

High- or Low-Dose Atorvastatin in Elderly Patients with Stable Coronary Artery Disease

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The full report is titled “Outcomes of Using High- or Low-Dose Atorvastatin in Patients 65 Years of Age or Older with Stable Coronary Heart Disease.” It is in the 3 July 2007 issue of *Annals of Internal Medicine* (volume 147, pages 1-9). The authors are N.K. Wenger, S.J. Lewis, D.M. Herrington, V. Bittner, and F.K. Welty, for the Treating to New Targets Study Steering Committee and Investigators.

What is the problem and what is known about it so far?

Cholesterol-lowering drugs reduce the risk for coronary heart disease in healthy adults and the risk for myocardial infarction and cardiac death in people with known coronary artery disease. Although the risk for coronary heart disease increases with advancing age, we have much to learn about the effects of cholesterol lowering in older adults.

One strategy for coronary artery disease prevention is to increase the dose of a cholesterol-lowering drug (such as atorvastatin) until the serum cholesterol level falls to below a target value. This strategy has not been tested in older patients.

Why did the researchers do this particular study?

The researchers wanted to find out whether a higher dose of atorvastatin worked better than a lower dose in reducing the risk for heart disease in elderly patients.

Who was studied?

The researchers studied 3,809 patients age 65 years or older who were enrolled in a randomized trial in which 10,001 patients with known coronary artery disease received either a high dose or a low dose of atorvastatin. The researchers also compared the effect of atorvastatin in older people to its effect in 6,192 people younger than 65 years.

How was the study done?

Patients were randomly assigned to receive either 10 mg or 80 mg of atorvastatin daily for an average of 4.9 years. The researchers monitored them for several heart disease outcomes: heart attack, stroke, cardiac arrest, and death from heart disease. The researchers were not aware of the dose of atorvastatin during the study, nor were the patients, their doctors, or the doctors who decided whether the patients had had a heart disease outcome.

What did the researchers find?

The high dose of atorvastatin decreased cholesterol levels and the rate of heart disease outcomes more than the low dose. During 4.9 years, 10.3% of patients who took the high dose and 12.8% who took the low dose had a serious heart disease outcome, a difference of 2.3%. The reduction in risk was the same in older people and younger people. Side effects of atorvastatin caused 4.4% of patients in the high-dose group and 2.2% of the patients in the low-dose group to withdraw from the study.

What were the limitations of the study?

Atorvastatin and other, similar drugs have many effects that could affect the rate of heart disease outcomes. The researchers could not tell whether the reduction in heart disease rates was due to lower cholesterol levels, the higher dose of the drug, or both factors.

What are the implications of the study?

In older people with known coronary heart disease, a high dose of atorvastatin reduces the risk for serious heart disease outcomes by 2.3% compared with a lower dose, just as in younger people.

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