Coastal Health & Wellness
Galveston County's Community Health Center

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Portable Oxygen Cylinders and Regulators

Training and Safety Guidelines

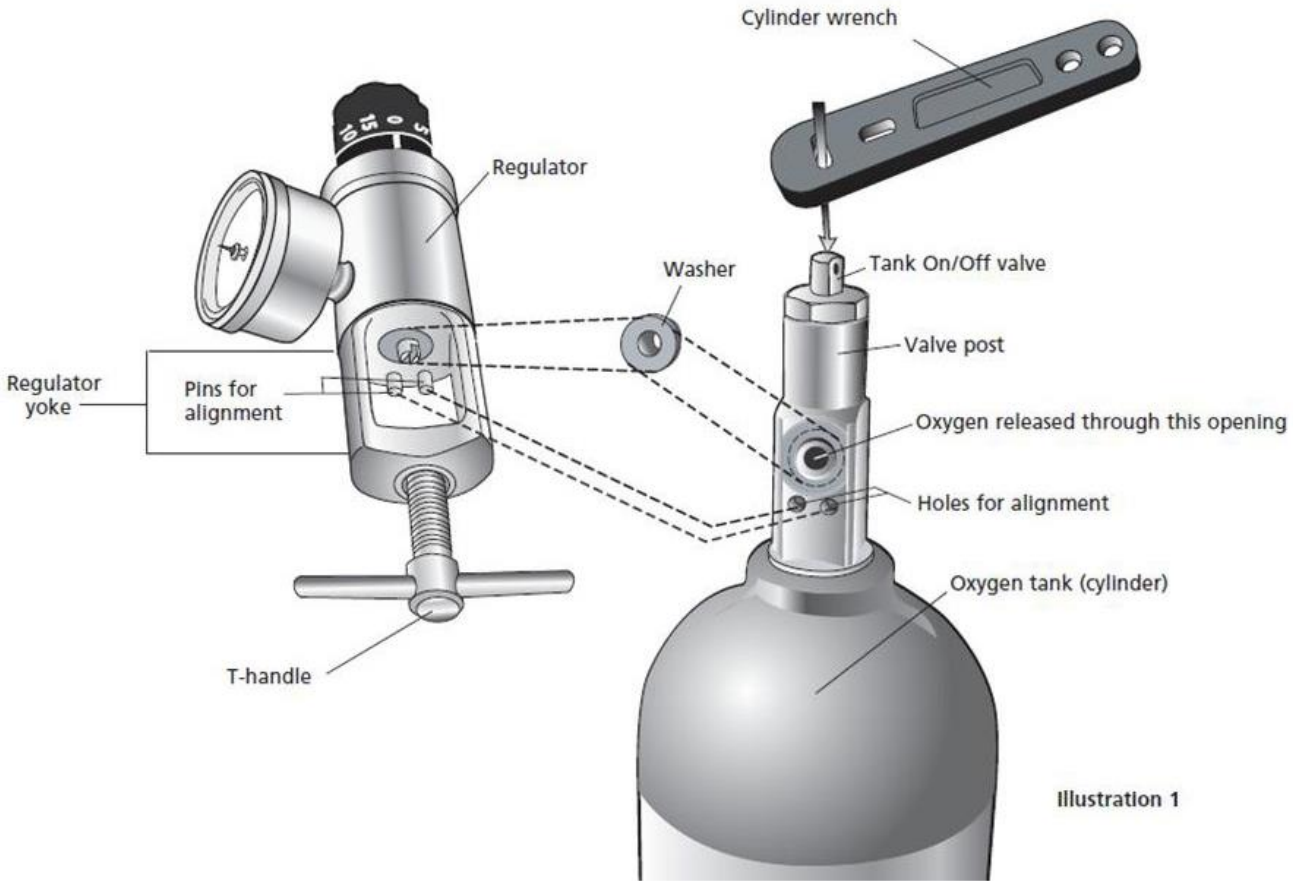

Illustration 1

For your safety

- It is very important to understand that oxygen can be dangerous if not used correctly.
- Oxygen makes things burn more easily and can even explode. Following these safety guidelines will help reduce potential risks.
- Keep your oxygen tanks (cylinders) away from all heat sources, including radiators, heat ducts, stoves, fireplaces, matches, and lighters.
- Do not permit open flames, sparks, or burning tobacco in the room where oxygen is being used.
- Use only as prescribed by physician.
- While using oxygen, do NOT use: Aerosols such as hair spray or paint; Oil-based face creams or lotions on your nose or face; Petroleum-based products such as Vaseline
- Keep the cylinder you are using in a stand or cart.

