

# Inhaled steroids increase diabetes risk, say researchers

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Patients taking inhaled corticosteroids are at increased risk of developing type 2 diabetes, and more so with higher doses, say researchers at the Jewish General Hospital's Lady Davis Institute for Medical Research (LDI) in Montreal. The risk is of special concern for patients suffering from chronic obstructive pulmonary disorder (COPD), and much less significant for asthmatics.

"These medications are very effective in asthma, so the benefits clearly outweigh the risk for asthmatics," said Dr. Samy Suissa, Director of the Centre for Clinical Epidemiology at the LDI, and lead author of the study published in the [American Journal of Medicine](#). "However, their effectiveness is questionable in COPD, where they are also used in higher doses. This is a very different risk/benefit situation."

[Inhaled corticosteroids](#) are administered in the form of [aerosol sprays](#) and micropowders, and include drugs like fluticasone (Flonase, Advair), budesonide (Pulmicort, Rhinocort) and beclometasone (QVAR, Beclovent), among others.

[Oral corticosteroids](#) like prednisone have long been known to increase the risk of diabetes, but this is the first time the effect has been observed with the inhaled form.

Suissa and his colleagues used the extensive databases of Quebec's provincial health insurance board to study a cohort of nearly 400,000 patients treated for COPD or asthma. They determined that inhaled

[corticosteroids](#) increased the rate of onset of diabetes from 14 people per 1000 to 19 per 1000, or 34 percent, every year of use. In other words, 5 additional people for every 1000 users in the study – people who otherwise would not have been affected – developed diabetes from the use of the drug.

"These are not insubstantial numbers," said Dr. Suissa, also a professor of epidemiology and biostatistics at McGill University in Montreal.

"Over a large population the absolute numbers of affected people are significant.

"We recommend that physicians reserve the use of inhaled steroids for the patients who truly benefit from these medications, namely asthmatics, and curb their use in COPD to the few patients for whom they are indicated. In all cases, patients using high doses should be assessed for possible hyperglycemia and the lowest effective dose targeted."

Provided by Jewish General Hospital

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