

Statin use appears associated with modest reduction in Parkinson's disease risk

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Regular use of cholesterol-lowering statin drugs may be associated with a modest reduction in risk for developing Parkinson disease, particularly among younger patients, according to a study in the March issue of *Archives of Neurology*.

Statins are one of the most prescribed classes of drugs in the United States and some researchers have hypothesized that the anti-inflammatory and immunomodulating effects of these medications may be neuroprotective. However, [statins](#) also may have unfavorable effects on lowering the level of plasma [coenzyme Q10](#), which may be neuroprotective in patients with [Parkinson disease](#) (PD), the researchers write in their study background.

Xiang Gao, M.D., Ph.D., of Brigham and Women's Hospital and Harvard School of Public Health, Boston, and colleagues conducted a prospective study that included 38,192 men and 90,874 women participating in the Health Professional Follow-up study and the Nurses' [Health study](#).

During 12 years of follow-up from 1994 to 2006, researchers documented 644 incident PD cases (338 in women and 306 in men).

"In summary, we observed an association between regular use of statins and lower risk of developing PD, particularly among younger patients," the researchers comment. "However, our results should be interpreted with caution because only approximately 70 percent of users of

cholesterol-lowering drugs at baseline were actual statin users. Further, the results were only marginally significant and could be due to chance."

Researchers note that because they classified the use of any cholesterol-lowering drugs before 2000 as statin use, misclassification was inevitably introduced. They also did not collect information on the use of specific statins, which could have different effects on the central nervous system.

When researchers did observe a significant interaction between statin use and age in relation to PD risk it was among [study participants](#) younger than 60 years at the start of follow-up, not among those participants who were older.

The authors note that not only have epidemiologic studies produced mixed results on statin use and PD risk, but statins also may have unfavorable effects on the [central nervous system](#).

"In contrast with use of ibuprofen, which has been consistently found to be inversely associated with PD risk in these cohorts as well as in other longitudinal studies, the overall epidemiological evidence relating statin use to PD risk remains unconvincing," the authors conclude. "Given the potential adverse effects of statins, further prospective observational studies are needed to explore the potential effects of different subtypes of statin on risk of PD and other neurodegenerative diseases."

More information: *Arch Neurol.* 2012;69[3]:380-384.

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