

Effectiveness Research

Taiji/Qigong



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TAIJI AND QIGONG – BROTHER AND SISTER

practised for centuries

aiming to promote health and self development and to prevent diseases singular or partner exercise or in a group setting



especially developed for the treatment of disease and health prevention.

influenced by Daoism, Buddhism and TCM

different static and dynamic exercises, breathing and mediation



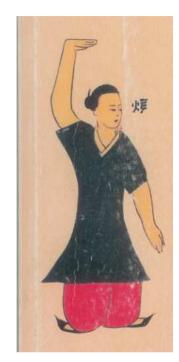
developed as martial art

includes a series of dance-like movements that combine to postures or forms

TAIJI AND QIGONG

- betters physical condition coordination, balance, stretching, flexibility
- adjusts the vegetative state
- calms down the spirit
- Exercises for self-application
- Group therapy helps to foster contact and social support







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A Systematic Review and Meta-Analysis of Qigong for the Fibromyalgia Syndrome



Romy Lauche,¹ **Holger Cramer**,¹ **Winfried Häuser**,^{2,3} **Gustav Dobos**,¹ **and Jost Langhorst**¹ Evidence-Based Complementary and Alternative Medicine Volume 2013, Article ID 635182, 12 pages

Patients with fibromaylgia syndrome qigong vs. control intervention major outcome measure: pain and Qol

7 trials, 395 participants

low quality evidence for short term improvement of pain, Qol and sleep quality compared to usual care

No evidence for superiority of qigong compared to active treatment No serious adverse events

Conclusion: Qigong may be a useful approach for FMS patients Acc. to quality of evidence only a weak recommendation can be made

A SYSTEMATIC REVIEW AND META-ANALYSIS OF TAI CHI FOR OSTEOARTHRITIS OF THE KNEE

Lauche R, Langhorst J, Dobos G, Cramer H. Complement Ther Med, 2013, 21(4):396-406.

- Five RCTs with a total of 252 patients
- Four studies had a low risk of bias
- moderate overall evidence for short-term effectiveness for pain, physical function, and stiffness
- Strong evidence was found for short-term improvement of the physical component of quality of life

Given that Taiji appears to be at least effective and safe in the short-term, it might be preliminarily recommended as an adjuvant treatment for patients with osteoarthritis of the knee.

Effectiveness of Tai Chi for Chronic Musculoskeletal Pain Conditions: Updated Systematic Review and Meta-Analysis

Hall A, Copsey B, Richmond H, Thompson J, Ferreira M, Latimer J, Maher CG. Physical Therapy, Volume 97, Issue 2, 1 February 2017

Fifteen studies were identified

moderate-quality evidence was found that tai chi was more effective than no treatment or usual care at short term on pain (SMD=-0.66 [95% CI=-0.85, -0.48]) and disability (SMD=-0.66 [95% CI=-0.85, -0.46]).

The evidence for other outcomes was of low or very low quality and there was little information regarding long-term effects.

Thus, although the number of publications in this area has increased, the rigor has not, hindering physical therapists' ability to provide reliable recommendations for clinical practice.

Effectiveness of Tai Chi for Chronic Musculoskeletal Pain Conditions: Updated Systematic Review and Meta-Analysis

Hall A, Copsey B, Richmond H, Thompson J, Ferreira M, Latimer J, Maher CG. Physical Therapy, Volume 97, Issue 2, 1 February 2017

