

# Common rheumatoid arthritis and psoriasis medications are associated with reduced diabetes risk

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Individuals with systemic inflammatory conditions, such as rheumatoid arthritis (RA) and psoriasis, experience a 1.5 to 2-fold increased rate of cardiovascular disease. Previous research suggests that inflammation and insulin resistance, linked with these conditions, likely accelerate the development of cardiovascular risk and diabetes. Researchers at Brigham and Women's Hospital (BWH) sought to determine whether commonly used disease-modifying antirheumatic drugs (DMARDs), which are directed against inflammation, might reduce the risk for developing diabetes in patients with RA or psoriasis. They found that among patients with RA or psoriasis, the risk for developing diabetes was lower for those patients who started TNF inhibitor or hydroxychloroquine. Their findings are published in the June 22/29, 2011 issue of the *Journal of the American Medical Association*.

"While there may be other mechanisms at play in these medications aside from their effect on inflammation, we observed a reduced risk for diabetes in patients with RA or psoriasis who were treated with [tumor necrosis factor](#) (TNF) inhibitors or hydroxychloroquine when compared with patients who began treatment on other non-biologic DMARDs," said Daniel Solomon, MD, MPH, lead author of the study and a researcher in the Division of Rheumatology and the Division of Pharmacoepidemiology at BWH.

Researchers evaluated data gathered from 13,905 patients with RA or psoriasis with 22,493 new instances of treatment initiation. The patients were categorized based on four categories of commonly used DMARD regimens: non-biologic DMARDs, TNF inhibitors, methotrexate and [hydroxychloroquine](#). The researchers found 267 newly diagnosed cases of diabetes: 55 cases among 3,993 patients treated with non-biologic

DMARDs; 80 cases among 4,623 patients treated with TNF inhibitors; 82 cases among 8,195 patients treated with methotrexate; and 50 cases among 5,682 patients treated with hydroxychloroquine. Researchers report that the rate of newly diagnosed diabetes was highest in individuals who were treated with nonbiologic DMARDs and lowest for TNF inhibitor users. Additionally, when adjusting for other risk factors for diabetes, researchers found a reduced relative risk of diabetes in patients treated with TNF inhibitors and hydroxychloroquine compared with other non-biologic DMARDs.

"Our study shows an association between these two DMARDs (TNF inhibitors and hydroxychloroquine) and reduced diabetes risk, but we cannot be sure that the association is causal - that the medications are the cause of the reduced risk. Currently we are working on an NIH sponsored randomized clinical trial using hydroxychloroquine in RA patients to assess for its effects on glucose and insulin. If this and other randomized clinical trials show the same relationships, then physicians may want to consider assessing their patients not only for the management of their RA or psoriasis, but also for [insulin resistance](#)," Solomon said.

Provided by Brigham and Women's Hospital

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