

# Carotid artery stenting compared with endarterectomy in patients with symptomatic carotid stenosis (International Carotid Stenting Study): a randomised controlled trial with cost-effectiveness analysis

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## Plain English summary

### The International Carotid Stenting Study

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## Plain English summary

Narrowing of one of the carotid arteries in the neck by deposits of fat in the artery wall is a major cause of stroke. The International Carotid Stenting Study (ICSS) compared two treatments to prevent stroke resulting from this narrowing. The first was surgical treatment (endarterectomy), which removes the fatty deposits altogether via an incision in the neck. The second was the newer treatment of carotid stenting, in which a wire mesh tube (a stent) is inserted inside the narrowed artery after being threaded up to the neck through the arteries in the leg via a puncture in the groin. The trial included 1713 patients who had recently had a stroke or transient ischaemic attack ('mini stroke') caused by carotid narrowing, at 50 centres in the UK, mainland Europe, Canada, Australia and New Zealand. Half the patients were randomly assigned to stenting and half to surgery. ICSS showed that stenting avoids complications of surgical incision in the neck, but caused more minor strokes at the time of the treatment than surgery. The combination of procedural stroke or death was more frequent in the stenting group. During long-term follow-up (median 4.2 years), the proportion of patients with fatal or disabling stroke was essentially the same for both stenting and endarterectomy. Any stroke during follow-up was more frequent in the stenting group. There were no differences in the costs of the two treatments. Therefore, endarterectomy remains the treatment of choice for patients at higher risk with stenting, but stenting is an appropriate treatment choice for patients if the risk of periprocedural stroke is low.

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