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Cochrane Database of Systematic Reviews 2009, Issue 4. Art. No.: CD006074.
DOI: [10.1002/14651858.CD006074.pub2](https://doi.org/10.1002/14651858.CD006074.pub2).

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[Intervention Review]

Carotid endarterectomy for carotid stenosis in patients selected for coronary artery bypass graft surgery

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Editorial group: Cochrane Stroke Group.

Publication status and date: New, published in Issue 1, 2010.

Citation: Mortaz Hejri S, Mostafazadeh Davani B, Sahraian MA. Carotid endarterectomy for carotid stenosis in patients selected for coronary artery bypass graft surgery. *Cochrane Database of Systematic Reviews* 2009, Issue 4. Art. No.: CD006074. DOI: [10.1002/14651858.CD006074.pub2](https://doi.org/10.1002/14651858.CD006074.pub2).

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ABSTRACT

Background

Carotid stenosis and coronary artery disease can occur simultaneously. In patients with coronary artery disease who are scheduled for coronary artery bypass graft (CABG) surgery, but who also have carotid artery stenosis, there is controversy about the role of carotid surgery. It is not known whether any benefit from prophylactic carotid endarterectomy (by avoiding stroke and neurological dysfunction complicating CABG surgery) outweighs the risks.

Objectives

To assess, in patients undergoing CABG surgery with a carotid stenosis more than 50%, the effects of carotid endarterectomy plus best medical therapy compared with best medical therapy alone on the overall risk of major clinical outcomes including death, stroke, and myocardial infarction.

Search methods

We searched the trials registers of the Cochrane Stroke Group (searched October 2008) and the Cochrane Heart Group (searched November 2008). In addition, we searched the Cochrane Central Register of Controlled Trials (CENTRAL) (*The Cochrane Library* Issue 4, 2008), MEDLINE (1966 to November 2008), EMBASE (1980 to November 2008), reference lists of identified trials, and ongoing trials and research registers (last searched November 2008).

Selection criteria

We planned to include all truly randomised controlled trials comparing carotid endarterectomy plus best medical therapy with best medical therapy alone in patients selected for CABG surgery. The main outcome was perioperative death.

Data collection and analysis

We planned for two review authors to independently assess the methodological quality of included studies, and extract data.

Main results

We did not find any eligible studies.

Authors' conclusions

We found no evidence from randomised trials by which to assess the benefits and risks of prophylactic carotid surgery before CABG surgery. Randomised controlled trials are required to reliably document the risks and benefits of such procedures.

PLAIN LANGUAGE SUMMARY**Carotid endarterectomy for carotid stenosis in patients selected for coronary artery bypass graft surgery**

People who have coronary artery disease requiring coronary artery bypass graft (CABG) surgery often have narrowing of other arteries. If the carotid artery, the artery carrying blood to the brain, is narrow (called carotid stenosis), this may increase the risk of stroke and other brain damage, complicating CABG surgery. Surgery to remove the carotid narrowing might prevent these complications of CABG surgery, but also has risks. We found no reliable evidence from randomised trials to indicate whether or not to perform preventive carotid surgery in patients who are going to have CABG surgery.