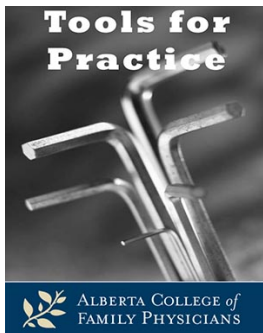


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Evidence Updated: New evidence, Context
Bottom Line: Changed
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Dual Antiplatelet Therapy Following Drug-Eluting Stent Placement: 3 Months, 1 Year or Forever?

Clinical Question: In patients with coronary artery disease who have drug-eluting stent (DES) placement, how long should we prescribe dual antiplatelet therapy (DAPT), such as aspirin plus clopidogrel?

Bottom-line: Current evidence shows small reductions in cardiovascular events balanced by a small increase in major bleed and mortality for DAPT duration >12 months. Guidelines recommend >12 months for ACS and >6 months for elective DES placement, with ½ these durations if major bleed occurs. Patient preferences and values should guide DAPT duration.

Evidence:

- Multiple meta-analyses of 11 Randomized Controlled Trials (RCTs), 33,051 patients comparing DAPT durations of 3-48 months following DES placement.
 - One meta-analysis¹ (10 RCTs) comparing “longer” versus “shorter” DAPT, statistically significant:
 - Decreased risk of:
 - Myocardial infarction (MI): -0.8%/year, Number Needed to Treat (NNT)=125.
 - Increased risk of:
 - All-cause mortality: +0.2%/year, Number Needed to Harm (NNH)=500.
 - Major bleed: +0.6%/year, NNH=167.
 - Other meta-analyses²⁻⁴ found:
 - 3-6 versus 12 months:
 - Death,^{2,3} MI/stent thrombosis:²⁻⁴ No difference.
 - Major bleed: No difference² or reduction,^{3,4} NNT=250-385.
 - 18-48 versus 6-12 months:
 - Death: No difference^{2,3} or higher risk.⁴
 - MI/stent thrombosis: Reduction.²⁻⁴
 - Major bleed: Increase.²⁻⁴

Context:

- 2016 American DAPT guidelines⁵ recommend:
 - Acute coronary syndrome (ACS) +/- stent placement: DAPT \geq 12 months.
 - Consider stopping at six months if high bleed risk or develop overt bleed.
 - DES placement for stable coronary artery disease: DAPT \geq 6 months.
 - At six months, re-assess & consider for longer if low bleed risk.
 - Stop after three months if develop bleed.
- Reduction of “very late” stent thrombosis (one year after DES placement), the primary goal of prolonged DAPT, rarely occurs with newer DES:
 - 0.8% with 2nd generation DES versus 3% with paclitaxel-eluting stent (1st generation stent no longer used in practice).⁶
 - In-hospital mortality is <4%⁷ (previously overestimated as 20-45%⁸).
- Preliminary clinical predictions rules^{9,10} (such as the [DAPT Score](#)) describe factors to consider shorter/longer duration:
 - Longer (increase MI): ACS/MI at presentation, prior MI/revascularization, heart failure or ejection fraction <30%, diabetes and certain stent/procedural factors.
 - Shorter (increased bleed): Age, low/high BMI, anemia, and anticoagulation.

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Tools for Practice is a biweekly article summarizing medical evidence with a focus on topical issues and practice modifying information. It is coordinated by G. Michael Allan, MD, CCFP and the content is written by practising family physicians who are joined occasionally by a health professional from another medical specialty or health discipline. Each article is peer-reviewed, ensuring it maintains a high standard of quality, accuracy, and academic integrity. If you are not a member of the ACFP and would like to receive the TFP emails, please sign up for the distribution list at <http://bit.ly/signupfortfp>. Archived articles are available on the ACFP website.

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