

# Yoga and Arthritis

Compiled by: Trisha Lamb

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## **International Association of Yoga Therapists**

P.O. Box 2513 • Prescott • AZ 86302 • Phone: 928-541-0004

E-mail: [mail@iayt.org](mailto:mail@iayt.org) • URL: [www.iayt.org](http://www.iayt.org)

The contents of this bibliography do not provide medical advice and should not be so interpreted. Before beginning any exercise program, see your physician for clearance.

**NOTE:** See also the “Fibromyalgia” bibliography.

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**Abstract:** Background: This study was designed to determine rheumatologists' self-reported knowledge, perceptions of legitimacy, referral patterns, and use in practice of 22 complementary and alternative medicine (CAM) therapies. Methods: A survey was mailed to a random sample of 2000 physician members of the American College of Rheumatology asking respondents which (if any) CAM therapies they (1) knew enough about to discuss with patients, (2) considered part of “legitimate medical practice,” and (3) “personally administered” to patients, or “referred patients to someone else” to administer. The response rate was 47%. Results: On average, the respondents reported knowing enough to discuss 10 of the therapies with patients, considered 9 to be part of legitimate medical practice, and had referred patients to someone else for 8 of the 22

therapies. Correlates of use and/or referral included sex, age, belief in the legitimacy of the therapies, and self-reported knowledge. Conclusions: These results provide potentially important preliminary data regarding rheumatologists' responses to dramatic increases in the use of CAM therapies among their patients.

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From the website: "Exercise often feels like an impossible dream if you have rheumatoid arthritis, yet you know that exercise will often help you feel better. Here is an easy, enjoyable Yoga routine that provides all the right moves. All of the exercises can be done in a chair, and many can even be done in bed. Program 1 is for those with mild to moderate RA, and Program 2 is for those experiencing a flare-up of symptoms."

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"Comment: Some of the improvements seen here did not meet statistical significance. Left hand grip strength, however, and the improvement in right hand grip strength was still impressive (22%). Practices such as yoga and Tai Chi are very beneficial for patients with arthritic changes of any kind, as well as demonstrating greater functionality for aging persons whether or not a pathological diagnosis has been made . . ."

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Program Summary: "Exercise has been recognized as an essential component of the management of patients with a variety of rheumatic diseases. Previous work has demonstrated that exercise can reduce the pain and disability of osteoarthritis, but compliance with exercise programs can be difficult to maintain. Our preliminary work has suggested that yoga has benefits in osteoarthritis management and we are continuing our investigations into the potential mechanisms that may be involved, including analysis of gait."

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“I have rheumatoid arthritis. I am doing quite well using an alternative treatment protocol—see [www.rheumatic.org](http://www.rheumatic.org), which saves me from taking the heavy-duty drugs. It’s been a while since I had a flare-up, but I have a few hints concerning yoga.

“It is advised to not do weight-bearing exercises on an inflamed joint.

“Gentle joint opening exercises and range of motion movements are important. During serious flare-ups it is even advised to have someone passively move the joints to not lose range of motion. I’m not suggesting that yoga teachers do that, I just want to stress how important the range of motion part is, because it gets lost fast.

“I have worked as yoga teacher (teaching 6-10 classes per week) even through some nasty flare-ups and can tell you that this has been my saving grace. Often I would have preferred not to move at all because of the pain but did it because of my commitment to my students and every time I felt better after yoga class than before.

“Hot bath before class (that infra-red sauna sounds great!) helped and after it lots of ice on the inflamed joints. I would start a couple hours before class to be ready for it. I would also splint or wrap flaring joints . . .

“Then I am modeling to my students how to take care of my body by modifying poses to my needs, while I am assisting them in doing the poses to their capacities. It works very well.

“Rheumatoid arthritis can involve any joint (there are joints I never knew existed until they flared up) but frequently hands, wrists, shoulders, hips, knees, ankles, feet are involved. Modifications are needed to avoid weight bearing on the inflamed joint.

“Fatigue is a component of the disease, so restorative poses, shavasana, meditation can help. I don’t know if you get into it in your class, but diet is important. A sattvic diet helps and paying attention if any specific food causes a flare-up.”

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Abstract: This article is a personal essay describing the methodology for and orientation to teaching therapeutic Yoga in a mixed milieu. Many of the students have complex conditions such as multiple sclerosis, fibromyalgia, rheumatoid arthritis, cancer, or chronic fatigue. Others have suffered structural trauma from car accidents and are contending with soft tissue injury and disc compression. In spite of the irrefutable challenge of addressing these various conditions simultaneously, years of working in this field has convinced the author that not only is it possible to do so, but it is highly rewarding for both the students and the teacher. It is the author’s hope that by sharing her experience it will encourage other therapists to move beyond the container of a specific pathology and reunite body, mind, and spirit in a healing, communal environment.

