

Patients receiving steroids are more than twice as likely to develop diabetes, UK study finds

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Patients who are being treated with systemic glucocorticoids are more than twice as likely to develop diabetes as those not receiving the

treatment, the Annual Meeting of the [European Association for the Study of Diabetes \(EASD\)](#) in Madrid, Spain (9-13 September) will hear.

Glucocorticoids (sometimes known as steroids) fight inflammation and are used to treat a wide range of inflammatory and autoimmune conditions, including asthma, [rheumatoid arthritis](#), cancers and other medical problems.

While they can be very effective in decreasing inflammation, glucocorticoids have many adverse effects including increasing blood sugar levels and causing [diabetes](#). This is more likely when people use glucocorticoid tablets or injections than when used as inhalers, creams or drops.

A new study by researchers at the Diabetes Trials Unit, University of Oxford's Radcliffe Department of Medicine, Oxford, UK, has investigated how commonly patients being treated with glucocorticoids can develop new-onset diabetes. The study found that patients receiving systemic glucocorticoids were more than twice as likely (2.6 times) to develop diabetes as those not receiving the treatment.

Study leader Dr. Rajna Golubic said, "Existing information on how much more common new diabetes is in patients treated with glucocorticoids is based on small studies including patients with one or a few conditions. We wanted to expand the data to get a more accurate idea of how likely it is that people could develop diabetes while being treated with these drugs."

Dr. Golubic and colleagues compared the rate of new-onset diabetes in hospital patients who received systemic glucocorticoids (tablets, injections or infusions) to patients not treated with these drugs.

The study involved 451,606 adults ([median age](#) 52 years, 55% female,

69% white) who were admitted to the Oxford University Hospitals NHS Foundation Trust between 1 January 2013 and 1 October 2023. All were free from diabetes at the start of the study and none were taking systemic glucocorticoids.

In total, 17,258 (3.8%) of the patients were treated with systemic glucocorticoids (some names include prednisolone, hydrocortisone, dexamethasone) while in the hospital, most commonly for autoimmune and [inflammatory diseases](#) and for infections.

A group of 316 of these 17,258 patients (1.8%) developed diabetes while in the hospital. This compares with 3,430 of the 434,348 patients (0.8%) who didn't receive systemic glucocorticoids. Patients had been typically admitted for less than a week.

Further analysis showed that when age and sex were factored in, patients receiving systemic [glucocorticoids](#) were more than twice as likely (2.6 times) to develop diabetes as those not receiving the treatment.

Dr. Golubic says, "These latest results give [clinical staff](#) a better estimate of how likely new diabetes is to occur and could prompt doctors to plan [clinical care](#) more effectively to detect and manage new diabetes. While we studied [hospital patients](#), glucocorticoid tablets can be prescribed by GPs for conditions such as asthma and rheumatoid arthritis and it is important that they, too, are aware of the link."

She added, "This study also shows how routinely collected [clinical data](#) can be used to help people with diabetes."

Provided by Diabetologia

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