinders under high pressure will explode under extreme heat.



Warning ⚠ 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. Hand, hair or body lotions should not come in contact with oxygen equipment.

Warning ⚠ Cylinder Stability

Secure cylinders at all times.

Oxygen is stored in gas cylinders under very high pressure. An oxygen cylinder needs to be secured in a special base to keep it from falling over. The weight of the cylinder can cause injury and damage property if

it were to fall on someone or something. The cylinder valve could also be knocked off if the cylinder were to fall over. The high pressure coming out of a broken valve opening could then cause the cylinder to move about the room in a destructive, uncontrolled manner.

No Smoking

Do not permit smoking in the same room as your oxygen equipment.

Place **"No Smoking"** signs on the front door of your residence or in a front window of your residence.

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 (5) feet of you. Nevertheless, when visiting restaurants, always ask to sit in the no smoking section.

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.

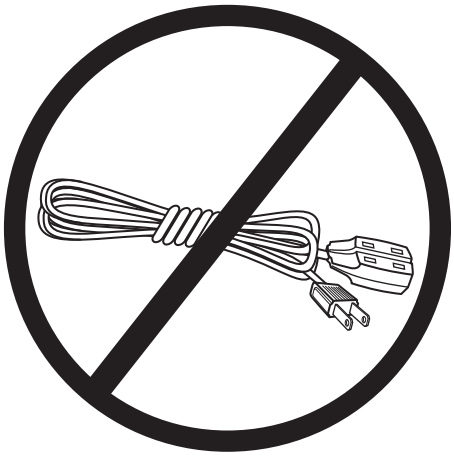
Store portable oxygen cylinders lying down or in a storage rack. Cylinders should never be left standing upright without a cylinder stand.

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.



Do not use extension cords

Furniture Polish

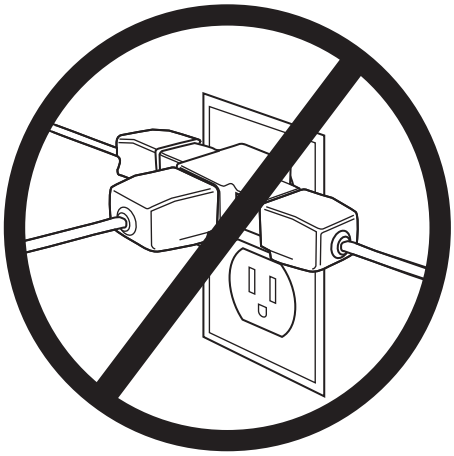
Clean the concentrator surface with a damp cloth. **Never use wax, spray or furniture polish.**

Extension Cord

Do not use an extension cord with the concentrator.

Electrical Outlet

Never plug the concentrator into an outlet that is being used to power other major appliances.



Do not combine the concentrator plug with plugs from other major appliances

Home Address

Make sure your home address can be easily seen from the street during both day and night.

Check to see that your address numbers are easy to spot and read from the street. If you are expecting a night delivery or visit, turn on the porch light. This will allow all Apria Healthcare and emergency personnel to locate your residence easily.

Emergencies and Natural Disasters

In the event of an emergency or natural disaster, follow the radio or television emergency instructions broadcast by your local authorities.

Cooking Safeguards

Cooking with oxygen tube secured behind ears/back

When using oxygen, it is best to cook with a microwave oven or to make other arrangements. However, if you must cook, you should:

Step 1: Secure the cannula over your ears and behind your head instead of under your chin.

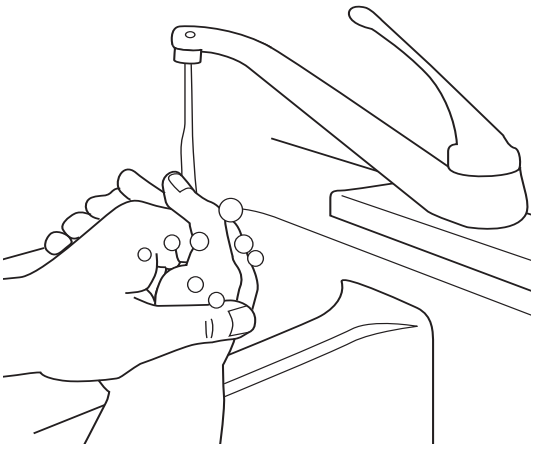
Step 2: Secure the oxygen tubing to the side of your clothing at your waist with a large safety pin.

This method will keep the oxygen tubing away from the source of heat.

Do **not** bend down close to the burner.

Note: Apria Healthcare urges you not to use a gas stove due to the open flame hazard.

Handwashing Technique



Wash hands for 1–2 minutes

Hands must be clean prior to handling supplies and solutions. Wash hands before beginning any procedure.

Step 1: Wet hands thoroughly with warm water.

Step 2: Use antibacterial soap.

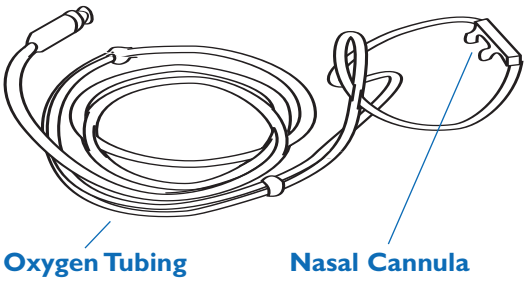
Step 3: Wash hands for 1–2 minutes using a rotary motion and friction. Wash:

- Back and palm of each hand
- Between all fingers

Step 4: Rinse hands under running water.

Step 5: Dry on clean cloth or paper towel.

Care of Your Oxygen Tubing



Minimal care is required of your oxygen tubing and nasal cannula or oxygen mask. We recommend that once or twice during the day, you remove the cannula or mask and wipe it clean with a damp cloth. You should discard and replace your nasal cannula or oxygen mask every two weeks. Discard and replace your tubing every 90 days. Do not use alcohol or oil-based products on or near your cannula or mask.

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:

You should use your back-up oxygen system while refilling and cleaning your humidifier bottle.

Step 1: Remove humidifier bottle from 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.

Note: If excess moisture is a recurrent problem, be sure to call your Apria location to request a "water trap."

Physical Problems

If you experience any of the following problems, call your doctor:

- Fever or chills
- Increased wheezing
- Increased mucus production
- Mucus becomes thicker
- Change in mucus color
- Headaches
- Loss of appetite
- Increased shortness of breath
- Chest pain
- Increased cough
- Swelling in your ankles or around your eyes
- Weight gain overnight
- Feeling dizzy or sleepy
- Any change in physical sensation after taking a new medication

If you are having trouble with your equipment call Apria Healthcare.

If you experience any physical change, call your doctor.

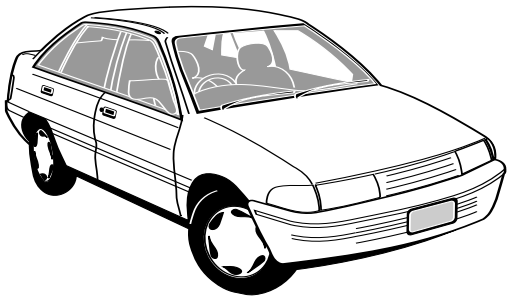
If you experience severe physical problems, call 911 or the local rescue squad.

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.

