

# Hyperbaric Oxygen Shows Promise for Migraine Sufferers

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Oxygen therapies may ease headache pain

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NEW YORK (Reuters Health) – Two forms of oxygen therapy may help manage two types of debilitating headache pain, a new research review suggests. In a review of nine small clinical trials, the researchers found that hyperbaric oxygen therapy showed promise for halting pain during migraine attacks. A similar treatment — normobaric, or normal-pressure, oxygen therapy — eased pain in people suffering from cluster headaches. The findings are published in the Cochrane Library, a publication of the Cochrane Collaboration, an international organization that evaluates medical research. Both migraines and cluster headaches can be debilitating. Migraines typically cause throbbing pain in one area of the head, often accompanied by nausea, vomiting or sensitivity to light and sound. Cluster headaches cause sharp pain on one side of the head, including the eye; that lasts anywhere from 15 minutes to a few hours and come in waves — repeated attacks over a few weeks to months, followed by a period of no symptoms. Hyperbaric oxygen therapy involves breathing pure oxygen in a sealed, pressurized chamber. With normobaric oxygen therapy, patients breathe pure oxygen from a portable unit under normal conditions. Normal-pressure oxygen has long been used for severe headache pain, and there is some evidence that hyperbaric oxygen could be helpful, but few controlled clinical trials have evaluated the therapies. For the current study, researchers were able to find nine clinical trials performed between 1981 and 2004 involving a total of 201 patients. When they combined data from three, they found that hyperbaric oxygen therapy was six times more likely to relieve migraine pain than a “sham” (placebo) therapy used for comparison. Similarly, one study showed that normal-pressure oxygen outperformed sham therapy in easing cluster headache pain. Another trial found the therapy to be effective, but not better than the medication ergotamine. None of the two forms of oxygen therapy prevented future headache attacks, however, lead researcher Dr. Michael H. Bennett, of Prince of Wales Hospital in Randwick, Australia, told Reuters Health. He said that based on the evidence, people with cluster headaches who are not finding quick or complete relief from their medication could ask their doctor about normobaric oxygen therapy. Hyperbaric oxygen could be an option for stubborn migraine pain, according to Bennett, but it may not be all that practical. “Unfortunately, this treatment will be relatively expensive and may not be covered by medical insurance or provided by local medical services,” he said. “It is likely that hyperbaric oxygen will only be used in the very worst cases where relief is not obtained by any alternative method.” Exactly why oxygen therapy works is not entirely clear. Bennett noted that migraines involve blood vessel dilation in the head, and hyperbaric oxygen causes vessels to constrict, which may help explain the pain reduction. There is also evidence that hyperbaric oxygen blocks the “chemical pathways” that lead people to feel migraine pain, he explained. As for cluster headaches, they are associated with altered activity in certain brain areas. “In general,” Bennett explained, “oxygen seems to return the activity of these areas to normal, and may be directly responsible for the effect of oxygen on the headache.”

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