

**Kallen BAJ.** Use of omeprazole during pregnancy – no hazard demonstrated in 955 infants exposed during pregnancy. *Eur J Obstet Gynecol Reprod Biol* 96, 63-68, 2001

Type of study	Population-based retrospective cohort
Where	Sweden
When	1995-1999
Characteristics of the cohort	Newborns whose mothers reported use of omeprazole during pregnancy, identified in the Swedish Medical Birth Registry
Characteristics of the treated diseases	Not indicated
Exposure definition	Intake in pregnancy: two groups: women reporting use during the first trimester and after the first antenatal visit
Ascertainment of drug exposure	Nation-wide medical birth registry. Information on drug use reported by the pregnant women (midwife interview at the first visit to the antenatal care centers, usually in weeks 10-12). Recorded drugs: taken during the first trimester, during the organogenetic period, during the continued antenatal care. Information on the drugs used stored in the registry as Anatomical Therapeutic Chemical Classification codes
Size of the studied cohort	Exposed to the studied drug: 955 infants ( 944 deliveries) exposed in utero to omeprazole: 824 (815 deliveries) only during the first trimester, 92 (91 deliveries) only after the first trimester, 39 (38 deliveries) during both the first trimester and later Unexposed reference group: total number of infants born in the general population during the study period unexposed to the studied drug: not indicated
Exposed cohort	Newborns exposed to the studied drug: - exposed during the first trimester (including some exposed also later) - exposed after the first trimester (including some also exposed during the first trimester)
Control cohort	Newborns not exposed to the studied drug: - all infants, not exposed to the studied drugs, born in the general population during the study period
Malformations definition	Using the International Statistical Classification of Diseases and Related Health Problems (ICD) codes given by the pediatrician: Chapter 14 in ICD 9 (up to 1997) and Chapter 17 in ICD 10 (from 1997)
Malformations ascertainment/delivery outcome	Identified from four sources: the Swedish Medical Birth Registry, the Swedish Registry of Congenital Malformations, the Child Cardiology Register. For infants born in 1995-97, hospitalization studied using the Hospital Discharge Register
Prevalence of malformations among control offspring	3.6%
Analysis	Mantel-Haenszel OR and 95% CI were estimated (according to year of birth, maternal age, parity, smoking)
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 - Information on other drugs use - Follow-up using Hospital Discharge Register (up to 3 years)
Weaknesses	- Drug use reported by the pregnant women - Not indicated if information on maternal drug use was available at the time of paediatrician's examination - No information on abortions or drug dosage

	- Incomplete information on the exact weeks of pregnancy related to exposed drug
Main results	The OR for having any malformation is 0.82 (95% CI 0.5-1.3). No clear-cut indication of ill effects were seen. Five infants were stillborn and the rate of congenital heart defects was slightly increased, but both effects may be random