

Coronary artery stents

Coronary angioplasty and coronary artery stents

Coronary angioplasty is a treatment for coronary heart disease, a condition in which the arteries supplying the blood to the heart muscle (the coronary arteries) become narrowed or blocked. The angioplasty procedure involves inflating a special balloon inside a coronary artery to open up a narrowed artery and improve blood flow to the heart.

After angioplasty is performed, an expandable metal tube (called a stent) is usually placed in the newly opened artery and expanded. The stent is left in place and helps to keep the artery from re-narrowing. There are two main types of stent currently available—standard ‘bare metal’ stents (BMS), and the more recently developed ‘drug-eluting’ stents (DES), which are coated with special drugs that help to stop the artery narrowing again (see below).

What are the benefits and disadvantages of ‘bare metal’ and ‘drug eluting’ stents?

Over time, scar tissue and the lining of the artery wall grow over the stent, so that the metal support becomes part of the artery wall.

Occasionally, the regrowth of tissue inside the stent is excessive, and causes a re-narrowing of the artery (this is called ‘restenosis’). About 10–15% of people who receive a standard BMS will need further treatment in the future. This may involve another angioplasty or even bypass surgery.

The drugs used to coat DES reduce scar tissue formation and make restenosis less likely. However, these drugs can also interfere with the normal healing of the artery wall. In rare instances, this may increase the risk of a blood clot suddenly forming on the stent and blocking the artery, leading to a heart attack. It is important to know that although this risk is slightly greater with DES than with BMS, it is still very low. To help prevent these blood clots, people who receive DES will be prescribed ‘antiplatelet’ medicines (usually aspirin and clopidogrel) for a longer period (usually at least 12 months) than those receiving BMS.

Discuss the options with your cardiologist

If your cardiologist has recommended angioplasty and stent implantation, discuss with him or her whether a DES or BMS is a better choice for you. It may be better to use a BMS if you are at higher risk of excessive bleeding, or if you are likely to have any other procedures (such as a colonoscopy) or surgery within the next 12 months. This is because the antiplatelet medicines you will need to take increase the risk of bleeding, and it is essential that you don't stop taking these medicines until your cardiologist advises you.

Summary

If you are undergoing coronary angioplasty and stent implantation, the Heart Foundation recommends that you discuss with your cardiologist whether a bare metal stent or a drug eluting stent is a better option for you. In particular, you should:

- tell your cardiologist about any other planned procedures or surgery
- understand the importance of antiplatelet medicines following stent implantation and the length of treatment that will be required
- remember not to stop taking your antiplatelet medicines without talking to your cardiologist first.

Further information

For general information on these procedures, please see our booklet *Coronary angioplasty and stent implantation*. Alternatively, you can contact our Heart Health Information Service on 1300 36 27 87 (local call cost) or email heartline@heartfoundation.org.au.

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