



Stewardship of the Body
By Virginia Esslinger, RN

“I give you thanks that I am fearfully, wonderfully made” (Ps. 139)

Coronary Stents

Coronary stents are one of the most frequently implanted medical devices. About one million Americans are walking around with coronary stents in the blood vessels of their hearts. Many doctors consider angioplasty with stent placement to be a good treatment because it's less invasive than open-heart surgery and has had good results.

What are coronary stents? Coronary stents are tiny, expandable mesh tubes which help prop open clogged arteries supplying blood to the heart.

Why are stents used? The arteries that supply the heart muscle itself with oxygen are called coronary arteries. When one or more of these arteries become narrowed or clogged, the blood flow to the part of the heart fed by that artery is reduced so the muscle is getting less oxygen. The person may experience chest pain or pressure. If the artery becomes totally clogged, the person may have a heart attack when the blood supply to the heart muscle is completely cut off.

Angioplasty has been used since the 1970's to open up the artery and restore blood flow by inserting a flexible tube into a leg or arm artery and threading it toward a blocked heart artery. A balloon on the tip of the tube would be inflated to stretch open the clogged artery. But in 30 to 40 % of people the artery would narrow again within 6 months.

In the mid 1990's the FDA approved the use of stents which are expanded into place using balloon angioplasty and left within the artery to help keep it open.

What are stents made of? The stents that were first used were bare metal stents. It was found that in about 10 to 15% of people who had them inserted, excessive tissue grew around the stent and caused the artery to become narrow again. Now new stents have been developed that are coated with a drug that is released over about 30 days to inhibit inflammation and scar tissue growth. This allows tissue to grow around the stent to hold it in place but not narrow the artery.

What are the risks with stents? The main risk with stents is the development of blood clots around the stent. This risk is reduced by taking anti-platelet medications exactly as prescribed by the doctor after having the stent inserted. These may have to be taken for 4-6 weeks if a bare-metal stent was inserted or for at least a year if a drug-releasing stent was used.

When are stents used? If a person is having symptoms of coronary artery disease that are not relieved by lifestyle changes or medication, the doctor may recommend either angioplasty or bypass surgery. Which option is recommended depends on the location, severity and number of blockages in the heart arteries as well as the overall general health of the person. Generally, angioplasty is used if: the blockage is not long and fewer arteries are involved, the affected artery isn't the main vessel supplying blood to the left side of the heart, the person does not have heart failure, and can take anti-platelet drugs.