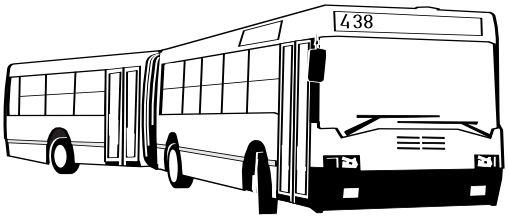
- Contact your doctor to make sure your proposed trip is medically safe and to obtain additional copies of your prescription.
- Contact Apria Healthcare for assistance with getting oxygen refills along your driving route or at your final destination.
- Have cash available to pay for oxygen refills or equipment.

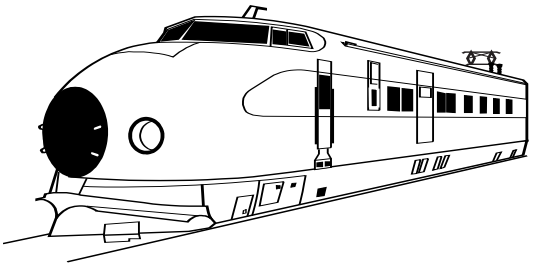
Visit us at www.Apria.com to request a free Apria Great Escapes™ Patient Travel Program Kit. Or, call your local Apria branch.

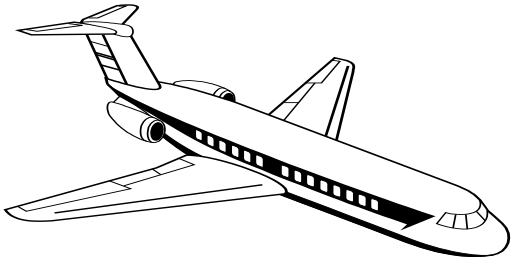


If traveling by car or recreational vehicle:

- Remind passengers not to smoke in the vehicle in which you are traveling.
- 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.
- When traveling in, or occupying a recreational vehicle, do not store oxygen near gas or open flame.
- Stay at least 5 feet away from all open flames, such as camp stoves, lanterns, heaters, etc.







If traveling by bus, train or ship:

- 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 one is available.
- All airlines require you to use their oxygen on the plane. Your empty portable unit may be stored as baggage.
- Apria Healthcare offers its Great Escapes™ program to assist with your travel arrangements. Contact your Apria branch at least 6 weeks prior to your travel date for more information.
- Ask what the airline will charge for oxygen during the flight.
- Arrange for your oxygen supply at your final destination.

For further information, please contact your local Apria Healthcare location to assist with your travel arrangements.

Feedback on Our Services

Apria Healthcare is among America's most experienced and respected home respiratory care providers, and our patient satisfaction scores are consistently high. It is possible, however, that you may have a concern and we welcome feedback. To voice a concern, you should take these steps:

1. Call your local Apria branch and ask to speak to the branch manager.
   OR
2. Contact us by e-mail at:
   Patient_Satisfaction@Apria.com
   OR
3. Visit our Web site at www.Apria.com

Satisfaction Survey Process

Our goal is to ensure your satisfaction. You will likely receive an Apria patient satisfaction questionnaire and we hope that you will take a few minutes to return it to us. The postage is prepaid by Apria Healthcare.

Orientation Checklist

Special instructions:

_____

_____

_____

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Demonstrate the following:

- ☐ How to turn cylinder on.
- ☐ How to set flow rate.
- ☐ Have patient/caregiver demonstrate all of the above.

Safety information:

- ☐ Explain oxygen safety precautions.
- ☐ Post "No Smoking" signs.
- ☐ Explain importance of following cleaning procedure.
- ☐ Explain proper procedure during a power failure.
- ☐ Explain Apria Healthcare's recontact schedule.
- ☐ Explain Oxygen Cylinder section.
- ☐ Give patient/caregiver Apria Healthcare's telephone number to call for routine and after-hours equipment problems.
- ☐ Explain how to obtain help if a medical emergency arises.

Patient/Caregiver Acknowledgement

1. Your Prescription ☐
2. Oxygen ☐
3. Oxygen Safety Precautions ☐
4. Care of Your Oxygen Tubing ☐
5. Physical Problems ☐
6. Travel Tips ☐
7. Feedback on Our Services ☐
8. Orientation Checklist ☐
9. Your Oxygen Cylinder System ☐
10. Pediatric Applications ☐
11. Your Stationary Cylinder System ☐
12. Your Portable Cylinder System ☐
13. Oxygen Cylinder Supply Times ☐
14. Replacing Your Cylinder ☐
15. Reordering Oxygen ☐
16. Troubleshooting ☐

The undersigned acknowledges that he/she has received, been instructed in, and understands the subjects shown on this page and covered in this booklet.

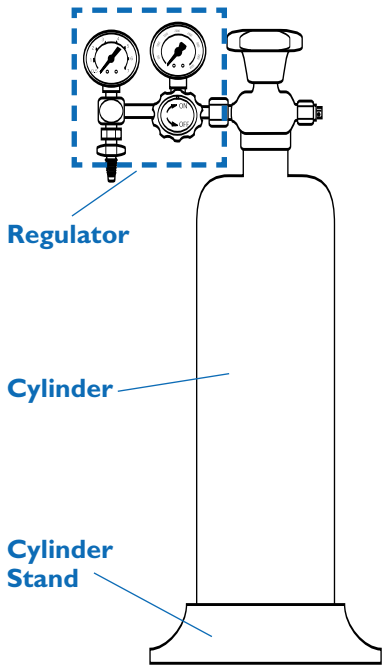
Patient/Caregiver Signature Date

Please PRINT Name

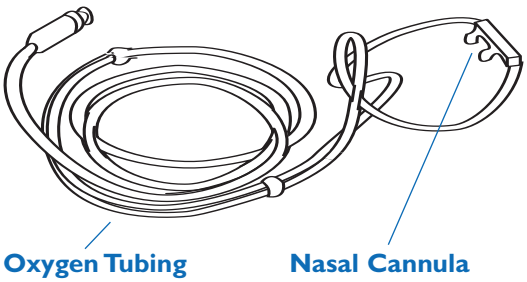
Apria Representative Date

Please PRINT Name

Your Oxygen Cylinder System



H 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 which can be compressed into the space of the cylinder.

Your **cylinder system** consists of the following parts: the **cylinder** which stores the pressurized oxygen, the **cylinder stand** which stabilizes the cylinder to prevent accidental tipping, a **regulator** which controls the flow of oxygen from the cylinder and, if recommended, a **humidifier bottle.**

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.

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.

The most commonly used large cylinder is the H cylinder. The standard H cylinder weighs approximately 150 pounds and is meant to be used as a stationary source. It contains over 6500 liters of oxygen. At 2 liters per minute, this is enough oxygen for over 2 days of continuous use.

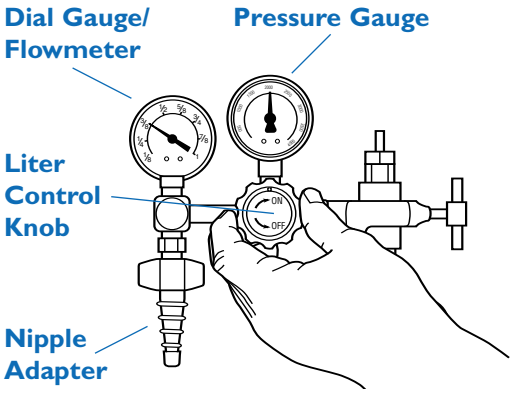
Patients needing a portable supply of oxygen use a smaller lightweight system. The weight of these portable cylinders ranges from 7–18 pounds. They have capacities ranging from 240–625 liters of oxygen — a supply of 2–5 hours at 2 liters per minute.

