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Beating Heart Bypass Surgery Glossary of Terms

**Beating Heart Bypass Surgery
Glossary of Terms**

anastomotic suturing - The delicate sewing process of stitching the end of the bypass graft vessel to the artery.

angina pectoris - Chest pain associated with lack of blood flow to the heart. It is described as a vise-like, suffocating or crushing pain - sometimes radiating to the arms, neck and jaw.

atraumatic - Not causing trauma or damage.

aorta - The largest blood vessel in the body. The aorta is connected to the heart's left ventricle. It carries oxygen-enriched blood to the body.

angioplasty - A procedure where a tiny balloon is inserted into the blocked coronary artery and inflated at the site of blockage. Inflating the balloon reopens the vessel by pushing the plaque back against the walls of the artery.

arteries - The thick, muscular tubes that carry blood away from the heart and to the tissues.

atrial fibrillation - Extremely rapid, irregular impulses in the upper chambers (atria) of the heart. This rapid rate does not allow the atria to pump blood effectively into the ventricles. It can also cause irregular rapid ventricular beats.

Beating Heart surgery - Accomplished in a way that avoids cardiopulmonary bypass (the heart- lung machine); the surgeon performs surgery on a heart through a 10-12" incision in the chest, stabilizing a portion of the beating heart so that a bypass can be sewn into place. This approach provides the same basic benefits as conventional bypass surgery - restoring adequate blood flow and normal delivery of oxygen and nutrients to the heart. Also known as off pump surgery.

cardiopulmonary bypass (CPB) - Functions as the patient's heart and lungs during the conventional bypass surgery; also called the heart-lung machine.

conventional bypass surgery - Surgery performed on a stopped or "arrested" heart through a 10-12" incision down the middle of the chest. Patients are placed on cardiopulmonary bypass, which functions as the patient's heart and lungs during the operation.

coronary artery bypass grafting (CABG: pronounced 'Cabbage') - An open heart surgery procedure that treats the symptoms of coronary artery disease. CABG surgery involves sewing a bypass graft into place and rerouting (or bypassing) the blood flow around the blockages in the coronary arteries, restoring blood flow to the heart muscle itself.

coronary artery disease (CAD) - A disease in which plaque deposits block the artery and reduce the blood supply to the heart tissue, therefore inhibiting the amount of oxygen and nutrients delivered to the heart.

coronary artery vessels - A network of vessels that deliver blood, which carries oxygen and nutrients to the heart tissue.

graft - Created by using portions of another artery or vein from the patient's body to reroute blood around a blockage.

greater saphenous veins - Veins in the leg often used as a source for a bypass graft to be placed during open heart surgery.

heart-lung machine - Functions as the patient's heart and lungs during the conventional bypass surgery; also called cardiopulmonary bypass (CPB).

hemodynamic - The study of the forces involved in the circulation of blood.

ischemic - Not receiving the needed blood flow.

internal mammary arteries - Vessels inside the chest wall that are commonly used to create an alternative pathway for blood to reach the heart muscle.

minimally invasive cardiac surgery - Surgery on the heart that is performed either through a smaller than normal incision, or without the use of cardiopulmonary bypass (the heart-lung machine), or both.

neurocognitive - Memory, thinking skills.

perfusion - To supply nutrients and oxygen to the organs and tissues by way of blood flow through the vessels or the process of mechanically pumping blood through the body's blood vessels.

plaque - Deposits of fat, cholesterol, calcium and other cellular sludge from one's blood.

shunt - Created surgically to divert or permit flow from one pathway or region to another; a bypass.

stabilizer - Used to steady only the portion of the heart where the surgeon is sewing the bypass graft into place.

stent - A small device that can be placed in the artery after angioplasty to ensure that the artery remains open.

Definitions provided by Medtronic's Web site. For a more comprehensive glossary, see www.medtronic.com.

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