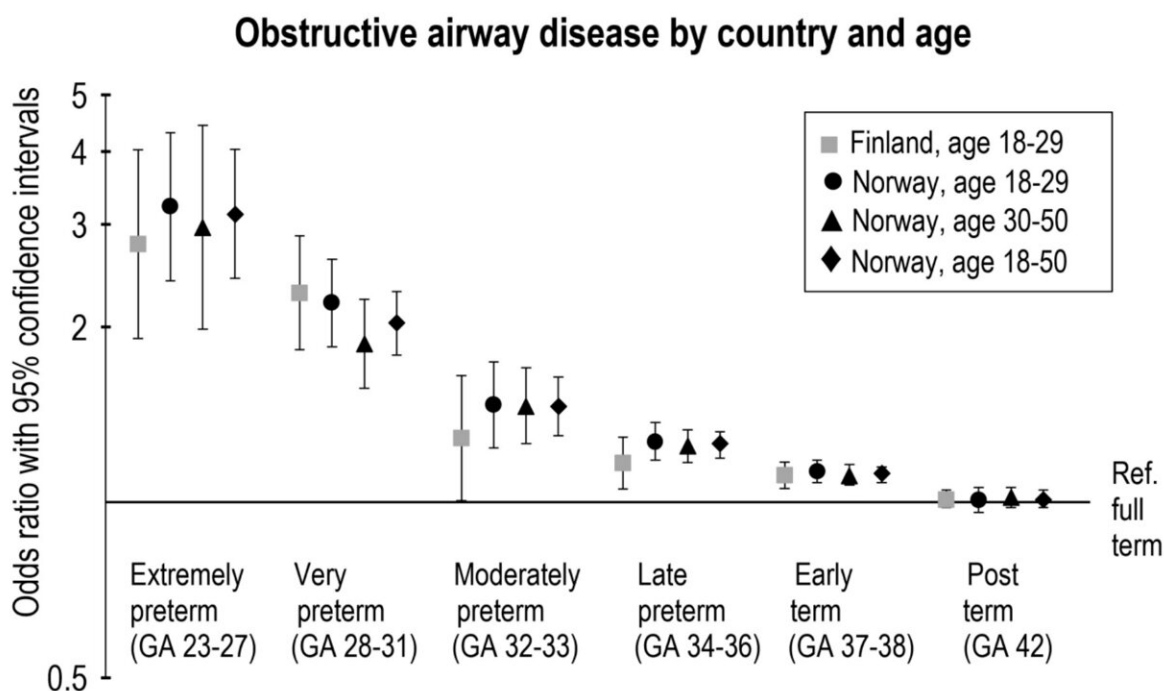


Children born preterm are more likely to have asthma or COPD in adulthood, shows large study

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Associations between gestational age and any obstructive airway disease (asthma or chronic obstructive pulmonary disease), adjusted for sex and birth year. GA = gestational age in weeks. Credit: *European Respiratory Journal* (2023). DOI: 10.1183/13993003.01763-2022

Breathing problems are among the most common problems that babies

born preterm have after birth. A new study of over 2.6 million people from Finland and Norway shows that such problems may extend at least up to middle age. The study found that babies born preterm are more likely to have asthma or chronic obstructive pulmonary disease, COPD, in adulthood. Asthma and COPD are the most common forms of obstructive airways disease, meaning diseases that cause difficulty in airflow out from the lungs.

Births before 37 weeks of pregnancy are counted as [preterm birth](#). The highest risk for asthma or COPD was in individuals who were born extremely preterm, before gestational age 28 weeks. Their risk was around 3-fold compared to those born full-term at gestational age 39-41 weeks.

"The risk decreased gradually as gestational age increased, but individuals who were born close to term, at [gestational age](#) 37-38 weeks, had still a slightly increased risk compared to the full-term. We also observed that the risk pattern was similar for men and women. However, the risk was up to 8-fold for those who had [bronchopulmonary dysplasia](#) in infancy. Bronchopulmonary dysplasia is a chronic lung disease common in the smallest preterm infants," says Dr. Anna Pulakka, the lead author from THL.

Professor Kari Risnes, from Norwegian University for Science and Technology NTNU explains, "Preterm birth affects lung health in many ways, and earlier studies have established that preterm birth is a risk factor for lung health in childhood. The current study shows that the risk extends at least up to [middle age](#)."

Increased risk for asthma and COPD was independent of many factors that are related to preterm birth and asthma, such as [socioeconomic status](#), age or asthma of the mother, prenatal disorders or mother's smoking during pregnancy.

"Other than smoking of the mother during pregnancy, we did not have information about smoking of the people included in the study. In earlier studies we have seen that people born preterm do not smoke more than people born full-term, thus smoking is not likely to explain our results." Anna Pulakka continues. "Smoking is still a major risk factor for asthma and especially COPD and quitting smoking is important for all."

The research team used national birth registers of all people born in Finland during 1987-1998 and in Norway during 1967-1999. Their health records were followed up until they were at maximum 29 years old in Finland and 50 years old in Norway. During the study period, around 5% of the children both in Finland and Norway were born preterm. After 18 years of age, about 41 300 people (1.6%) had asthma and about 2 700 (0.1%) COPD.

"We only studied asthma treated in specialist care, which is why we caught only the more severe end of the disease in this study, and not all who have [asthma](#). The low rates of COPD are additionally explained by the young age of the population in this study" says professor Eero Kajantie from THL. "Our message to [health professionals](#) is that medical history of patients presenting with respiratory symptoms should include birth conditions such as being born preterm."

The study is published in the *European Respiratory Journal*.

More information: Anna Pulakka et al, Preterm birth and asthma and COPD in adulthood: a nationwide register study from two Nordic countries, *European Respiratory Journal* (2023). [DOI: 10.1183/13993003.01763-2022](https://doi.org/10.1183/13993003.01763-2022)

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