

Minimally Invasive and Robotic Heart Surgery

General Information

Minimally invasive heart surgery is performed through small incisions (cuts) on the side of the chest. There are usually four to five incisions made that are each 3 to 5 inches long. Traditional heart surgery uses a longer incision down the center of the chest.

Robotic heart surgery is a type of minimally invasive heart surgery. A surgeon uses a special computer to control surgical instruments with robotic arms.

Benefits

The benefits of minimally invasive and robotic heart surgery may include:

- smaller incisions and scars
- less chance of infection
- decreased hospital stay
- decreased recovery time
- return to normal activities faster.

Types of Heart Surgery

The most common types of heart surgery are:

- **coronary artery bypass:** Bypass surgery is done when plaque blocks the coronary artery. This surgery will help improve blood flow to your heart.
- **heart valve repair or replacement:** Valve repair or replacement is done when any of the heart's 4 valves become damaged. These valves let the blood flow into and through your heart's 4 chambers.

- **treatments for congenital heart conditions** (born with a heart defect), such as atrial septal defect. This is a hole in the wall that separates the upper chambers of the heart.

Preparing for the Hospital

While you wait for surgery (it may be days or weeks), you can get a good start on your recovery. Follow these guidelines:

- **Eat well.** Your body will need vitamins and protein to speed healing.
- **Rest.** Do not let yourself get too tired before surgery. The more rested you are, the stronger you will be.
- **Stop smoking.** Smoking makes your heart and lungs work harder than they should. This will make your recovery more difficult.
- **Exercise.** Routine exercise, as OK'd by your doctor, will help you relieve stress and help strengthen your body. Stop any exercise if you feel signs of your heart problem and call your doctor right away.
- Some tests are necessary before surgery and may include blood work, a chest X-ray, urine test, an electrocardiogram (EKG), vein mapping and spirometry.
- A day or so before your surgery you will go to the hospital as an outpatient. During this visit, your health care team will teach you about your surgery and recovery.

Call your doctor if you have any questions about the above guidelines.

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Food and Liquid Directions Before Surgery

These directions are based on your scheduled arrival time. Not following these directions could mean your procedure will be delayed or canceled.

Alcohol and tobacco: 24 hours

- Do not drink any alcohol 24 hours before your scheduled arrival time.
- Do not smoke, vape, use chewing tobacco or use any other tobacco products up to 24 hours before your scheduled arrival time.

Solid foods: 8 hours

- Eat up to 8 hours before your scheduled arrival time.
 - Eat light meals such as oatmeal or toast.
 - Do not eat foods that are heavy or high in fat such as meat or fried foods.

Clear liquids: 2 hours

- Drink only clear liquids up to 2 hours before your scheduled arrival time.
 - Drink water, fruit juice without pulp, black coffee, clear pop or tea.
 - Do not have milk, yogurt, energy drinks or alcohol.

Medicines

- Take your medicines as directed with a small sip of water.
 - Talk with your cardiologist if you have diabetes or if you take warfarin (Jantoven®).

Preparing for the Surgery

- You will shower and then use a cleansing cloth with a special antiseptic solution the evening before and morning of surgery.
- You will remove any dentures and glasses or contact lenses.
- All jewelry (including body piercings) must be removed before surgery and should be left at home.
- You will go to the pre-anesthesia room where the anesthesiologist will connect special intravenous (IV) lines which will let your body be monitored during and after the surgery.
- Your family will be taken to the Surgical Waiting Room.

Recovering at the Hospital

- You will be taken to your room where a nurse will watch you closely. You will be connected to tubes and machines that monitor you.
- Your family will be able to visit while you are in the intensive care phase. The nurse will talk to you and your family about the machines and what they do. You will stay in the intensive care phase until your condition is stable.
- As your body heals, the tubes and machines will be taken away and you will begin to increase your activity.
- Cardiac rehabilitation staff members will guide you in progressive exercises.
- As your healing progresses, you will receive information on how to care for yourself at home.