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“John Schlorholtz is the principle yoga instructor for Harvard University’s Center for Wellness. In this video, he shares yoga for people of all ages and types and those with injury and illness. Lubricates, strengthens, and creates space in all the major joints. Good for arthritis, poor circulation, and preparing for or recovering from surgery.”

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**Udupa, K. N.** Stress and arthritis. In K. N. Udupa, *Stress and Its Management by Yoga*. Delhi, India: Motilal Banarsidass, 1985. 2d ed., pp. 321-325.

“ . . . we have treated nearly 50 cases of rheumatoid arthritis of various joints including those of the spine with uniformly good results in almost all the cases within a period of six months . . . “

**Weller, Stella.** Arthritis (includes rheumatoid arthritis, osteoarthritis, ankylosing spondylitis, and gout); Autoimmune disorders (includes arthritis, rheumatoid arthritis, lupus, and scleroderma); Immune system disorders (includes rheumatoid arthritis and lupus). In Stella Weller, *Yoga Therapy*. London: Thorsons, 1995, pp. 90-91; 92; 111-112.

**White, Carrie.** Some arthritis sufferers find yoga and diet can offer nonpharmaceutical comfort. *East Valley Tribune* (Scottsdale, Arizona), 3 Feb 2005.

“Scottsdale rheumatologist Paul Howard doesn’t believe pharmaceuticals, by themselves, are the best way for people with arthritis to get better.

“Rather, Howard sees treatment for the disease—joint inflammation affecting nearly 70 million Americans—as involving a combination of exercise, supplementation, diet and, if needed, weight loss. His patients bear out his approach.

“Peggy McKee, 76, of Scottsdale first visited Howard’s office three years ago with an arthritis flare-up shortly after the death of her husband and a daughter. McKee, who suffers from rheumatoid arthritis, received a prescription for yoga. ‘I sometimes wonder if I still have arthritis,’ McKee says with a chuckle. McKee, who attends yoga class twice a week at a studio set up by Howard for arthritis patients, says the gentle form of stretching ‘has done wonders for me. I don’t take nearly the amount of medication I used to.’

“Winifred Doane, 75, received a prescription for yoga after Synvisc injections in the knee failed to help her osteoarthritis. ‘Yoga remade my whole life,’ says Doane, who attends yoga class twice a week at Arthritis Health in Scottsdale. Not only has her physical health improved, she says, but her mental well-being has, too. The Arizona State University professor emeritus is completely off medications, with the exception of glucosamine with MSM. And her bone density is back to normal after a diagnosis of osteopenia, a precursor to osteoporosis.

“Ginnie Livingston, a certified yoga therapist, oversees five levels of yoga at Arthritis Health. Livingston, a faculty assistant at ASU’s College of Nursing, says the huge changes she sees yoga making in the lives of arthritis patients is inspiring. She sees yoga as a great alternative or adjunct to pharmaceuticals as it does not mask symptoms but increases balance and strength and elevates mood.

“‘It really improves quality of life,’ she says . . .”

**Widdowson, Rosalind.** Rheumatism and arthritis. In Rosalind Widdowson, *The Joy of Yoga*. Garden City, N.Y.: Doubleday and Co., 1983, pp. 61-63.

**Yocum, D.E., W. L. Castro, and M. Cornett.** Exercise, education, and behavioral modification as alternative therapy for pain and stress in rheumatic disease. *Rheumatic Diseases Clinics of North American*, Feb 2000, 26(1): 145-159, x-xi. MEDLINE® PMID: 0010680202.

Abstract: Stress and pain mechanisms are complex and share many central nervous system pathways. Both are critical issues for patients with rheumatoid arthritis and other connective tissue diseases. The link between stress and neuroendocrine function suggests that alternative therapies focusing on improved psychologic and metabolic function could significantly change patients’ pain outcomes. Programs using alternative therapies such as tai chi and meditation in combination with traditional medications appear to be beneficial for patients with arthritis. These individuals appear to live better lives and may have better long-term outcomes.

**Yoga Biomedical Trust Survey.** Statistics on arthritis and rheumatism and Yoga. Number of cases: 589; percent claiming benefit: 90%. See: <http://urt.org/recovery.html>.

\_\_\_\_\_. Arthritis classes. URL: <http://freespace.virgin.net/yogabio.med/> (click on “Yoga Therapy & How to Try It,” then click on “Index-Alphabetical,” then click on “Arthritis”).

