Tai Chi versus Traditional Therapy for Balance

Clinical Bottom Line:
Traditional therapy, such as balance training, stepping training and education, are more effective at decreasing falls in the balance compromised patient than Tai Chi. ¹,4

Citation:

Clinical question:
In persons at risk of falling, is Tai Chi more effective than traditional forms of therapy at improving standard balance measures?

Search terms & methods:
The search term “tai chi versus physical therapy” was entered into the PubMed database.

The study:
The purpose of this study was to explore the difference between two different training programs; one consisted of step and balance training and the other of Tai Chi. The researchers hypothesized that step and balance training would show more favorable outcomes than Tai Chi after 10 weeks of training. The design of the study was a prospective intervention trial with pre- and post-tests taken and random assignment using computer software.

The study patients:
Subjects were selected from senior centers and congregate housing facilitates. Inclusion criteria consisted of adults 65 years of age and older, who demonstrated a minimum of mild impairment in tandem walking and performing single limb stance. This is in accordance with the population identified in the PICO questions. Subjects were excluded from the study if they were being treated for balance, functional mobility, neuromuscular, or musculoskeletal impairments via physical therapy. Exclusion criteria also included participating in structured, regular physical exercise at least three times per week.

Intervention Group 1:
The Tai Chi treatment group consisted of 107 subjects with a mean age of 78. Three times a week, they received one hours of Tai Chi training from two experienced Tai Chi trainers. Treatment period was ten weeks.

Intervention Group 2:
The experiment group consisted of 106 subjects with a mean age of 78. They received one hour of circuit training 3 times a week consisting of challenges to standing dynamic and static balance, which progressed in difficulty. Training period was again ten weeks.

The evidence:
The traditional therapy group showed a 5-10% increase in Maximum Step Length (p<.001) and Rapid Step Test (p=.02) and a 9% increase in the Timed Up and Go Test (p=.001) over the Tai Chi group. These findings are statistical significant but clinical significance was not discussed. About 25% of both groups were unable to complete the study. Reasons for attrition included medical illness and lack of attendance.

Comments:
This study’s internal validity is threatened by the vague description of its random assignment. The external validity is threatened by the inclusion and exclusion criteria, which limit the generalizability to older less active adults. The preponderance of evidence suggests that Tai Chi has been shown to increase balance in populations at risk for falls however it has not been proven more effective than traditional therapy. Further research needs to be conducted to determine if results are generalizable to younger and more active patients.

Appraised by: Ryan Resnik & Kirk Player  Date appraised: 06/05/09

Additional References:

