Understanding Your Child's Heart Catheterization

The heart catheterization is a procedure that gives details about your child's heart function. It helps your doctor figure out the problem and proper treatment. It can be used to:

- See how well the heart is pumping.
- Study the structure and function of heart valves, blood vessels and lungs.
- Measure the pressure and oxygen levels in the heart and lungs.
- Look for coronary artery disease.
- Fix problems with the heart or blood vessels.

How Heart Catheterization is Done
We pass a thin flexible tube (catheter) to your child's heart and lungs through an artery or vein in the groin. We inject dye into the heart chambers and blood vessels so we can see them on x-ray. An x-ray camera films the heart and its vessels as they pump blood. We can view these pictures right away so we can decide on a treatment option quickly.

Tell your doctor or nurse if your child is allergic to x-ray dye (contrast) or any medicines.

How the Heart Works
The heart is made up of strong muscle tissue. Its main function is to pump blood to the body and lungs. The heart is a hollow organ. It has four chambers, two on the right side and two on the left side. The upper chambers are called the right and left atrium. The lower chambers on each side are called ventricles. All four chambers work together to pump the blood and bring vital nutrients and oxygen throughout the body.

The main pumping chamber is the left ventricle. This chamber pumps oxygen rich blood to all parts of the body. The right ventricle pumps blood to the lungs where it picks up fresh oxygen.

There are 4 valves in the heart. These valves allow blood to move in only one direction and prevent it from backing up into the chamber it has just left.

- Mitral valve is between the left atrium and the left ventricle.
- Tricuspid valve is between the right atrium and the right ventricle.
- Pulmonary valve is between the right ventricle and the pulmonary artery (goes to lungs).
- Aortic valve is between the left ventricle and the aorta (main artery in the body).

The atrial and ventricular septum divide the right from the left side of the heart. These keep oxygen rich blood pumping to the body and venous blood with oxygen removed pumping to the lungs.

Before Your Child's Heart Catheterization

The Night Before
We will give you detailed instructions to help your child get ready. We will tell you when and where to check in, give you a list of medicines that you need, and when your child needs to stop eating before the procedure.

Diet
We will give you diet guidelines when you schedule the procedure.

Please arrive on time. If your child is an inpatient, we will let you know the time of the procedure.

We will have a gown for your child to wear. Bring your child's socks or slippers to the cath lab as the room is kept very cool. All nail polish and jewelry must be removed.

Before Leaving for the Cath Lab
A doctor or nurse will explain the procedure, its purpose, benefits, and risks. We will ask you to sign a consent form.

Your child will likely have general anesthesia. Your child will be asleep and should not have any pain or anxiety. You will meet the anesthesia doctor before the procedure. This doctor will stay with your child during the entire procedure.

Before the procedure, we may give your child medicine to help them stay calm and lower anxiety. Sometimes, we place an IV before the procedure. Then, we will take you and your child to the cath lab on a cart. Other family members and guests will go to the cath lab waiting room.

In the Cath Lab
We will help your child onto the table. Your child lies flat so that the x-ray machine can rotate around the upper part of the body. We will place ECG patches on your child's shoulders, chest, arms, and legs. These patches are hooked to equipment that monitors your child's heart.

The groin will be the main spot we use to insert the catheter. In rare cases, we may use upper body blood vessels. Your child's doctor will decide which approach to use. We will likely use the right groin. The area will be shaved, if needed, and cleaned to remove any bacteria on the skin.

The doctors in the lab will wear sterile gowns, hats, masks, and gloves. Your child will be covered from chest to feet with a sterile sheet.

Placing the Catheters
The doctor will make tiny incisions in your child's skin. We will place a small hollow tube (a sheath) through the incisions into an artery and vein. This is like a large IV. We then pass catheters through the sheath to the heart and lungs. We then take pressure and oxygen readings in your child's heart and lungs. We will also take pictures of the heart and blood vessels.

After Heart Catheterization
The doctor will discuss results with you and your child right away. Your child's treatment will depend on the type of heart problems your child has and what we did during the procedure.

We will take you and your child to a room to recover. Your child will be on bed rest for several hours. Staff will give your child pain medicine and help your child change positions, if needed.

If your child had a catheterization to **diagnose** a problem, often you are discharged home after about 6 hours.

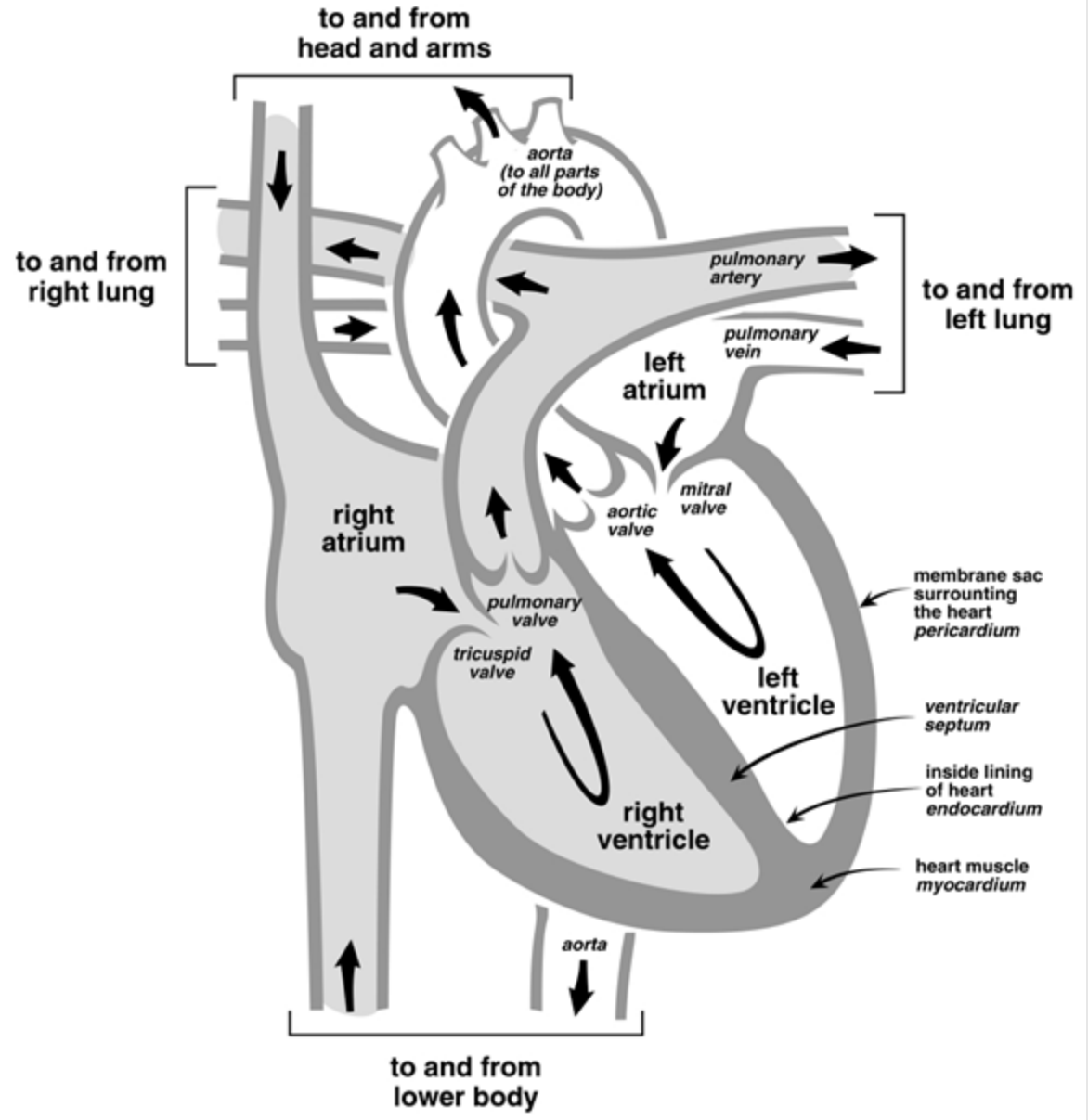
If your child had a catheterization to **fix** a problem, we will likely observe your child overnight.

