

OLIN-studiernas barn-kohorter

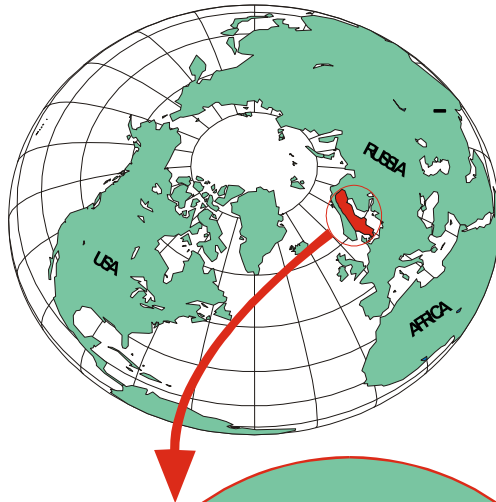
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Obstruktiv Lungsjukdom i Norrbotten (OLIN)

- epidemiologiska studier om *astma*, *allergi* och *KOL*
- pågår sedan 1985
- ca 60 000 individer i åldrar > 7år



Metoder

- tvärsnittsstudier
- longitudinelle studier
- fall-kontroll studier
- kliniska studier

Resultat

- 20 doktorsavhandlingar och ca 20 från samverkande projekt
- >> 200 original articles
- Sex doktorandprojekt pågår

- Fyra forskningslinjer; astma & allergi bland vuxna, astma & allergi bland barn, KOL, hälsoekonomi

www.nll.se/olin

www.facebook.com/olin-studierna



Tre pediatriiska kohorter

Rekryterade med 10 års mellanrum

Alla barn i klass 1 & 2 i Kiruna, Luleå och Piteå

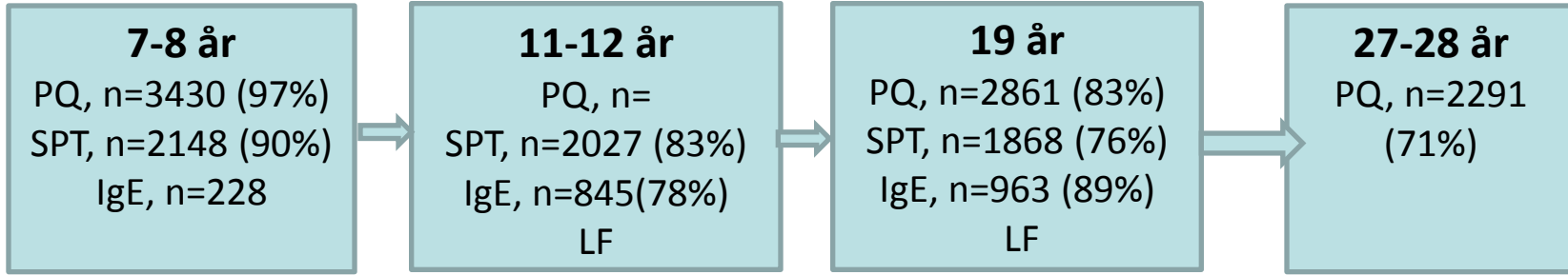
7-8 år vid rekrytering

Föräldraenkät och med tiden enkät besvarad av deltagarna

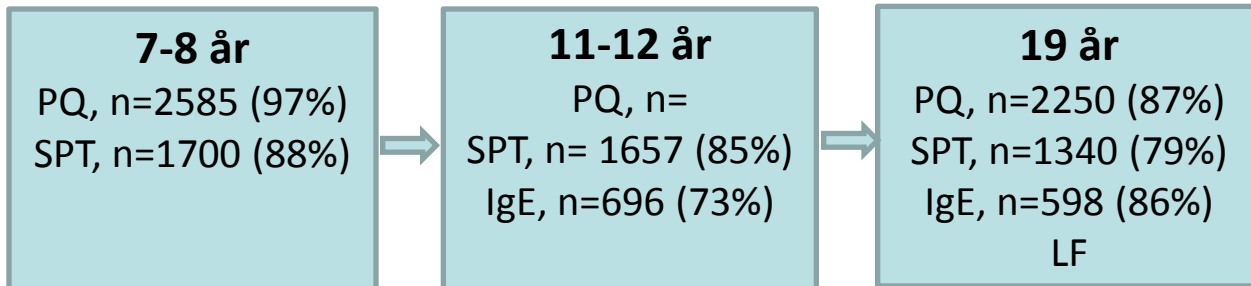
Kliniska undersökningar ffa i Kiruna och Luleå

