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News Release

USU Faculty Member Links Anticholinergic Drugs to Increased Cognitive Decline in Seniors

BETHESDA, Md. — CDR Jack Tsao, MC, USN, associate professor for the Uniformed Services University of the Health Sciences' (USU) Department of Neurology recently presented case findings to the American Academy of Neurology linking the use of anticholinergic drugs, such as medicines for stomach cramps, ulcers and motion sickness to an increased decline in cognitive ability in older people.



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The study, entitled "Using Anticholinergic Drugs May Increase Cognitive Decline in Older People" looked at the effects of taking a medication with anticholinergic properties on the annual change in thinking abilities of 870 Catholic nuns and clergy members who were an average of 75 years old. All of the participants were part of the Rush Religious Orders Study, an ongoing, longitudinal, clinical study of older people without dementia.

All of the participants underwent annual cognitive tests and reported their medication use for an average follow-up period of eight years. During the study, 679 people took at least one medication with anticholinergic properties. The study found people who took anticholinergic drugs saw their cognitive function decline 1.5 times as fast as those people who did not take the drugs.

Tsao's research interests include understanding the mechanism of and developing treatments for phantom limb pain in amputees. Mirror therapy is used to treat phantom pain but the mechanism behind the efficacy of this therapy remains unknown; Tsao and his colleagues are using functional magnetic resonance imaging to study brain activation patterns during mirror treatment. Tsao is undertaking several additional funded research projects, including developing optimal clinical screening tools to detect traumatic brain injury, establishment of a telemedicine system for clinical neurology, and the use of Botulinum toxins in the treatment of lower back pain.

Located on the grounds of Bethesda's National Naval Medical Center and across from the National Institutes of Health, USU is the nation's federal school of medicine and graduate school of nursing. Students are active-duty uniformed officers in the Army, Navy, Air Force and Public Health Service, who are being educated to deal with wartime casualties, national disasters, emerging infectious diseases, and other public health emergencies.