Children's Hospital of Pittsburgh of UPMC

HELPFUL Information for parents and children

Cardiology

Electrocardiogram (EKG or ECG)

At Children's Hospital of Pittsburgh of UPMC, we believe parents and guardians can contribute to the success of this test, and we invite you to participate. Please read the following information to learn about the test and how you can help.

Fast Facts About the Electrocardiogram

- An electrocardiogram *(e-LECK-tro-KAR-dee-o-gram)*, also called an EKG or an ECG, is a simple, fast test used to check the heart.
- An EKG measures the electrical beats of the heart and prints that information out on strips of graph paper.
- An EKG gives doctors information about the rhythm of the heartbeat, the size of the chambers of the heart and the amount of blood going to the heart muscle itself.
- All testing takes place on the outside of the body and it does not hurt.
- Testing is done using 10 stickers that are placed on your child's chest, arms and legs.
- The test takes about 5 to 10 minutes to complete.
- Parents can stay in the room with their child during the entire test.

What Is An EKG?

An EKG is a quick and easy way to measure the beats of the heart. Small plastic stickers called electrodes *(e-LECK-trodes)* are placed at certain spots on your child's chest, arms and legs. When the electrodes are connected to the EKG machine, the heartbeats are measured and printed out on strips of graph paper for the doctor to look at. On paper, the heartbeats look like a long row of pointy mountains. To the doctor, the patterns of those points may show one or more of several heart conditions, including:

- An enlarged (swollen) heart—which might be caused by heart defects, high blood pressure or congestive heart failure, when the heart can't pump out all the blood from the heart to the rest of the body;
- Ischemia *(is-KEEM-ee-ya)*, which is when not enough oxygen-rich blood can get to the heart because of a clog in an artery;
- Problems with "conduction" or how the electrical impulses run through the heart, which can make the heart beat too fast, too slow or at an uneven rate; and
- Disease or problems in one or more of the heart's valves, which may block the flow of blood within the heart.

An EKG also may be done during a clinic visit to get a baseline (starting point) measure of your child's heartbeat; to test how well a pacemaker is working; to make sure certain heart medicines are working; or to check the heart after surgery.

Home Preparation

- Your child may eat and drink as usual.
- You should not use any cream, lotion, powder or baby oil on your child's chest on the day of the test.
- You may bring along a "comfort" item—such as a favorite stuffed animal or "blankie"—for your child to hold during the test.

The Test

Since the EKG equipment is very small and easily portable, an EKG can be done almost anywhere. That means an EKG can be done in a doctor's office, in the hospital, in a clinic, in the emergency room or in a hospital room. You may stay with your child during the entire test. Your child may hold a comfort item during the test.

- Your child will need to remove his or her shirt.
- Your child will lie flat on a table or bed, covered with a sheet or gown.
- Electrodes—the small plastic stickers—will be attached to your child's chest, arms and legs, and wires connected to the EKG machine will be attached to the electrodes.
- It is important for your child to lie still and not talk during the EKG. If the child is still, the test will go very quickly.

- Once the EKG is done, the wires will be disconnected and the stickers will be taken off. Taking off the stickers feels like taking off a small band-aid.
- This test is painless and completely safe.

A Parent's/Guardian's Role During the Test

The most important thing parents can do is to keep their child relaxed and still during the test.

- Parents may stay with their child to provide a reassuring touch and words of encouragement throughout the entire test.
- You will be told where to sit or stand in the room during the test.
- We welcome your questions—but please ask them before or after the test.

After the Test

A doctor will look at the graph paper measurement of your child's heartbeat. If more information is needed about how well your child's heart is working, the doctor may order other tests.

Special Needs

If your child has any special needs or health issues you feel the doctor needs to know about, please call the Heart Center at Children's Hospital of Pittsburgh ***before the test*** and ask to speak with a nurse. It is important to notify us in advance about any special needs your child might have.

Heart Center
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One Children's Hospital Drive
4401 Penn Ave.
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2599 Wexford-Bayne Road
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1300 Oxford Drive
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To see the list of all available patient procedures descriptions, please visit www.chp.edu/procedures.

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