The OLIN pediatric cohorts

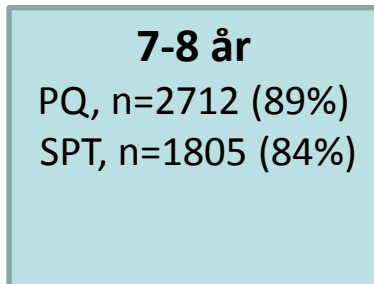
Cohort I
recruited
In 1996



Cohort II
recruited
in 2006



Cohort III
recruited
In 2017



Utfallsmått

Prevalens, trender

Incidens, trender

Remission

Naturalförlopp

Riskfaktorer

Livskvalitet

Utfallsmått:

Prevalens, trender

Incidens, trender

Remission

Naturalförlopp

Risikfaktorer

Livskvalitet

Sjukdomar/tillstånd:

Astma

Rhinit

Eksem

Födoämnesöverkänslighet/allergi

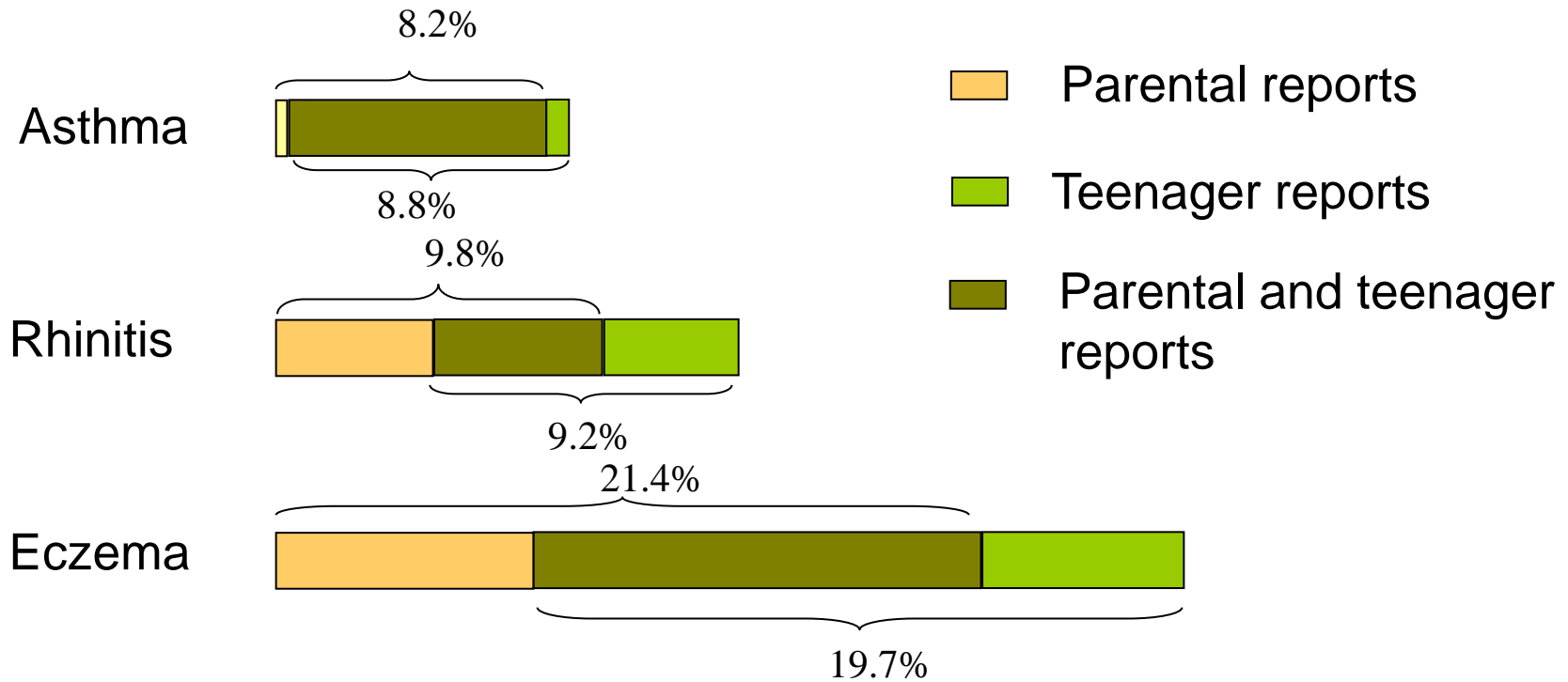
Allergisk sensibilisering (pricktest, specifika IgE och komponenter)

