

Cardiac Birth Defects

What are cardiac birth defects?

Cardiac defects affect the development or function of the heart. Some of the most common cardiac defects include patent ductus arteriosus (failure of an artery to close correctly), septal defect (hole in the heart wall that divides the left and right sides), and heart valve abnormalities (heart valves do not form properly).

What causes cardiac birth defects and how can the risk of cardiac birth defects be reduced?

Cardiac defects are caused by a combination of genetic and environmental factors. Risk factors include maternal age, race, history of reproductive problems, maternal stress, and maternal exposure to certain drugs and chemicals. Up to 30% of cardiac birth defects are estimated to be preventable. The following are recommended for pregnant women and women of childbearing age (18-45 years old) to reduce the risk of cardiac birth defects:

- Take a multivitamin supplement with folic acid before and during pregnancy
- Consult with a doctor before and during pregnancy to keep maternal PKU or diabetes under control
- Receive an immunization against rubella before becoming pregnant

How severe are cardiac defects?

The severity of cardiac defects in individuals may range from not causing any problems, to being a cause of death or disability. An estimated 85% of individuals with a cardiac defect survive into adulthood. Individuals living with cardiac defects may suffer from physical issues such as difficulties with growth and stature, problems with motor skills, or reduced exercise tolerance, as well as behavioral and psychiatric abnormalities.

What can be done to detect or treat cardiac defects?

Screening during pregnancy may detect some defects, although others will not be detected until after birth or even in adulthood. Some defects require surgical repair, while others require regular monitoring and medications. The most severe defects may require heart transplants.

How does Washtenaw County compare to Michigan?

In Washtenaw County, 24.5% of birth defects are classified as cardiac defects, making it the largest birth defects category. The overall rate of cardiac defects in Washtenaw County is 21.9 per 1,000 live births, which is higher than the Michigan rate of 15.3 per 1,000 live births. It is likely that some of this difference could be due to better detection and reporting in Washtenaw County compared to the rest of the state. In both Washtenaw County and Michigan, the rate of cardiac birth defects is increased in infants born to women over 35 years old compared to women under 35 years old, and in blacks compared to whites. Rate trends in Michigan and Washtenaw County from 1992-2003 are shown in the figure below.

