

# Children with Kawasaki Disease at higher risk for heart problems 10 years later

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New research shows that children with Kawasaki Disease remain at an

increased risk for cardiovascular events more than 10 years after hospitalization for their condition, highlighting the need for long-term heart disease surveillance and risk reduction strategies for these young patients. Details of the study was presented at ACR Convergence, the American College of Rheumatology's annual meeting (ABSTRACT #0937).

Kawasaki [disease](#) (KD) is a childhood illness that causes blood vessels to become inflamed (vasculitis) and swell. KD is most common in [children](#) younger than five years old; however, [older children](#) can be affected too. Its exact cause is unknown. Without prompt medical evaluation and treatment, serious damage to the [blood vessels](#) of the [heart](#) may develop. KD is associated with coronary artery aneurysms.

Researchers in Ontario, Canada noticed that the incidence of KD has significantly increased in their province over the past two decades. However, the risk of long-term cardiovascular events after childhood KD diagnosis remains unknown. They launched this study to determine the risk and timing of long-term cardiovascular events and death among KD survivors.

"The motivation to perform this study came from a conversation I had with a patient's family as a first-year pediatric resident. Their child had been diagnosed with KD and was almost ready to be discharged from the hospital. They asked me whether their child would be at risk of heart disease later in life," says study co-author Cal Robinson, MD, BSc, Pediatric Nephrology Resident at The Hospital for Sick Children and the University of Toronto. "Not knowing the answer, I dug deeper into the published literature about cardiovascular outcomes after KD and found that a significant knowledge gap existed, particularly in children who did not develop coronary artery aneurysms during their acute illness. It's very important that we better understand the cardiovascular risk after childhood KD. Earlier diagnosis provides opportunities for intervention,

which may mitigate the risk of heart disease later in life."

The researchers identified all children up to 18 years of age who survived hospitalization for KD in Ontario between 1995-2018 using health administrative databases. They included only the first eligible hospitalization, excluding children who were previously diagnosed with KD, as well as non-residents of Ontario. They matched each KD case to 100 non-exposed control cases by age, sex and year. They then followed these patients until death or March 2019, or up to 24 years old. They determined the rates of cardiovascular events, major adverse cardiac events (such as heart attack or stroke) and death, comparing children who had KD with those who were not exposed to the disease. They looked specifically at four time periods after hospital discharge: 0-1 year, 1-5 years, 5-10 years and more than 10 years.

They found that, among 4,597 KD survivors, 746 or 16.2% experienced cardiovascular events compared with 5.2% of children without the disease. They also found that 79 or 1.7% experienced major adverse cardiac events compared to 0.7% of children without the disease, and nine died during the median 11-year follow-up period. The most frequent cardiovascular events experienced by KD survivors were ischemic heart disease, arrhythmias, [high blood pressure](#) and peripheral vascular disease. KD survivors were at higher risk of heart problems compared to patients who did not have the disease and they experienced [cardiovascular events](#) sooner. Their risk was highest in the first year after they were discharged from the hospital. They were also at higher risk of heart surgery like coronary artery bypass grafting. However, their risk of death during follow-up was lower than non-exposed patients.

"Our study results provide a signal that KD survivors have a higher risk of developing heart disease more than ten years after their initial diagnosis. This suggests that KD survivors should be screened at regular intervals for cardiovascular diseases and associated risk factors," says

Dr. Robinson. "Cardiovascular risk reduction strategies should be implemented for all KD survivors, including healthy active lifestyle counseling and early intervention when cardiovascular risk factors are identified."

**More information:** ABSTRACT #0937: [acrabstracts.org/abstract/late-onset-cardiovascular-risk-reduction-strategies-should-be-implemented-for-all-kd-survivors-including-healthy-active-lifestyle-counseling-and-early-intervention-when-cardiovascular-risk-factors-are-identified](https://acrabstracts.org/abstract/late-onset-cardiovascular-risk-reduction-strategies-should-be-implemented-for-all-kd-survivors-including-healthy-active-lifestyle-counseling-and-early-intervention-when-cardiovascular-risk-factors-are-identified)

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