

**Kallén B.** Use of antihistamine drugs in early pregnancy and delivery outcome. *J Maternal-Fetal Neonatal Medicine* 2002, 11, 146-52

Type of study	Population-based retrospective cohort
Where	Sweden
When	1995-1999
Characteristics of the cohort	Newborns whose mothers reported the use of antihistamines in early pregnancy, identified in the Swedish Medical Birth Registry
Ascertainment of drug exposure	Nation-wide medical birth registry. Information on drug use reported by the pregnant women. (Interview at the first antenatal visit, with questions on drugs' use, mainly first-trimester exposure; drugs were divided into three main groups: used for nausea/vomiting/motion sickness, allergy, heavy vomiting)
Exposure definition	Intake in early pregnancy
Size of the studied cohort	Exposed: 17,266 recruited women; 17,776 deliveries (12,394 for nausea/vomiting; 5041 for allergy); 18,197 infants born Unexposed reference group: total number of infants born in the general population during the study period: 403,545
Exposed cohort	Newborns exposed to a group of drugs
Control cohort	All infants, not exposed to the studied drugs, born in the general population during the study period
Malformations ascertainment	Identified from diagnoses given in the Medical Birth Registry and supplemented with cases reported to the Swedish Registry of Congenital Malformations with auxiliary registers
Malformations definition	All malformations: any malformation registered in the Medical Birth Registry Selected malformations: preauricular appendix, patent ductus at preterm birth, single umbilical artery, unstable hip were excluded
Prevalence of malformations among control offspring	3.16% (all malformations) 2.02% (selected malformations)
Analysis	Mantel-Haenszel OR and 95%CI were estimated (according to maternal age, parity, smoking habits, year of birth)
Strengths	- Nation-wide population based study - The drug information was retrieved prospectively, data not affected by delivery outcome - Multiple sources for malformation identification reduced the risk of ascertainment bias
Weaknesses	- Drug use reported by the pregnant women - No information on the number of abortions or drug dosage - Not indicated if information on maternal drug use was available at the time of paediatrician's examination - Possibility of confounding by indication
Main results	Nausea/vomiting pregnancy group: - Normal malformation rate (3.17% all/1.92% selected) - Reduction in the occurrence of congenital cardiovascular defects: OR 0.54, 95% CI 0.3-0.9 for specified cardiac defects (exception: ventricular/atrium septal defects) significantly lower than non cardiovascular congenital malformations (OR 0.95, 95% CI 0.8-1.1). (significant increase in twin births, significant reduction in preterm births, low birth weight and small for gestational age among singleton, the perinatal death rate was reduced)

Allergy pregnancy group:

- Slightly increased but not statistically significant malformation rate (3.45% all /2.24% selected)
- Non significant tendency for a reduced risk for specified cardiac defects (OR 0.71, 95% CI 0.4-1.1)