**The Yoga for Health Foundation.** Yoga for Arthritis classes. For more information, contact: The Yoga for Health Foundation, Ickwell Bury, Ickwell Green, Biggleswade, Beds. SG18 9EF, Great Britain, tel: 01767 627261, fax: 627266, URL: <http://www.yogaforhealthfoundation.co.uk/remedialyoga.htm#arthritis>.

### ***Videotapes and Audiotapes***

**Adams, Jenni.** *Befriend Your Arthritis* audiotape. Torquay, Devon: Mind Your Body Cassettes. (Address: 5 Thurlow Road, Torquay, Devon TQ1 3DZ, England)

Focuses on “legs, hips, neck, wrists, shoulders and balance. Includes fourteen postures, two link movements, pranayama (expansion and awareness of breath), deep relaxation and visualization.”

**Crotzer, Shoosh.** *Yoga for MS and Related Conditions* video (previously titled *Pathways Exercise Video for People with Limited Mobility*). Mobility Limited. 48 minutes. URL: <http://www.mobilityltd.com/pathways.htm>, tel.: 800-366-6038, 805-772-9253.

This tape is for “anyone with limited mobility, including those with: multiple sclerosis, mild arthritis, chronic illness or pain, post-polio syndrome, chronic fatigue, . . . seniors and anyone with daily stresses, as well as people who are overweight or temporarily limited.” Comes with a 56-page instruction guidebook.

**Sidelman, Shelley.** *Yogability and You* video or DVD. 60 minutes. URL: [www.yogabilityandyou.com](http://www.yogabilityandyou.com).

From the website: “Shelley’s approach to yoga combines soft and gentle stretching exercises (no pretzel postures!) with simple breathing and relaxation techniques. It is both therapeutic and rehabilitative, as well as ‘heart healthy’ and helps to gentle some of the tumbling thoughts that clutter your mind.

“Whether you have multiple sclerosis, arthritis, Parkinson’s, or fibromyalgia or you are recovering from an illness, accident or surgery, *Yogability and You* is designed specifically to enable you to reduce pain, increase circulation, and improve flexibility.”

**Yogic Sciences Research Foundation.** *Flexibility (anti-rheumatoid)* video. East Lansing, Mich.: Yogic Sciences Research Foundation. Email: [reschbach@yahoo.com](mailto:reschbach@yahoo.com), URL: <http://www.geocities.com/yoga20012002/products.html>.

### ***Of Related Interest***

**Davis, Mary C., Alex J. Zautra, John W. Reich.** Vulnerability to stress among women in chronic pain from fibromyalgia and osteoarthritis. *Annals of Behavioral Medicine*, Aug 2001, 23(3):215-226.

Abstract: In two investigations, we studied vulnerability to the negative effects of stress among women in chronic pain from 2 types of musculoskeletal illnesses, fibromyalgia syndrome (FMS) and osteoarthritis (OA). In Study 1, there were 101 female participants 50 to 78 years old: 50 had FMS, 29 had OA knee pain and were scheduled for knee surgery, and 22 had OA but were not planning surgery. Cross-sectional analyses showed that the three groups were comparable on demographic variables, personality attributes, negative affect, active coping, and perceived social support. As expected, FMS and OA surgery women reported similar levels of bodily pain, and both groups scored higher than OA nonsurgery women. However, women with FMS reported poorer emotional and physical health, lower positive affect, a poorer quality social milieu, and more frequent

use of avoidant coping with pain than did both groups of women with OA. Moreover, the perception and use of social support were closely tied to perceived social stress only among the FMS group. In Study 2, we experimentally manipulated negative mood and stress in 41 women 37 to 74 years old: 20 women had FMS, and 21 women had OA. Participants from each group were randomly assigned to either a negative mood induction or a neutral mood (control) condition, and then all participants discussed a stressful interpersonal event for 30 min. Stress-related increases in pain were exacerbated by negative mood induction among women with FMS but not women with OA, and pain during stress was associated with decreases in positive affect in women with FMS but not women with OA. These findings suggest that among women with chronic pain, those with FMS may be particularly vulnerable to the negative effects of social stress. They have fewer positive affective resources, use less effective pain-coping strategies, and have more constrained social networks than their counterparts with OA, particularly those who experience similar levels of pain. They also seem to experience more prolonged stress-related increases in pain under certain circumstances, all of which may contribute to a lowering of positive affect and increased stress reactivity over time.

**Ezzo, Jeannette, Victoria Hadhazy, Stephen Birch, Lixing Lao, Gary Kaplan, Marc Hochberg, and Brian Berman.** Acupuncture for osteoarthritis of the knee: A systematic review. *Arthritis and Rheumatism*, Apr 2001, 44(4):819-825.

