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Predicting adult asthma

Woolcock researchers have developed a novel method to calculate an overall probability of asthma in adulthood.

Parents often ask doctors for advice about whether their child will develop asthma, or if the child has asthma, whether the child will grow-out of it.

Long-term studies starting in childhood help researchers to find answers to this question.

Brett Toelle (Woolcock Institute of Medical Research, University of Sydney, Australia) and colleagues have been following a group of schoolchildren for 17 years.

Every two years the researchers visited the participants and collected questionnaire information and performed breathing tests and skin allergy tests. This has enabled the Australian team to use childhood characteristics, measured at age 8 – 10 years, to predict the likelihood of asthma 17 years later when the participants were adults.

Adults were classified as having asthma symptoms if they reported having wheeze, sleep disturbance due to breathing problems or had used inhaled steroid medication in the last year.

The characteristics in childhood that predicted having asthma symptoms in adulthood were having a positive skin allergy test, having extra-sensitive lungs to a challenge test, having wheezed in the last year, having an abnormal lung function test and being female

A statistic called the likelihood ratio was calculated for the presence or absence of each of the characteristics in childhood predicting asthma in adulthood.

This study provides doctors with information on which to base their assessment of the probability that a child will have asthma symptoms as an adult.