

Table S1 Embase search strategy (1988 to February 2017)

#	Searches	Results	Type
1	exp rhinovirus/	8204	Advanced
2	exp virus/	1252002	Advanced
3	exp respiratory virus/	4272	Advanced
4	exp infection/	2048585	Advanced
5	#1 OR #2 OR #3 OR #4	2597053	Advanced
6	exp infant/	723550	Advanced
7	exp children/	1530746	Advanced
8	exp childhood/	390871	Advanced
9	exp child/	2225785	Advanced
10	exp adolescence/	97643	Advanced
11	#6 OR #7 OR #8 OR #9 OR #10	3037398	Advanced
12	exp wheezing/	24103	Advanced
13	exp asthma	267125	Advanced
14	#12 OR #13	276878	Advanced
15	#5 AND #11 AND #14	13501	Advanced
16	#15 AND ([article]/lim OR [article in press]/lim OR [conference paper]/lim) AND [humans]/lim	7053	Advanced
17	exp 'case control study'/ OR exp 'case study'/ OR exp 'clinical trial'/ OR exp 'intervention study'/ OR exp 'longitudinal study'/ OR exp 'major clinical study'/ OR exp 'prospective study'/ OR exp 'retrospective study'/	4395666	Advanced
18	(discussion* OR group OR participant* OR course* OR followup).mp.	5593700	Advanced
18	#16 AND (#17 OR #18)	4878	Advanced
19	#18 AND ([newborn]/lim OR [infant]/lim OR [child]/lim OR [preschool]/lim OR [school]/lim OR [adolescent]/lim) AND [humans]/lim	4141	Advanced

Table S2 More details of studies included in meta-analysis (n=15)

Study	Study design	NO. of subjects with subsequent wheezing/asthma	Diagnosis	Adjustments	Statistical method	NO. of missing data	P ₀
Kotaniemi-Syrjänen ⁴⁰	Prospective cohort study	27	Mixed	Age, sex, and atopic dermatitis on entry	Logistic regression models	18	0.283
Hyvärinen ¹⁸	Prospective cohort study	32	Mixed	Sex, age, passive smoking, and atopic dermatitis on admission	Logistic regression models	19	0.34
Ruotsalainen ³⁵	Prospective cohort study	20	Mixed	Age, sex, smoking, allergic rhinitis, asthma in parents, and asthma in siblings	Logistic regression models	33	0.125
Lemanske ³⁹	Prospective, high-risk birth cohort study	76	Mixed	Maternal and paternal asthma, birth month and weight, dog and cat exposure, presence of older siblings, passive smoke exposure, daycare, exclusive breast-feeding, atopic dermatitis, and allergic sensitization to food protein at age 1 year	Logistic regression analyses	14	Not reported
Jackson ¹⁹	Prospective, high-risk birth cohort study	73	Mixed	Aeroallergen sensitization	Logistic regression models	30	0.238
Rubner ³⁶	Prospective, high-risk birth cohort study	Not reported	Mixed	Viral etiologies, atopy	Logistic regression models	72	Not reported
Kusel ³⁷	Prospective, community-based birth cohort study	37	Physicians	Gender, older siblings, environmental tobacco smoke exposure, breastfeeding, daycare attendance and parental asthma	Logistic regression analysis	65	Not reported

Kusel ²⁵	Prospective, community-based birth cohort study	27	Physicians	Sex, breastfeeding, pet ownership, older siblings, second-hand tobacco smoke exposure and daycare attendance, atopy	Log-binomial regression models	116	Not reported
Midulla ³⁸	Prospective cohort study	71	Physicians	Not reported	Logistic regression models	83	0.506
Midulla ²²	Prospective cohort study	138	Physicians	Not reported	Logistic regression models	51	0.276
Lukkarinen ²⁰	Prospective cohort study	51	Mixed	Parental asthma, any sensitization, eczema, day care, parental smoking, age at study entry, sex and viral aetiology	Cox proportional-hazards regression	0	0.416
van der Gugten ¹⁴	Prospective, population-based birth cohort study	13	Physicians	Resistance (Rrs) or compliance (Crs) of the respiratory system, gestational age, birth weight or atopic dermatitis	Logistic regression models	44	0.071
Teeratakulpisarn ²¹	prospective cohort study	41	Mixed	Not reported	Cox regression analysis	79	0.465
Takeyama ¹⁵	prospective cohort study	42	Physicians	Not reported	Chi-square test	73	0.493
de Winter ²³	prospective, community-based birth cohort study	17	Physicians	Birth weight, gestational age, male sex, having ≥ 1 siblings, maternal smoking during pregnancy, the presence of ≥ 1 highly educated parent, day care attendance, being breastfed ever, respiratory function at one month of age, atopic eczema in infancy, blood eosinophil count at one month of age, RSV LRTI during infancy and the presence of parental atopic eczema or allergic rhinitis	Generalized linear models	109	0.067

NO., number.