Two different sizes of smaller cylinders are commonly available: the D cylinder and the E cylinder.

The D cylinder is the smaller of the two. It is usually an aluminum cylinder which is often used with a carrying case with a shoulder strap. The E cylinder is a bit larger than the D cylinder and is often used with a wheeled cart.

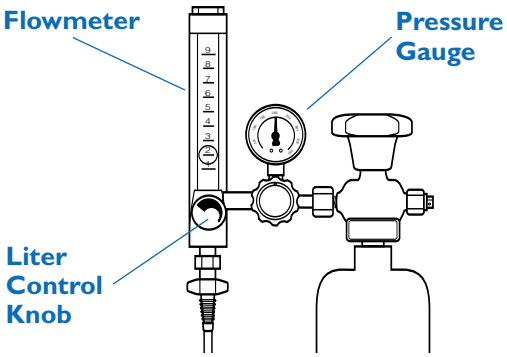
Pediatric Applications

If the prescribed flow rate of oxygen is less than one liter per minute, a special pediatric regulator is used. The pediatric regulator has settings for very low flows, such as 1/16, 1/8 and 1/4.

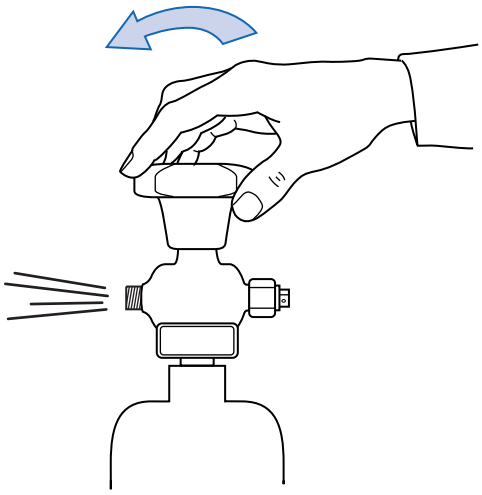


Pediatric regulator

Your Stationary Cylinder System



Detail of H cylinder gauges and controls



Clearing dust from connector orifice (H cylinder shown)

The regulator on a stationary cylinder system consists of the **pressure gauge** which tells you how much oxygen is left in the tank and a **flowmeter** which indicates the flow rate of oxygen.

Operating Your Cylinder System

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

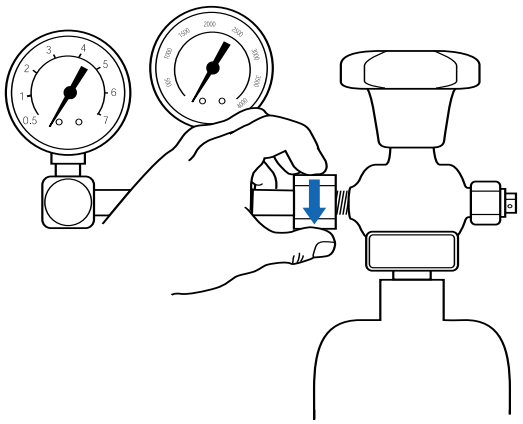
Attaching the Regulator to a Full Cylinder

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

Step 1: If necessary, remove the white tape on the cylinder by turning counterclockwise.

Step 2: 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.

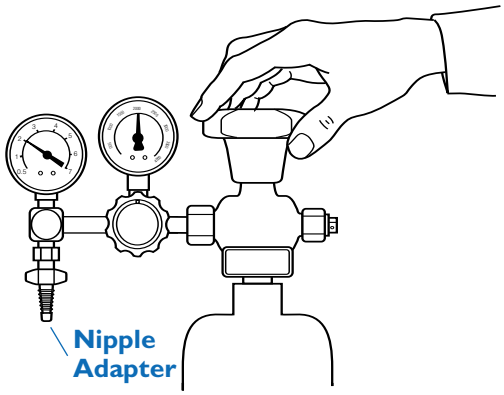


Attaching regulator to H cylinder

Step 3: Attach the regulator to the cylinder by threading the regulator connector nut clockwise on the cylinder outlet. Tighten firmly with a cylinder wrench.

Step 4: Attach a nipple adapter to the regulator outlet and attach the oxygen tubing to the nipple adapter.

Turning On Your Oxygen

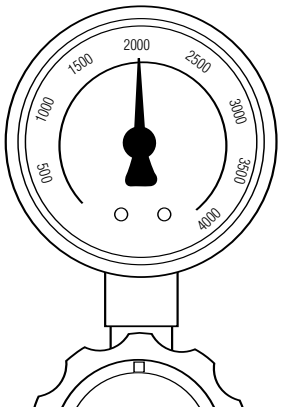


Opening cylinder valve on H cylinder

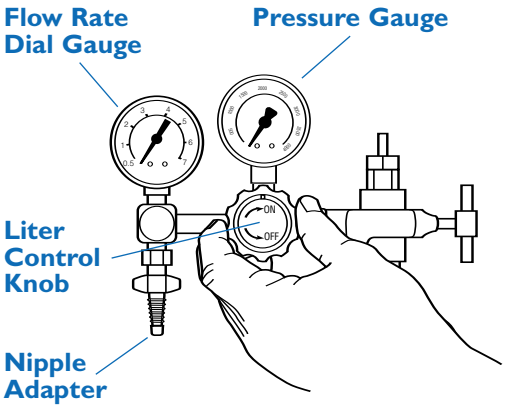
Step 1: Slowly open the cylinder valve by turning counterclockwise.

The needle in the pressure gauge will register the amount of oxygen in the cylinder.

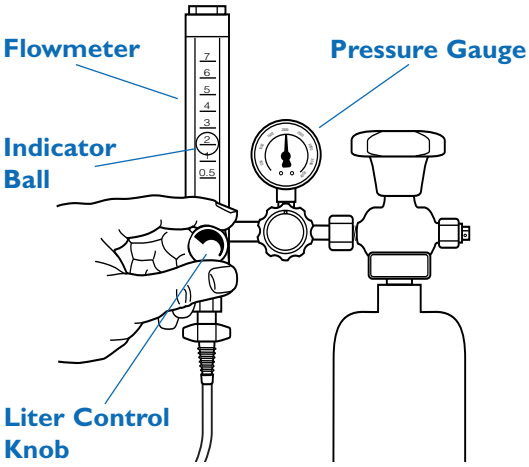
A full cylinder registers approximately 2,000 pounds per square inch (PSI).



