

# Sexually transmitted disease, urinary tract infections may be bad combination for birth defect

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## **Chances of gastroschisis increase fourfold in babies whose moms have both infections**

Women who reported having both a sexually transmitted disease (STD) and urinary tract infection (UTI) just before or during early pregnancy were four times more likely to have babies with gastroschisis—a severe birth defect in which infants are born with their intestines and other internal organs outside the abdomen, University of Utah researchers report in the online *British Medical Journal*.

The study, which the researchers caution must be verified with further investigation, may explain in part a global increase in gastroschisis, according to lead investigator Marcia L. Feldkamp, Ph.D., P.A., assistant professor of pediatrics at the U School of Medicine and director of the Utah Birth Defect Network. The National Center on Birth Defects and Developmental Disabilities, part of the U.S. Centers for Disease Control and Prevention (CDC), and the Utah Birth Defect Network were partners in the study.

"Gastroschisis is a public health issue worldwide, and the prevalence is on the rise in Utah," Feldkamp said. "We don't understand why this is occurring. But the incidence of STDs is also increasing and there may be a connection."

A study conducted by others in Utah found a tenfold increase in

gastroschisis from 1971-2002, according to Feldkamp.

The causes and mechanisms of gastroschisis are not known, but researchers suspect environmental and maternal factors may be related to the birth defect. The age of a woman giving birth also appears to play a strong role: women less than 20 years old are 11 times more likely to have babies with gastroschisis than women older than 25.

Nationally, one in every 2,700 babies is born with gastroschisis. In Utah, the birth defect may occur more often—once in every 2,200 births, according to Feldkamp. The prevalence of gastroschisis is estimated at about one in 570 births in Utah when the mother is less than 20 years old.

Feldkamp and colleagues from the University of Utah pediatrics department, the Utah Department of Health, and the National Center on Birth Defects and Developmental Disabilities, conducted their study as part of the National Birth Defects Prevention Study (NBDPS). This study is a multi-site national investigation using birth defect surveillance systems in Utah and nine other states: Arkansas, California, Georgia, Iowa, Massachusetts, New Jersey, New York, North Carolina, and Texas.

The researchers compared data on mothers of 505 babies with gastroschisis and a control group of 4,924 babies without the birth defect in the 10 states. Mothers of babies in both groups were queried through a computer-assisted telephone interview and questioned about whether they'd had kidney, bladder, or urinary tract infections, pelvic inflammatory disease or other illnesses, such as STDs, before or during pregnancy. About 70 percent of the women in each group contacted agreed to take part in the study.

Women who reported having both an STD and UTI immediately before

or early in pregnancy were four times more likely to have a child with gastroschisis, the researchers found. Mothers under 25 whose babies had gastroschisis reported having an STD and UTI nearly five times more than mothers in the control group. In women 25 or older, no case mothers reported having both types of infection. Mothers in both groups reported having more UTIs than STDs, the researchers found.

Although the association between having both an STD and UTI and the risk for gastroschisis needs more study, it's possible the link might be even stronger than the study suggests, according to Feldkamp. That's because STDs and UTIs often go undiagnosed.

"One of the problems, especially with Chlamydia, is these infections are subclinical (unreported) because the woman doesn't know she has it," Feldkamp said. "We probably have many cases that go undiagnosed."

This is a particularly important issue in the under-20 age group, she said, because STDs are increasing in women in this demographic. Chlamydia, in particular, is rapidly increasing Feldkamp said, and can cause both a sexually transmitted disease infection and a UTI. "If teens are having sex and getting pregnant, they're at risk of sexually transmitted diseases," she said. "They're not thinking about the consequences, so that's a huge problem with this age group."

Babies born with gastroschisis have a much better chance of survival now than several decades ago, with about a 90 percent survival rate, according to Feldkamp. Surgeons will place the intestines back in the abdomen. But this sometimes can be a slow process resulting in complications.

Source: University of Utah Health Sciences

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