

A total of 17,162 mothers of cases and 10,127 mothers of controls who completed a telephone interview were included in this study. Multivariable logistic regression was used to assess the association between maternal self-report of cold or flu with fever and cold or flu without fever during early pregnancy and 30 categories of non-cardiac birth defects.

Main findings from this research

◊ Maternal report of cold or flu with fever was significantly associated with 8 birth defects: anencephaly (aOR; 95% CI—1.52; 1.11-2.07), spina bifida (1.39; 1.11-1.76), encephalocele (1.66; 1.01-2.74), cleft lip with or without cleft palate (1.23; 1.05-1.45), colonic atresia/stenosis (3.68; 1.72-7.85), bilateral renal agenesis/hypoplasia (2.10; 1.28-3.71), limb reduction defects (1.29; 1.01-1.63), and gastroschisis (1.42; 1.11-1.81).

◊ Adjusted odds ratios that were associated with maternal reports of cold or flu with a fever of ≥ 101 degrees Fahrenheit (F) were not substantially different from the adjusted odds ratios associated with maternal report of cold or flu with a fever <101 degrees F.

◊ Maternal report of a cold or flu without fever, and maternal fever reported in later pregnancy, were not associated with any birth defects studied.

Conclusion and discussion

This study found further evidence that maternal fever during early pregnancy is associated with an increased risk for certain birth defects. This increase was limited to mothers who reported having a fever, suggesting that the fever contributes to the increase in risk of birth defects and not the illnesses that can accompany the fever. Nonetheless, having a fever can also be an indicator of having other severe illnesses or infections.