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Titel des Beitrags: Early-life determinants of asthma from birth to age 20 years: a German birth cohort study.

Abstract: The lack of longitudinal data analyses from birth to adulthood is hampering long-term asthma prevention strategies. We aimed to determine early-life predictors of asthma incidence up to age 20 years in a birth cohort study by applying time-to-event analysis. In 1990, the Multicenter Allergy Study included 1314 newborns in 5 German cities. Children were evaluated from birth to age 20 years at 19 time points. Using a Cox regression model, we examined the associations between 36 early-life factors and onset of asthma based on a doctor’s diagnosis or asthma medication (primary outcome), typical asthma symptoms, or allergic asthma (including positive IgE measurements). Response at 20 years was 71.6%. Two hundred eighteen subjects met the primary outcome criteria within 16,257 person years observed. Asthma incidence was lower in participants who were vaccinated (measles, mumps, and rubella vaccine/tick-borne encephalitis vaccine/BCG vaccine: adjusted hazard ratio [HR], 0.66 [95% CI, 0.47-0.93]). Up to age 20 years, asthma incidence was higher in subjects who had parents with allergic rhinitis (adjusted HR, 2.24 [95% CI,
started day care early or late (before 18 months: adjusted HR, 1.79 [95% CI, 1.03-3.10]; after 3 years: adjusted HR, 1.64 [95% CI, 0.96-2.79]), had mothers who smoked during pregnancy (adjusted HR, 1.79 [95% CI, 1.20-2.67]), had poor parents (adjusted HR, 1.55 [95% CI, 1.09-2.22]), and had parents with asthma (adjusted HR, 1.65 [95% CI, 1.17-2.31]). Not associated with asthma were aspects of diet and breast-feeding, pet ownership, presence of older siblings, and passive smoking. Parental asthma and nasal allergy increase asthma incidence in offspring up to adulthood. Avoiding tobacco smoke exposure during pregnancy, receiving vaccinations in early childhood, and starting day care between 1.5 and 3 years of age might prevent or delay the development of asthma.

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