		Tai Chi Group		Control Group					Standardized Mean Difference		
	Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% CI	IV, Random, 95%	6 CI
	Arthritis										
Effect of tai chi	Adler et al, 30 2000	-15	23.9	8	10	23.9	8	3.1%	-0.99 (-2.05, 0.07)		
	Brismée et al,31 2007	-2.12	5.56	18	-1.34	3.43	13	6.7%	-0.16 (-0.87, 0.56)		
versus	Fransen et al,32 2007	-9.6	15.85	56		13.72	41	20.1%	-0.34 (-0.75, 0.06)		
VCISUS	Hartman et al, ³³ 2000	-11	16.34	18		12.83	15	6.5%	-0.92 (-1.64, -0.19)		
no treatment	Lee, ³⁵ 2006	-17.31	10.38	32		17.88	29	11.9%	-0.97 (-1.50, -0.43)		
no creatment	Lee et al, ²¹ 2009	-2.2	4.1	29	-0.2	1.8	15	8.4% 9.0%	-0.56 (-1.20, -0.07)		
on pain	Song et al, ³⁴ 2007 Tsai et al, ²² 2013	-12.3 -2.6	19.8 2.54	22 28	3.1 -1.02	25.8 1.68	21 27	9.0%	-0.66 (-1.27, -0.04) -0.72 (-1.27, -0.17)		
	Wang et al, ²³ 2009	-157.25	2.34			98	20	7.4%	-1.19 (-1.87, -0.51)		
	Wortley et al, ²⁴ 2013	-28		12		73.37	6	3.6%	-0.15 (-1.13, -0.83)		
	Zeng et al, ²⁶ 2015	1.51	1.93	32	0.02	1.73	27	11.8%	-0.82 (-1.35, -0.29)		
	Subtotal (95% CI)			275				100.0%	-0.66 (-0.85, -0.48)	•	
	Heterogeneity: Tau ² =0.00; χ^2 =10.21, <i>df</i> =10 (<i>P</i> =.42); l ² =2% Test for overall effect: <i>Z</i> =6.98 (<i>P</i> <.00001)										
	Low back pain									_	
	Hall et al, ²⁰ 2011	-1.04	2.15	76	0.23	1.85	75	50.9%	-0.63 (-0.96, -0.30)		
	Weifen et al, ²⁵ 2013	-25.4	10.02	141	-15.2	7.76	47	49.1%	-1.07 (-1.42, -0.72)		
	Subtotal (95% CI)	07 2 2 24	# 1 (0	217	(00/		122	100.0%	-0.84 (-1.27, -0.42)	-	
	Heterogeneity: Tau ² =0.07; χ^2 =3.24, <i>df</i> =1 (<i>P</i> =.07); I ² =69%										
	Test for overall effect. 2	est for overall effect: Z=3.85 (P<.0001)						1			
	Tension headache										1
	Abbott et al, ²⁹ 2007	-6.94	3.37	13	0	3.85	17	100.0%	-1.85 (-2.73, -0.97)	— —	No.
	Subtotal (95% CI)			13			17	100.0%	-1.85 (-2.73, -0.97)	•	
	Heterogeneity: not app	licable									
	Test for overall effect: Z	′=4.12 (P<.0	0001)								
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									Fi		vors Control
										Group	Group
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						k	LINT		ER UNIVERSITÄT MÜ		
	MULTIDISCIPLINARY PAIN CENTRE,										
	DEPARTMENT OF ANAESTHESIOLOGY										
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QIGONG – MORE STUDIES IN CNP UND LBP

Qigong seems to be superior to waiting list in patients with chronic neck pain and equal to exercises

Qi-ling Yuan et al. PLOS ONE, 2015

In chronic low back pain Taiji and Qigong can improve restricted mobility, coordination and self perception, at least equal to exercises therapy (12 sessions with 1×90 min/week over 3 months)

Blodt et al. Europ. journal of pain 2015

Qigong and Yoga not superior to no treatment in older adults with chronic low back pain

Teut et al, J of Pain, 2016

JAGS 65:2037–2043, 2017 © 2017, Copyright the Authors

Tai Chi for Risk of Falls. A Meta-analysis Journal compilation © 2017, The American Geriatrics Society

Rafael Lomas-Vega, PhD,* Esteban Obrero-Gaitán, MSc,* Francisco J. Molina-Ortega, PhD,* and Rafael Del-Pino-Casado, PhD[†]

Older adults population and at-risk population RCTs analyzing the effect of taiji vs. other treatments

Incidence of falls, short term (< 12 months)

- 5 studies, 1432 participants
- High quality of medium protective effect for fall incidence

Incidence of falls, longterm (< 12 months)

- 6 studies, 1546 participants
- High quality of a small protective effect for fall incidence

Time to first fall

- 5 studies, 1320 participants
- No effect on time to first fall with moderate quality of evidence

JAGS 65:2037-2043, 2017

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Rafael Lomas-Vega, PhD,* Esteban Obrero-Gaitán, MSc,* Francisco J. Molina-Ortega, PhD,* and Rafael Del-Pino-Casado, PhD[†]

Statistics for each study Rate ratio and 95% CI Study name Time point Rate Lower Upper limit p-Value ratio limit Faber 2006 0,847 0,713 1,005 0,057 Long-term Hwang 2016 Long-term 0,802 0,639 1,007 0,058 Logghe 2009 Long-term 1,213 0,921 1,598 0,170 Taylor 2012 0,858 0,735 1,002 0.053 Long-term Tousignant 2013 Long-term 0,868 0,688 1,096 0,235 Woo 2007 Long-term 0,545 0,308 0,965 0.037 OVERALL 0,871 0,770 0,986 0,029 0,503 0,363 0,698 Hwang 2016 0,000 Short-term Li 2004 Short-term 0,371 0,240 0,573 0,000 Saravanakumar 2014 Short-term 0,700 0,390 1,257 0,232 0,663 0,504 0,872 0,003 Voukelatos 2007 Short-term Wolf 1996 Short-term 0.651 0,479 0,884 0,006 **OVERALL** 0,569 0,462 0,700 0,000 0,1 0,2 0,5 2 5 10

Figure 1. Forest plot for fall incidence (effect sizes are expressed as incidence rate ratio). Short-term follow-up indicates less than 12 months; long-term follow-up indicates equal to or greater than 12 months.

