

CARDIOLOGY

Dying of a broken heart

The condition is not just a poetic metaphor — intense emotion can cause what's colloquially known as broken heart syndrome.



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It's not unheard for someone to die soon after the passing of someone he or she was close to. This happened to movie legend Debbie Reynolds, who died a day after her daughter, Carrie Fisher, passed on — and threw the spotlight on a condition called stress-induced cardiomyopathy.

It is also referred to as broken heart syndrome or takotsubo syndrome (TTS). The latter, Japanese for “octopus trap”, describes the shape of the left ventricle of the heart when it weakens.

TTS is believed to happen when stress hormones, such as adrenaline, temporarily disrupt the function of the left ventricle. These hormones cause changes in heart muscle cells and/or coronary blood vessels that prevent the left ventricle from contracting effectively.

TTS is typically brought on by intense stress, serious physical illness or surgery. It can also be triggered by strong emotions on the other end of the spectrum — researchers have found evidence that extreme happiness and sadness share common emotional pathways. These strong emotions overstimulate the sympathetic nervous system, resulting in a cardiovascular reaction. Certain drugs that induce a release of adrenaline or other stress hormones may also lead to TTS. Other risk factors for TTS include:

- Gender: the condition affects more women than men
- Age: it usually appears in people older than 50 years
- Medical history: at higher risk are people with existing neurological disorders (eg: epilepsy) and psychological disorders (eg: anxiety, depression), as well as those who have suffered head trauma



The heart attack that isn't

TTS — whose symptoms include chest pain and shortness of breath — can often be mistaken for a heart attack. However, unlike heart attacks, heart arteries are not blocked in TTS. Rather, it is more likely that the stress-induced weakness of the heart has reduced blood flow in the arteries.

Whatever the case, if you experience persistent chest pain, seek emergency medical attention. This is critical to rule out an actual heart attack and prevent complications such as:

- The backing-up of fluid into the lungs (pulmonary oedema)
- Low blood pressure (hypotension)
- Irregular heartbeat
- Heart failure

Mending TTS

The symptoms of broken heart syndrome are treatable and the condition usually reverses itself in days or weeks. Typically, treatment is similar to that for a heart attack. You may be prescribed heart medications to reduce the stress on your heart. There's a small chance that the condition can recur: there is no proven therapy to prevent additional episodes.