Pressure gauge for D, E, and H cylinders



Adjusting oxygen flow on dial gauge-equipped E or H cylinder regulators



Adjusting oxygen flow on flowmeter

Adjusting nasal cannula

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

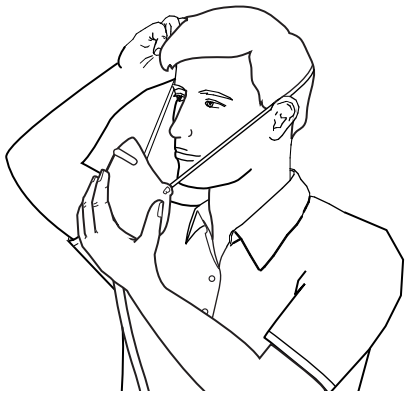
Step 3: If your oxygen system has a flowmeter, adjust the liter control knob until the middle of the indicator ball is at the prescribed number.

Your doctor has prescribed the oxygen flow rate for you. **Never change the flow rate without instructions from your doctor.** If you are confused about the prescribed setting, please consult your physician or Apria Healthcare immediately.

Step 4: Fit the nasal cannula or the oxygen mask to your face so that it is comfortable.

Nasal Cannula

- Insert the two prongs of the cannula into your nostrils. Make sure the prongs curve into your nostrils.
- Slide the tubing over 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.



Adjusting oxygen mask

Oxygen Mask

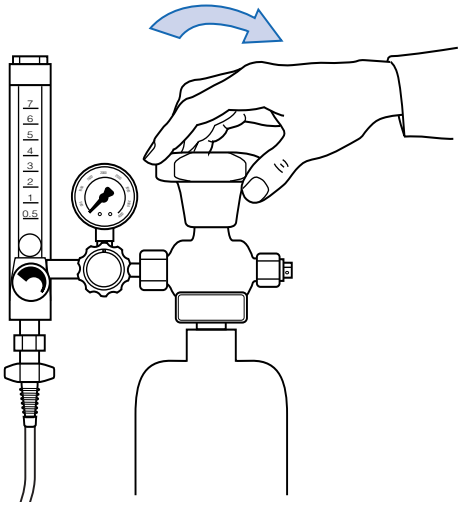
Place the oxygen mask over your mouth and nose.

- Slide the loose elastic strap over your head and position it above your ears.
- Pull the end of the elastic on each side of the mask until the mask fits comfortably. Pinch the metal nose strap to fit snugly around your nose.

  This will prevent oxygen from blowing into your eyes.
- Oxygen masks require a higher flow rate. Use only if prescribed by your doctor.

Note: Do not use an oxygen mask if your doctor prescribed a nasal cannula.

You should use your oxygen at the proper flow rate for the number of hours each day your doctor has prescribed.



Turning off oxygen

Turning Off Your Oxygen

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

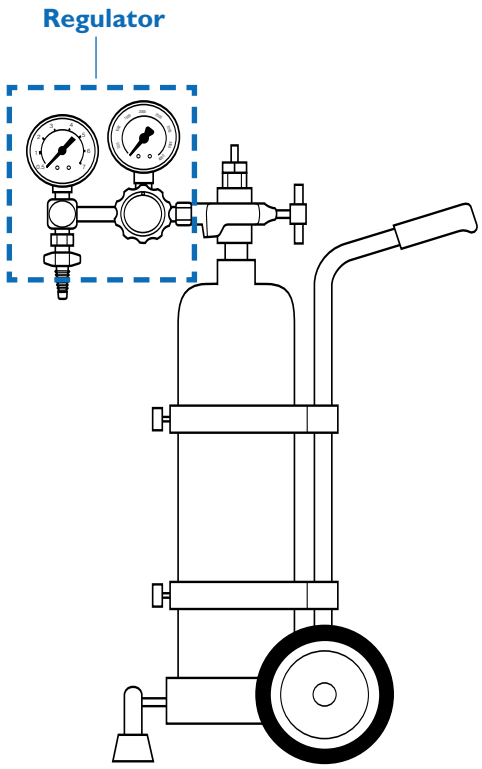
Step 1: Remove the nasal cannula or oxygen mask.

Step 2: Turn the cylinder valve clockwise until it is tight. This stops the flow of oxygen from the cylinder.

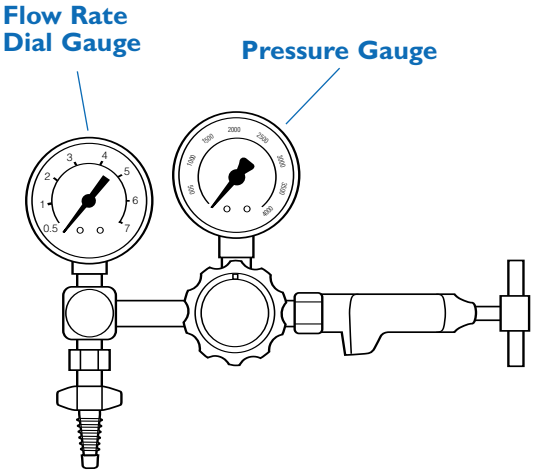
- The needle on the pressure gauge will drop to zero.
- The indicator ball on the flowmeter (or the needle on the flowrate dial gauge) will drop to zero.

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

Your Portable Cylinder System



Portable E cylinder with cart



A Typical Regulator

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 **flow rate dial gauge or flowmeter,** which provides the desired flow rate of oxygen.

Note: Do not use a humidifier bottle with a portable system.

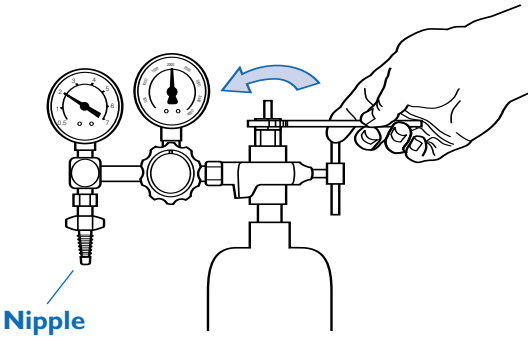
Operating Your Portable Cylinder System

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: Wash hands. (See page 6.)

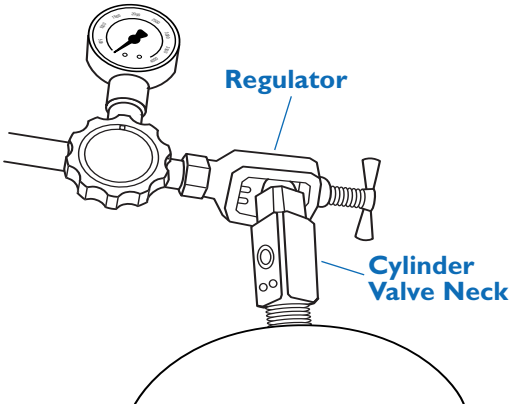


Opening D or E cylinder

Step 2: Slowly 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 3: Make sure valve system is free of all debris and oil.

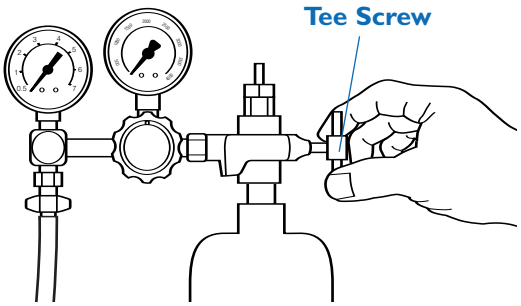


Installing the regulator

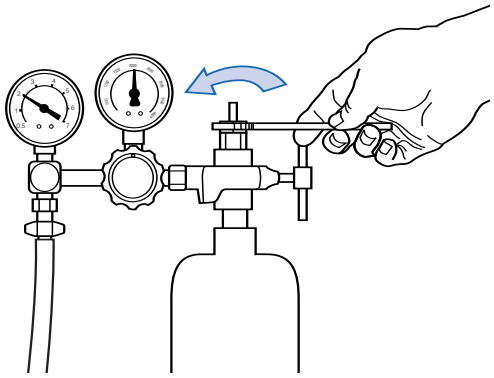
Step 4: Slip the regulator over the cylinder valve and neck of the full cylinder. Line up the pins on the regulator with the holes on the neck of the cylinder.