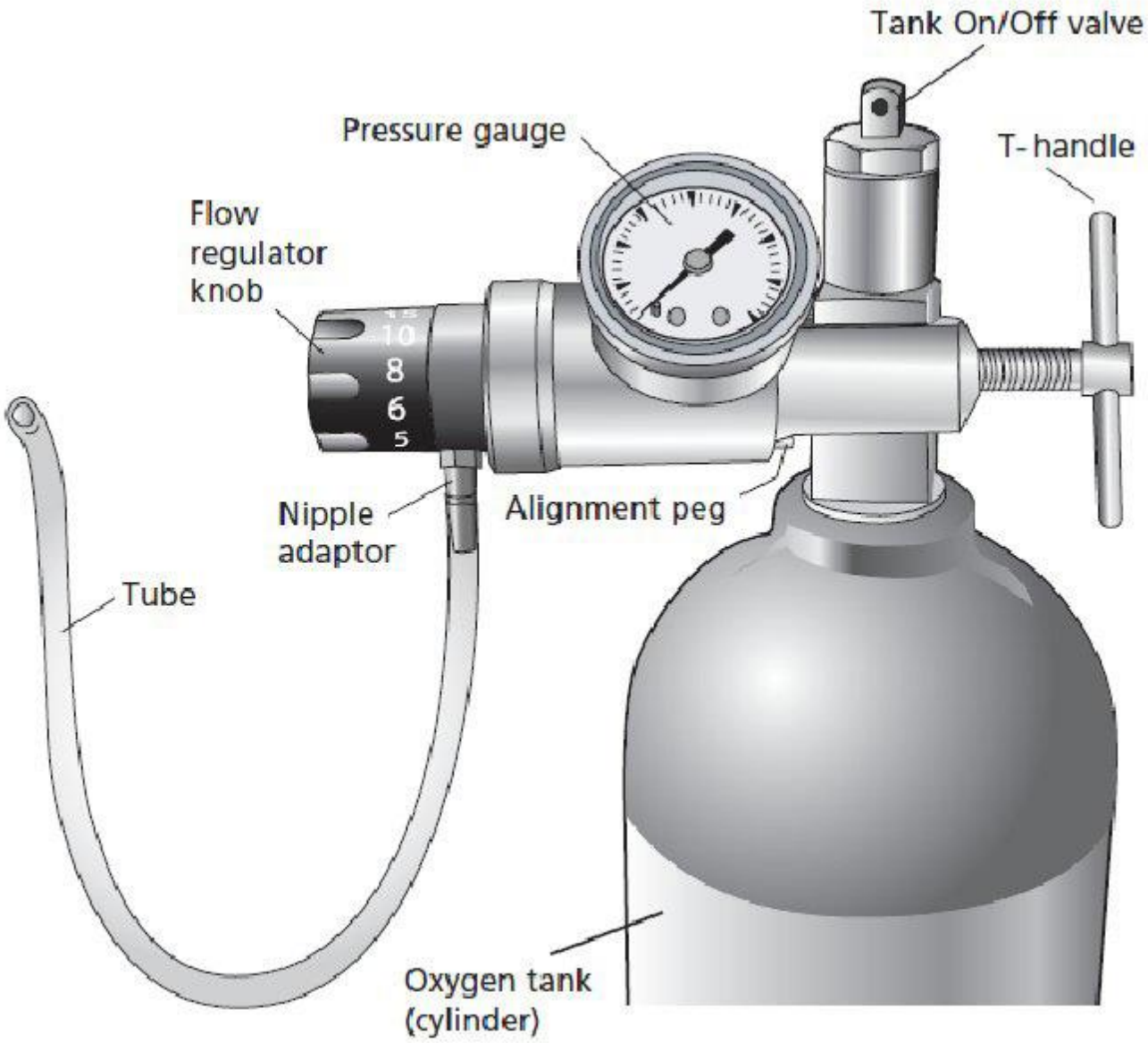

Illustration 2

How to use oxygen cylinders

- Be sure the flow regulator knob is set at zero (see *illustration 2).*
- Make sure the T-handle is tight.
- Place the cylinder wrench on the cylinders on/off valve, located at the top of the cylinder.
- Open the valve by turning it counter-clockwise one full turn.
- As the valve opens, the gauge on the regulator will show the amount of pressure in the cylinder.
- A full cylinder will read about 2000 psi (pounds per square inch).
- Adjust the flow regulator knob to the flow rate your Provider prescribed.
- Attach tubing to the nipple adaptor on the regulator.

How to change your oxygen cylinder

- Turn off the oxygen flow
- Using the small cylinder wrench, turn the cylinder on/off valve clockwise to close it.
- Bleed off the pressure in the valve by opening the flow regulator knob.
- When the gauge reads zero, turn the flow regulator knob to zero.

Change the cylinder

- Remove the regulator by loosening the T-handle.
- Slide the pegs out of the holes on the valve post and remove the regulator.
- Remove the tab from the valve post on the new cylinder (see *illustration 1*).
- Make certain there is a washer on the large post on the regulator.
- Attach the regulator to the cylinder by slipping the regulator over the valve post of the cylinder.
- Align the pegs located on the inside of the regulator yolk with the holes in the valve post.
- Slide the regulator forward so the pegs go into the holes (see *illustration 1*).
- Turn the T-handle on the regulator until it is tight. If the handle is not tight enough or if the washer is not in place, the cylinder will leak when the valve is opened

Turn on the oxygen flow

- Be sure that the flow regulator knob is set to zero.
- Make sure the T-handle is tight.
- Place the cylinder wrench on the cylinders on/off valve, located at the top of the cylinder.
- Open the valve by turning it counter-clockwise one full turn.
