

The logo for the Journal of Stroke & Cerebrovascular Diseases features the title in a bold, sans-serif font. The word 'Journal' is at the top, followed by 'of Stroke' in a larger size, and '& Cerebrovascular Diseases' below it. A large red ampersand is positioned to the left of the '&' symbol. The background is dark with a blue circular shape on the right side.

Journal of Stroke & Cerebrovascular Diseases

NEWS RELEASE FOR IMMEDIATE RELEASE

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For stroke survivors, modified cardiac rehabilitation can reduce the chances of death by 76%

***Research published in the Journal of Stroke & Cerebrovascular Diseases could change the
future of stroke care***

Philadelphia, May 3, 2022 — Survivors of serious stroke can reduce their chances of dying within the year by 76% if they complete a modified cardiac rehabilitation program that includes medically supervised exercise, prescribed therapy, and physician follow-up, according to [new research](#) published in the [Journal of Stroke & Cerebrovascular Diseases](#), published by Elsevier. The findings have the potential to change the future of stroke care.

The study is the latest research from the ongoing Stroke-HEART™ Trials at Hackensack Meridian JFK Johnson Rehabilitation Institute, located in Edison, NJ, USA.

The study shows that participants in the JFK Johnson Stroke Recovery Program also significantly improved exercise capacity, mobility, self-care, and cognition.

“After a stroke, sometimes family members are cautious. ‘Don’t get up, you might fall.’ Many caregivers of stroke survivors discourage stroke patients from being active and mobile,” said Sara J. Cuccurullo, MD, Chairman and Medical Director of JFK Johnson and a Co-Principal Investigator of the study. “But we are showing that even survivors of serious stroke can exercise safely in a supervised program — and they can benefit enormously.”

The JFK Johnson Stroke Recovery Program (SRP) provides 36 sessions of medically monitored interval cardiovascular training — as well as follow-up visits with a Physical Medicine and Rehabilitation physician along with psychological, nutritional, and educational support and risk factor (such as smoking, diet, and exercise) management. The research found that stroke patients, even those who may experience hemiplegia, can exercise safely with some modifications, such as the use of recumbent bicycles.



Caption: Sara J. Cuccurullo, MD, Chairman and Medical Director of the JFK Johnson Rehabilitation Institute and a Co-Principal Investigator, left, and Talya Fleming, MD, Medical Director of the JFK Johnson Stroke Recovery and Aftercare Programs and Co-Principal Investigator of the study. The physicians are in the rehabilitation gym where stroke patients exercise on recumbent bicycles (Credit: Hackensack Meridian JFK Johnson Rehabilitation Institute).

The research follows survivors with strokes serious enough to require inpatient hospital rehabilitation at JFK Johnson. The study so far has included more than 1,600 stroke survivors. Because stroke can vary greatly from one survivor to the next, the study created a subgroup of patients closely matched for gender, race, type of stroke, age, medical complexity, and functional scores at hospital discharge.

Of 449 patients in this subgroup, 246 completed the program. Among the patients who completed the program, four died within a year of their stroke. Among the non-participants, 14 patients died. This translates into a four-fold reduction in one-year all-cause mortality.

The researchers hope the ongoing research will persuade the Centers for Medicare & Medicaid Services (CMS) to cover comprehensive stroke rehabilitation the same way cardiac rehabilitation is covered in people who have cardiac events; both stroke and cardiac events involve the vascular system.

“Stroke survivors deserve the same benefits that patients with cardiac disease receive. As a nation, we need to do more to help patients with stroke improve their lives — to improve both their longevity and quality of life,” commented Talya Fleming, MD, Medical Director of the JFK Johnson Stroke Recovery and Aftercare Programs and Co-Principal Investigator of the study. “We should enable stroke survivors to function in the community at the highest level possible.”

The study also found the Stroke Recovery Program participants improved in other ways. Participants saw a 78% increase in their cardiovascular capacity. (Many people with stroke also have cardiovascular disease.) The Stroke Recovery Program participants showed steady improvement in scores related to mobility, self-care, and communication/cognition. Research results show the matched pairs function similarly at the beginning of the study; over time, the study SRP participants perform better compared to the non-participants as they move forward with the Stroke Recovery Program.

“You see a real divergence,” Dr. Cucurullo added. “What this means to patients is that instead of just walking around the house, maybe you can walk around the block. It means you can feed and take care of yourself at a much higher level of independence. We also see speech and cognition improve. Exercise has significant and multiple benefits associated with it, including promoting overall improvement in circulation, especially promoting enhanced circulation to the brain.”

The research continues. Future phases of Stroke-HEART™ Trials will include other rehabilitation institutes as the research expands nationally.

Notes for editors

The article is “Stroke Recovery Program with Modified Cardiac Rehabilitation Improves Mortality, Functional & Cardiovascular Performance,” by Sara J. Cucurullo, MD, Talya K. Fleming, MD, Stavros Zinonos, PhD, Nora M. Cosgrove, RN, CCRC, Javier Cabrera, PhD, John B. Kostis, MD, DPhil, Christine Greiss, DO, Arlen Razon Ray, PT, MHM, Anne Eckert, AuD, MBA, CCC/A, Rosann Scarpatti, RN, Mooyeon Oh Park, MD, MS, Martin Gizzi, MD, PhD, and, and William J. Kostis, PhD, MD (<https://doi.org/10.1016/j.jstrokecerebrovasdis.2022.106322>). It appears in the *Journal of Stroke & Cerebrovascular Diseases*, volume 31, issue 5 (May 2022), published by [Elsevier](#).

Full text of the article is available to credentialed journalists. To request the full text, additional information, or an interview with the authors, contact Carol Ann Campbell at +1 973 567 1901 or cacampbell101@gmail.com.

About the *Journal of Stroke & Cerebrovascular Diseases*

The Journal of Stroke & Cerebrovascular Diseases publishes original papers on basic and clinical science related to the fields of stroke and cerebrovascular diseases. Its editorial mission is to focus on prevention and repair of cerebrovascular disease. Clinical papers emphasize medical and surgical aspects of stroke, clinical trials and design, epidemiology, stroke care delivery systems and outcomes, imaging sciences and rehabilitation of stroke. www.strokejournal.org

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About Hackensack Meridian JFK Johnson Rehabilitation Institute

Named in the Top 30 Rehabilitation Hospitals in the Country by *U.S. News and World Report*, JFK Johnson Rehabilitation Institute is a 94-bed facility in Edison, New Jersey, that offers the state's most comprehensive rehabilitation services to restore function and quality of life to those with physical impairments or disabilities. For nearly 50 years, JFK Johnson has served children and adults in the tri-state area — and has developed programs in specialties such as brain injury, stroke rehabilitation, orthopedics/musculoskeletal and sports injuries, cardiac

rehabilitation, pediatrics, and prosthetics and orthotics. As part of the Hackensack Meridian Health network, JFK Johnson Rehabilitation Institute includes Johnson Rehabilitation Institute at Ocean University Medical Center and Johnson Rehabilitation Institute at Riverview Medical Center. Each rehabilitation hospital brings together highly specialized physicians and professionals with the goal of “Advancing What’s Possible” for every patient. The JFK Johnson Rehabilitation Institute also partners with the St. Joseph’s Health Acute Rehabilitation Unit at St. Joseph’s Wayne Medical Center in Wayne, New Jersey. JFK Johnson Rehabilitation Institute serves as the Physical Medicine and Rehabilitation Department of the Hackensack Meridian School of Medicine and Rutgers Robert Wood Johnson Medical School. To learn more, visit JFKJohnson.org.