What is congenital heart disease?
Congenital heart disease, also known as a congenital heart defect, is a problem with the heart’s structure that is present at birth. Common problems with the disease include holes in the heart and misplaced, malformed, and/or missing valves, vessels and heart chambers. Most heart defects involve a combination of these problems. These defects either obstruct blood flow in the heart or vessels near it or cause blood to flow through the heart in an abnormal pattern.

What causes congenital heart disease?
Heart defects are among the most common birth defects and are the leading cause of birth defect-related deaths. Approximately 40,000 babies are born each year with congenital heart disease, and 4,000 will not survive the first year.

Heart defects are about three times more common than muscular dystrophy and childhood cancer and about 40 times more common than cystic fibrosis.

For most people, the cause of congenital heart disease is unknown; however, there are some factors associated with an increased chance of developing the disease.

These risk factors include:
- Genetic abnormalities.
- Alcohol or drug abuse during pregnancy.
- Maternal viral infections, such as rubella, in the first trimester of pregnancy.

The risk of having a child with congenital heart disease is higher if a parent or sibling has a congenital heart defect.

What are the symptoms and how is it diagnosed?
It is possible to have a heart defect and show no symptoms at all.

In adults, if symptoms are present, they may include:
- Shortness of breath
- Limited ability to exercise

Congenital heart defects may be diagnosed before birth, right after birth, during childhood or even in adulthood.

Congenital heart disease is typically detected when an abnormal heart sound or heart murmur is heard by the doctor. Depending on the type of murmur the doctor hears, he or she may run additional tests to determine if a congenital heart defect is present.

Treatment
Treatment for congenital heart disease is based on a number of factors, including the type and severity of the defect, age of the patient and other related elements. Prescription medication may be the first line of treatment. If medications are not effective, then a more invasive treatment may be necessary.

Catheter-based procedures may be the next best option for heart defect patients. If none of the catheter-based procedures is an option, surgery may be necessary.

Surgery may either be palliative, which relieves symptoms but does not cause blood to flow normally, or reparative, which fixes the underlying problem.

Most adults with congenital heart disease should be monitored by a heart specialist and take precautions to prevent any serious infection of the heart valve throughout their lives.
Outcome
Due to medical breakthroughs, more than 90 percent of children born with heart defects are now expected to live to adulthood and beyond.

Common long-term problems include:
- Rhythm problems
- Valve problems
- Heart failure
- Heart infection
- Stroke

Most adults with heart defects have few or no ongoing physical limitations or symptoms. With appropriate medical care, adults and children with all kinds of heart defects can now live longer, fuller lives than in the past.

About the congenital heart team
Our congenital heart team, led by Dr. Jorge Alegria and Dr. Tim Bricker, is composed of adult and pediatric cardiologists with expertise in congenital heart disease. These physicians have the support of advanced cardiovascular imaging, including state-of-the-art CT and MRI. We also have a full line of interventional catheter-based procedures for congenital heart defects.

TO FIND OUT MORE
Gill Heart Institute
ukhealthcare.uky.edu/Gillheart

Adult Congenital Heart Association (ACHA)
www.achaheart.org