

**Macomb Township Fire Department**  
Fire and Life Safety Tips  
June 2010



## *Safety Tips*



*For*

## *Home Oxygen Use*

### **What is oxygen?**

Oxygen (often called O<sub>2</sub>) is a colorless, odorless gas that is part of the air we breathe. It is essential for all cells in our body and helps healing.

A doctor's prescription is required. Think of oxygen as a medicine. Do not change the liter flow (amount of oxygen flowing through the tubing) without talking with your home care nurse, doctor, or respiratory care practitioner.

Oxygen use in the home is safe. It does not explode. However, it does support combustion. The use of home-based and portable oxygen systems in the home continues to increase. Sources suggest it's mostly due to a growing older adult population, shorter hospital stays, and more advanced home healthcare services.

Macomb Township Fire Department wants you know that it is important to understand how oxygen can contribute to home fires. Under normal circumstances, room air contains approximately 21% oxygen. Oxygen can permeate into clothing, fabric, hair, and beards. Contrary to popular belief, oxygen is not flammable but can cause other flammable materials to ignite more easily and to burn more quickly.

Oxygen is of great benefit to those home healthcare patients in need of supplemental oxygen therapy. Please remember, however, that it should always be handled with caution and complete awareness of potential hazards. Oxygen can be used safely at home. Below are suggested guidelines to follow:

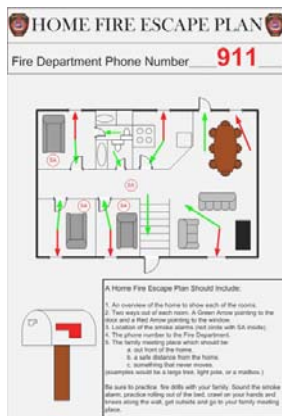
- **Do not smoke** while using oxygen.
- Warn visitors not to smoke near you when you are using oxygen. Encourage visitors to smoke outside.
- Post at least one NO SMOKING sign in a prominent place at the entrance to your home.





- When you go to a restaurant with your portable oxygen source, sit in a section away from any open flame such as candles or warming burners.
- Stay at least eight feet from gas stoves, candles, lighted fireplaces and other heat sources.
- Keep oxygen cylinders and vessels in a well-ventilated area (not in closets, behind curtains, or other confined space). The small amount of oxygen gas that is continually vented from these units can accumulate in a confined space and become a fire hazard.
- Keep oxygen cylinders and vessels a minimum of 8 feet from heaters, heat producing and electrical appliances.
- Secure oxygen cylinders and vessels to a fixed object or place in a stand.
- Oxygen cylinders and vessels must remain upright at all times. Never tip an oxygen cylinder or vessel on its side or try to roll it to a new location.
- Always operate oxygen cylinder or container valves slowly. Abrupt starting and stopping of oxygen flow may ignite any contaminant that might be in the system.
- Turn the cylinder valve off when not using your oxygen.
- Only use a properly grounded wall outlet for your oxygen concentrator.

## Fires and Burns Involving Home Medical Oxygen



- When more oxygen is present, any fire that starts will burn hotter and faster than usual.
- More oxygen in the air means that things such as hair, plastic, skin oils, clothing, and furniture can catch fire at lower temperatures.
- In 2003-2006, hospital emergency rooms saw an estimated average of 1,190 thermal burns per year caused by ignitions associated with home medical oxygen.
- Eighty-nine percent of the victims suffered facial burns.
- In most cases, the fire department was not involved.
- During 2002-2005, oxygen administration equipment was involved in an estimated average of 182 home fires reported to local fire departments per year.
- These fires caused an average of 46 civilian deaths and 60 civilian injuries per year.
- One of every four such fires resulted in death.
- Smoking is by far the leading cause of burns, reported fires, deaths, and injuries involving home medical oxygen.
- Cooking and candles were other common factors.
- People who may have difficulty escaping a fire should have a phone near their bed or chair.
- Make sure that the home has smoke alarms. Test them at least monthly.
- Have a home fire escape plan with two ways out of every room and an outside meeting place.
- Practice the plan at least twice a year.

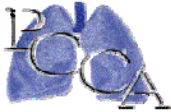


## Traveling with oxygen



- Be very careful when traveling with oxygen.
- No smoking in the car.
- Never put the oxygen into a hot vehicle.
- Never put the oxygen in the trunk.
- Secure the oxygen to avoid rolling or banging. For example, you could secure it with the seatbelt.
- Make sure there is air movement in the vehicle.
- Always take the most direct route.
- Try to avoid heavy traffic.
- When you arrive, remove the oxygen from your vehicle right away. Never leave it in a vehicle it could get hot from the sun.

### *References*



Pulmonary - Critical Care Associates of East Texas



Portland Fire & Rescue



**National Fire Protection Association**

The authority on fire, electrical, and building safety

