

High and moderate potency statins associated with increased risk of diabetes

New prescriptions of high and moderate-potency statins to prevent cardiovascular events were associated with an increased risk of developing diabetes compared to pravastatin.

What does this mean?

- Elderly patients treated with atorvastatin (Lipitor®), rosuvastatin (Crestor®) and simvastatin (Zocor®) were at increased risk of new-onset diabetes relative to those treated with pravastatin (Pravachol®), regardless of whether the drug was for primary or secondary prevention of cardiovascular events.
- Approximately 1 of every 172 patients treated with atorvastatin, 1 of every 210 treated with rosuvastatin, and 1 of every 363 treated with simvastatin instead of pravastatin will develop diabetes.

Clinical Implications

- ✓ Consider the risk of diabetes when prescribing statins to elderly patients. Also, consider whether lower potency statins (e.g. pravastatin, fluvastatin, lovastatin) might be preferred over higher potency statins.
- ✓ Consider prescribing pravastatin (Pravachol®) to patients who are already at high risk for developing diabetes.

How do we know this?

The ODPRN conducted a population-based retrospective cohort study of patients aged 66 years or older in Ontario, Canada without diabetes who initiated statin therapy between August 1, 1997 and March 31, 2010. Compared to pravastatin (Pravachol®), an increased risk of diabetes was observed with atorvastatin (Lipitor®; adjusted HR, 1.22; 95% CI 1.15 to 1.29), rosuvastatin (Crestor®; adjusted HR, 1.18; 95% CI 1.10 to 1.26), and simvastatin (Zocor®; adjusted HR, 1.10; 95% CI 1.04 to 1.17). The number needed to treat to harm (NNTH) was 172, 210 and 363 for atorvastatin, rosuvastatin and simvastatin, respectively (when compared to pravastatin). Risk was not impacted significantly when accounting for the use of statins for primary or secondary prevention; however when dose was taken into account no increased risk was evident with rosuvastatin (adjusted HR, 1.01; 95% CI 0.94 to 1.09). No significantly increased risk was evident among patients who received lovastatin (Lescol®) or fluvastatin (Mevacor®).

Carter A, Gomes T, Camacho X, Juurlink DN, Shah B, Mamdani MM. Assessment of the Risk of Incident Diabetes Among Patients treated with Statins: A Population-Based Study. *BMJ*. Published Online First: 24 May 2013.

*This Research Minute was created by the ODPRN.
The ODPRN is funded by the Ontario Drug Innovation Fund
to respond rapidly and directly to policy-makers' needs for relevant research.
For more information about the ODPRN please visit our website www.odprn.ca*