

## HazCom: Medical Gases



Medical gases are especially hazardous because they're hard to smell and can't be seen. Operating and recovery room staff are at the highest risk if gas leaks from tubing or from the patient's mask. The longer the gases are inhaled or are in contact with your body, the more harm they can do.

### Color System for Medical Gases

A standardized color system is crucial since it helps identify the compound in the cylinder. The color system for air and oxygen used in the United States, however, differs from those used internationally.

- **Oxygen** - Green (\*White)
- **Carbon dioxide** - Gray
- **Nitrous oxide** - Blue
- **Nitrogen** - Black
- **Helium** - Brown
- **Air** - Yellow (\*White & Black)

\*International color

To prevent any mishaps from connecting the wrong cylinders, a safety system, called the Pin Index Safety System, is used. It employs a standardized, unique pin configuration system that acts as a lock and key system. This prevents the mismatching of gas cylinders with their corresponding connections in medical settings.

## Oxygen

Oxygen is dangerous because it makes other materials highly flammable. The gas is found in operating, patient, and recovery rooms. It also is commonly transported between floors and nursing stations and may be piped throughout your facility.

## Anesthetic gases

Most exposure from anesthetic gases, such as nitrous oxide and halothane, occurs through leakage of tubing or as the gas enters the patient during surgery. Patients recovering from anesthesia also exhale the gases. Your facility has a scavenger system to collect waste gas and route it outside.

## Check for leaks

Check your equipment often to make sure valves fit and aren't allowing gas to leak.

## Transport safely

Secure gas containers in carts so they don't topple. Once containers are at their destination, make sure to secure them again in their new location.

## Health effects of exposure to gases

Short-term exposure to medical gases can cause headaches, irritability, nausea, decreased mental alertness and motor coordination, and even coma or death. Longer-term exposures can lead to liver and kidney disease,

**birth defects, miscarriages, and cancer.**

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