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News Release

Phantom Pain, a Reflection on the Wounds of War

BETHESDA, Md. — Results of a recent study titled “Mirror Therapy for Phantom Limb Pain” will be published in the November 22 edition of the *New England Journal of Medicine*. The study headed by Jack W. Tsao, M.D., D.Phil., assistant professor, Department of Neurology at the Uniformed Services University of the Health Sciences (USU), suggests that phantom limb pain may be induced by a conflict between visual feedback and one’s own perception of the amputated limb.

Phantom limb pain occurs in at least 90% of limb amputees according to the research. Dr. Tsao conducted a sham-controlled trial using mirror and imagery therapy in patients who have had a foot or leg amputated. Twenty-two patients at Walter Reed Army Medical Center in Washington, D.C. were assigned to one of three groups: one that viewed a reflective image of themselves in a mirror (mirror group); one that viewed a covered mirror; and one that was trained in mental visualization. Eighteen patients completed the study with six in each group, and after one month of treatment 100% of the members in the mirror group reported less phantom pain, while only 17% reported a pain decrease and 50% reported worsening pain in the covered mirror group, and 67% reported worsening pain in the mental visualization group.

The study found that mirror therapy reduced phantom limb pain in patients who had undergone amputation of the lower limbs. Such pain was not reduced by either covered mirror or mental visualization treatments. These results suggest that mirror therapy may be helpful in alleviating phantom pain in lower limbs.

Located on the grounds of Bethesda’s National Naval Medical Center and across from the National Institutes of Health in Bethesda, Md, USU is the nation’s federal school of medicine and graduate school of nursing. Students are active-duty uniformed officers in the Air Force, Army, Navy, and Public Health Service, who are being educated to deal with wartime casualties, national disasters, emerging infectious diseases, and other public health emergencies. The university conducts sponsored research in the combined sciences, including military-relevant research in parasitology, infectious diseases, treatment of traumatic injury, and other issues related to health, war, and national disaster.

For more information or to receive a copy of Dr. Tsao’s complete article contact the Office of External Affairs at (301) 295-1219 or visit the *New England Journal of Medicine* Web site at <http://content.nejm.org>.