

# Multicenter clinical study on the prevention of stroke recurrence by statin

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The results of "The Japan Statin Treatment Against Recurrent Stroke (J-STARS)" study led to the hypothesis that statins reduce the occurrence of strokes due to larger artery atherosclerosis.

J-STARS examined whether pravastatin, a traditional statin widely used in the clinic, reduces the recurrence of strokes and respective subtypes in non-cardioembolic stroke [patients](#). The study also examined whether the use of pravastatin favorably impacts the occurrence of other vascular events, and stroke-related functional outcomes were explored.

Statins are widely used to reduce [cholesterol levels](#) in blood. High cholesterol levels are associated with cardiovascular diseases such as strokes, so statins are thought to be beneficial for [stroke prevention](#). However, these findings are obtained from patients without prior stroke, and the preventive effect is less robust in patients with prior stroke.

J-STARS is a multicenter, randomized, open-label, blinded-endpoint, parallel-group study of patients who experienced a non-cardioembolic ischemic stroke. In total, 1578 patients were recruited and randomly assigned to either the pravastatin group or the control group.

During a follow-up of about 5 years, the incidence of [recurrent strokes](#) was about 2.6%/year in both groups. The onset of atherothrombotic infarction, a stroke subtype, was clearly less frequent in the pravastatin group, whereas no significant difference was found for other stroke subtypes. No significant difference was found between the two groups in

terms of the occurrence of adverse effects, which included cancer and laboratory examinations.

Professor Masayasu Matsumoto, a J-STARS principal investigator at Hiroshima University said "the pravastatin dose used in this study is lower than that used in studies from Western countries, but it is the approved standard dose in Japan." He explained "Stroke is a heterogeneous disease with different etiologies with or without underlying arterial pathologies. Thus, the benefits of statin may be different depending on the subtypes of the stroke."

The majority of previous studies defined stroke as a whole with no distinction between subtypes. Moreover, current international guidelines uniformly recommend the use of statin for secondary [stroke](#) prevention.

According to Professor Matsumoto, "Further studies are required to determine whether such guidelines are applicable for Asians. Although the current study has certain limitations, J-STARS can contribute to the establishment of guidelines for using [statins](#) to prevent strokes caused by larger artery atherosclerosis."

**More information:** Naohisa Hosomi et al. The Japan Statin Treatment Against Recurrent Stroke (J-STARS): A Multicenter, Randomized, Open-label, Parallel-group Study, *EBioMedicine* (2015). [DOI: 10.1016/j.ebiom.2015.08.006](#)

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