

## Angioplasty and stent placement for the heart.

Faad Malan \*

Department of Cardiac Surgery, Cedars-Sinai Smidt Heart Institute, Los Angeles, United States

*Accepted on 15th December, 2021*

### Description

Angioplasty is a method used to open blocked coronary arteries caused by coronary artery disease. It restores blood flow to the coronary heart muscle without an open-heart surgical procedure. Angioplasty may be performed in an emergency situation such as a coronary heart attack, or it is able to be performed as an optional surgery in case our healthcare provider strongly suspects that we've got coronary heart disease. Angioplasty is also known as Percutaneous Coronary Intervention (PCI).

For angioplasty, a long, thin tube (catheter) is placed right into a blood vessel. The catheter has a tiny balloon at its tip. Once the catheter is in place, the balloon is inflated in the narrowed place of the coronary heart artery. This presses the plaque or blood clot towards the edges of the artery, making more space for blood flow. In atherectomy, the health provider may additionally use a catheter with a rotating tip. When the catheter reaches the narrowed spot in the artery, the plaque is broken up or cut away to open the artery.

Coronary stents are now used in almost all angioplasty procedures. A stent is a tiny, expandable metal mesh coil. It is placed into the newly opened area of the artery to maintain the artery from narrowing or closing again. Once the stent has been positioned, the tissue will begin to coat the stent-like layer within three to twelve months, depending on if the stent has a medicinal drug coating or not. We may be prescribed drugs known as antiplatelets to decrease the "stickiness" of platelets. Platelets are unique blood cells that clump collectively to prevent bleeding. The medicinal drug also can prevent blood clots from forming in the stent. Our healthcare team will give particular instructions on which medicines need to be taken and for how long.

Most stents are coated with medicine to save scar tissue from forming within the stent. These stents are known as Drug-Eluting Stents (DES). They release medicinal drugs within the blood vessel that slows the overgrowth of tissue within the stent. This allows saving the blood vessel from turning narrow again. Some stents do not have this medicinal drug coating and are known as Bare-Metal Stents (BMS). They can also additionally have higher rates of stenosis; however, they do not require long-term use of antiplatelet medicines. This can be the preferred stent in people who are at high threat of bleeding. Because stents can become blocked, it is crucial to speak with our healthcare team about what we need to do when we have chest pain after stent placement. If the scar tissue does form inside the stent, we may need a repeat method. This can be using either balloon angioplasty or with a second stent. In a few cases, radiation therapy can be given through a catheter located close to the scar tissue to prevent the growth of scar tissue and open up the vessel. This is known as brachytherapy. Angioplasty is done to restore coronary artery blood flow while the narrowed artery is in an area that may be reached in this manner. Not all coronary artery disease (CAD) may be treated with angioplasty. The doctor will decide the best way to treat CAD based on our circumstances.

### \*Correspondence to

Faad Malan,  
Department of Cardiac Surgery,  
Cedars-Sinai Smidt Heart Institute,  
Los Angeles, United States  
E-mail: [Faad.malan@cshs.org](mailto:Faad.malan@cshs.org)

**Citation:** Malan F. Angioplasty and stent placement for the heart. *J Hyperten Heart Care* 2021;4(3):5.