

Rapid weight gain in first three months of life increases asthma risk

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Babies who gain weight rapidly in the first three months of life are more likely to develop asthma and for it to persist into adolescence. This is according to the latest research from the University of Bristol's Children of the 90s study, which analysed information on height, weight and asthma symptoms in almost 10,000 people in the study at various points in time from birth to age 17.

Of the 9,723 people studied, current asthma was reported for 13.9 per

cent of them at age eight, 13.2 per cent at age 14 and 15.3 per cent at age 17. Asthma is one of the world's most common chronic diseases in childhood, affecting 5.4 million people in the UK alone, including 1.1 million children (one in 11) and 4.3 million adults (one in 12). The UK has some of the highest rates in Europe and on average three people a day die from asthma, according to Asthma UK.

Although many factors are associated with an increased risk of asthma, the cause of asthma is still not known. It is now widely accepted that events in early childhood could be critical for asthma development: rate of foetal growth and low [birth weight](#) have both been associated with asthma.

In this study, lead researcher, Dr Agnes Sonnenschein-van der Voort, and colleagues found that rapid [weight](#) gain from birth to age three months was consistently associated with asthma at the ages of eight and 17 years. It was also associated with lower [lung function](#) and increased responsiveness of the airways; both signs of asthma. In contrast, rapid [weight gain](#) between three and seven years was associated with higher lung function and measures of obstruction at [age](#) 15 years.

Speaking about her discovery, Dr Sonnenschein-van der Voort said: 'It is clear from our research that there is a connection between babies gaining weight quickly in the first three months of life and the risk of them developing asthma later on. We are not sure exactly what causes this but it may be that [rapid weight gain](#) leads to abnormal development of the lungs or the immune system. Further studies will be required to confirm these findings.'

'We would recommend that GPs check a child's personal growth curve if they come to them with asthma-related symptoms and take this into account in their decision to start medication.'

Dr Samantha Walker, Director of Research and Policy at Asthma UK, added: 'Asthma is a complex condition, affecting one in 11 people in the UK, yet years of research underfunding means it still remains a relative mystery. The relationship between birth weight and the development of asthma is unclear; while these new findings show that babies who gain weight quickly in the first three months of life may be at increased risk of developing asthma, it has also been recognised previously that babies born with a [low birth weight](#) are more likely to develop asthma later on in childhood.

'More research is needed to get a clearer picture of the connection between a baby's weight and their likelihood of developing [asthma](#) in later life.'

More information: Agnes M.M. Sonnenschein-van der Voort, Laura D. Howe, Raquel Granell, Liesbeth Duijts, Jonathan A.C. Sterne, Kate Tilling, A. John Henderson, "Influence of childhood growth on asthma and lung function in adolescence," *Journal of Allergy and Clinical Immunology*, Available online 8 January 2015, ISSN 0091-6749, [dx.doi.org/10.1016/j.jaci.2014.10.046](https://doi.org/10.1016/j.jaci.2014.10.046).

Provided by University of Bristol

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