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cardiac care provided in a **heartbeat**

## HEART MURMURS

From birth through adolescence, heart murmurs are as common as children as baby teeth and usually harmless.

Murmur is a general name applied to any heart sounds other than the normal "lub dub" sound of the heart valves closing. More than 99 percent of all pediatric heart murmurs are normal, caused by the various changes in blood flow that occur as the child's heart and circulatory system grow and mature. A murmur may be a buzz, a soft blowing sound or a swishing noise, depending on its underlying cause.

The type of murmur the pediatrician hears depends on the child's age, heart size and circulatory system development. As a child's inner anatomy changes, different murmurs appear, are audible for a period of time, then disappear.

For example, newborns have a neonatal murmur, caused by blood flowing into the immature arteries in the lungs. Before birth, these arteries do not receive much blood because the baby breathes through the placenta. When the baby is born and starts using its lungs to breath, the arteries are still tiny. Blood flowing into these small arteries make a certain sound, which is usually detectable by stethoscope. By about eight weeks of age, the baby's arteries have grown sufficiently, and this particular murmur disappears.

Normal childhood heart murmurs do not require any medical follow-up or treatment. For this reason, and to avoid causing unnecessary concern, pediatricians frequently do not tell parents if they hear a normal murmur.



## WHEN THE HEART SOUNDS WRONG!

The scenario is quite different, however, if the pediatrician detects a murmur that may not be normal. Abnormal murmurs usually indicate potentially serious heart problems, although they are usually not immediately life threatening. An abnormal murmur may be caused by a structural problem such as a malformed valve or a functional defect such as a weakness of the heart's pumping mechanism. If the pediatrician has the slightest suspicion about a murmur, the next step would be an evaluation by a pediatric heart specialist.

The specialist takes a thorough medical history, and examines the child for any signs or symptoms, indicating a heart problem. He or she performs an extensive examination with a stethoscope, listening to the heart with the child in several different positions, both before and after exercise.

The history of the murmur, i.e. when it first appeared, how long it has been here, is an important factor in making a diagnosis. Most congenital heart defects are diagnosed in the first few months of life and cause persistent murmurs. If a murmur appears at a later age, or if the murmur comes and goes, it is usually a normal murmur.

Happily for all concerned, most children referred to a pediatric cardiologist with suspicious murmurs turn out to have normal healthy hearts. For those few murmurs that indicate serious heart defects, more advanced treatment exist than ever before.

As you get older, the picture changes somewhat. After about age twelve, most functional murmurs disappear. When you get over the age of sixty, due to hardening of the arteries and aorta, a murmur may restart. It is then difficult to differentiate whether the murmur is due to a diseased valve or hardening of the arteries. One way of telling



the difference is by cardio echo ultrasound. This procedure not only diagnoses the presence of organic murmur, but can also quantitate the severity. The treatment then will depend on the particular case.