

COMPRESSED GAS CYLINDERS

Compressed gas cylinders are most commonly found in the surgery area of veterinary facilities. They are used to transport and store anesthetic gases and gases used to power hi-speed drills. The cylinder itself can be a physical hazard in many ways.

- It can fall on someone.
- It can roll and cause a tripping hazard.
- It can become a projectile (gas-powered rocket) if the valve is damaged.
- It can become an explosion hazard if the pressurized contents are exposed to heat.

Cylinder Storage and Transport

When storing or transporting gas cylinders, observe the following guidelines:

- *Store compressed gas cylinders away from heat sources.*
- Keep them in an area where they cannot be damaged by passing employees or falling objects.
- Provide a secure area where cylinders are not subject to tampering by unauthorized persons.
- Make sure all cylinders are secured with chains, racks, or other approved devices to prevent falling or tipping.
- Valve protection devices or collars must be in place whenever the tank is not in use, including empty tanks.
- Oxygen cylinders must be stored away from highly combustible materials and away from substances likely to cause or accelerate a fire.
- Transport large cylinders by using a cylinder hand truck. Safety caps or collars must be in place during transport.
- *Do not* roll or walk cylinders.
- *Do not* move a cylinder with a regulator in place (unless it is a small E cylinder and is secured to the anesthesia cart).
- *Do not* lay cylinders on their sides without the use of racks to prevent rolling.

Cylinder Use

You should be given specific training on the use of equipment requiring compressed gas cylinders. Do not attempt to use this equipment if you have not received this training. Some general rules include the following:

- When not in use, close the cylinder's main valve.
- Use the regulator valve on the compressed gas cylinder to adjust flow, not as an on-off valve.
- Use *only* the regulator specifically designed for the cylinder.
- *Do not* use a cylinder without a regulator or pressure-reducing device in place.
- *Do not* use a cylinder of unidentified gas.

Oxygen can cause many materials to burn violently. Never use grease, cleaning solvents, or other flammable material on an oxygen valve, regulator, or piping.

Anesthetic gases are hazardous substances. Be sure to read and understand the SDS for each gas to which you may be exposed.

COMPRESSED GAS CYLINDER SAFETY QUESTIONS

Do employees know how to properly cap, store and secure compressed gas cylinders?

Are employees familiar with the location of compressed gas cylinders in the practice and what the markings on each mean?

Who is authorized to handle compressed gas cylinders in the practice?

What procedures does the practice follow to avoid compressed gas cylinder tipping, falling or rolling?

Can each employee who handles compressed gas cylinders demonstrate how to properly close the cylinder valve and cap the cylinder?

Who do employees notify if they notice corrosion, general distortion, cracks, or any other defect that might indicate a weakness or render a compressed gas cylinder unfit for use?

ADDITIONAL TRAINING RESOURCES

California Law pertaining to compressed gas cylinders: <https://www.dir.ca.gov/title8/4650.html>

Compressed Gas Safety Sheet: <https://www.ehs.uci.edu/programs/safety/compressgasprog.html>