Risikfaktorer/karakteristika

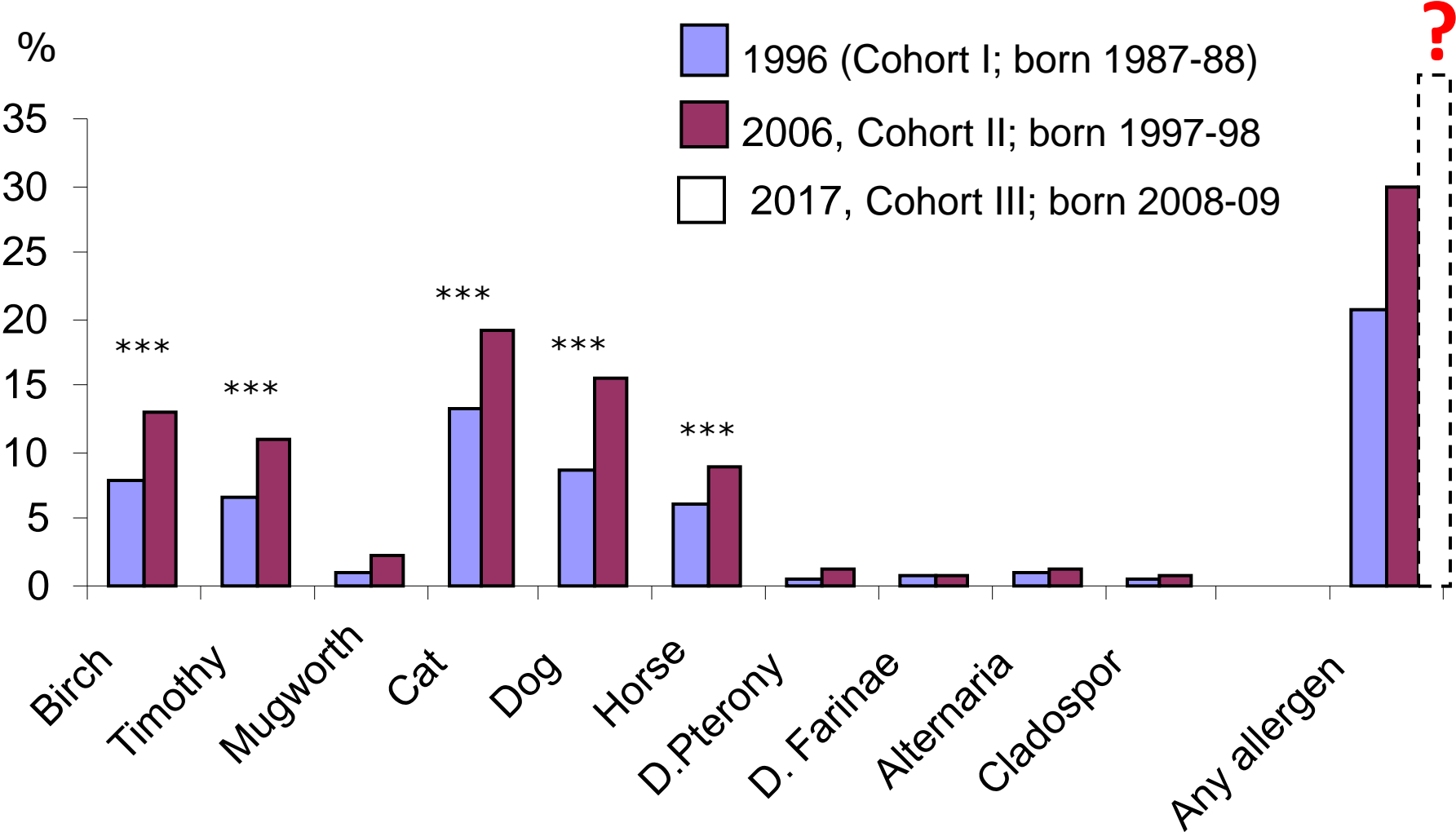
- baserad på enkätdata (faktorer i barndom, hereditet, miljø, livsstilsfaktorer, rökning, ...)
- uppmätta trafikflöden vid hemadressen
- allergenmätning i skolor och hem
- trikloramin-exponeringsmätningar på mest besøkta badhus
- Kliniska undersøkningsar (IgE, IgE-komponenter, pricktest, lungfunktion, bronkiell hyperreaktivit, födoämnesprovokationer,...)
- Livskvalitetsformulär

