

Oxygen Cuts Heart Damage, Study Finds

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Two hours in a pressurized oxygen chamber, the kind used to treat deep-sea divers who suffer from "the bends," can help limit damage from heart attacks, according to a new study.

In a study of 49 patients who had just suffered heart attacks, physicians at Long Beach Memorial Medical Center in California found that use of hyperbaric chambers, when combined with clot-dissolving drugs, relieved chest pain and reduced damage to the heart muscle better than the drugs alone. The research was presented yesterday at a scientific meeting of the American Heart Association. According to Dr. Myrvin Ellestad, who directed the research, the drugs can take two hours to dissolve the clots, during which time the heart usually sustains damage because of continued oxygen deficiency. In the hyperbaric chamber, Ellestad said, patients receive oxygen at twice the normal atmospheric pressure, which increases the blood's oxygen level by about 15 times. "We think it stops the damage in the heart during the time the medicine is dissolving," he said.

In the randomized human trials at Long Beach Memorial, doctors treated 24 patients with clot-dissolving agents only and 25 with the drugs and oxygen chamber. They found that electrocardiogram tests of patients who received the oxygen treatment showed that the heart resumed normal electrical activity twice as fast as in patients who were not placed in the chambers.

Moreover, patients who received the oxygen had significantly lower levels of the enzyme creatine phosphokinase, which is released during a heart attack and indicates the extent of heart muscle damage. Patients also got relief from chest pain faster, in an average of 271 minutes, compared with 671 minutes among those who got only the drugs.

Most hospitals are not equipped with hyperbaric chambers, which cost at least \$50,000 and are used to treat stroke victims and speed healing of wounds and burns.

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