# Study Finds C-Section Born Children May Have Higher Risk of Poor MMR Vaccine Response



A study involving researchers from Cambridge University and Fudan University in China found that children born via caesarean section (C-section) may have a higher risk of not responding to their first measles, mumps, and rubella (MMR) vaccination. Analyzing data from 1,505 children, the study indicated that 12% of C-section born children did not develop an immune response to the first MMR dose contrasted with 5% of children delivered vaginally.

The researchers suggest that this discrepancy may be due to differences in the development of the gut microbiome between C-section and vaginally delivered children. Typically, vaginal births facilitate the transfer of diverse microbes from the mother to the baby, potentially enhancing immune responses to vaccinations.

However, the study, published in Nature Microbiology, also noted that C-section children who received the second MMR dose generally developed a robust immunity against measles, emphasizing the importance of completing the vaccination schedule.

In the UK, the NHS administers the first MMR dose to babies between 12 and 13 months, with a follow-up dose between three years four months and five years old. Despite these measures, only 85% of children receive both doses by age five, below the 95% needed to prevent measles outbreaks effectively.

The researchers and health professionals involved in the study advocate for ensuring that children, especially those born by C-section, receive both doses of the MMR vaccine to maintain high immunity levels against measles.