

Doubled risk of anxiety for 18 month-old children with congenital heart defects

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Research from the Norwegian Institute of Public Health (NIPH) shows that children with severe congenital heart defects have twice the risk of anxiety at 18 months of age compared to healthy children. Children with mild and moderate heart defects, on the other hand, did not show an increased risk of anxiety.

"These findings suggest that [children](#) with severe forms of [congenital heart defects](#) are prone to emotional problems at a very young age. The increased risk of [anxiety](#) could be related to the number of medical procedures and hospital admissions that characterise the first years of life for these children," said PhD student Kim Stene-Larsen at the NIPH.

The NIPH is collaborating with the Department of Paediatric Cardiology at Oslo University Hospital on a major research project, HEARTKIDS.

In this follow-up study the researchers examined whether children with congenital heart defects had an increased risk of internalising problems such as anxiety or sleep problems at 18 months of age.

Out of 198 eighteen month old children with a congenital heart defect who were studied, 58 had a severe heart defect. Analysis showed that the children with a severe heart defect had a doubled risk of anxiety compared to healthy children.

In addition to the severity of the heart defect, maternal anxiety and depression explained some of the anxiety in these children. Children

with mild or moderate heart defects, however, showed no signs of anxiety or other internalising problems.

The HEARTKIDS project is a sub-study of the Norwegian Mother and Child Cohort Study (MoBa). The project is funded by the Norwegian Research Council. This [longitudinal study](#) aims to explore the psychological and developmental consequences of congenital heart defects in infants and toddlers. Through a merge of the MoBa and the Oslo University Hospital's nationwide register of congenital heart defects, which provides accurate diagnostic information about heart defects, it is possible to compare children with varying severity of heart defects with healthy children.

Previous findings from the HEARTKIDS project have shown that 6-month-old children with moderate or severe congenital heart defects show a higher risk of emotional reactivity (irritability, frequent and powerful crying).

Need for more knowledge about children with congenital heart defects

Approximately one percent of all newborn children have a congenital heart defect. The severity of the heart defects varies widely from minor defects to complex conditions that require a series of operations throughout the child's first year.

Several studies have shown that children with congenital heart defects down to 3 years of age are more prone to emotional problems like anxiety and depression. However, there is little knowledge about the [emotional problems](#) in infancy and early childhood, which is the phase of life where most of the medical treatment is carried out. The HEARTKIDS project is focusing on the phase from birth to child age 3 years of age.

More information: Longitudinal findings from a Norwegian case-cohort study on internalising problems in children with congenital heart defects is published online by *Acta Paediatrica*. [Doi: 10.1111/j.1651-2227.2010.02015.x](https://doi.org/10.1111/j.1651-2227.2010.02015.x)

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