

No pain, big gains

Excerpt from the Harvard Health Publication, Harvard Medical School.

http://www.health.harvard.edu/newsletters/Harvard_Womens_Health_Watch/2009/May/The-health-benefits-of-tai-chi

Although Tai Chi is slow and gentle and doesn't leave you breathless, it addresses the key components of fitness — muscle strength, flexibility, balance, and, to a lesser degree, aerobic conditioning. Here's some of the evidence:

Muscle strength. In a 2006 study published in *Alternative Therapies in Health and Medicine*, Stanford University researchers reported benefits of Tai Chi in 39 women and men, average age 66, with below-average fitness and at least one cardiovascular risk factor. After taking 36 Tai Chi classes in 12 weeks, they showed improvement in both lower-body strength (measured by the number of times they could rise from a chair in 30 seconds) and upper-body strength (measured by their ability to do arm curls).

In a Japanese study using the same strength measures, 113 older adults were assigned to different 12-week exercise programs, including Tai Chi, brisk walking, and resistance training. People who did Tai Chi improved more than 30% in lower-body strength and 25% in arm strength — almost as much as those who participated in resistance training, and more than those assigned to brisk walking.

"Although you aren't working with weights or resistance bands, the unsupported arm exercise involved in Tai Chi strengthens your upper body," says internist Dr. Gloria Yeh, an assistant professor at Harvard Medical School. "Tai Chi strengthens both the lower and upper extremities and also the core muscles of the back and abdomen."

Flexibility. Women in the 2006 Stanford study significantly boosted upper- and lower-body flexibility as well as strength.

Balance. Tai Chi improves balance and, according to some studies, reduces falls. Proprioception — the ability to sense the position of one's body in space — declines with age. Tai Chi helps train this sense, which is a function of sensory neurons in the inner ear and stretch receptors in the muscles and ligaments. Tai Chi also improves muscle strength and flexibility, which makes it easier to recover from a stumble. Fear of falling can make you more likely to fall; some studies have found that Tai Chi training helps reduce that fear.

Aerobic conditioning. Depending on the speed and size of the movements, Tai Chi can provide some aerobic benefits. But in the Japanese study, only participants assigned to brisk walking gained much aerobic fitness. If your clinician advises a more intense cardio workout with a higher heart rate than Tai Chi can offer, you may need something more aerobic as well.