

Loss of a co-twin linked to heightened psychiatric risk

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The death of a twin, especially earlier in life, can increase the risk of their surviving twin being diagnosed with a psychiatric disorder, finds a new study published today in *eLife*.

Losing a loved one is always difficult but losing a twin may be particularly so. By virtue of being the same age, twins share many common experiences and may have strong emotional bonds. The new study suggests those who lose a co-twin may require extra support in both the short and longer term.

"Losing a co-twin by [death](#) may be a particularly devastating life stressor with considerable health implications for surviving twins, yet there have been few studies on this type of bereavement," says lead author Huan Song, a senior researcher at West China Hospital, Sichuan University, China, and also at the University of Iceland and Karolinska Institute, Sweden.

Using the Swedish health registers and the Swedish Twin Registry, Song and colleagues identified all Swedish twins who experienced the

death of a co-twin between 1973 and 2013. They then compared the rates of psychiatric diagnoses in these bereaved twins with their non-twin siblings, and with 22,640 twins whose co-twin was still alive.

"We showed that the risk of being diagnosed with a psychiatric disorder increased by 55% to 65% after the death of a co-twin," Song says. This risk was highest in cases where a co-twin had died during childhood or young adulthood.

Surviving twins were most likely to receive a new psychiatric diagnosis in the first month after the death, when their risk of such a diagnosis was sevenfold higher than non-bereaved twins. But they continued to have a higher risk for more than 10 years after the loss.

The findings also revealed that the risk of being diagnosed with a psychiatric disorder after a co-twin's death was particularly high for [identical twins](#), who share all the same genes. These individuals had about a 2.5-times higher risk compared to their non-twin siblings. Surviving [fraternal twins](#), who are as genetically similar to their twin as their non-twin siblings, had about a 30% higher risk of a psychiatric diagnosis after the death of their twin than their non-twin siblings.

Senior author Unnur Valdimarsdóttir, Professor of Epidemiology at the University of Iceland explains that because of their genetic similarities and shared experiences, twins often develop a sense of shared identity, which may compound their grief after the loss of their co-twin.

"Our results suggest that both [genetic similarity](#) and early-life attachment may contribute to the subsequent risk of [psychiatric disorders](#) among surviving twins after the death of their co-twin," Valdimarsdóttir concludes.

More information: Huan Song et al, Risk of psychiatric disorders among the surviving twins

after a co-twin loss, *eLife* (2020). DOI:
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