FROM ABSTRACT

Background: This study investigates whether the incidence of new-onset diabetes mellitus (DM) is associated with statin use among postmenopausal women.

Statin use was captured at enrollment and year 3. Incident DM status was determined annually from enrollment.

This investigation included 153,840 women without DM at baseline, and more than 1,004,466 person-years of follow-up.

Statin use at baseline was associated with an increased risk of DM (hazard ratio) by 71% [in 3 years]. This association remained after adjusting for other potential confounders and was observed for all types of statin medications.

Conclusions: Statin medication use in postmenopausal women is associated with an increased risk for DM.

KEY POINTS FROM THESE AUTHORS:

1) The use of statin drugs is progressively increasing, especially among older Americans.

2) Statin use at baseline was significantly associated with an increased DM risk (hazard ratios) by 71% when compared with nonuse. “This association was observed for all types of statin. Similar risk associations were found in use of either high- or low potency statins” compared with nonusers.

3) “Statin use was consistently associated with increased risk of DM across subgroups by age. We observed significantly increased risk of DM by statin use within subgroups of white, Hispanic, and Asian women in both unadjusted and adjusted models.”

4) Assessed covariates included demographic and health history information, including race/ethnicity, age, educational attainment, family history of DM, family history of depression, self-report of CVD, hormone therapy use, smoking status, BMI, physical activity, blood pressure, alcohol intake, and energy intake.
5) “Moreover, a significantly increased risk of DM associated with statin use was observed among women with BMI lower than 25.0 when compared with women with BMI of 30.0 or higher after adjusting for all potential confounders.”

6) Statin users had higher fasting glucose levels compared with non–statin users. [This is not surprising. Biochemistry texts show that cholesterol is made from glucose, and statin drugs block the conversion of glucose to cholesterol, thus raising glucose levels].

7) “The results of this study imply that statin use conveys an increased risk of new-onset DM in postmenopausal women”.

8) “Statin-induced DM is a medication class effect and not related to potency or to individual statin.”

9) “The consequences of statin-induced DM have not been specifically defined and deserve more attention. Given the wide use of statins in the aging population, further studies among women, men, and diverse ethnicities will clarify DM risk and risk management to optimize therapy.”

EDITOR’S NOTE
Kirsten L. Johansen, MD
Increased Diabetes Mellitus Risk With Statin Use
Tipping the Balance

“In this issue of the Archives, Culver et al report an association between use of statins and increased risk of developing diabetes mellitus in a large cohort of women.”

“These data confirm and extend associations previously demonstrated among participants in randomized trials.”

“The increased risk of diabetes mellitus with statin use was similar among women with and without a history of cardiovascular disease, a finding that may have important implications for the balance of risk and benefit of statins in the setting of primary prevention in which previous meta-analyses show no benefit on all-cause mortality.”

[This means that meta-analyses show that in those who do not have cardiovascular disease {already have heart signs/symptoms or a prior heart attack} but do have high cholesterol, statin drugs do not help prevent heart attacks, but statin drugs do increase their risk of becoming diabetic].

COMMENTS FROM DAN MURPHY: