# Study shows C-section babies have lower immune response to initial measles vaccine



According to a study by experts from the University of Cambridge and Fudan University in China, babies born through Cesarean section have significantly less immune response to their initial measles vaccination compared to those who are born vaginally. The research, involving 1,505 children from Hunan, China, found that 12% of C-section born children showed no immune response to their first measles jab compared to just 5% of vaginally born children.

This outcome has been partially attributed to differences in the gut microbiome's development, which is influenced by the birth method. Vaginal births transfer more diverse microbes from mother to baby, potentially enhancing immune responses.

Given the increased risk of vaccine failure in C-section born children, researchers emphasize the importance of receiving a second dose of the measles vaccine to ensure adequate protection. This is critical not only for the health of the individual child but also for achieving herd immunity within the broader community.

The study also highlights a concerning trend in the UK, where measles vaccination rates are below the threshold needed to prevent outbreaks. As of the last quarter of the prior year, only 89.1% of children had received their first MMR dose by age two, and 85% had received both doses by age five, below the needed 95% for herd immunity.

This study has been published in the journal Nature Microbiology and adds to growing evidence on the impact of birth methods on immune system development and vaccine effectiveness.