

Minimally Invasive Heart Valve

Inside your heart are four valves that act as traffic cops to ensure that blood flows in the correct manner. Sometimes these valves may become damaged, which may cause blood to back up into the heart (called aortic regurgitation) or not allow blood to pass through properly (aortic stenosis). Valve problems may arise from a number of conditions including birth defects, calcium deposits, infections such as rheumatic fever or side effects of medications.

At one time, valve surgeries were performed using an open procedure where doctors

exposed the heart by cutting through the patient's breastbone. Doctors would place the patient on a heart-lung bypass machine, which would take over the heart's function during surgery.

More recently, minimally invasive surgical procedures are allowing doctors to replace or repair heart valves using smaller incisions and without cutting through the sternum or breastbone. These surgeries include the following:

- ▶ **Thoracoscopy** requires two- to three-inch incisions on the right side of the chest between the ribs. Special instruments,

including one with a fiber-optic camera, are inserted through these incisions, allowing the doctor to work on the heart.

- ▶ **Keyhole surgery** uses one to four incisions in the chest for the instruments to be inserted. Keyhole surgery uses images displayed on TV monitors for magnification of the surgical elements.

- ▶ **Robotic-assisted surgery** requires between two and four incisions that are no more than three-quarters of

an inch long. The surgeon uses a computer-controlled robot to manipulate the surgical instruments.

As with any surgery, there are risks involved including adverse reactions to anesthesia, bleeding, blood clots, infection and breathing problems. Older patients may have an increased risk for irregular heart rates (requiring medication or a pacemaker to control), damage to other organs, nerves or bones, or heart attack, stroke or death.

Minimally Invasive Heart Valve Surgery

Helps Avoid Harmful Complications

Not too long ago Joe Cagle was facing a possible kidney transplant. His kidneys were weak and dialysis wasn't doing the job anymore. But tests revealed that he didn't need a transplant — he needed a new heart valve to replace the defective one that was causing the problem.

Cagle went to Reginald Abraham, M.D., a board-certified cardiovascular and thoracic surgeon affiliated with Fountain Valley Regional Hospital, who is also the hospital's Cardiovascular

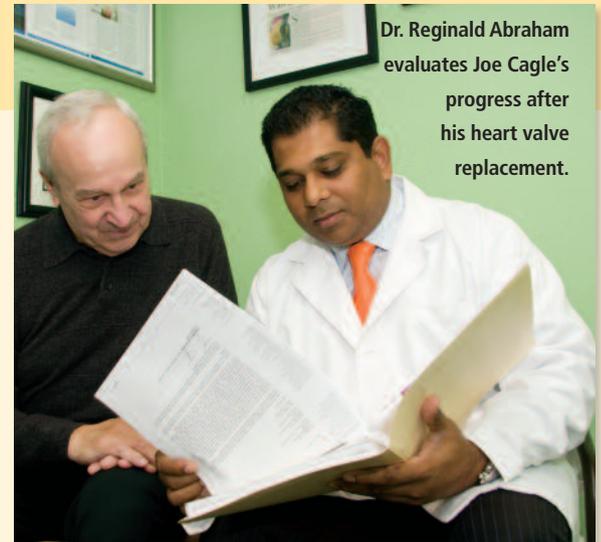
Medical Director. Fearful his patient's kidneys could fail at any time, Dr. Abraham did not want to risk a traditional valve replacement, a procedure that requires cutting through the breastbone.

New technology, however, allows surgeons to perform the replacement through two- to three-inch incisions in the side of the chest between the ribs. "This less invasive procedure would help prevent organ damage that might lead to being on dialysis for the rest of his life," says Dr. Abraham.

In addition, with any minimally invasive procedure patients bleed

less and recover faster. After Dr. Abraham performed a minimally invasive valve replacement, Cagle spent just two-and-a-half days in the hospital. He was able to get out of bed easily, and he was able to breathe easily.

The surgery didn't just strengthen his heart. His kidneys are stronger — with improved blood flow, all his organs are getting more of what they need. "I continue to feel stronger every day," he says. "I fully expect that in a few months I'll be able to go out and play some golf."



Dr. Reginald Abraham evaluates Joe Cagle's progress after his heart valve replacement.

After his surgeon performed minimally invasive heart valve replacement, Cagle spent just two-and-a-half days in the hospital.



ORANGE COUNTY INSTITUTE
HEART & VASCULAR CARE
at Fountain Valley Regional Hospital