Researchers study potential rehab following 'mini stroke'

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Transient Ischemic Attacks (TIA) are often called "mini strokes" for good reasons -- the short-term symptoms can mimic a stroke and up to 10 percent of first-time sufferers often experience full-blown strokes within as little as 90 days. Despite the well-known statistics, no post-TIA regimen exists to help prevent future strokes -- but this might be changing.

Indiana University researcher Marieke Van Puymbroeck on Wednesday (Feb. 24) discussed preliminary—and promising -- findings that a modified version of cardiac rehabilitation was effective at addressing some of the risk factors for stroke in just six weeks. The most common risk factors for stroke -- hypertension, physical inactivity, elevated lipids and diabetes -- also are leading risk factors for heart disease.

Van Puymbroeck, one of four researchers discussing TIA-related research during a press conference at the American Stroke Association's International Stroke Conference 2010, is teaming up with Bloomington Hospital, in Bloomington, Ind., to look for a possible post-TIA treatment. She said more research and treatment options are needed to help people who experience a TIA reduce their risk for stroke, which can be debilitating and deadly.

"This is a health issue but it's also a policy issue," said Van Puymbroeck, an assistant professor in IU's School of Health, Physical Education and Recreation. "There needs to be greater access to rehabilitation after TIA in order to prevent future strokes."

Van Puymbroeck's study is following 14 first-time TIA sufferers who agreed to participate in a modified version of the second phase of cardiac rehabilitation, which is a well-established program nationwide. This second phase generally is conducted at a hospital on an out-patient basis and involves monitored aerobic exercise, resistance training and health education.

The participants saw improvements in blood pressure and physical function.

"High blood pressure is the number one risk factor for stroke, so to see such a large reduction in the six-week period is really exciting," Van Puymbroeck said. "We didn't track medication change, which could account for this, so we also need to be cautious."

Here are some of the findings:

- Systolic blood pressure was reduced by 8.71 millimeters of Mercury (mm Hg) and diastolic blood pressure reduced by 7.18 mm Hg. Other research has found that a change in systolic blood pressure of 5 mm Hg leads to a 14 percent decrease in stroke risk while a 5 mm Hg reduction in diastolic blood pressure leads to a 42 percent reduction in stroke risk.
- Gait speed and endurance improved significantly. This can be associated with increased community function and physical activity, which could lead to improved health in general.

The study participants, ages 44 to 85, began the program within a month of their TIA, participating in 1.5-hour sessions three times a week for six weeks. Van Puymbroeck said the American Heart Association and American College of Sports Medicine both encourage aerobic activity all or most days of the week, working up to 60 minutes per day, as well as

strength training for individuals who have high blood pressure or have had a stroke. She recommends that people get tested by their physician before starting any exercise program. She said the study will check in on the study participants six months and one year after they began their rehabilitation.

Provided by Indiana University