

Heart Surgery: Understanding Minimally Invasive Surgery

“It looks like you’d be a great candidate for the minimally invasive approach.”

When you need heart surgery, your cardiac care team may decide that Minimally Invasive Surgery is best for you. This method of surgery lasts about the same amount of time as traditional heart surgery, but your cardiac care team will use a number of smaller incisions to access your heart. Sometimes special robotic tools are used to help your cardiac care team perform more detailed actions.

Two common minimally invasive heart surgeries are Heart Valve Surgery and Coronary Artery Bypass Surgery. To understand heart valve replacement and repair let’s take a look at the heart.

The heart is a muscle that pumps oxygen and nutrient rich blood throughout the body. On the inside of the heart, blood moves from chamber to chamber through valves. Each time your heart contracts blood is pumped forward. When your heart relaxes, the valves prevent blood from flowing backward. Normally blood flows easily through the heart and to the rest of the body. But over time, the heart valves may weaken or become damaged preventing them from opening and closing properly. This can cause blood to back up in the heart chambers.

Heart valve surgery either repairs or replaces any damaged valves you may have. If you need a replacement valve, your cardiac care team will recommend either a mechanical valve or a tissue valve. Both valves work in a similar way and allow blood to flow properly through your heart. If you need Coronary Artery Bypass Surgery, you may also be a candidate for Minimally Invasive Surgery.

On the outside of the heart, large blood vessels called coronary arteries wrap around the surface and deliver oxygen and nutrients to the heart, so it can do its job. A fatty substance called plaque can build up in the coronary arteries. Plaque causes the arteries to narrow, reducing or completely blocking the amount of blood that can get to the heart. When the heart doesn’t get enough blood and oxygen, parts of it can become permanently damaged and even die. This can lead to chest pain called angina or heart attack.

During Coronary Artery Bypass-Surgery a blood vessel from your leg, forearm or chest is removed and used on the surface of your heart to create a new route for blood to flow. It will ‘bypass’ the clogged portion of your coronary artery and restore blood flow to your heart, allowing it to once again receive the oxygen and nutrients it needs to function.

Depending on a number of factors, including your overall health, age and type of repair your heart needs, your cardiac care team may talk to you about minimally invasive surgery. In the operating room, you will be given medication to help you sleep called Anesthesia. Little disks called Electrodes are attached to monitor your heart. And an IV provides you with medication, anesthesia and fluids.

Once you are asleep, a catheter is used to collect urine and a breathing tube helps you breathe. Because of the smaller incisions your cardiac care team will use a video monitor to see the parts of your heart that need repair. If robotic tools are being used, computers help guide the tools on thin, robotic arms allowing your cardiac care team greater control while performing complex repairs. Some benefits of Minimally Invasive Surgery include: small incisions and small scars. Some people may experience shorter recovery time and be released from the hospital faster.

Minimally Invasive Heart Surgery is not best for everyone. Talk to your cardiac care team about all of your surgery options, ask any questions you may have and follow your doctor’s instructions before and after surgery.