

'Broken heart' syndrome can be triggered by stress, grief

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By Stacey Naggiar, NBC News



In 2005, Joel Bizon went into Maine Medical Center in Portland for a routine surgery. When the surgeon came out to report that the procedure was a success, Joel's wife Cyndy was relieved. For the next few hours, she sat by the waiting room phone, anxious to be reunited with her husband.

Instead, Cyndy got the news that Joel had taken a turn for the worse and had suffered a heart attack while in recovery.

"I just remember dropping the phone in shock," says Cyndy.

The next few days were a blur. Cyndy set up camp in the hospital, visiting her husband in the cardiac intensive care unit as often as she could. She wasn't eating or sleeping well. Eventually the stress would take a toll on her. Two days into Joel's recovery, Cyndy walked up to the nurses' station to check in. No one could have predicted what happened next.

"I remember feeling dizzy... and trying to grab the counter. I remember a curtain of black that I couldn't shake away coming down," Cyndy says.

Head nurse Cathy Palleschi recalls hearing a loud thud. She came out of her office to find Cyndy on the floor and immediately called a code. The team who attended to Cyndy was able to revive her and get her heart back to its normal rhythm within a couple of minutes. But Palleschi says she doesn't think Cyndy would be here today if the episode had occurred elsewhere.

A rush of hormones

Instead of being by her husband's side as he recovered, Cyndy ended up in the cardiac ICU herself, right across the hall. After ruling out a blockage, a stroke, and an epileptic seizure, doctors determined Cyndy had suffered something called "broken heart" syndrome.

"If someone cuts Joel, I bleed; we are that close. I could understand the stress that I was under, but didn't realize that it could have that kind of an effect on my heart," Cyndy says.

Dr. Ilan Wittstein, a cardiologist at Johns Hopkins Medicine, is part of the team that first coined the term "broken heart" syndrome, also known as stress

cardiomyopathy. According to Wittstein, the syndrome got its name because a lot of patients suffer from it after the death of a loved one. But it's not always triggered by grief.

"There are a wide variety of emotions that can cause this," says Wittstein. Extreme fear, anxiety and even being surprised can lead to stress cardiomyopathy, he says. In patients with "broken heart" syndrome, the extreme stress of an event triggers the brain to send a signal to the adrenal glands, located on the kidneys and responsible for regulating stress in the body. The adrenal glands release a surge of hormones that then rush to the heart, essentially paralyzing the muscle and causing it to shut down.

Wittstein says although the symptoms often mimic that of a typical heart attack — chest pain, shortness of breath — "broken heart" syndrome is different. Heart attacks are caused by a blockage, but in "broken heart" syndrome, the muscle of the heart becomes dysfunctional and doesn't squeeze normally. And unlike a classic heart attack, the heart is only temporarily "stunned" and usually recovers with no permanent damage. But Wittstein points out that in severe cases, a patient can end up in heart failure.

"When I'm asked, can you die of a broken heart, I say... absolutely, yes, you can," says Wittstein.

Registry tracks condition

Wittstein's research has found that up to 90 percent of broken-heart patients are women, most are post-menopausal and over the age of 55. Estrogen improves blood flow to the heart and experts suggest that as women age and levels of the hormone decline, the tissue surrounding their hearts becomes more susceptible to stress hormones. For this reason, a stressful event at age 25 — when estrogen levels are high — may not have the same effect on the heart as later in life, Wittstein says

Dr. Wittstein's team at Johns Hopkins has set up a stress cardiomyopathy registry. This initiative has been following people with the condition since 1999, in an attempt to get a clearer picture of the features of "broken heart" syndrome. With a broader understanding of the causes and clinical features, doctors can begin to identify particular risk factors and, one day, may be able to intervene early enough to prevent it from occurring in the first place.

Cyndy, now 64, and Joel, 63, both fully recovered. They enjoy long walks and golfing, making regular exercise an important part of their lives. They also visit the hospital each year on the anniversary of Cyndy's episode, calling it their "re-birth day." For Cyndy, the most important message of their story is, "to be thankful for every moment that you have because it can be snatched away from you so quickly, without you having any warning."

For more information about the Johns Hopkins University Initiative for Stress Cardiomyopathy go to: <http://www.hopkinsmedicine.org/asc/>