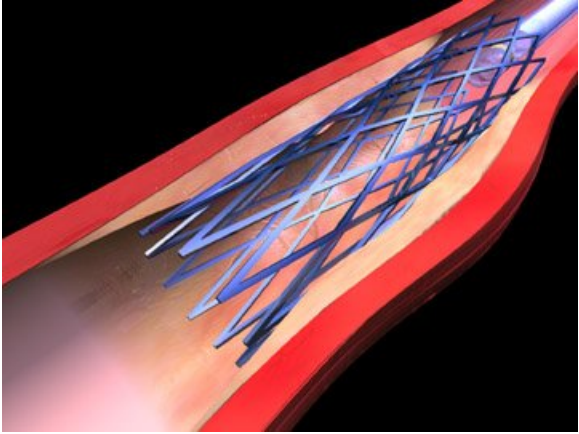


## Placement of cardiac stent



A stent is a tube-shaped metallic mesh that is placed during angioplasty in the coronary artery to keep it open. Angioplasty is a procedure that is performed during heart catheterization to open the blocked areas of the coronary arteries (the arteries that supply oxygen and nutrients to the heart muscle). The stent is at the tip of a thin catheter that has a tube-shaped balloon at the end. The stent collapses around the outside area of the balloon

that is at the tip of the catheter. The catheter is then threaded through the arteries up to the heart and, finally, it is introduced into the coronary artery where the blockage is. When the balloon is blown up, the stent expands and is locked in place. The stent stays in the artery and keeps it open permanently. This way the blood flow to the heart muscle is improved and symptoms such as chest pain are relieved.

The size of the coronary artery and the location of the blockage determine whether stents must be used in the angioplasty to keep the coronary arteries open. Stents are used to try to decrease the risk of restenosis (repeat narrowing or reocclusion) appearing after the balloon angioplasty or other procedure in which catheters are used. Stents also help restore normal blood flow and keep the artery open if it has been opened or injured with the balloon catheter. Restenosis continues to be a potential problem even after the placement of stents. Recently new types of stents have been developed known as drug-eluting stents. These stents are covered with drugs that are released gradually and prevent the blood vessel from closing up again. Drug-eluting stents promise to improve the long-term success of this procedure.