

# JT News

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## \*\*\*\* Scientist uses computer to trace congenital heart defects

DALLAS -- Pregnant women react to a child with German measles the same way characters in a horror flick flee at the first squeak from the vampire's coffin.

German measles, or rubella, has long been known to have the potential for causing a broad spectrum of birth defects in a fetus if the mother is exposed to the virus during pregnancy. A major handicap that results from a pregnant woman's exposure to rubella is congenital heart disease, a condition that shows up shortly after birth and can cover a large number of disorders, including holes in the heart or defects in the valves or chambers.

However, exposure to rubella accounts for less than one percent of congenital heart diseases, says Dr. David Fixler, professor of pediatrics at The University of Texas Health Science Center at Dallas. Unfortunately, while other causes are suspected, few have been definitely pinpointed for this disorder.

That's why Fixler and his associates have decided to play detective.

The cardiologist is working with a computer registry to search for clues to other causes of congenital heart defects, a condition that generally develops within the first 10 weeks of pregnancy.

"We think there may be other viruses and such things as chemical exposure that may play a role," says Fixler. "It's important to look for causes so we can direct greater effort toward prevention."

The physician, who two years ago earned a masters degree in epidemiology at the University of London, says his team is using time/space analysis as well as other means to look for possible relationships between congenital heart defects and environmental factors. These include outbreaks of common viruses as established by laboratory diagnosis in the state lab, occupational factors such as work in certain manufacturing plants and chemical exposure in particular neighborhoods. Fixler says he hopes that the entire study, which will encompass over 3,000 cases, will point to areas to be explored for possible investigation, such as environmental exposure and ethnic predisposition.

All the pediatric cardiologists in the Dallas area are cooperating with the researchers by providing information about children born in this area who have congenital heart defects. The study has been going on for about a year.

Any clues to new causes for congenital heart defects will emerge after analyzing the data from the computer registry at Children's Medical Center, where Fixler is head of pediatric cardiology.

The researcher says this method has been used in Europe to look for epidemics of other congenital defects, such as hydrocephalus (an increased accumulation of cerebrospinal fluid within the brain) and limb deformities.

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