Några resultat

Agreement between parental and teenager reports of conditions



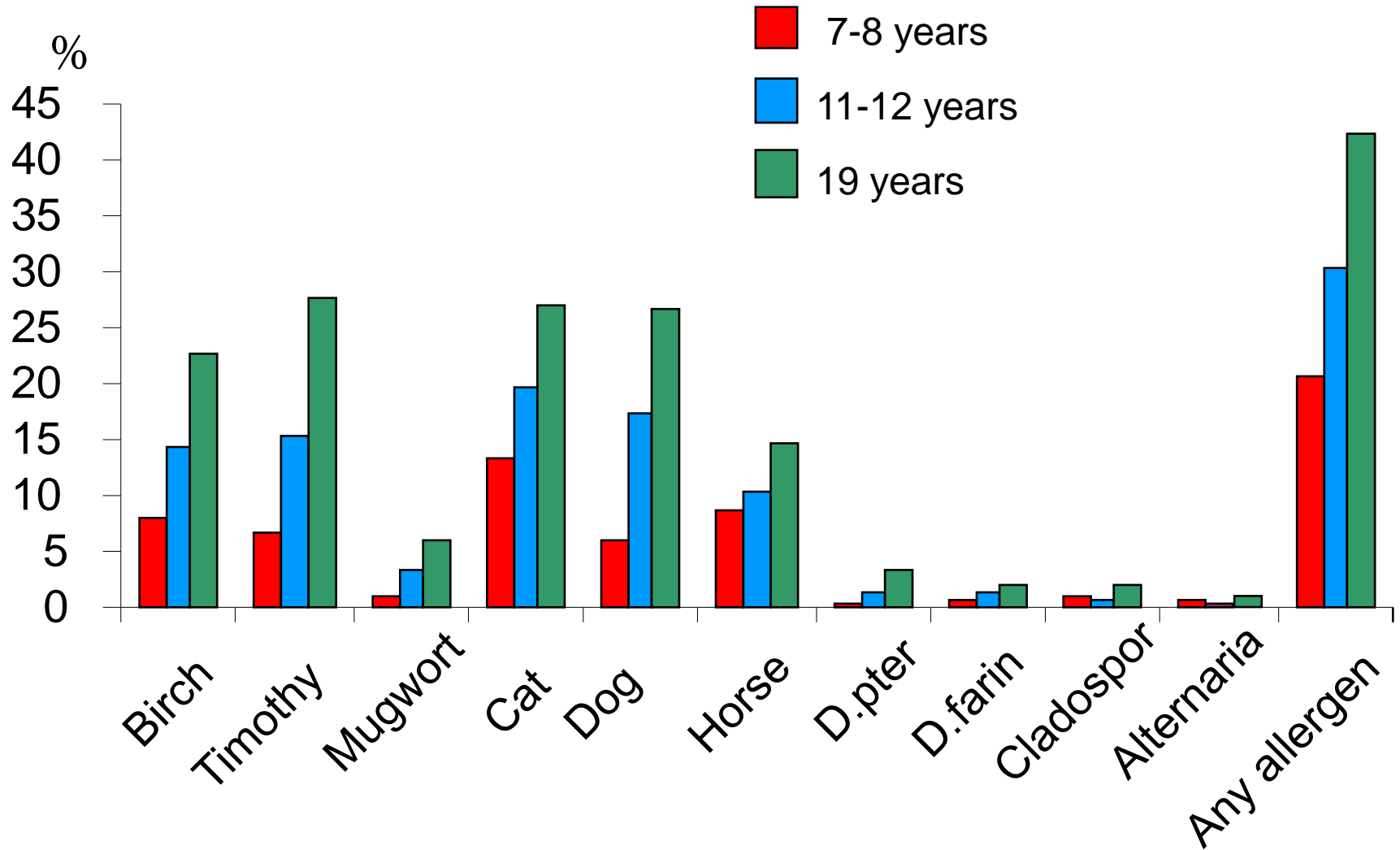
Prevalence (%) of positive skin prick test in 7-8 y old children in 1996 and 2006 in Northern Sweden



