# Increased risk of developing asthma by age of 3 after cesarean section

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A new study supports previous findings that children delivered by cesarean section have an increased risk of developing asthma. The study from the Norwegian Mother and Child Cohort Study (MoBa) suggests that children delivered by cesarean section have an increased risk of asthma at the age of three. This was particularly seen among children without a hereditary tendency to asthma and allergies.

Data from more than 37 000 participants in the MoBa study were used to study the relationship between delivery method and the development of lower respiratory tract infections, wheezing and asthma in the first three years of life. Children born by planned or emergency cesarean section were compared with those born vaginally.

The results indicate that children born by cesarean section have a slightly elevated risk for asthma at three years, but have no increased risk of frequent lower respiratory tract infections or wheezing. The increased risk of asthma among children delivered by cesarean section was higher among children of mothers without allergies.

## Unlikely to be caused by birth method

"It is unlikely that a cesarean delivery itself would cause an increased risk of asthma, rather that children delivered this way may have an underlying vulnerability," said Maria Magnus, a researcher at the Department of Chronic Diseases at the Norwegian Institute of Public Health. Magnus is the primary author of the article published in the

*American Journal of Epidemiology.*

Children delivered by cesarean section may have an increased risk of asthma due to an altered bacterial flora in the intestine that affects their immune system development, or because children born this way often have an increased risk of serious respiratory problems during the first weeks of life.

**More information:** Delivery by cesarean section and early childhood respiratory symptoms and disorders: the Norwegian Mother and Child Cohort Study. Magnus MC, Håberg SE, Stigum H, Nafstad P, London SJ, Vangen S, Nystad W. Am J Epidemiol. 2011 Dec 1;174(11):1275-85.doi: 10.1093/aje/kwr242

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