

# Beneficios de alcanzar niveles de LDL-C <70 mg / dL

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**Nueva evidencia reafirma que LDL <70 mg / dL reduce el accidente cerebrovascular recurrente**

Spanish

Amarenco P1, Kim JS2, Labreuche J1, Charles H1, Giroud M3, Lee BC4, Mahagne MH5, Nighoghossian N6, Gabriel Steg P7, Vicaut É8, Bruckert E9; Treat Stroke to Target (TST) Committees and Investigator Centers. Benefit of Targeting a LDL (Low-Density Lipoprotein) Cholesterol <70 mg/dL During 5 Years After Ischemic Stroke. PMID: 32078484 DOI: 10.1161/STROKEAHA.119.028718

**El estudio Treat Stroke to Target (TST) evaluó los beneficios de alcanzar niveles de LDL-C <70 mg / dL en la reducción del riesgo CV en 2.869 pacientes con accidente cerebrovascular isquémico con estenosis de vasos cerebrales o placa del arco aórtico > 4 mm .**

**Este nuevo análisis, restringido a participantes franceses, comparó los 1,073 pacientes asignados al objetivo de LDL <70 mg / dL con los asignados al objetivo de LDL entre 90 y 110 mg / dL. Para lograr los objetivos, los investigadores usaron estatinas en las dosis de su elección y agregaron ezetimiba cuando consideraron necesario. El resultado primario "endpoint" del estudio estuvo compuesto por accidente cerebrovascular isquémico, IAM, nuevos síntomas de isquemia que requieren intervención coronaria o carotídea y muerte vascular.**

**Después de un seguimiento medio de 5,3 años, los niveles promedio de LDL fueron 66 mg / dL y 96 mg / dL, en los grupos metaintensivos y menos intensivos, respectivamente. El resultado primario ocurrió en 9.6% y 12.9% de los pacientes, respectivamente (HR 0.74 IC 95%: 0.57-0.94 p = 0.019).**

**El infarto cerebral o la revascularización carotídea después del ataque isquémico transitorio (AIT) se redujo en un 27% (p = 0,046). Se produjeron hemorragias intracraneales en 13 y 11 pacientes, respectivamente (HR 1.17 IC 95%: 0.53-2.62 p = 0.70).**

**Los autores concluyeron que después de un accidente cerebrovascular isquémico de origen aterosclerótico documentado, alcanzar un objetivo de LDL <70 mg / dL, durante 5,3 años de seguimiento, puede evitar 1 evento CV en 4 (NNT 30), sin aumentar hemorragias intracraneales.**

## **Português**

### **Nova evidencia reafirma que LDL <70 mg/dL reduz AVC recorrente**

**Amarenco P1, Kim JS2, Labreuche J1, Charles H1, Giroud M3, Lee BC4, Mahagne MH5, Nighoghossian N6, Gabriel Steg P7, Vicaud É8, Bruckert E9; Treat Stroke to Target (TST) Committees and Investigator Centers. Benefit of Targeting a LDL (Low-Density Lipoprotein) Cholesterol <70 mg/dL During 5 Years After Ischemic Stroke. PMID: 32078484 DOI: 10.1161/STROKEAHA.119.028718**

O estudo Treat Stroke to Target (TST) avaliou os benefícios de se alcançar níveis de LDL-C <70 mg/dL na redução do risco CV em 2.869 pacientes acometidos de AVC isquêmico com estenose de vasos cerebrais ou placa em arco aórtico >4 mm.

Essa nova análise, restrita aos participantes franceses, comparou os 1.073 pacientes alocados para a meta de LDL <70 mg/dL com aqueles alocados para a meta de LDL entre 90 e 110 mg/dL. Para o alcance das metas, os investigadores utilizaram estatinas em doses de sua escolha e adicionaram ezetimiba, quando necessário. O desfecho primário do estudo foi composto de AVC isquêmico, IAM, novos sintomas de isquemia requerendo intervenção coronária ou carotídea, e morte vascular.

