Yoga and Polio

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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.

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.”


“Conemaugh Health Systems has completed a preliminary outcome study evaluating the benefits of Hatha yoga and meditation in patients with post-polio syndrome (PPS). This research integrates clinical trials investigating the application of Hatha yoga with ongoing patient care and education. The results of this clinical trial will be used to develop a longitudinal data collection effort integrating research and clinical trials investigating the applications of Hatha yoga with ongoing patient care and education . . .

“This study enrolled 23 patients. All patients participated in a 5 day retreat in Johnstown, PA followed by 12 weeks of home practice with a video specifically developed for this clinical trial. The data was analyzed via one-way repeated measures analysis of variance in order to estimate an effect size to guide a sample size/power analysis for subsequent clinical trials. Seven outcome measures were used to assess patient response to the interventions and compare reliability among the scales used. Patients were assessed at 3 time periods: baseline (first day of retreat), last day of retreat and 12 weeks after the retreat. For all outcomes, except visual analogue scale (VAS) fatigue, significant differences were found between baseline and last day of retreat [measurements included VAS Pain, Yoga Self-Efficacy, Fatigue Severity Scale, Fatigue Impact Scale, VAS Fatigue, and VAS Weakness]. As for the baseline and 12 week comparison, significant differences were found for VAS measures as well as Yoga Self-Efficacy and Fatigue scales.

“These results showed significant improvements in a patient population where a lack of deterioration is often viewed as success. These patients improved and at the end of 12 weeks they were actively involved in self-care. Subsequent studies will be designed so that multiple centers can be involved and data can be pooled to produce a hardy set for subsequent analyses.”

“Yoga has provided benefits to me in improving breathing, maintaining flexibility, improving balance, and reducing stress. I have post-polio syndrome with loss of muscle strength, and I do not seek to gain strength from yoga. I do have pulmonary problems, and the development of good breathing habits from yoga practice has noticeably improved my performance on pulmonary function tests. A stretching routine works off ‘morning stiffness’ more rapidly and keeps lower back pain and sciatica away. Habits developed from both yoga and Alexander Technique make me much more aware of my body and how it is functioning . . .”


John’s interest in Yoga began when his mother bought him books on Yoga to help him recover from childhood polio.


Shows a photo of children in a Yoga class, with the following caption (translated from French): “These children follow a course of yoga which helps them to stretch the muscles of the legs at the Institute of Rehabilitation Akshay Pratishthan of New Delhi. Of the 358 handicapped children who attend the institute, 120 have been paralyzed by polio.”


Moore, Debbie. HealthCare Adaptive Yoga. Sharp HealthCare, Rehabilitation Services, Recreation Therapy, San Diego, California. Tel. 858-541-3048.

“There are many physical and mental benefits derived from practicing hatha yoga. Most yoga classes are designed for students who can do standing poses. Sharp Rehabilitation Services Recreation Therapy offers an adaptive yoga class designed for individuals with physical limitations. At Sharp, recreation therapist and yoga teacher Debbie Moore leads a class using modified poses and no standing poses. The weekly class is performed from raised mat tables in the physical therapy gym. The class is open to anyone in San Diego who has a physical limitation. Current students include those with spinal cord injury, stroke, multiple sclerosis, post-polio and other mobility limitations. Due to the adaptive nature of the yoga class, many of the students state that they receive the same benefits from practicing hatha yoga as their able-bodied counterparts. These benefits include increased feelings of relaxation, deeper breathing, increased flexibility, increased posture or alignment, and less muscle stiffness and pain.”

Post-polio syndrome e psicologia. Article available online: http://www.postpolio.it/PPS_e_psicologia.htm. (In Italian; can be translated by Google.com translator.)

Contains a section on the benefits of Yoga for PPS.


Roller, Sunny. To reap the rewards of post-polio exercise. Article available online: http://ncpad.cc.uic.edu/whtppers/postpolioex.htm.

Includes the following section on Yoga:

“The following Yoga stretching exercise was part of the University of Michigan Wellness for Women with Polio Workshop and was particularly well received:

The Breathing Tree

- Stand or sit erect. Feet apart, body balanced over hips. Arms at sides, palms forward.
- As you inhale raise your arms slowly up. Stretch up, up.
- Exhale arms to starting position
- Inhale arms to starting position
- Inhale arms slowly up. Stretch up, up
- Exhale arms out at shoulder level. Turn head to look at fingertips
- Exhale twisting from the waist toward the direction you are looking
- Inhale forward. Turn head to look at other fingertips
- Exhale twisting from the waist toward the direction you are looking
- Inhale head forward and arms down to starting position.”


