

Gastroschisis

More teens than ever before are having babies—do their infants have greater risks for birth defects? Yes; young mothers are 5 times as likely as women in their late 20s to have a child with gastroschisis (pronounced gas-tro-SKEE-sis). Newborns with gastroschisis—where the intestines protrude through a hole in the abdomen—die without immediate corrective surgery and intensive hospital care. The defect is seen in 2 per 10,000 California births—120 affected babies are born each year, one quarter of them to teens.



YOUNG MOTHERS HAVE HIGHEST RISK

The younger the mother, the higher the risk for having a baby with gastroschisis. As yet, no biological explanation has been found for the pronounced age difference.

This study by the California Birth Defects Monitoring Program examines lifestyle—including drug use, social/economic factors, and reproduction—to uncover factors raising risk in women of any age. Information was gathered in interviews with mothers of infants with and without gastroschisis.

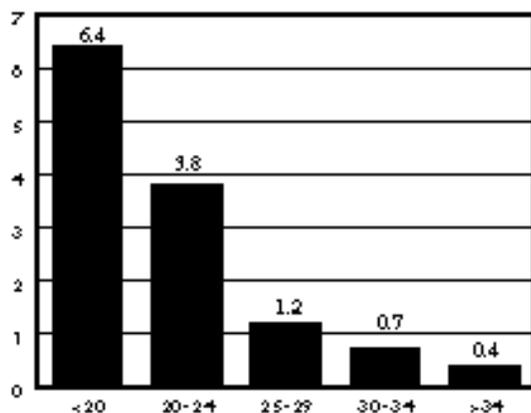
SUBSTANCE ABUSE

Using recreational drugs before or early in pregnancy increases the risk for gastroschisis. A higher risk is seen if the mother uses more than one type of drug, and if both parents are drug users. Cocaine-using mothers are more than 4 times as likely to have a baby with gastroschisis. Using marijuana, amphetamines, or alcohol (either daily or binge drinking) increases risk by 2 to 4 times.

SOCIALLY DISADVANTAGED BACKGROUND

Compared to a mother of the same age, a woman who faced greater social and economic challenges during childhood/young adulthood had a greater risk of having a baby with gastroschisis.

GASTROSCHISIS BY MOTHER'S AGE
RATE PER 10,000 BIRTHS



An affected child's mother was more likely to:

- Not have completed high school
- Have low or middle income level
- Be living with but not married to the baby's father
- Have grown up without her own father in the home
- Not know if her mother smoked (often because she was raised by someone else).

REPRODUCTIVE FACTORS

The number of previous pregnancies and/or births does not change risk. Mothers of infants with gastroschisis are more likely to have had a previous abortion and to have had children with different partners. They started menstruating at about the same age as other girls but had a shorter interval between their first period and their first pregnancy. Does physical immaturity in teen mothers contribute to gastroschisis? In this study, early pregnancy was strongly linked to social/economic conditions, and by itself did not account for the extra risk.

IMPLICATIONS

Being young, using drugs, and having a socially disadvantaged lifestyle increase gastroschisis risk—babies born to mothers with all 3 characteristics are most vulnerable. “These factors explain one-third of the risk,” states researcher Claudine Torfs. “Future analysis will focus on possible roles of other exposures such as medications, diet, occupation, and hobbies.”

The defect forms during weeks 5-8 of pregnancy, most likely due to a blood supply disruption to the developing abdominal wall. Blood flow-altering drugs such as cocaine are natural candidates in the search for causes. However social and economic instability are substantial risk factors as well, even among non-drug users—the biological mechanisms for this link are still unknown.

DATA SOURCES

All cases were originally identified through ongoing surveillance by the California Birth Defects Monitoring Program registry, a database of information from medical records of children with birth defects.

- **Participants:** 110 mothers of infants with gastroschisis and 220 mothers of the same ages whose infants did not have birth defects. All babies were born between 1988-1990. Only White or Latina women were included because there were few cases in other racial/ethnic groups.
- **Interview:** Conducted in the mother's home by a trained interviewer, in English or Spanish, 3-6 months after the baby's birth. The 2.5-hour structured survey asked about the mother's pregnancy, diet, health, drug use, occupation, and demographics as well as questions about the baby's father and grandparents.
- **Diagnostic information:** Abstracted from hospital medical records and reviewed by a geneticist to ensure correct classification.

*REFERENCE: Torfs C, Velie EM, Oeschli FW, Bateson TF, Curry CJR. A population-based study of gastroschisis: Demographic, pregnancy & lifestyle risk factors. **Teratology** 1994, 50(1):44-53.*

The California Birth Defects Monitoring Program—a public health program devoted to finding causes of birth defects—is funded through the California Department of Health Services and jointly operated with the March of Dimes Birth Defects Foundation.