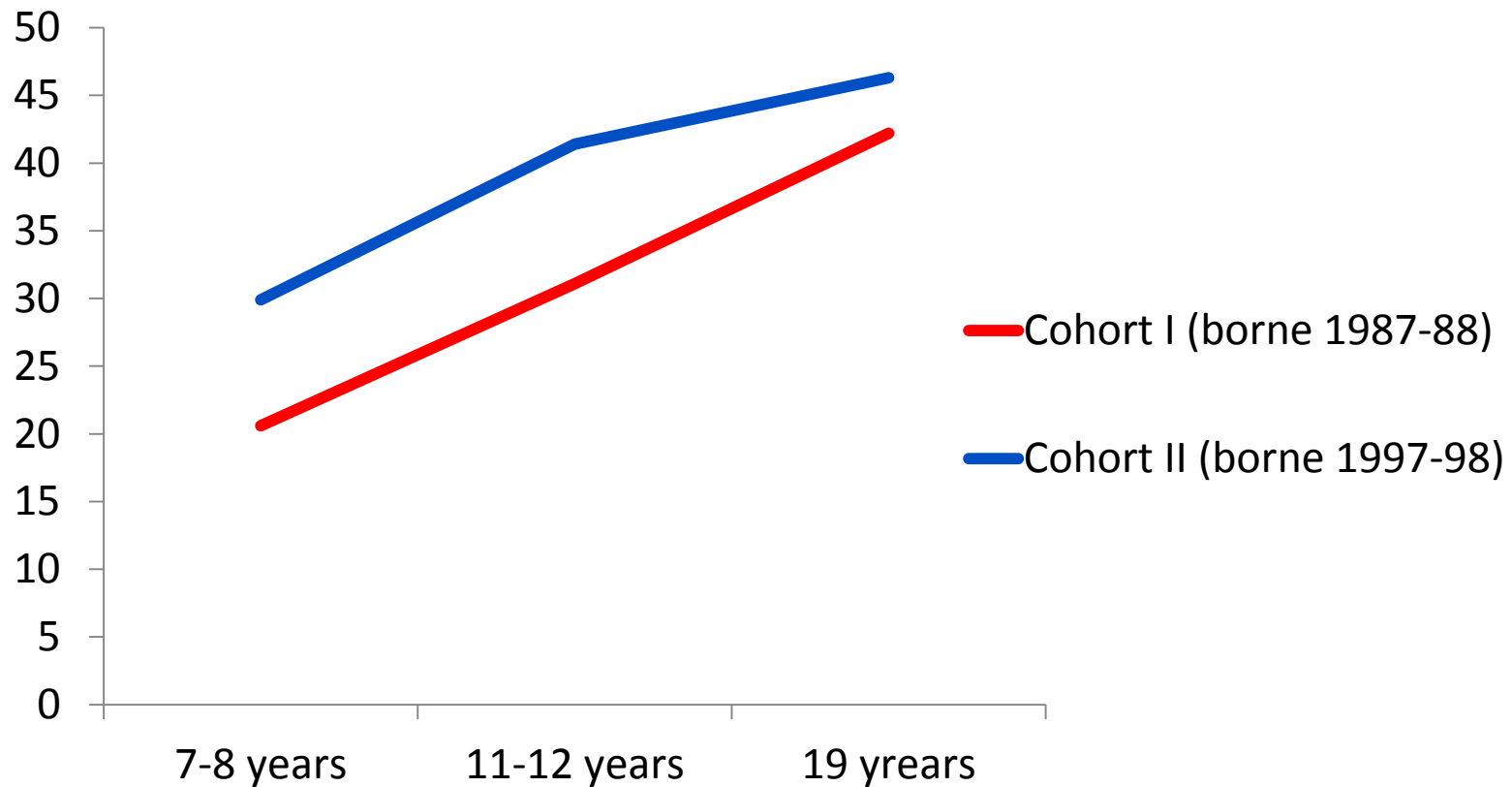
Rönmark et al. Respir Med 1998; JACI 209

