

Background and Significance

- Lower back pain can have a significant negative impact on readiness and military operations (7).
- Between 2010 and 2014, 689,073 active duty military personnel had at least one LBP related medical encounter (5).
- Individuals suffering from back pain often seek out complementary and alternative medicine (CAM) for treatment (13).

Searchable Question Using PICO

- In active duty personnel being seen in an outpatient military clinic with lower back pain how does participation in a weekly Tai Chi session compared to current practice affect pain management?

Search Strategy

- Melnyk, Fineout-Overholt EBP model
- Databases searched: PubMed, Cochrane, CINAHL, Academic Search Complete
- Search terms: Tai Chi, back pain, lower back pain, active duty military
- Search limited to English language, peer reviewed journals
- Articles screened for relevance
- Reference lists of retrieved articles examined to ensure comprehensiveness of search
- Rapid critical appraisal conducted

Evidence Synthesis from Search

- Tai Chi is a recognized form of CAM that is being used to manage chronic pain (9,16,21).
- Tai Chi is safe, cost effective and endorsed by the Arthritis Foundation (10,12).
- Randomized control trials demonstrated improved pain control and function associated with participation in Tai Chi for individuals with lower back pain (9,11).
- Agency for Healthcare Research and Quality (AHRQ), Clinical Practice Guideline from the American College of Physicians and the VA/DOD Clinical Practice Guideline for Diagnosis and Treatment of Lower Back Pain recommends the use of Tai Chi for management of chronic low back pain (2,3,4,6,14,22,23).

Levels of Evidence Synthesis Table- Tai Chi and Lower Back Pain

Levels of Evidence Synthesis Table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
Level I: Systematic review or meta-analysis			X	X		X			X					X		X			X			X		X	X	X	
Level II: Randomized controlled trial		X								X		X							X								X
Level III: Controlled trial without randomization																											
Level IV: Case-control or cohort study																											
Level V: Systematic review of qualitative or descriptive studies																											
Level VI: Qualitative or descriptive study, CPG, Lit Review, QI or EBP project	X				X		X	X			X		X		X		X			X	X		X				
Level VII: Expert opinion																											

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Evidence-Based Recomm

- There is moderate evidence that Tai Chi is a part of a treatment regimen for lower back pain.
- Tai Chi is a low-impact exercise consisting of a series of controlled movements, including deep breathing common to many health and general well-being practices.
- A 10-week Tai Chi intervention by an instructor reduced pain and disability in individuals with chronic low back pain.

Outc

- Subjective measurements:
 - Numeric Rating Scale
 - Pain Disability Index
 - Quebec Back Pain Disability Index
- Objective measurements:
 - Y-Balance lower extremity
 - Plank Hold Test.



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