

Heart Murmur

What is a heart murmur?

Technically, a heart murmur is simply a noise heard between the beats of the heart. When a doctor listens to the heart, she hears a sound something like lub-dub, lub-dub, lub-dub. Most often, the period between the lub and the dub and between the dub and the lub is silent. If there is any sound during this period, it is called a murmur. Although the word is unsettling, murmurs are extremely common, and usually normal (that is, the sounds are caused by a healthy heart pumping blood normally).



"Innocent" murmurs

In preschool and school-age children, heart murmurs are almost always not a concern; the children require no special care, and the sound eventually disappears. These children have "normal" or so-called functional or innocent heart murmurs.

If your child has such a murmur, it probably will be discovered between the ages of one and five during a routine examination. The doctor then will listen carefully to determine if this is a "normal" heart murmur or one that might indicate a problem. Usually, just by listening to its sound, the pediatrician will be able to tell if a murmur is innocent (normal). If necessary, she will consult a pediatric cardiologist to be certain, but additional tests are usually not necessary.

On rare occasions, a pediatrician will hear a murmur that sounds abnormal enough to indicate that something might be wrong with the heart. If the doctor suspects this, your child will be referred to a pediatric cardiologist ([/English/family-life/health-management/pages/What-is-a-Pediatric-Heart-Surgeon.aspx](#)) to enable a precise diagnosis to be made.

Heart murmurs and infants

When do heart murmurs become a concern? When they occur very early at birth or during the first six months of life. These murmurs are *not* functional or innocent, and most likely they will require the attention of a pediatric cardiologist immediately. They may be due to abnormal connections between the pumping chambers (septal defects) or the major blood vessels coming from the heart (e.g., transposition of vessels). Your infant will be observed for changes in skin color (turning blue), as well as breathing or feeding difficulties. He also may undergo additional tests, such as a chest X-ray, electrocardiogram (ECG), and an echocardiogram. This echocardiogram creates a picture of the inside of the heart by using sound waves. If all of these tests prove normal, then it is safe to conclude that the baby has an innocent murmur, but the cardiologist and pediatrician may want to see him again to be absolutely certain. The cardiologist and pediatrician together will make a decision as to next steps depending on the results of these tests.

When a specific condition called patent ductus arteriosus (PDA) occurs, it is often detected shortly after birth, most commonly in premature babies. It is a potentially serious condition in which blood circulates abnormally between two of the major arteries near the heart, due to the failure of a blood vessel (the ductus arteriosus) between these arteries to properly close. In most cases, the only symptom of PDA is a heart murmur until the ductus closes on its own shortly after birth, which often happens in otherwise healthy, full-term newborns. Sometimes, especially in premature babies, it may not close on its own, or it may be large and permit too much blood to pass through the lungs, which can place extra strain on the heart, forcing it to work harder and causing a rise in blood pressure in the arteries of the lungs. If this is the case, a medication or, rarely, surgery may be needed to help close the PDA.

Treatment

Innocent heart murmurs are normal and therefore require no treatment. Children with these innocent heart murmurs do not need repeated evaluation or long-term follow-up care from cardiologist, nor do they require restrictions on sports or other physical activities.

Innocent heart murmurs generally disappear by midadolescence. Cardiologists don't know why they go away, any more than we know why they appear in the first place. In the meantime, don't be discouraged if the murmur is softer on one visit to the pediatrician and loud again on the next. This may simply mean that your child's heart is beating at a slightly different rate each time. Most likely the murmur will go away eventually.

Patent ductus arteriosus is a selfcorrecting problem in some cases, or medications can be used to close a PDA. But if the ductus arteriosus remains open, it may need to be corrected surgically or with a catheter.

If other, more serious, heart conditions are diagnosed from birth or shortly thereafter, and the evaluation reveals more serious defects, the pediatric cardiologist and pediatrician will consult a pediatric cardiac surgeon at a regional Pediatric Cardiac Center where complete pediatric cardiac diagnostic and intervention capabilities exist.

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