Prevalence of positive skin prick test from 7/8 to 19 years in Northern Sweden in a cohort followed longitudinally

Rönmark et al Allergy 1999, JACI 2009



Trends in allergic sensitization by increasing age in two cohorts followed from 7 to 19 years.



Rönmark et al. JACI 2003 och 2009
Bunne et al. JACI in practice 2015

Early life risk factors in relation to the incidence of allergic sensitization to any allergen

	Incidence of any positive SPT from birth to 7-8 y, n=310	Incidence of any positive SPT from 7-8 to 11-12 y, n=153	Incidence of any positive SPT from 11-12 to 19 y, n=184
Risk factor	OR (95%CI)	OR (95%CI)	OR (95%CI)
Order among siblings*	0.8 (0.7-1.0)	1.0 (0.9-1.1)	0.9 (0.8-1.1)
Cat or dog in childhood	0.7 (0.5-0.9)	0.8 (0.6-1.2)	0.8 (0.5-1.1)
Urban area in childhood	1.9 (1.2-2.9)	0.7 (0.5-1.1)	1.7 (1.0-2.9)
Family history of allergy	2.1 (1.6-2.8)	1.4 (1.0-1.9)	1.6 (1.1-2.3)
Male sex	1.3 (1.0-1.7)	1.5 (1.1-2.1)	1.0 (0.7-1.4)

