

# Death of spouse, child may cause higher heart rate, other dangers

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The death of a spouse or child can cause elevated heart rate and other potentially harmful heart rhythm changes among the recently bereaved, according to research presented at the American Heart Association's Scientific Sessions 2010.

These changes in how the heart functions — which could increase the risk of heart attack and sudden cardiac death — tend to revert back to normal ranges within six months, researchers said.

"While the focus at the time of bereavement is naturally directed toward the deceased person, the health and welfare of bereaved survivors should also be of concern to medical professionals, as well as family and friends," said Thomas Buckley, Ph.D., the study's lead researcher, acting director of postgraduate studies at the University of Sydney Nursing School in Sydney, Australia.

"Some bereaved, especially those already at increased cardiovascular risk, might benefit from medical review, and they should seek medical assistance for any possible cardiac symptoms."

Although heart attacks and sudden cardiac death have been shown in some studies to be more common among recently bereaved people, researchers have not been able to explain the cause for this phenomenon, or why the risk appears to dissipate with time.

Researchers studied 78 bereaved spouses and parents within two weeks

of the death of a spouse or child and after six months. They then compared them to a group of volunteers who had not lost a loved one. The bereaved participants consisted of 55 women and 23 men who were between 33 and 91 years old.

Using 24-hour heart monitors and other tests, the researchers documented increases in [heart rate](#) (the number of times a heart beats per minute), reduced heart rate variability (a measure of the heart's rhythmic regularity) and increases in clinical depression and anxiety.

"Increased heart rate and reduced heart rate variability in the early months of bereavement are possible mechanisms of increased cardiovascular risk during this often very stressful period," he said.

Among the researchers' findings:

- Bereaved patients had almost twice the number of episodes of rapid heartbeats, or supraventricular tachycardia (SVT), than non-bereaved participants in the first weeks after their loved one's death (2.23 vs. 1.23 episodes of SVT). However, after six months their numbers were lower than in the control group (0.58 vs. 0.66).
- The average heart rate for bereaved participants was 75.1 beats per minute (bpm) compared to 70.7 bpm in the non-bereaved in the early stages. But the rate for bereaved participants fell to 70.7 bpm after six months. Average minimum heart rates were 50.1 bpm initially for bereaved spouses and parents vs. 48.0 bpm in the others, and fell to 48.8 bpm after six months, almost identical to the non-bereaved volunteers.
- The average depression score in the bereaved was 26.3 compared

to just 6.1 in the control group, using the Centre for Epidemiological Studies – Depression and Spielberger State Anxiety scales. This difference declined after six months, yet remained almost three times higher than among the controls.

- The average anxiety score was 46.7 in the bereaved and 28.8 in the control group. After six months, the rate increased to 29.1 in volunteers who had not experienced a loss and dropped to 37.2 among the bereaved participants.

"While our findings do not establish causality, they are consistent with evidence for psychosocial triggering of cardiovascular events," Buckley said. "They suggest the need for further investigation of the link between bereavement and [cardiovascular risk](#), including the potential for preventive measures."

In the study, the bereaved had lost family members who were being treated in critical care areas of hospitals; so these results can't necessarily be generalized to the broader community, because deaths that occur in hospices or at home may elicit a different response to grief. Furthermore, there weren't enough bereaved parents in the study to assess their risk separately.

Provided by American Heart Association

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