- As the valve opens, the gauge on the regulator will show the amount of pressure in the cylinder.
- A full cylinder will read about 2000 psi (pounds per square inch).
- Adjust the flow knob on the regulator until the gauge reaches the flow rate your doctor prescribed.
- Attach tubing to the nipple adaptor on the regulator.

Nasal cannula

- Most common delivery device used.
- Best used for patients with mild hypoxia of oxygen saturations between 90% an 93% and for long-term use in COPD patients to maintain oxygen saturations between 88% to 92%.
- Tubing varies in length to allow for mobility. In some cases, an extension tubing can be connected. (Home Use)
- Monitor for skin breakdown behind the ears. (Long-term Use)
- Monitor for drying of nares; if flow is 4 liters/minute or greater, a humidifier should be utilized.
- Flow rates greater than 5 liters/minute should be avoided as this will dry out nasal mucosa and cause nasal irritation.
- Never use a petroleum-based jelly in nares; water-based gels should be utilized for nasal irritation.

Simple Facemask

- The simple facemask is made of a clear soft vinyl construction mask to cover the mouth and nose, a metal frame to ensure a tight fit at the nose.
- The strap on the mask ensures a tight fit around the cheeks and chin, providing maximum patient comfort.
- Holes in the side of the mask allow for air to be drawn into the mask to supplement the oxygen accumulating in the mask itself.
- Best used for patients with moderate hypoxia and oxygen saturation between 85% and 93%.
- Must be used with a concentrator that delivers >5 liters/minute.
- Flow rates less than 5 liters/minute will result in unwanted carbon dioxide (CO_2) retention.
- Usual order is between 6 – 10 liters/minute for a concentration of 40-60% of oxygen.
- Do not place a humidifier on this device.

Did you know?

Oxygen should always be prescribed by a Provider and include the flow rate, delivery system, duration, for what medical condition/disease and how often to monitor saturations.