

Inhaled glucocorticoids during pregnancy and offspring pediatric diseases

December 16 2011

Inhaled glucocorticoids for the treatment of asthma during pregnancy are not associated with an increased risk of most diseases in offspring, but may be a risk factor for endocrine and metabolic disturbances, according to a new study.

In a population-based cohort study, 65,085 mother-child pairs from the Danish National [Birth Cohort](#) were followed up in real time from [early pregnancy](#) into childhood. "Maternal use of inhaled [glucocorticoids](#) for asthma during pregnancy was not related to an increased risk of most diseases in childhood, except for endocrine and metabolic disorders, as compared to the risk in asthmatic mothers without glucocorticoid inhalation during pregnancy," said first author Marion Tegethoff, PhD, associate faculty member in clinical psychology and psychiatry at the University of Basel, Switzerland. "Our data are mostly reassuring and support the use of inhaled glucocorticoids during pregnancy."

The findings were published online ahead of print publication in the American Thoracic Society's [American Journal of Respiratory and Critical Care Medicine](#).

Of 65,085 mother-child pairs with live singleton pregnancies, 61,002 had no asthma during pregnancy (93.7%) and 4083 (6.3%) had asthma during pregnancy. Median age at end of follow-up was 6.1 years (range: 3.6 to 8.9 years). In statistical analyses adjusted for baseline predictors of child health, use (versus no use) of inhaled glucocorticoids was associated with a significantly increased risk for the first diagnosis of

endocrine and metabolic disorders (hazard ratio [HR], 1.84; 95% confidence interval [CI], 1.13-2.99), but not of diseases in any other category. Results were similar when analyses were restricted to mother-child pairs exposed only to budesonide, the inhaled glucocorticoid used by the majority of women (79.9%) in the study.

"This is the first comprehensive study of potential effects of glucocorticoid inhalation during pregnancy on the health of offspring, covering a wide spectrum of pediatric diseases," said last author Gunther Meinlschmidt, PhD, associate faculty member in [clinical psychology](#) and epidemiology at the University of Basel, Switzerland. "While our results support the use of these widely used asthma treatments during pregnancy, their effect on endocrine and [metabolic disturbances](#) during childhood merits further study."

There were some limitations to the study, including a lack of data on daily inhalation doses, use of self-report of maternal asthma and the study's focus on glucocorticoid inhalation rather than other active ingredients or glucocorticoids administered by other routes.

"Our data have both clinical and public health implications," the authors concluded, "given that asthma is common in pregnant women and inhaled glucocorticoids are the recommended treatment."

Provided by American Thoracic Society

Citation: Inhaled glucocorticoids during pregnancy and offspring pediatric diseases (2011, December 16) retrieved 28 April 2024 from <https://medicalxpress.com/news/2011-12-inhaled-glucocorticoids-pregnancy-offspring-pediatric.html>

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