Step 5: Hand tighten the tee screw by turning clockwise. Use a cylinder wrench to tighten if necessary.

Step 6: Attach the oxygen tubing to the nipple outlet.



Tightening regulator to valve neck



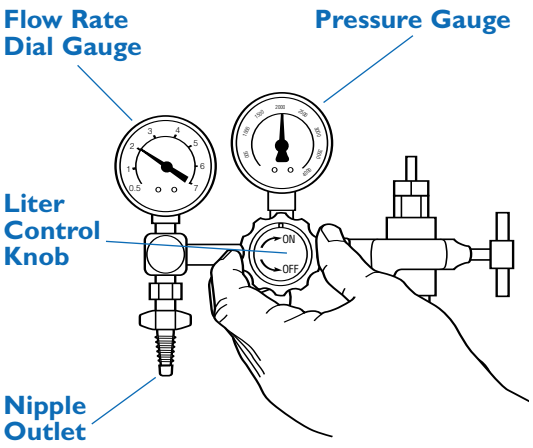
Opening D or E cylinder

Turning On Your Oxygen

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

Step 1: Slowly open the cylinder valve by turning the nut at the top of the valve 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.

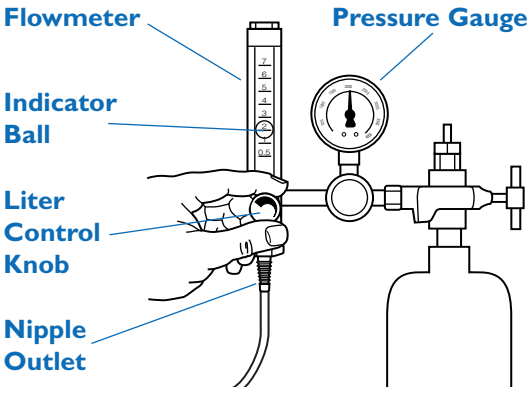


Step 2: If your oxygen system has a flow rate dial gauge, adjust the liter control knob until the needle on the gauge registers at the prescribed number.

If your oxygen system has a flowmeter, adjust the liter control knob until the middle of the indicator ball is at the prescribed number.

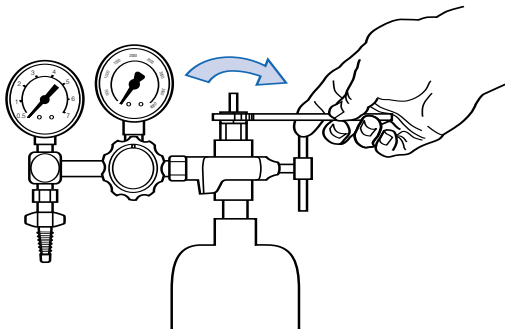
Note: Cylinder and regulator must be in upright position to read indicator ball and flow rate.

Your doctor has prescribed the oxygen rate for you. **Never change this flow rate without instructions from your doctor.**



Adjusting liter control

Step 3: Fit the nasal cannula or oxygen mask to your face so that it is comfortable. See pages 17–18 for more instructions on placement.



Turning Off Oxygen

Turning Off Your Oxygen

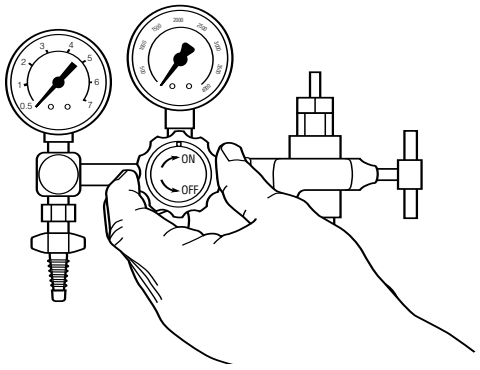
When you are finished using your oxygen, turn off your portable cylinder system following the steps below:

Step 1: Remove the nasal cannula or oxygen mask.

Step 2: Close the cylinder valve by turning clockwise all the way. **Your system may may require the use of a cylinder wrench.**

- This stops the flow of oxygen from the cylinder.
- The needle on the pressure gauge will drop to zero.
- The indicator ball on the flowmeter (or the needle on the flow rate dial gauge) 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.



Closing Liter Control Knob

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.

H Cylinder Supply Time Guide

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 hrs.
1500 psi	3 days/3 hrs.	1 day/12 hrs.	1 day	17 hrs.	14 hrs.
1000 psi	2 days	1 day	15 hrs.	12 hrs.	9 hrs.
500 psi	1 day	12 hrs.	7 hrs.	6 hrs.	4 hrs.

Pediatric
H Cylinder 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	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.

D Cylinder Oxygen Supply Time Guide

PRESSURE GAUGE READING	Liter Flow per Minute				
	1	2	3	4	5
	Approximate Time Remaining:				
2000 psi	5 hrs.	2 hrs.	1hr./15 min.	1 hr.	not recommended
1500 psi	3 hrs./30 min.	1 hr./30 min.	50 min.	45 min.	not recommended
1000 psi	2 hrs.	1 hr.	30 min.	20 min.	not recommended
500 psi	1 hr.	15 min.	5 min.	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 hrs.	9 hrs./30 min.	6 hrs./30 min.
1500 psi	2 days/12 hrs.	1 day/6 hrs.	15 hrs.	7 hrs./15 min.	4 hrs./45 min.
1000 psi	1 day/12 hrs.	18 hrs.	9 hrs.	4 hrs./30 min.	3 hrs.
500 psi	18 hrs.	9 hrs.	4 hrs.	2 hrs.	1 hr./15 min.

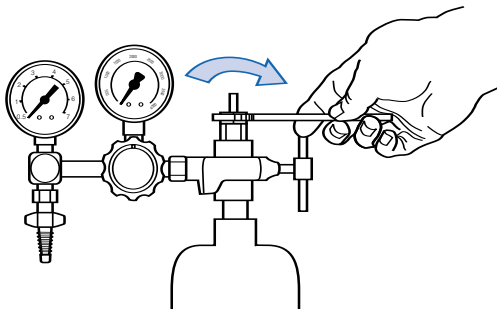
E Cylinder Oxygen Supply Time Guide

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

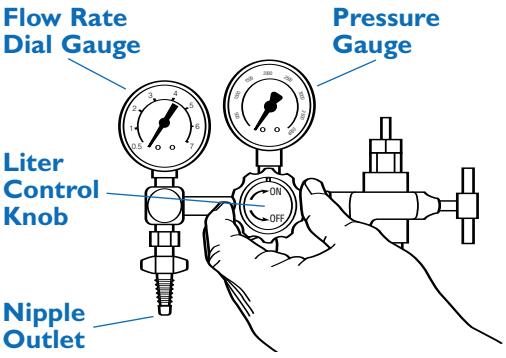
Pediatric
E Cylinder Oxygen Supply Time Guide

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 hrs.	1 hr.
1500 psi	4 days/12 hrs.	2 days/6 hrs.	1 day	12 hrs.	8 hrs./30 min.
1000 psi	2 days/20 hrs.	1 day/10 hrs.	17 hrs.	8 hrs.	5 hrs./30 min.
500 psi	1 day/10 hrs.	17 hrs.	8 hrs.	4 hrs.	2 hrs./30 min.