Após o seguimento médio de 5,3 anos, os níveis médios de LDL foram de 66 mg/dL e 96 mg/dL, nos grupos meta intensiva e menos intensiva, respectivamente. O desfecho primário ocorreu em 9,6% e 12,9% dos pacientes, respectivamente (HR 0,74 IC 95%:0,57-0,94 p=0,019).

Infarto cerebral ou revascularização carotídea após ataque isquêmico transitório (AIT) foi reduzido em 27% (p=0,046). Infarto cerebral ou hemorragia intracraniana foi reduzido em 25% (p=0,021). Hemorragias intracranianas ocorreram em 13 e 11 pacientes, respectivamente (HR 1,17 IC 95%:0,53-2,62 p=0,70).

Os autores concluíram, que após um AVC isquêmico de origem aterosclerótica documentada, alcançar uma meta de LDL <70 mg/dL, durante 5,3 anos de seguimento, é capaz de evitar 1 evento CV em 4 (NNT 30), sem aumento de hemorragias intracranianas.

English

**Amarenco P1, Kim JS2, Labreuche J1, Charles H1, Giroud M3, Lee BC4, Mahagne MH5, Nighoghossian N6, Gabriel Steg P7, Vicaud É8, Bruckert E9; Treat Stroke to Target (TST) Committees and Investigator Centers. Benefit of Targeting a LDL (Low-Density Lipoprotein) Cholesterol <70 mg/dL During 5 Years After Ischemic Stroke. PMID: 32078484 DOI: 10.1161/STROKEAHA.119.028718**

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Abstract

**Background and Purpose-** The TST trial (Treat Stroke to Target) evaluated the benefit of targeting a LDL (low-density lipoprotein) cholesterol of <70 mg/dL to reduce the risk of cardiovascular events in 2860 patients with ischemic stroke with atherosclerotic stenosis of cerebral vasculature or aortic arch plaque >4 mm, in a French and Korean population. The follow-up lasted a median of 5.3 years in French patients (similar to the median follow-up time in the SPARCL trial [Stroke Prevention by Aggressive Reduction in Cholesterol Level]) and 2.0 years in Korean patients. Exposure duration to statin is a well-known driver for cardiovascular risk reduction. We report here the TST results in the French cohort. **Methods-** One thousand seventy-three French patients were assigned to <70 mg/dL (1.8 mmol/L) and 1075 to 100±10 mg/dL (90-110

mg/dL, 2.3-2.8 mmol/L). To achieve these goals, investigators used the statin and dosage of their choice and added ezetimibe on top if needed. The primary outcome was the composite of ischemic stroke, myocardial infarction, new symptoms requiring urgent coronary or carotid revascularization and vascular death. Results- After a median follow-up of 5.3 years, the achieved LDL cholesterol was 66 (1.69 mmol/L) and 96 mg/dL (2.46 mmol/L) on average, respectively. The primary end point occurred in 9.6% and 12.9% of patients, respectively (HR, 0.74 [95% CI, 0.57-0.94]; P=0.019). Cerebral infarction or urgent carotid revascularization following transient ischemic attack was reduced by 27% (P=0.046). Cerebral infarction or intracranial hemorrhage was reduced by 28% (P=0.023). The primary outcome or intracranial hemorrhage was reduced by 25% (P=0.021). Intracranial hemorrhages occurred in 13 and 11 patients, respectively (HR, 1.17 [95% CI, 0.53-2.62]; P=0.70). Conclusions- After an ischemic stroke of documented atherosclerotic origin, targeting a LDL cholesterol of <70 mg/dL during 5.3 years avoided 1 subsequent major vascular event in 4 (number needed to treat of 30) and no increase in intracranial hemorrhage. Registration- URL: <https://www.clinicaltrials.gov>. Unique identifier: NCT01252875.

**KEYWORDS:**

angiography; aorta; cholesterol, LDL; informed consent; stroke.