

# 'Broken heart syndrome' no longer a myth

July 13 2009

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Larry Cahalin, a clinical professor in physical therapy at Northeastern, observed broken heart syndrome twice in a woman participating in an ultramarathon cycling event.

(PhysOrg.com) -- Dying of fright or of a broken heart has long been dismissed as myth, but it's a real phenomenon that one Northeastern physical therapy professor and researcher has observed and studied.

The phenomenon recently recognized by the medical community and named "stress cardiomyopathy," mimics a heart attack in that the heart is unable to pump blood to the brain or to the rest of the body. But in this condition, blood flow is not blocked and the patient usually recovers with no long-term cardiac damage.

Referred to as “broken heart syndrome,” stress cardiomyopathy affects primarily women, typically elderly women following extreme emotionally stressful life events, like the death of a loved one or involvement in a car crash.

But the syndrome can also occur in younger women under intense physical stress. Larry Cahalin, a clinical professor in physical therapy at Northeastern, observed broken heart syndrome twice in a woman participating in an ultramarathon cycling event, called the “Race Across America”— a 3,000-mile, West Coast to East Coast event involving cycling as many as 22 hours a day.

Cahalin, who studies [heart failure](#) and methods physical therapists can use to help patients avoid and manage heart failure, studied ultramarathon cyclists for four years, measuring the effects of exercise on heart and pulmonary function.

One year, while following a dozen riders in the last leg of the Race Across America, he observed heart failure symptoms in a female cyclist, including marked shortness of breath and extreme leg swelling. He recommended she go to a hospital emergency room, where she underwent medical tests and was given drugs to remove the excess fluid filling her lungs, he said.

Once treated, she was fine. But a year later, she competed in the race again, and Cahalin observed again the onset of heart failure, but with milder symptoms, he said.

Researchers have found that broken heart syndrome occurs when adrenaline overwhelms the heart in response to a life stressor, like grief, fear, extreme anger or surprise.

Broken heart syndrome is getting increasing attention from researchers

and physicians. Cahalin noted that a large number of physical therapists in the United States work with patients who have heart disease, some of whom may have experienced broken heart syndrome.

“The condition is likely under-diagnosed and not completely understood,” said Cahalin. “It mimics a heart attack in that the heart becomes unable to pump blood to the brain and the rest of the body, with the possibility of life-threatening heart rhythm abnormalities.”

Provided by Northeastern University ([news](#) : [web](#))

Citation: 'Broken heart syndrome' no longer a myth (2009, July 13) retrieved 20 April 2024 from <https://medicalxpress.com/news/2009-07-broken-heart-syndrome-longer-myth.html>

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