

## Study: In-patient, out-patient stroke rehab might benefit from yoga

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Researchers looking into the value of adapted yoga for stroke rehabilitation report that after an eight-week program, study participants demonstrated improved balance and flexibility, a stronger and faster gait, and increased strength and endurance.

The study, involving researchers from the Richard L. Roudebush VA Medical Center in Indianapolis, Indiana University-Purdue University Indianapolis and IU Bloomington, exposed older veterans recovering from stroke to [yoga](#). The men and women had completed their post-stroke occupational and physical therapy before the study but continued to have impairments.

The findings from two new analyses of the study will be presented on Wednesday during the annual meeting of the American College of Sports Medicine in San Francisco.

Arlene Schmid, rehabilitation research scientist at the Roudebush VA Medical Center and principle investigator of the VA-funded study, said loss of functional strength, flexibility and endurance is common after a stroke, which can lead to long-term disability. She said 5 million Americans are living with the consequences of stroke, which can alter patients' lifestyles through decreased independence in activities of daily living, limited mobility and reduced participation in society.

"Clinicians need methods to manage and improve these post-stroke [physical impairments](#)," said Schmid, also an assistant professor of

occupational therapy in the School of Health and [Rehabilitation Sciences](#) at IUPUI.

Her analysis, "Physical Improvements After Yoga for People With Chronic Stroke," examined gains in functional strength, flexibility and endurance as a result of the yoga and found significant improvements in all areas. The yoga activities, she said in her report, might have "improved neuromuscular control, likely allowing for strength improvements in affected limbs, sides or areas of disuse."

Tracy Dierks, associate professor of physical therapy in the School of Health and Rehabilitation Sciences, focused his analysis of study findings on how well study participants could walk after the program.

In "The Effect of Balance Exercise Therapy on Gait Parameters in Individuals With Chronic Stroke," he reports that after the yoga program, the [study participants](#) showed improved balance and faster gait speeds with longer steps or strides. But, while the veterans could walk faster, they were unable to sustain this faster speed for the duration of the six-minute test.

"The gait findings from our study have the potential to greatly impact clinical practice for gait recovery," Dierks said. "The yoga intervention was designed to improve balance, not gait; we did not focus on improving gait at all. Yet we saw major improvements in most clinical gait measurements. But one often overlooked deficit remained: the inability to sustain gait speed for endurance."

Schmid concluded in her presentation that it might be appropriate to include yoga in the in-patient or out-patient rehabilitation people receive after a [stroke](#). Such a class should be taught by a yoga therapist who has had additional training in anatomy and physiology and how to work with people with disabilities.

Dierks is discussing his findings at 2 p.m. Wednesday, May 30, during the [gait](#) session. Co-authors are Peter A. Altenburger, IUPUI, and Schmid and Kristine K. Miller, Roudebush VA Medical Center.

Schmid is discussing her findings at 2 p.m. Wednesday, May 30, during the session on cardiovascular system, cardiovascular disease management, children and the elderly. Co-authors are Miller, Linda S. Williams, Erin DeBaun and Teresa Damush, IUPUI/Roudebush VA Medical Center; Marieke Van Puymbroeck, IU Bloomington; Dierks and Altenburger, IUPUI; and Nancy Schalk, Heartland Yoga.

Provided by Indiana University

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