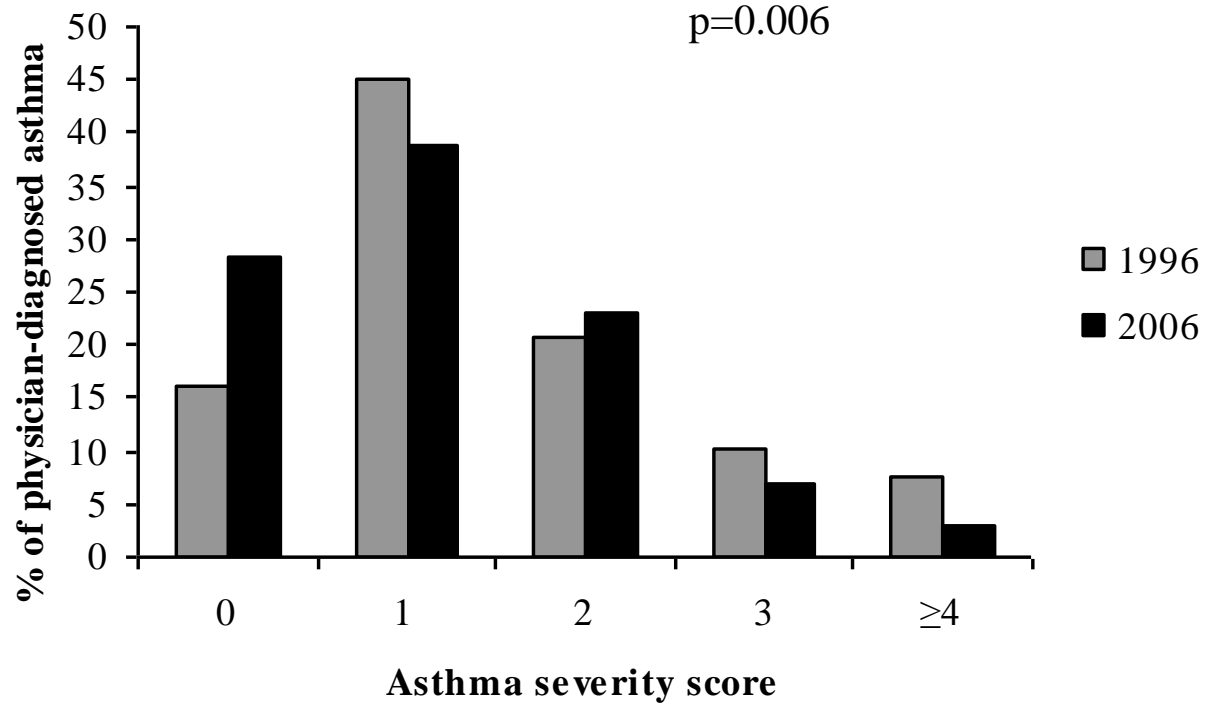
*Numeric variable

Analyzed by multiple multinomial logistic regression with negative reactions to all allergens at all measurements as reference category , n= 845

Prevalence and Severity of asthma among 7-8 y children in 1996 and 2006.

Andersson et al. *Pediatr Allergy Immunol* 2010

Physician-diagnosed asthma increased from 5.7 to 7.4%



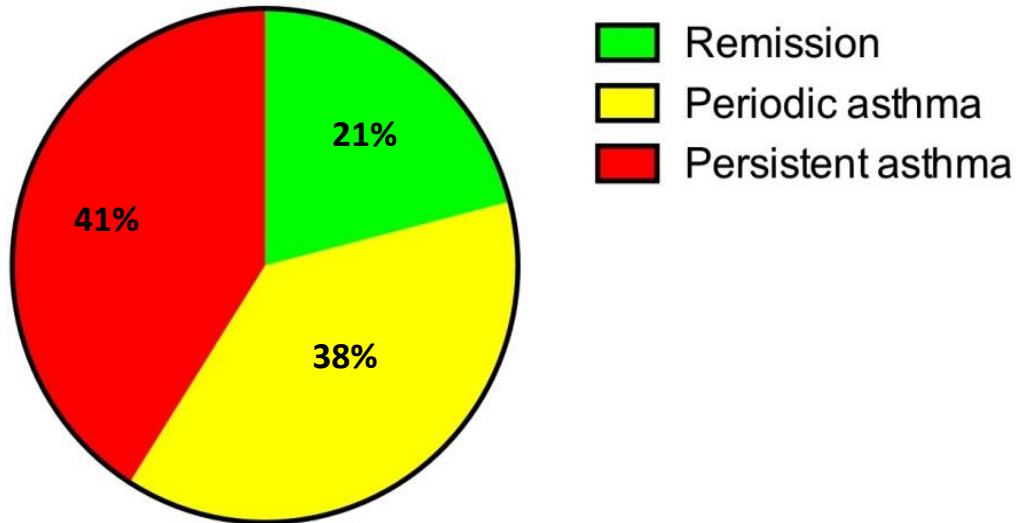
Asthma score based on: Current wheeze, daily asthma medication, disturbed sleep, speech-limiting wheeze, >12 episodes of wheeze during last 12 months

Different risk factors for allergic and non-allergic asthma in children. Risk in Odds ratio (OR)

Variables	Allergic asthma	Non allergic asthma
	OR (95%CI)	OR (95%CI)
Male sex	1.3 (0.8-2.1)	1.6 (1.0-2.5)
Asthma in family	3.0 (1.8-4.8)	3.6 (2.3-5.7)
Dampness at home	1.4 (0.8-2.4)	1.8 (1.1-2.9)
Mother smokes	1.2 (0.7-2.0)	1.6 (1.0-2.7)
Cat or dog at home	0.6 (0.4-0.9)	0.8 (0.5-1.2)
Breast feeding < 3months	1.0 (0.6-1.8)	1.9 (1.1-2.9)

Remission and persistence of asthma followed from 7 to 19 years of age

Andersson et al. Pediatrics 2013



Remission: Free from symptom and asthma medication the last 3 year at age 19 y.

Persistent asthma: Symptoms or use of asthma medication at the age of 19 years and in at least 8 of the 9 previous surveys.

Factors related to persistence:

- allergic sensitization
- more severe disease

Sammanfattning av OLIN studiernas barnkohorter

Tre kohorter; rekryterade med 10 års mellanrum, identiska metoder

Longitudinell studiedesign; observationstid från 7 till 28 år

Kliniska undersökningar i stora urval

Mycket högt deltagande i alla kohorter, både vid rekrytering och vid uppföljningar