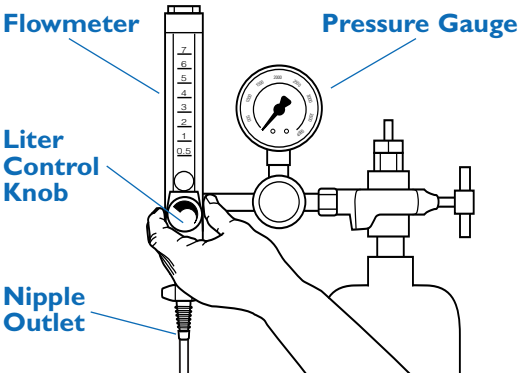
Replacing Your Cylinder



Closing cylinder valve



Closing liter control knob with flow rate dial gauge



Closing liter control knob on flowmeter

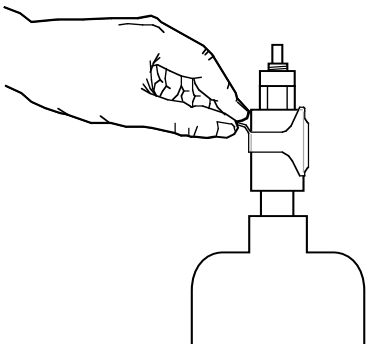
Step 1: Remove the nasal cannula or oxygen mask.

Step 2: Close the cylinder valve by turning the nut at the top of the tank 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 *(see middle diagram for dial gauge and lower diagram for flowmeter)*.

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.



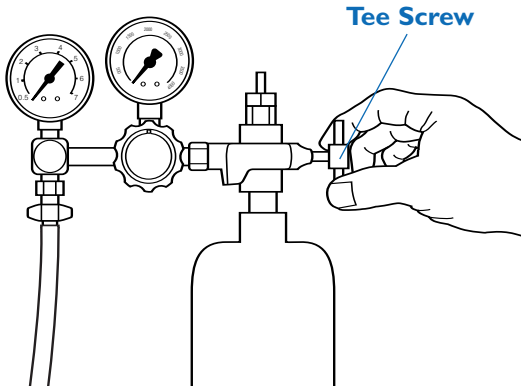
Removing the tank seal

Step 6: Remove the tank seal from the valve of the new cylinder.

Step 7: Slowly 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.

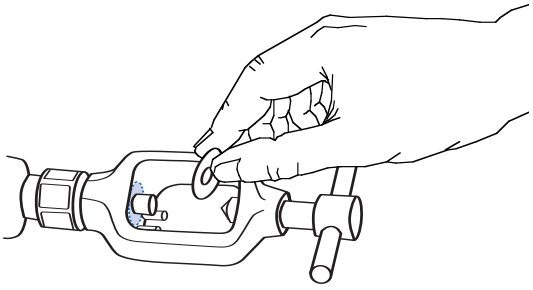
Step 8: Replace the regulator as described on page 19 for portable cylinder systems, or page 15 for standard cylinder systems.



Tightening the tee screw

Step 9: On regulators with a tee screw, tighten the tee screw. First, hand tighten the screw, then use the key to firmly tighten it.

Step 10: Slowly open the cylinder valve by turning the nut at the top of the valve counterclockwise. Your system may require the use of a cylinder wrench. If there is a leak you may hear a hissing sound. Use the cylinder wrench on the tee screw to tighten the connection. If the leak persists, the washer may be damaged and should be replaced.



Replacing the washer

Step 11: If the washer appears to be deformed (no longer flat) or cracked it may need changing. Remove the old washer as shown *(left)* and replace it with a new one.

Do not use any sharp instruments (e.g,. knife) to remove the old washer; sharp instruments could scratch the regulator and cause an oxygen leak.

If the leak persists, call Apria Healthcare.

Reordering Oxygen

Always be aware of the amount of oxygen remaining in your cylinder.

You will most likely be on an automatic redelivery schedule, but always knowing how much oxygen you have will prevent any worry of running out while your resupply is being delivered.

If you are not on an automatic delivery schedule, reorder a new cylinder two days before your cylinder has been calculated to run out. This will allow your Apria Healthcare location to schedule your delivery without causing you to worry.

Consult the tables on pages 23–25 for guidelines.

Troubleshooting

Trouble	Probable Cause	Remedy
No oxygen coming from cannula or mask	Empty cylinder	Check pressure gauge for oxygen contents. If cylinder is empty, remove regulator and attach to new full cylinder. Call Apria Healthcare 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 or mask	Remove cannula or mask and check tubing for kinks or obstructions. Replace with new cannula or mask if needed.
	Loose connections	Check all connections, especially humidifier bottle to regulator and humidifier top to jar.
	Plugged humidifier bottle	Remove humidifier bottle. If flow is restored, clean or replace with new humidifier bottle.
	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 Apria Healthcare. 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 washer	Replace washer.
	Faulty regulator	Call Apria Healthcare. NEVER attempt to fix the regulator yourself.
All other problems or questions about equipment		Call your Apria Healthcare location.

Orientation Checklist

Special instructions:

_____

_____

_____

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Demonstrate the following:

- ☐ How to turn machine on.
- ☐ How to set flow rate.
- ☐ Alarm function.
- ☐ How to clean filter.
- ☐ How to care for cabinet.
- ☐ If required, how to fill and attach humidifier bottle.
- ☐ If required, how to assemble and disassemble humidifier bottle.
- ☐ If required, how to clean the humidifier bottle.
- ☐ Have patient/caregiver demonstrate all of the above.

Safety information:

- ☐ Explain oxygen safety precautions.
- ☐ Post "No Smoking" signs.
- ☐ Explain need for grounded outlet.
- ☐ Explain importance of following cleaning procedure.
- ☐ Explain proper procedure during a power failure.
- ☐ Explain Apria Healthcare's recontact schedule.
- ☐ Explain Oxygen Concentrator section.
- ☐ Give patient/caregiver Apria Healthcare's telephone number to call for routine and after-hours equipment problems.
- ☐ Explain how to obtain help if a medical emergency arises.

Patient/Caregiver Acknowledgement

The undersigned acknowledges that he/she has received, been instructed in, and understands the subjects shown on this page and covered in this booklet.

