

Where **kids** come first

Cardiac murmurs in children



L'Hôpital de Montréal pour enfants
The Montreal Children's Hospital

Centre universitaire de santé McGill
McGill University Health Centre

A significant number of children who visit the Cardiology Department of The Montreal Children's Hospital of the McGill University Health Centre have heart murmurs. However, only a small percentage of these children suffer from significant heart problems.

A cardiac murmur is a noise made by the heart as it pumps blood. This is over and above the normal sound of a beating heart that doctors can hear while using a stethoscope.

A murmur does not necessarily mean your child has a heart problem. In most cases, doctors hear murmurs in children with normal, healthy hearts. These murmurs are called functional or innocent heart murmurs. A small percentage of heart murmurs are associated with heart disease. These are known as organic or pathological heart murmurs.

Pediatric cardiologists can distinguish between innocent and organic heart murmurs based on the characteristics of the murmur, and by using diagnostic tests such as electrocardiograms, echocardiograms and X-rays.

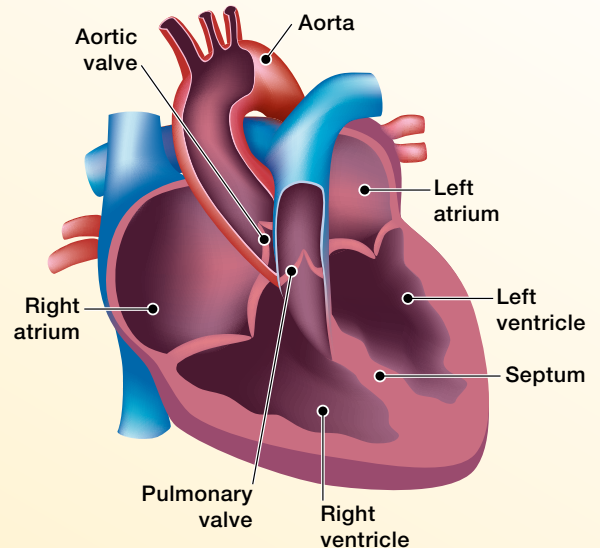
Murmurs are heard in up to 40% of children, particularly at 3 to 4 years of age.



Functional or innocent heart murmurs

In most cases, a functional or innocent heart murmur represents the sound of blood as it passes through a vigorously beating heart. Many functional murmurs diminish in intensity when your child is sleeping or calm. The murmurs become louder after activity or when your child is nervous, feverish or anemic. In general, these murmurs gradually disappear or become quieter as a child gets older. In adolescence, the development of the chest and chest muscles absorbs sound and the murmur tends to disappear.

An illustration of the heart



Organic or pathological heart murmurs

In less than one per cent of children, a cardiac murmur may mean heart disease, either congenital or acquired. Although there can be numerous causes of organic murmurs, the most common are:

- a valve within the heart that does not open or close properly;
- an abnormal communication between two chambers in the heart.

When a heart murmur is the result of a valve that leaks or does not open properly, there is abnormal blood flow within the heart. The blood flow is turbulent and pediatric cardiologists can hear this turbulence with a stethoscope.

When the heart murmur is the result of an abnormal communication between two chambers in the heart, an abnormality in the wall (septum) that separates the chambers of the heart can be the cause. When there is a hole in the wall or an abnormal connection between the chambers, the blood from the right and left sides of the heart mix. This abnormal flow creates a murmur which can be detected during a physical examination.

Even if a child has an organic murmur, in most cases, the abnormalities do not require any intervention, just careful observation and a few precautions. Less frequently, an intervention, either surgical or by catheter, may be necessary to correct a heart defect.

The cardiology team of The Montreal Children's Hospital of the MUHC reminds you that in the majority of cases, a cardiac murmur is harmless and not a cause for concern. If diagnosed as having an innocent murmur, no follow-up is needed since the heart is normal.

Symptoms of heart disease

In the case of a functional or innocent murmur, the heart functions normally so the child will have no symptoms. On the other hand, an organic murmur, which results from a cardiac malformation, may have symptoms which will vary according to the severity of the defect and the age of the child.

Babies

- may take a very long time to feed
- may drink only small amounts at every feeding
- may perspire and breathe rapidly while feeding

Older children

- may have trouble keeping up with their peers during physical activities or become easily short of breath.



This information was prepared by the Cardiology Department of The Montreal Children's Hospital of the McGill University Health Centre.

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