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Mind over Matter: Tai Chi Class Boosts Shingles Immunity, Improves Physical Functioning in Older Adults

UCLA Neuropsychiatric Institute researchers report that older adults in a 15-week Tai Chi class saw immunity factors that suppress shingles soar 50 percent. In addition, participants showed significant improvement in their physical health and ability to move through their day.

Appearing in the September edition of the journal *Psychosomatic Medicine*, findings of the randomized, controlled clinical trial are the first to demonstrate a positive, virus-specific immune response to a behavioral intervention.

“Our findings offer a unique and exciting example of mind over matter,” said Dr. Michael R. Irwin, a professor at the UCLA Neuropsychiatric Institute and director of the Institute’s Cousin’s Center for Psychoneuroimmunology. “A large body of research shows how behavior can negatively affect the immune system and health, but ours is the first randomized, controlled study to demonstrate that behavior can have a positive effect on immunity that protects against shingles. The findings are particularly noteworthy as Tai Chi Chih or “meditation with movement” increased immunity in older adults who are at risk for herpes zoster.

“The improvements in both immunity and physical functioning were significant by widely accepted measures of each, and all with no surgery, no drugs and no side effects,” Irwin said. “We were particularly struck by improvements in what subjects were able to accomplish physically as a result of participating in these classes. In fact, older adults who had more impairment present at the start of the study showed the greatest improvement and benefit at the end.”

The varicella zoster virus, or shingles, can cause a painful skin rash with intermittent pain that can last for months or years. Even when the rash subsides, skin in the affected area can remain extremely painful to the touch.

The virus lurks in the nerves of virtually everyone who has had chicken pox, but the immune system typically prevents outbreaks. This cell-mediated immunity to the virus declines with age, however, leaving older adults particularly susceptible to the painful condition. The greater the decline, the greater the risk. No vaccination against shingles exists.

The study randomly assigned 36 men and women age 60 or older to a 15-week program of three 45-minute Tai Chi classes a week or to a wait list. To qualify, each volunteer had to show immunity to varicella zoster virus, but not to have had a history of shingles. They also had to be able to walk. Three class members dropped out before the study ended due to transportation issues. One member of the control group dropped out.

Varicella zoster virus-specific cell-mediated immunity was measured before the program began and one week after the program ended. Doctors used the Medical Outcome scale to assess physical functioning before the program began; at five, 10 and 15 weeks during the program; and one week after the program ended.

The study was funded by the National Center for Complementary and Alternative Medicine, a unit of the National Institutes of Health.

Co-authors of the study were Jennifer L. Pike and Jason C. Cole of the UCLA Neuropsychiatric Institute and Department of Medicine at the David Geffen School of Medicine at UCLA, and Dr. Michael N. Oxman of the University of California at San Diego and the San Diego Veterans Affairs Healthcare System.

The UCLA Neuropsychiatric Institute is an interdisciplinary research and education institute devoted to the understanding of complex human behavior, including the genetic, biological, behavioral and sociocultural underpinnings of normal behavior, and the causes and consequences of neuropsychiatric disorders.