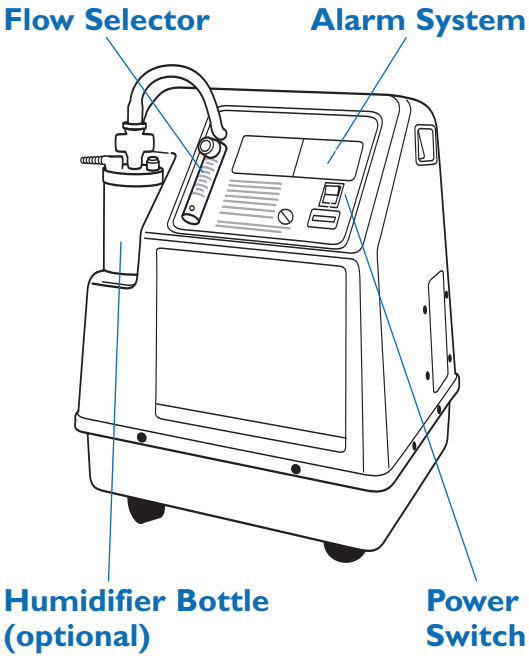
Patient/Caregiver Signature Date

Apria Representative Date

Please PRINT Name

Please PRINT Name

Your Oxygen Concentrator



An oxygen concentrator is an electrically operated device that draws in room air, separates the oxygen from the other gases in the air and delivers the concentrated oxygen to you. The concentrator acts like a strainer. It traps oxygen and releases the other gases (mostly nitrogen) back into the room air. This process goes on continuously until the oxygen inside the unit is highly concentrated. At two liters per minute, the air which you receive from your concentrator is more than 90% oxygen.

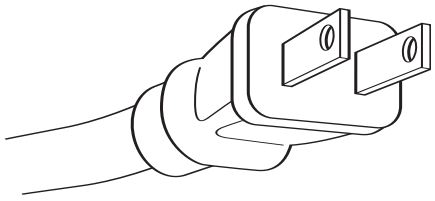
Oxygen concentrators are available in different sizes and models. However, all models have the same basic parts: a **power switch** to turn the unit on and off, a **flow selector** that regulates the amount of oxygen you receive and an **alarm system** that alerts you if the power is interrupted.

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 unit. Sometimes, an extra length of tubing may be provided. This will allow you to move a farther distance from your concentrator.

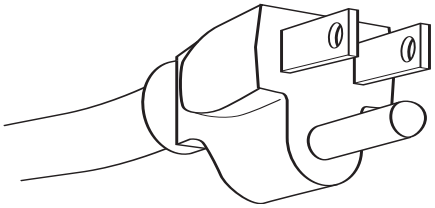
Where to Place Your Concentrator

Place your concentrator in a well ventilated area, away from fireplaces, stove, any heat source or heat vent. Do not place it in a closet. Place it at least six inches from any drapes, bedding, walls or any other item that may block the inlet ports. If the concentrator is too noisy, place it in an adjacent room but make sure that the alarm is still audible to the patient or caregiver.

Operating Your Oxygen Concentrator



Two-prong power plug



Three-prong (grounded) power plug

The following step-by-step instructions will help you operate your oxygen concentrator.

Step 1: Check the number of prongs on the AC power plug of your concentrator. Review the following instructions before connecting your unit to a power source.

For Two-Prong Power Plugs:

If the power cord only has two prongs, you may proceed to Step 2 below.

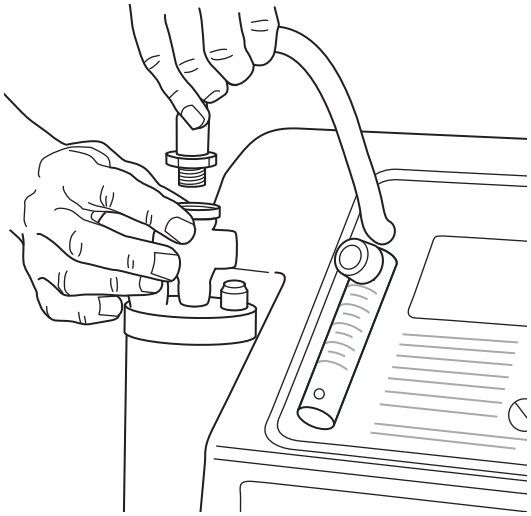
For Three-Prong (Grounded) Power Plugs:

- If your electrical power outlet is not a 3-prong (grounded) power outlet, you will need to use a grounded plug adapter. Do not use a non-grounded plug adapter.
- Whenever using a grounded plug adapter, always connect the ground wire or ground screw as required.

Warning: If your outlet is not grounded or if you are unsure whether it is or not, Apria Healthcare recommends that you contact an electrician. Using a non-grounded outlet could result in a fire hazard or an electrical shock.

Continue using these instructions ONLY if you are sure that your electrical power outlet is grounded.

Step 2: Attach nipple valve to the concentrator outlet tube and attach the oxygen tubing to the nipple outlet.

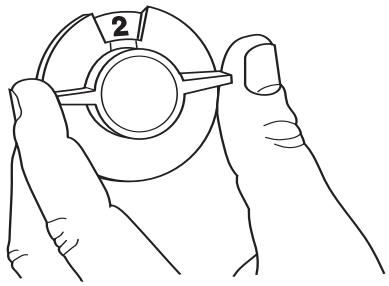


Attaching a filled humidifier bottle

Step 3: If a humidifier bottle is recommended, attach a filled humidifier bottle.

- Center the threaded cap on the humidifier bottle under the threaded outlet tube on the concentrator.
- Turn the cap on the humidifier bottle until it is tightly screwed onto the outlet tube.
- Attach oxygen tubing to the nipple outlet.

Note: Humidifier bottles are generally recommended only for patients using flow rates greater than four liters per minute.



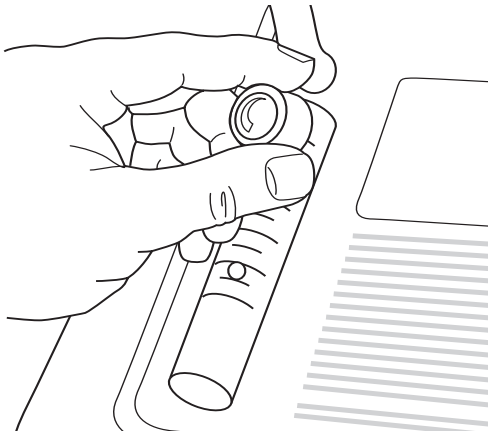
Using a rotary flow control dial to adjust the oxygen flow rate

Step 4: Press the ON/OFF switch to the ON position. The alarm will sound for a few seconds until the proper pressure is reached.

Step 5: Adjust the oxygen flow rate by turning the liter control knob until the flow is at the prescribed number.

Rotary Flow Control:

Turn the dial until the prescribed liter number appears.



Using a flowmeter liter control knob to adjust the oxygen flow rate

Flowmeter with Liter Tube:

Adjust the liter control knob until the middle of the indicator ball is at the prescribed number.

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

Step 6: Fit the nasal cannula or the oxygen mask to your face so that it is comfortable.

Adjust the tubing to fit comfortably under your chin

Nasal Cannula:

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

- Slide the tubing over and behind each ear.
- Adjust the tubing to fit comfortably under your chin by sliding the adjuster upward. Be careful not to adjust it too tightly.

Oxygen Mask

Place the oxygen mask over your mouth and nose.