Before you go home, we will review:

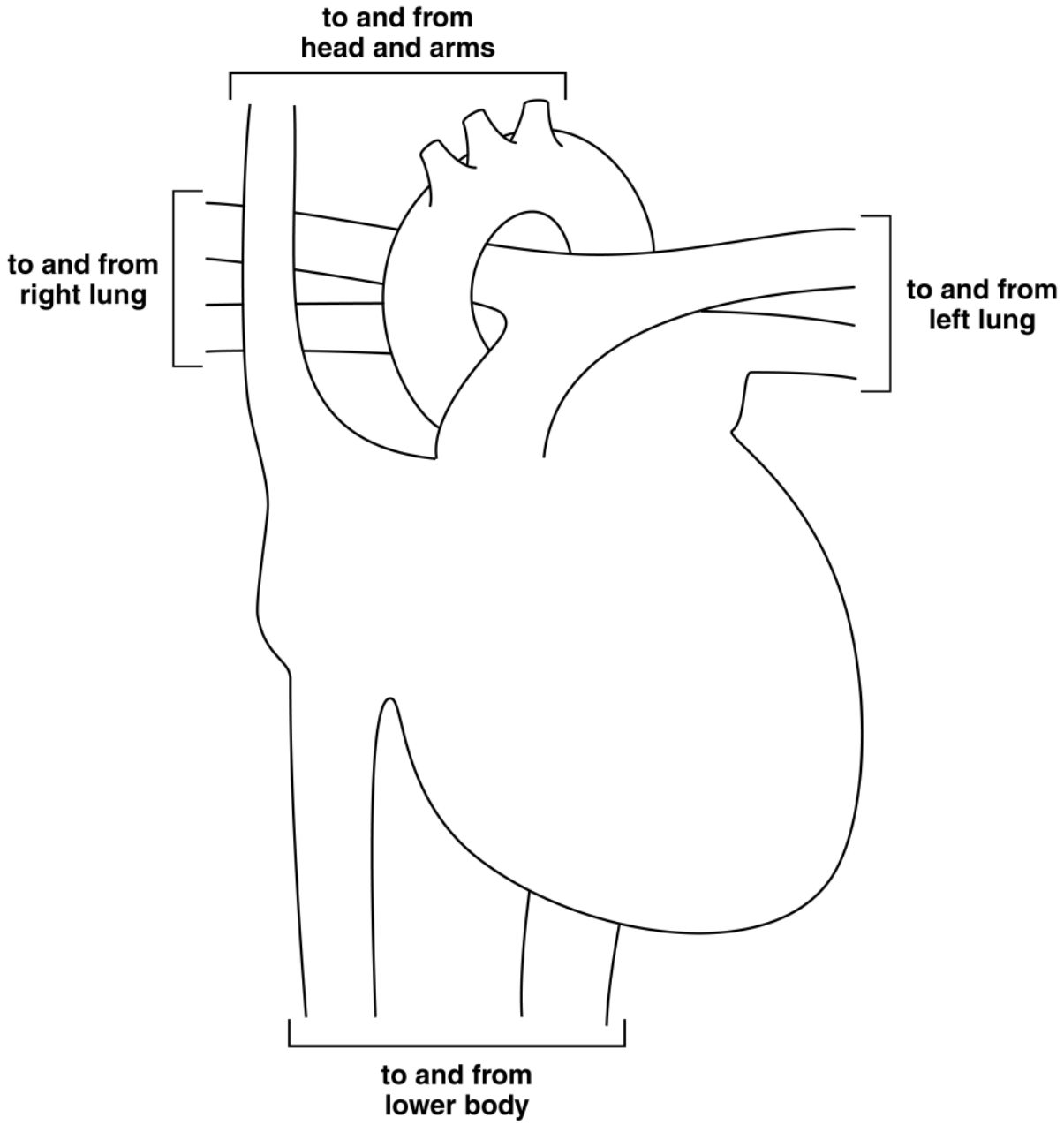
- How to care for the wounds.
- Pain management.
- New medicines.
- When to call your child's heart doctor.
- When to follow up with your child's primary doctor and heart doctor.

Who to Call
If you have questions, please contact your provider through MyChart or call your provider listed in your After Visit Summary or After Hospital Care Plan. For a list of UW Health Clinics, visit www.uwhealth.org/.

The heart and how it works



Your child's heart



Your health care team may have given you this information as part of your care. If so, please use it and call if you have any questions. If this information was not given to you as part of your care, please check with your doctor. This is not medical advice. This is not to be used for diagnosis or treatment of any medical condition. Because each person's health needs are different, you should talk with your doctor or others on your health care team when using this information. If you have an emergency, please call 911. Copyright © 7/2026 University of Wisconsin Hospitals and Clinics Authority. All rights reserved. Produced by the Department of Nursing HF#7496.