

US Defence Department Looking at Hyperbaric Oxygen Therapy for the treatment of TBI's

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Hyperbaric chamber may treat TBI

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The Defense Department hopes to find a better treatment for the 100,000 troops who have been diagnosed with mild Traumatic Brain Injury since 2003, and it's looking at hyperbaric chambers — often used in cases of carbon monoxide poisoning — for the answer.

Although there have been studies looking at the impact these pressurized oxygen chambers have on TBI patients, none have been able to definitively answer whether hyperbaric oxygen can reduce or eliminate chronic symptoms of TBI such as headaches, memory loss and mood swings. A new clinical trial, which is expected to begin in January 2011, is designed to do just that.

The study, conducted by the Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury, in Virginia, and the Army Research and Materiel Command, in Maryland, is expected to run for at least 18 months. It will include about 300 participants, mostly soldiers and Marines, and will build upon other ongoing studies on TBI treatment, said Col. Richard Ricciardi, director of the research evaluation and quality assurance and surveillance directorate at DCoE.

Five sites will participate in the study: Fort Carson, Colo.; Camp Pendleton, Calif.; Camp Lejeune, N.C.; Brooks City-Base, Texas; and possibly Fort Hood, Texas, although negotiations are still ongoing there, Ricciardi said.

Individuals getting the experimental treatment will breathe 100 percent oxygen while inside the hyperbaric chamber at 1.5 atmospheres of pressure — about the same amount of pressure you would feel if you dived 20 to 25 feet below water. The theory is that the pressure created by the chamber causes oxygen in the blood to dissolve, allowing more oxygen to flow through the body and repair damaged tissue.

A control group will feel 1.3 atmospheres of pressure inside the chamber but will breathe regular air, which will dissolve at the regular rate. Although the pressures are slightly different, officials say participants who have not received hyperbaric oxygen before won't know the difference.

The chambers will hold three to 16 participants. Each person will be asked to sit in the chamber for one hour a day, five days a week for 40 sessions. The study is primarily looking at service members who suffered a TBI about four to six months ago, and are going through the healing process, he said.

Soldiers interested in participating in the study should talk to their health care provider to see if there are clinical trials available in their area and whether they are a candidate for those trials. See www.clinicaltrials.gov for a complete listing of government-run clinical trials