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Test Predicts Injury Potential in Military Population

CEDARVILLE, OHIO -- Dr. David Peterson, assistant professor of kinesiology at Cedarville University, has collaborated with professors at the University of Vermont to test a screening process that helps eliminate and reduce weight-bearing injuries among the U.S. military.

The findings from the joint study were published November 1 in The Sport Journal, an electronic peer-reviewed scientific journal.

After 20 years of service, Peterson officially retired from the U.S. Navy on Sept. 1, 2018. He served four of those years as the deputy director of the physical education department at the U.S. Naval Academy (USNA) before coming to Cedarville. While at USNA, Peterson recruited subjects and collected data for testing the movement competency screen (MCS). The research took years as Peterson tracked the progress of a set group of incoming male and female plebes — equivalent to freshmen in college.

Peterson's colleagues at the University of Vermont developed the MCS to identify poor body movement patterns. "Musculoskeletal injuries in military populations are a leading cause for reduced physical readiness. If we can identify who is at risk for injury, we could ideally remediate and prevent the injury," explained Dr. Sharon Henry, professor of physical therapy emerita at the University of Vermont.

"The financial burden of musculoskeletal injuries is immense, with half a billion dollars being spent annually on diagnosing and treating musculoskeletal injuries among service members. So any steps in the direction of prevention or reduction of injuries are important."

Peterson sent his findings to the University of Vermont for analysis. Although there was no significant benefit with males, there was a significant correlation between how females faired on the MCS and how they performed during plebe summer training and on their physical readiness tests (PRT). The research concluded the MCS could successfully predict the risk of injury in female service members by testing their ability to perform certain movement patterns.

"I provided a copy of our findings to the director of physical education, who also leads the plebe summer physical education program at the U.S. Naval Academy," said Peterson. "Hopefully, after reviewing our findings, he will look for ways to try and include the movement competency screen into the physical education program at USNA. Doing so should, at least for females, help to reduce the risk of injury during plebe summer."

Located in southwest Ohio, Cedarville University is an accredited, Christ-centered, Baptist institution with an enrollment of 4,193 undergraduate, graduate and online students in more than 150 areas of study. Founded in 1887, Cedarville is recognized nationally for its authentic Christian community, rigorous academic programs, strong graduation and retention rates,

accredited professional and health science offerings and leading student satisfaction ratings. For more information about the University, visit www.cedarville.edu.