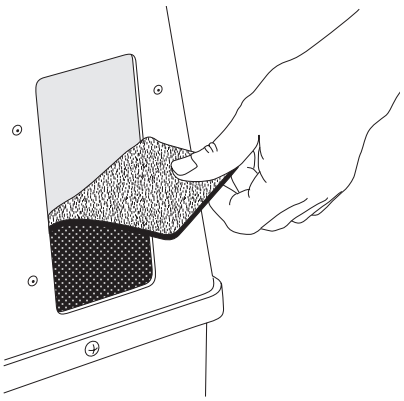
- Slide the loose elastic strap over your head and position it above your ears.
- Pull the end of the elastic on each side of the mask until the mask fits comfortably. Pinch the metal nose strap to fit snugly around your nose. This will prevent oxygen from blowing into your eyes.

Note: Do not use an oxygen mask if your doctor prescribed a nasal cannula. Oxygen masks must only be used with liter flow rates of five liters (or more) per minute.

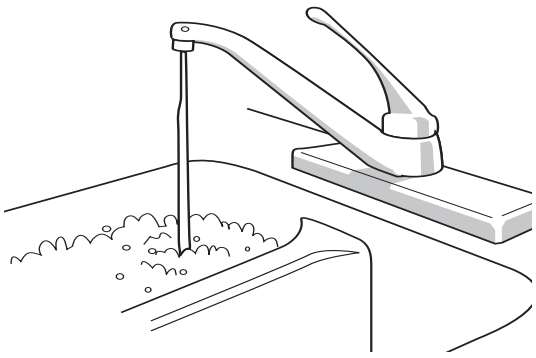
Step 7: You should use your concentrator for the number of hours each day which your doctor has prescribed. When you have finished using your oxygen, you should:

- Remove the nasal cannula or oxygen mask.
- Turn the ON/OFF switch to the OFF position.

Cleaning and Maintenance Procedures



Removing the filter from the concentrator



Wash the filter once a week

Oxygen Systems Require Very Little Cleaning

The only item that requires cleaning on your concentrator is the external filter and the cabinet. The cabinet can be washed with a damp cloth.

All Cleaning Must Be Done in a Clean Environment

Cleaning and decontamination of respiratory therapy equipment in the home is of major concern. To prevent equipment contamination, a simple but effective cleaning procedure must be carried out on a routine basis. Do all cleaning and disinfecting in a clean environment. Avoid doing it after vacuuming, under an open window, or in dusty, dirty, smoky areas.

Once a Week Cleaning and Maintenance

Step 1: Remove the filter.

Step 2: Wash in warm water and a non-lotion detergent (such as Joy®).

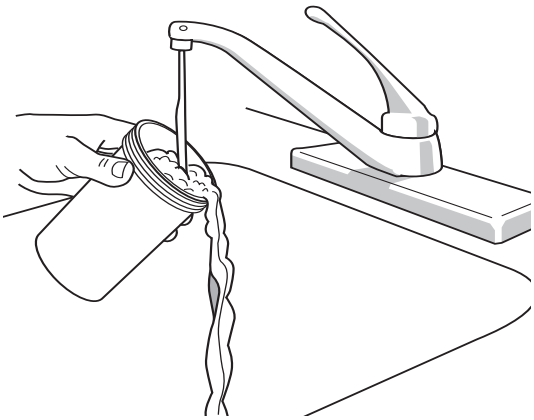
Step 3: Rinse the filter thoroughly with warm water.

Step 4: Gently squeeze water from the filter, then pat it dry with a clean towel.

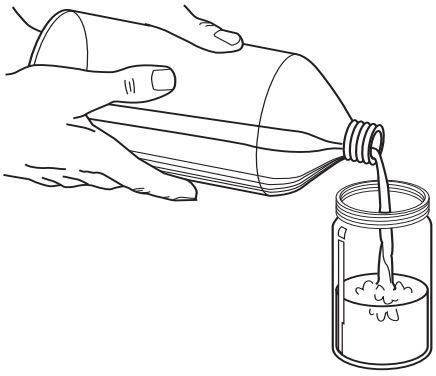
Step 5: Reattach the filter.

The only other item that would require cleaning would be a humidifier bottle if one is being used.

Care of Your Humidifier Bottle



Rinse bottle under a strong stream of warm tap water



Refill the jar with distilled water

If you are using a humidifier bottle with your oxygen concentrator, you will need to check the water level in the jar frequently. When the water runs low or the bubbling stops, you need to refill the jar. **You should use your back up oxygen system while refilling and cleaning your humidifier bottle.**

Refilling the Humidifier Bottle

Step 1: Wash your hands as instructed on page 6.

Step 2: Turn the oxygen concentrator off.

Step 3: Unscrew the jar from the humidifier bottle lid.

Step 4: Discard any water remaining in the jar.

Step 5: Rinse bottle under a strong stream of warm tap water. Shake off the excess water.

Step 6: Refill the jar with distilled water to the fill line. Do not overfill the bottle. Too much water in the bottle will cause water to collect in your oxygen tubing.

Step 7: Screw the bottle back on the humidifier bottle lid until it is tight. Be certain the jar is screwed on straight. Cross-threading will cause oxygen to escape out the top of the jar.

Twice Weekly Cleaning and Disinfection

It is very important to clean your humidifier bottle to prevent infection. The following procedure should be done every three days.

Step 1: Wash your hands as instructed on page 6.

Step 2: Turn the oxygen concentrator off.

Step 3: Remove the humidifier bottle.

Step 4: Wash the entire humidifier bottle in a solution of liquid detergent and warm water.

Step 5: Rinse the bottle thoroughly. Shake off the excess water.

Step 6: Mix together one part white vinegar and one part water.

Step 7: Soak humidifier bottle for 30 minutes in vinegar solution.

Step 8: Rinse bottle in warm tap water.

Step 9: Allow the bottle to air dry.

Step 10: Discard vinegar solution.

Step 11: Replace your humidifier bottle as instructed.

Troubleshooting

Trouble	Probable Cause	Remedy
No oxygen seems to be flowing from your system	Cannula or nipple adapter not connected tightly	Place the end of your cannula in a small glass of water and look for a steady flow of bubbles. If you can see the bubbles, your oxygen system is working fine.
		If you can't see any bubbles coming from both of your cannula prongs or if the bubbles have decreased in volume, check to see that the cannula is connected tightly to your oxygen system and that the nipple adapter is screwed on tightly.
Water blocking the oxygen tubing	Overfilling your humidifier bottle or tubing lying on a floor that is cold	You should use your back-up oxygen system while attending to water in your tubing.
Unit not operating (power failure alarm sounds)	Plug not firmly in wall	Check plug at outlet.
	Concentrator circuit breaker has been set off	Press reset button.
	No power at wall outlet	Check power source (fuse or circuit breaker). Wall switch that controls plug may be switched off. Try another outlet.
	Electrical power outage	Use back-up oxygen system until power is restored.

Trouble	Probable Cause	Remedy
Unable to dial prescribed flow rate	Obstructed humidifier bottle	Disconnect humidifier bottle. If flow is restored, replace with new humidifier bottle or use a nipple adapter.
	Obstruction in tubing	Disconnect tubing. If flow rate is restored, replace with new tubing.
	Obstruction in cannula	Disconnect cannula from tubing. If proper flow rate is restored, replace with a new cannula.
Temperature light/ alarm is on	Unit overheated	Check to see that unit is not obstructed by drapes, bedspread, wall, etc.
		Check to see that filters are clean.
		Turn unit off and go to your back-up system for 30 minutes while your concentrator is cooling. Restart your concentrator.
All other problems or alarms		Contact Apria Healthcare.

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