



MINC GENE SCENE

February is Heart Health Awareness Month

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Heart defects are among the most common birth defects and are the leading cause of birth defect-related deaths. According to the American Heart Association, nine out of every 1,000 babies born will have some form of congenital heart disorder.

Only a few genes have been discovered that are directly linked to the presence of isolated heart defects, however, once a heart defect is identified in one family member, the risk to other family members to have a baby with a heart defect may be higher. Heart defects are also common in children with chromosome disorders such as Down syndrome and a wide variety of inherited disorders including Noonan syndrome, DiGeorge syndrome, and Holt-Oram syndrome. In addition to genetics, environmental factors such as certain medications taken during a pregnancy can increase the risk for heart defects.

There are steps a woman can take before and during pregnancy that may help reduce the risk of having a baby with a heart defect:

- Take a multivitamin containing 400 micrograms of folic acid daily, starting before pregnancy. This helps to prevent serious birth defects of the brain and spinal cord and may also help prevent heart defects.
- Know your family history and review this information with your health care provider.
- Discuss all medications with your provider, even over-the-counter or herbal medicines.
- Avoid people who have the flu or other illnesses with fever.
- Avoid exposure to organic solvents, used in products such as paints, varnishes and degreasing/cleaning agents.

Heart disease is the number one cause of death in Ohio. The most common heart diseases are complex, multifactorial conditions that result from interactions between genetic and non-genetic factors. Examples of heart disease include aneurysms, congestive heart failure, coronary heart disease, heart attacks, strokes, irregular heartbeat or arrhythmia such as long QT syndrome, and heart muscle diseases such as hypertrophic cardiomyopathy.

What to look for in a family history:

- Heart disease at a young age in one or more close relatives (male before age 55 or female before age 65).
- Stroke before age 65 in a close relative
- Sudden cardiac death in a relative who seemed healthy
- Heart disease in both your mother and father
- Two or more close relatives on the same side of the family with the same or related conditions (heart disease, stroke, diabetes, high cholesterol, high blood pressure)
- A relative who has been diagnosed with a specific type of hereditary heart disease (long QT syndrome, hypertrophic cardiomyopathy, etc.)

There are lifestyle changes individuals can make once they know about their risk for heart disease:

- If you smoke, quit. If you don't smoke, don't start
- Eat a balanced diet low in sodium and high in fruits, vegetables, whole grains, low-fat or fat-free dairy products and lean meats
- Get active
- Lose weight if you are overweight
- If you drink alcohol, limit intake to one to two drinks a day
- Manage your stress levels
- Take your medications to control high cholesterol, high blood pressure and diabetes

Genomic Competencies:

1. Nurse identifies clients who may benefit from specific genetic and genomic information and/or services based on assessment data.
2. Nurse critically analyzes the history and physical assessment findings for genetic, environmental, and genomic influences and risk factors.

References

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