Hyperbaric oxygen therapy for carbon monoxide poisoning

Treatment Overview

The purpose of oxygen therapy for the treatment of carbon monoxide poisoning is to reduce the amount of carbon monoxide in the blood and restore the oxygen level to normal as quickly as possible.

For hyperbaric oxygen therapy, the affected person lies down on a stretcher that slides into an acrylic tube about 7 ft long and 25 in. across. The pressure inside the tube is raised, and 100% oxygen is delivered under high pressure. Each treatment session lasts about 90 minutes. After treatment, the chamber is depressurized slowly while the person rests inside.

What To Expect After Treatment

A person usually recovers from carbon monoxide poisoning within a few days. However, it is important to remember that long-term effects may occur days or weeks after carbon monoxide poisoning.

Why It Is Done

Hyperbaric oxygen therapy can be used to reduce carbon monoxide levels in the blood quickly and the symptoms that go with it. The use of hyperbaric oxygen therapy is evaluated on a case-by-case basis. Factors considered include:

- The amount of carbon monoxide in the blood.
- The severity of symptoms, such as whether a person has lost consciousness or appears confused.
- A person's age, the presence of heart or brain disease, and overall health. Infants, small children, older adults, or people with health problems are more easily affected by high amounts of carbon monoxide in the blood, and their symptoms are more severe.
- Pregnancy and whether a pregnant woman has had a significant exposure to carbon monoxide.

Treatments will likely be repeated, depending on the outcome of the first treatment. To date, studies have shown benefits only from multiple treatments.¹

How Well It Works

A recent study has concluded that three hyperbaric oxygen treatments within a 24-hour period may reduce the risk of cognitive problems, such as lasting damage to memory, attention, and concentration.²

In pregnant women who have been exposed to carbon monoxide, hyperbaric oxygen therapy reduces the time necessary to lower carbon monoxide levels in fetal blood, which increases the chances for a healthy baby. The fetus has a higher risk for carbon monoxide poisoning because it takes longer for carbon monoxide to be eliminated from fetal blood than from the mother's blood.³
Risks

Risks of hyperbaric oxygen therapy may include ear pain, rupture of the eardrum, sinus discomfort, a bloody nose, and in very rare cases, seizure or problems from too much oxygen.

What To Think About

Hyperbaric oxygen therapy chambers are located only at specialty medical centers or major hospitals.

Hyperbaric oxygen chambers also are used to treat people who have decompression sickness from scuba diving.

References

Citations