

Inhaled corticosteroids increase diabetes mellitus risk

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Inhaled corticosteroids are widely used in the treatment of asthma and chronic obstructive pulmonary disease (COPD). However, these drugs may be associated with diabetes development and progression. In a study published in the most recent issue of *The American Journal of Medicine*, researchers found that inhaled corticosteroids were associated with a 34% increase in the rate of diabetes onset and in the rate of diabetes progression. At the highest inhaled doses the risk increased by 64% in diabetes onset and 54% in diabetes progression.

Although inhaled corticosteroids are recommended only for patients with the most severe COPD, current practice has led to their use in less severe cases. In fact, over 70% of all patients with COPD are using inhaled corticosteroids. Since COPD and [diabetes](#) tend to increase with age, it is particularly important to assess any possible interaction between inhaled corticosteroid use and deterioration in glycemic control.

Investigators from McGill University and the Lady Davis Institute of the Jewish General Hospital, Montreal, Quebec, used data from over 380,000 patients treated for respiratory diseases identified in the Quebec health insurance databases. 30,167 patients developed diabetes during 5 ½ years of follow-up and another 2099 who progressed from oral hypoglycemic treatment to insulin.

Lead investigator Samy Suissa, PhD, Center for Clinical Epidemiology, Lady Davis Research Institute, Jewish General Hospital, Montreal, Quebec, Canada, and the Department of Epidemiology and Biostatistics and Department of Medicine, McGill University, observed that "high doses of inhaled corticosteroids commonly used in patients with COPD are associated with an increase in the risk of requiring treatment for diabetes and of having to intensify therapy to include insulin. Therefore, patients instituting therapy with high doses of inhaled corticosteroids

should be assessed for possible hyperglycemia and treatment with high doses of inhaled corticosteroids limited to situations where the benefit is clear."

This large cohort allowed the accurate estimation of relative risk. There have been other major randomized trials that have not shown a significant association of [inhaled corticosteroids](#) and diabetes onset. In this study, the authors found an incidence of diabetes onset of 14.2 per 1000 patients per year. At that rate, previous studies may not have had sufficient data to detect the excess risk. "These are not insubstantial numbers," commented Dr. Suissa. "Over a large population the absolute numbers of affected people are significant."

More information: The article is "Inhaled Corticosteroids and the Risks of Diabetes Onset and Progression" by Samy Suissa, PhD, Abbas Kezouh, PhD, Pierre Ernst, MD, MSc. It appears in *The American Journal of Medicine*, Volume 123, Issue 11 (November 2010) published by Elsevier.

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