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Latest Findings on Stents

More data on the risks and benefits of drug-eluting and bare metal stents

Recent reports comparing drug-eluting stents with bare metal stents have suggested potentially greater risks for stent thrombosis and for death and myocardial infarction with drug-eluting stents. However, very low event rates and variable definitions of stent thrombosis complicate comparisons within individual trials. Five studies (published in the March 8 *New England Journal of Medicine*), encompassing 19 randomized trials, yielded these findings:

- A slightly lower risk for stent thrombosis with drug-eluting than with bare metal stents before 1 year, but a significantly higher risk after 1 year, representing an absolute disadvantage of about 0.5% to 1.0% with drug-eluting stents
- No difference in stent thrombosis between sirolimus-eluting and paclitaxel-eluting stents
- Documentation that even some drug-eluting stent recipients on long-term dual antiplatelet therapy experienced late stent thrombosis
- No statistically significant difference in death or MI between bare metal stents and either sirolimus-eluting or paclitaxel-eluting stents
- A marked reduction in target-vessel revascularization with drug-eluting stents
- A tendency toward higher mortality with sirolimus-eluting stents than with bare metal stents in diabetes patients

Comment: Two accompanying perspective articles note that these randomized trials tended to enroll patients with the simplest lesions. However, current usage patterns suggest that as many as 60% of stent procedures are performed for off-label indications such as saphenous-vein graft lesions, bifurcations, acute MI, chronic occlusions, and multivessel disease — situations in which the risk for stent thrombosis may be particularly high. For now, drug-eluting stents should be reserved for patients at greatest risk for restenosis who can receive long-term dual antiplatelet therapy ([Journal Watch Feb 15 2007](#) (Link to: <http://general-medicine.jwatch.org/cgi/content/full/2007/215/1>)).

— **Howard C. Herrmann, MD**

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Citation(s):

Spaulding C et al. A pooled analysis of data comparing sirolimus-eluting stents with bare-metal stents. *N Engl J Med* 2007 Mar 8; 356:989-97.

[Original article](#) (Link to: </cgi/ijlink?linkType=FULL&journalCode=nejm&resid=356/10/989>) (Subscription may be required)

[Medline abstract](#) (Link to: /cgi/external_ref?access_num=17296825&link_type=MED) (Free)

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[Original article](#) (Link to: /cgi/ijlink?linkType=FULL&journalCode=nejm&resid=356/10/984) (Subscription may be required)

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Curfman GD et al. Drug-eluting coronary stents — Promise and uncertainty. *N Engl J Med* 2007 Mar 8; 356:1059-60.

[Original article](#) (Link to: /cgi/ijlink?linkType=FULL&journalCode=nejm&resid=356/10/1059) (Subscription may be required)

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