From a review at HealthCentral.com: “Ezzo and her colleagues looked at seven studies including nearly 400 patients with knee arthritis, one of the most common sites for the joint disorder. Although the investigators deemed only three trials to be of ‘high quality,’ they found that those studies’ results were strong enough to suggest acupuncture provides at least short-term relief from knee pain. The three studies compared ‘sham’ acupuncture to ‘real’ acupuncture. Two of the studies compared acupuncture with physical therapy and showed no advantage of one over the other.

“Acupuncture was first practiced in China more than 2,000 years ago. According to traditional theory, the human body has thousands of acupuncture points along pathways called meridians, and these pathways conduct energy throughout the body. Acupuncture is believed to keep this energy flow moving smoothly. Alternatively, some Western scientists speculate that the needle therapy helps release certain pain-killing chemicals from the central nervous system.

“According to the Arthritis Foundation in Atlanta, there is enough evidence to suggest acupuncture relieves pain for some arthritis sufferers. It has proven least effective against immune system-related arthritic conditions such as rheumatoid arthritis.”

**Ivanhoe Newswire.** Exercise helps arthritis. Winter Park, Fl.: Ivanhoe Broadcast News, 19 Aug 2002. For more information on this article, contact Peggy Nigh, University of Missouri, Dept. of Physical Therapy, 106 Lewis Hall, Columbia, MO 65211, email: [nighm@health.Missouri.edu](mailto:nighm@health.Missouri.edu), URL: <http://www.hsc.Missouri.edu/~arthritis/index.html>.

“Marilyn Bagnell learned [the] lesson when she joined [physical therapist Marian] Minor’s research program at age 75 with osteoarthritis. She says, ‘I happened into it by accident and I found out how much good it does me. I find if I miss a class I have problems with stiffness, so isn’t that an incentive to keep going?’

“Different exercises seem to help different pain. For example, strengthening the legs can help pain from knee arthritis. Exercise in warm water reduces stiffness from rheumatoid arthritis and aerobic exercise reduces joint swelling.

“Minor says, ‘Just knowing a few general exercises to do and how to do them can make a huge difference in your function and your comfort.’

“It made all the difference in Bagnell’s life. It improved the arthritis in her hands. ‘In two weeks, I doubled my time at the organ to 30 minutes and now I can play as long as I want to,’ she says.

“It also increased her energy. Now, there’s no stopping her.”

**LeBovidge, Jennifer Soriano, John V. Lavigne, and Michael L. Miller.** Adjustment to chronic arthritis of childhood: The roles of illness-related stress and attitude toward illness. *Journal of Pediatric Psychology*, 2005 30(3):273-286. Author email: jennifer.lebovidge@childrens.harvard.edu

Abstract: Objective: To examine the relationship of psychosocial stress and attitude toward illness to psychological adjustment among youth with chronic arthritis. Methods: Seventy-five youths with chronic arthritis aged 8-18 years were administered a semi-structured interview assessing illness-related and nonillness-related stressors in important life domains. Children also completed measures of attitude toward illness, depressive symptoms, and anxiety. Parents completed a measure of child psychosocial adjustment. Results: Higher levels of illness-related and nonillness-related stress were associated with higher levels of anxiety and depressive symptoms and parent-reported adjustment problems, while a more positive attitude toward illness was associated with lower levels of anxiety and depressive symptoms. Attitude toward illness moderated the relationship between stress and depressive symptoms. Conclusions: Results suggest the importance of assessing life stress and attitude toward illness among youth with arthritis and developing interventions to help children cope with arthritis-related stressors and promote a more positive attitude toward illness.

**Lumsden, D. B.** Tai chi exercises improve strength, range of motion in osteoarthritis patients. *Modern Medicine*, Apr 1998, 66(4):23.

**Pennix, Brenda W. J. H., Stephen P. Messier, W. Jack Rejeski, Jeff D. Williamson, Mauro DiBari, Chiara Cavazzini, William B. Applegate, and Marco Pahor.** Physical exercise and the prevention of disability in Activities of Daily Living in older persons with osteoarthritis. *Archives of Internal Medicine*, 22 Oct 2001, 161(19):2309-2316. Author email: bpennix@wfubmc.edu.

Conclusion: Aerobic [walking] and resistance exercise may reduce the incidence of ADL disability in older persons with knee osteoarthritis. Exercise may be an effective strategy for preventing ADL disability and, consequently, may prolong older persons' autonomy.

