

Table 1. Epidemiological studies of preconception exposures related to asthma, allergies and lung function.

Reference	Study, country	Major findings
Smoking, occupation and environmental exposures		
Svanes et al. Int J Epidemiol 2017 [32]	RHINE, Northern Europe	Father smoking starting <15 years, father's welding preconception, and paternal grandmother's smoking; all strongly associated with offspring asthma
Accordini et al. Int J Epidemiol 2018 [33]	ECRHS, Europe (Australia)	Father smoking starting <15 years, and maternal grandmother's smoking in pregnancy, appears to cause offspring asthma
Liu et al. Eur Respir J 2022 [34]	TAHS, Australia	Father smoking starting <15 years associated with offspring asthma
Potts et al. Eur Respir J 2019 (abstract) [35]	Health Survey of England	Father smoking starting <15 years associated with offspring asthma in biological offspring, not in non-biological offspring
Accordini et al. Eur Respir J 2021 [36]	RHINESSA (offspring), RHINE/ECRHS (parents)	Father smoking starting <15 years, and paternal grandmother's smoking in pregnancy, appears to cause lower lung function in offspring
Li et al. Chest 2005 [37]	CHS, USA	Maternal grandmother's smoking in pregnancy associated with offspring asthma
Lodge et al. Clin Exp Allergy 2018 [38]	NSC, Sweden	Maternal grandmother's smoking in pregnancy associated with offspring asthma
Bråbäck et al. Pediatr Allergy Immunol 2018 [39]	Swedish national health registry-based cohort	Maternal grandmother's smoking in pregnancy associated with offspring asthma
Magnus et al. Thorax 2015 [40]	MoBa, Norway	Maternal grandmother's smoking in pregnancy associated with offspring asthma
Miller et al. Chest 2014 [41]	ALSPAC, UK	Paternal grandmother's smoking in pregnancy associated with offspring asthma
Kuiper et al. Int J Environ Res Public Health 2020 [42]	RHINESSA (offspring), RHINE/ECRHS (parents)	Parental air pollution <18 years associated with offspring asthma and allergy outcomes
Pape et al. Int Epidemiol 2020 [43]	RHINE/ECRHS (parents), RHINESSA (offspring)	Parental preconception job exposure to asthrogens not clearly associated with offspring asthma
Tjalvin et al. J Allergy Clin Immunol 2021 [44]	RHINE/ECRHS (parents), RHINESSA (offspring)	Mother's cleaning/disinfectant exposure preconception associated with offspring asthma
Overweight and metabolic disadvantage		
Johannessen et al. J Allergy Clin Immunol 2020 [49]	RHINE/ECRHS (parents), RHINESSA (offspring)	Father's overweight onset before voice break appears to cause offspring asthma
Lønnebotn et al. Nutrients 2022 [51]	RHINE/ECRHS (parents), RHINESSA (offspring)	Father's overweight onset before voice break appears to cause lower lung function in offspring

Bowatte et al. J Allergy Clin Immunol 2022 [50]	TAHS, Australia	Father's higher BMI trajectory at ages 7-15 years associated with offspring asthma
Yamamoto-Hanada et al. Allergol Int 2016 [52]	T-CHILD, Japan	Mother's oral contraceptive use associated with offspring asthma and allergies
Hancock et al. Pediatr Allergy Immunol 2011 [53]	MoBa, Norway	No association of mothers combined contraceptive pills with offspring asthma, weak association of progestin only pills with infant wheeze
Infections		
Jögi et al. Clin Exp Allergy 2018 [59]	Bergen ECRHS and RHINESSA, Norway	Parental helminth <i>Toxocara</i> seropositivity associated with more offspring allergies
López-Cervantes et al. Int J Tuberc Lung Dis 2022 [60]	Tuberculosis registry (parents), prescription registry (offspring), Norway	Parental childhood-onset tuberculosis associated with offspring asthma

CHS: Children's Health study in southern California; ALSPAC: Avon Longitudinal Study of Parents and Children; MoBa: Norwegian Mother and Child Cohort Study; RHINE: Respiratory Health In Northern Europe; ECRHS: European Community Respiratory Health Survey; NSC: Nationwide Swedish Cohort; RHINESSA: Respiratory Health In Northern Europe Spain and Australia; T-CHILD: Tokyo-Children's Health, Illness and Development Study