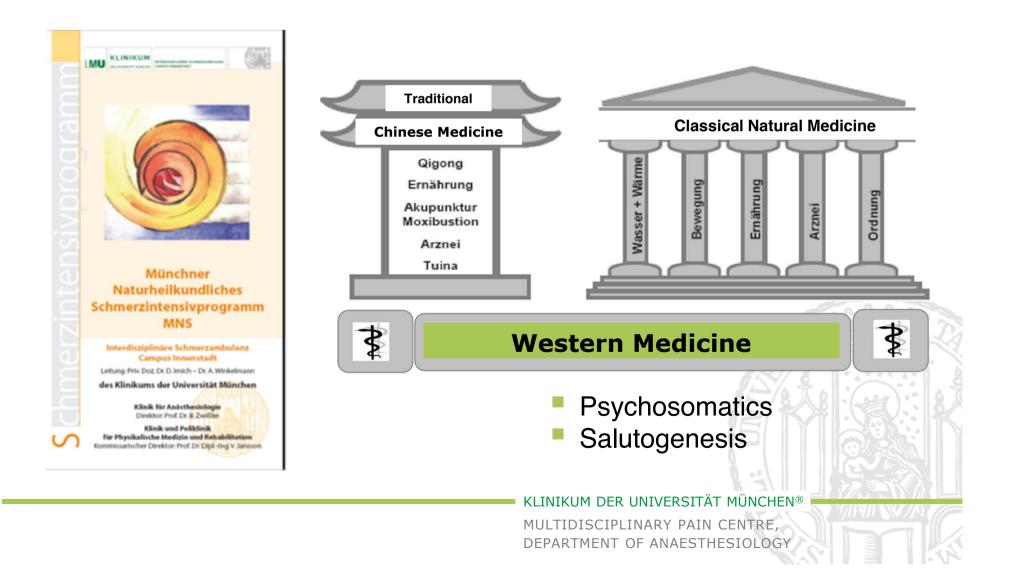
Favours tai chi

Taiji practice may reduce the rate of falls and injury related falls over the short term by approx. by 43% and 50% respectively

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Favours control

MUNICH OUTPATIENT PROGRAM IN COMPLEMETARY AND ALTERNATIVE MEDICINE FOR CHRONIC PAIN



MUNICH OUTPATIENT PROGRAM IN COMPLEMETAR

Therapy

Hydrotherapy Acupuncture Reflexology TENS Physiotherapy Occupational therapy CNM Self treatment





Body Awareness, Self Treatment, Stress Reduction

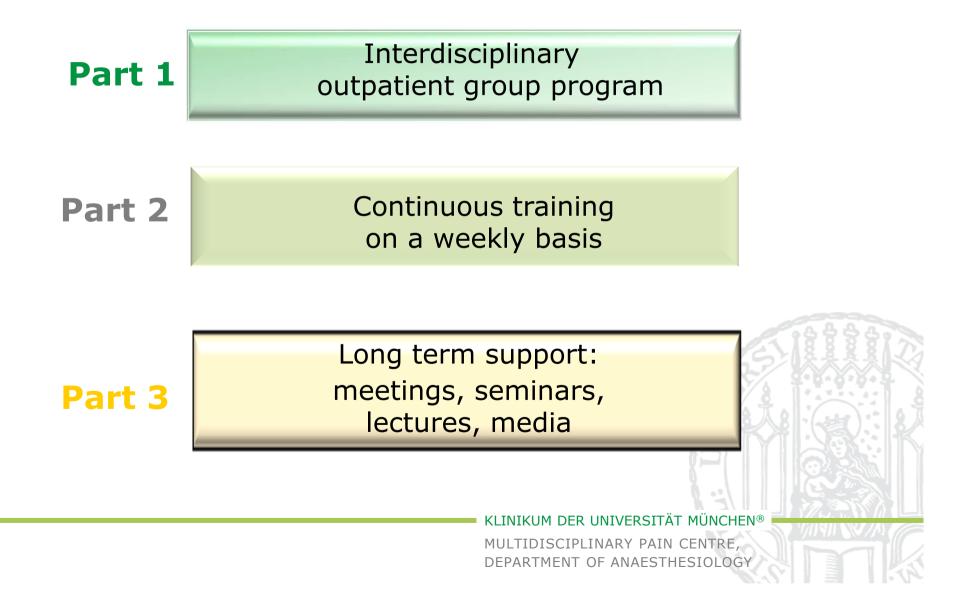
Meditation and Imagination Breathing Therapy Qigong Art Therapy Rhythmics Psychotonic

Information and Education



Bio-psycho-social model Anatomy, Physiology Pharmac. and nonpharmac. treatment Theory of TCM and CNM Stress reduction Work and life balance Diet as a general approach to wellbeing and health