**Reuters Health.** Acupuncture shown to reduce arthritis pain. 23 Feb 2001. Available online: <http://www.healthcentral.com/news/newsfulltext.cfm?ID=48920&src=n1>.

**Reuters Health.** Tai Chi may ease arthritis pain in elderly. 20 Mar 2001. Available online: <http://www.healthcentral.com/news/newsfulltext.cfm?ID=50064&src=n1>.

“Elderly people with painful arthritis may find relief in an ancient Chinese exercise that combines slow movement with meditation, preliminary study findings suggest.”

\_\_\_\_\_. Aging US population increasing arthritis burden. 3 May 2001. Available online: <http://www.healthcentral.com/news/newsfulltext.cfm?ID=52381&src=n1>.

“An estimated 43.1 million Americans of all ages report having arthritis, and of those an estimated 7.8 million report that arthritis limits their daily activities in some way, according to the Centers for Disease Control and Prevention (CDC) in Atlanta, Georgia . . . The data, from 1997, also indicate that the number of people with arthritis has increased by 750,000 people per year since 1990, and the CDC predicts that by 2020, 11.6 million Americans will be limited by arthritis. The federal agency reports the figures in the May 4th issue of the CDC's Morbidity and Mortality Weekly Report.”

**Suttona, A. J., K. R. Muirb, S. Mockettc, and P. Fentemd.** A case-control study to investigate the relation between low and moderate levels of physical activity and osteoarthritis of the knee using data collected as part of the Allied Dunbar National Fitness Survey. *Annals of the Rheumatic Diseases*, Aug 2001, 60:756-764.  
Correspondence to: [ajs22@le.ac.uk](mailto:ajs22@le.ac.uk).

**BACKGROUND:** Physical activity is being recommended as an intervention for seemingly almost universal improvements to health. A potential concern with this recommendation for increased exercise is that some believe increased levels of activity may lead to increased incidence of osteoarthritis of the knee (knee OA), as a result of accelerated “wear and tear” of the major joints.

**OBJECTIVE:** To investigate the hypothesis that the occurrence of knee OA may be related to the duration of participation in some forms of sport and active recreation.

**METHODS:** The relation between habitual exercise, reported by a cross section of people surveyed in England, and self reported knee OA was investigated. Data were derived from the Allied Dunbar National Fitness Survey (1990-91). A matched retrospective case-control design was used and a new exposure classification system which categorized different grades of activities for different time periods for each subject's lifetime participation in regular physical activities was developed. Additional data on knee injuries sustained and bodily composition were also included in a multivariate analysis.

**RESULTS:** From 4316 people originally interviewed, 216 eligible cases (66 men, 150 women) were identified (mean age 57.1). Each case was matched to four controls. When

habitual sport/exercise participation were examined during a subject's life, only exposure to regular long walks and being physically active between the ages of 20 and 24 suggested any association with developing knee OA later in life. The only strong association found was a greatly increased risk of knee OA having previously sustained a knee injury ( $p < 0.01$ , odds ratio 8.0 (95% confidence interval 2.0 to 32.0)).

**CONCLUSIONS:** There was little evidence to suggest that increased levels of regular physical activity throughout life lead to an increased risk of knee OA later in life. Previous knee injury was associated with an increased risk of knee OA. Additionally, most injuries were caused through participation in physical activities. Hence, when deciding on participation in activities, it is worth taking the likelihood of joint injury into consideration, as the chance of injury is greater in some activities than others.

**Tetley, Michael.** Instinctive sleeping and resting postures: An anthropological and zoological approach to treatment of low back and joint pain. *British Medical Journal*, 23-30 Dec 2000, 321:1616-1618.

### ***Ongoing Research***

**Arthur J. Barsky, M.D.**

Professor of Psychiatry

Brigham and Women's Hospital, Harvard Medical School

75 Francis St

Boston, MA 02115

617/732-5236

Investigating relaxation response, somatic style, and rheumatoid arthritis. Funded by NIH (NIAMSD).

**Measuring the power of positive outlooks.** Ongoing research at the University of Wisconsin-Madison on the science of emotions. For details, see:  
<http://www.news.wisc.edu/packages/emotion/>.

“Diagnosis with a serious illness can be overwhelming, but some people make a remarkable adjustment and manage to sustain a positive outlook and a sense of psychological well-being. This study compares symptoms and physiology in women with two debilitating conditions, fibromyalgia and rheumatoid arthritis, with the goal of determining the benefits of maintaining a positive emotional outlook. In a second phase of the study, half the women in each group will be taught a special type of meditation. Differences will be compared between the two groups in pain sensitivity, immune response and measures of psychological health.”