“A number of students demonstrated different poses of Yoga. George Joseph suffering from polio since 1970 and a student of Vasanthi won the hearts of the audience when he demonstrated his flexibility and ease with which he performed various asanas particularly bhujang asana and sarvang asana. Talking to India Post George said that by doing Yoga after effects of polio have slowed down. ‘Benefits of Yoga are not only physical but Yoga helps to cope with disability in a better way . . .’”

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“I have been practicing yoga with Vasanthi since 1993. Despite having limited use of my two legs due to polio, I am able to utilize yoga to strengthen my back muscles. I no longer have any lower back pain in spite of my disability and my busy working schedule as software engineer.”—Georg Joseph

*Unity Woods Yoga Center Newsletter.* URL:

S. H.: “. . . I started yoga because I have post-polio syndrome that affected the muscles in my right leg and I was having difficulty walking. Over the years, thanks to props and encouraging teachers, I have been able to increase my strength and balance. Without yoga I might be using a wheelchair or cane by now . . .”


This article contains a table that gives percentages of polio survivors (176 survivors were queried) trying various therapies as well as the percentage who found each therapy “very helpful” and of “no help.” Yoga was tried by 5% of those queried and was found “very helpful” by 33% and of “no help” by 11%.

**Of Related Interest**

**Black, Kathryn.** *In the Shadow of Polio: A Personal and Social History.* Addison-Wesley, 1996.

The author has been practicing yoga since the 1970s.


Abstract: To study the adaptability of postpolio muscles, 12 subjects (mean age 54 years) participated in a high-intensity resistance exercise program. Seventy-five percent met the criteria for postpolio syndrome. Isometric and isokinetic strength and muscle endurance were measured. Polio-affected muscles were identified in muscle biopsies. The biopsies were also used for measurements of enzymatic activities and for histochemical and histopathologic analyses. Pretraining strength values were less than half those of healthy controls, mean fiber areas were twice those of healthy controls, and oxidative enzyme activity was low. After training, a significant increase in isometric (mean 29%) and isokinetic (mean 24%) strength was observed and maintained for some time. This
demonstrates remaining adaptability in muscles already compensated from long-standing polio.


“Individuals are cautioned to stop if they become fatigued during their exercise program, or if they experience pain or aches in their muscles. Most polio survivors are able to continue increasing their exercise program to nearly the maximum exercise capability, though it clearly would take a full nine months if this program were strictly followed. Conditioning or aerobic exercise at this submaximal level allows the individual to regain a healthier sense of stamina without damaging delicate old motor units.

“It is imperative to incorporate the concept of pacing and spacing within the non-fatiguing general conditioning exercise program, meaning that rests are to be taken every few minutes.

“The 20% rule is sometimes also applied to polio survivors when they are given instructions in a home flexibility and stretching program so they do not exercise too vigorously.”

**IAYT Member Who Works with Post-Polio Patients**

**Judith Sullivan**
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814-467-3616 (W)
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Is currently involved in a pilot study for post-polio patients using Yoga as a main healing modality at Memorial Medical Center in Johnstown, Pennsylvania.

**Other Yoga Teachers/Therapists Who Work with Post-Polio Patients**
(Note: Some of the contact information may not be current.)
Norma Espy-Whittemore, Ph.D.
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Yoga on Wheels!™: Exercise, Stress-Reduction & Self-Care for Optimum Living
203-775-9094
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Yoga on Wheels!™ was designed to meet the needs of those with physical limitations and is suitable for people with multiple sclerosis, accident victims, war veterans, people with post-polio syndrome, victims of domestic or sexual violence, and all people who find themselves in wheelchairs looking for solace, relief, and happiness. Yoga on Wheels!™ is available to local, regional, and national support groups and organizations, and is offered in three formats: one-day workshop, weekend retreat, eight-session teleclass.

Linda Lack
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Initiated the first Yoga program at Cedars Sinai Breast Center for Women and has shared the technique with people living with AIDS, chronic fatigue syndrome, post-polio syndrome, and a spectrum of orthopedic issues.

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