MUNICH OUTPATIENT PROGRAM IN COMPLEMETAR



MUNICH OUTPATIENT PROGRAM IN COMPLEMETARY

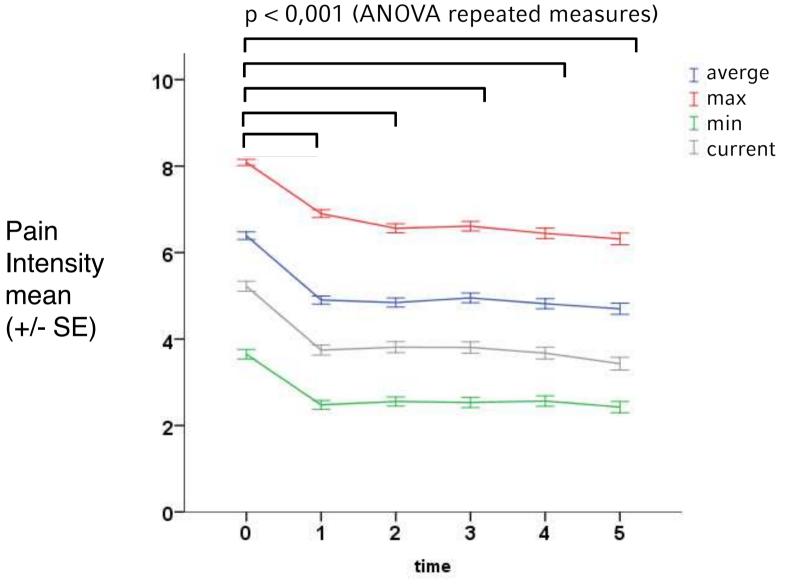
488 patients (77 groups) 20.11.2001 –17.04.2015



Age (Mean,SD)	53.1 (13.1)
female, n (%)	396 (81.1%)
Patients highly chronified n (%) Chronifizierungsgrad nach Gerbershagen III	317 (65.0%)
Duration of pain, Median (IQR)	53.5 (18.0 – 140.5)
uration of pain, Mean (SD)	102.1 (118.6)
Pain at 2 sites and more	240 (49.2%)
Continuous pain n (%)	313 (64.1%)

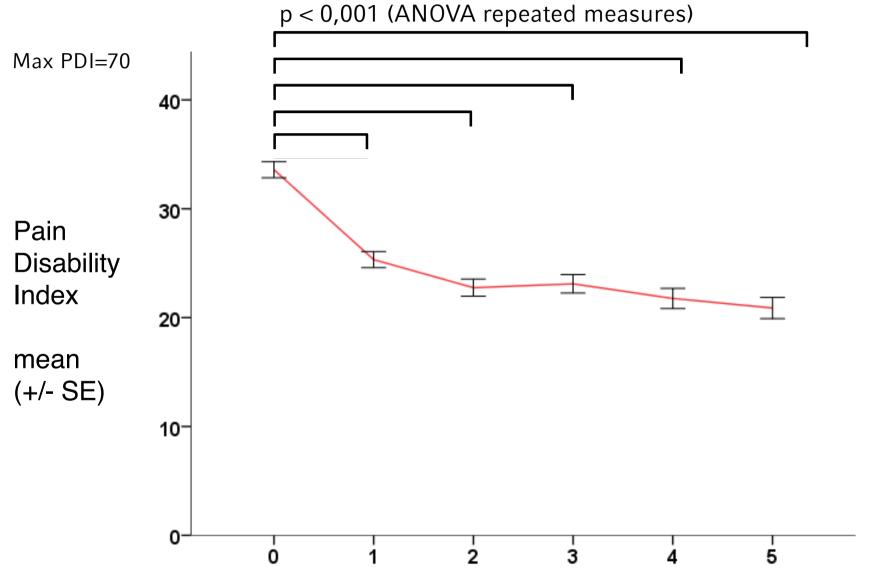


RESULTS – PAIN INTENSITY





RESULTS – PAIN DISABILITY INDEX (PDI)



time



RESULTS – CLINICAL RELEVANCE

Effect size (Cohen`s)		t1	t2	t3	t4	t5
Pain Intensity [NRS 0-10]	mean	0.80	0.76	0.75	0.73	0.84
	maximum	0.81	0.95	0.90	0.90	1.01
	minimum	0.50	0.51	0.52	0.43	0.51
Disability (PDI)		0.50	0.79	0.76	0.77	0.81



- There is moderate to strong evidence for short term effects of Qigong and Taiji in osteoarthritis and FMS compared to no treatment control
- Qigong and Taiji seems to be equal to exercises in CNP and LBP
- More research is required, but adequate for CAM
- Qiging can easily intergrated into multimodal treatment approaches