

TAI CHI IMPROVES OXIDATIVE STRESS IN MEXICAN OLDER ADULTS

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Oxidative stress (OxS) is a biochemical disequilibrium propitiated by an excessive production of free radicals (FR) and reactive oxygen species (ROS), which provoke oxidative damage to biomolecules and which cannot be counteracted by antioxidative systems. This biochemical alteration has been linked with aging and more of 100 chronic-degenerative diseases, including arterial hypertension, type 2 diabetes mellitus, cancer, arthritis, cognitive impairment and osteoporosis. For this reason, it has been suggested some antioxidant alternatives to counteract this biochemical alteration among we can stand out moderate aerobic physical exercise. Likewise, recently has been suggested that Tai chi could have an antioxidant effect, however, it has not been fully demonstrated. It was carried out a quasi-experimental study in a sample of 55 healthy subjects divided into two age-paired random groups: i) 23 subjects in control group, and ii) 32 subjects in experimental group. The experimental group received daily Tai chi training for 50 minutes. The following measurements were performed before and after the 6-month treatment period: thiobarbituric acid reactive substances (TBARS); total antioxidant status (TAS); superoxide dismutase (SOD), and glutation peroxidase (GPx). We found that experimental group exhibited a significant statistically increase in SOD and GPx antioxidant enzymes and TAS than control group ($p < 0.05$). In the same way, TBARS showed a significant decrease. Our findings suggest that daily Tai chi practice is useful for diminishing oxidative stress and DNA damage in healthy older adults. Grant: DGAPA, UNAM PAPIIT IN303009.