

The Premature Birth Problem

A new report shows the rate of preterm births is climbing in the U.S., but officials don't know why.

WEB EXCLUSIVE

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Newsweek

Updated: 3:34 p.m. PT July 13, 2006

July 13, 2006 - Last year, one in every eight babies in the United States was born prematurely—a 30 percent increase over 1981 rates, according to a report released Thursday by the National Academy of Science's Institute of Medicine. The study notes that babies born prematurely are at greater risk for health problems ranging from cerebral palsy and mental retardation to attention deficit hyperactivity disorder



Babies born prematurely have an increased risk of serious health problems.

and crossed eyes. The report put the economic burden of preterm births at \$26.2 billion last year—or about \$51,600 per infant—most of that stemming from the costs of medical care. Dr. Richard Behrman, chair of the committee that wrote the report, is a clinical professor at Stanford University and at the University of California, San Francisco, and a pediatrician who has been treating premature babies since 1965. He spoke with NEWSWEEK's Karen Springen about the growing and mysterious problem. Excerpts:

NEWSWEEK: Why such a big jump in premature births?

Richard Behrman: We know many factors that could be influencing it, but we don't really know why this increase occurred. We need to generate research money.

Who's most at risk of having a premature birth?

Most premature babies are born to white women in this country. However, the risk of

having a premature baby is increased if you're African-American [17.8 percent of black women have premature births compared to 11.5 percent of whites]. We don't understand why. We also know that first-generation mothers who are born in another country and come to this country have less of a risk than they do after they've been here for a while. We don't know why. It's for that reason that we feel that one of our recommendations, the development of multidisciplinary research centers, is critical to making progress—both in our ability to identify who particularly is at risk and to understand enough to know how to intervene so we might decrease the number of preterm births.

How could you decrease the number?

We don't know at this point. Late in pregnancy, drugs are used to arrest labor under certain circumstances. That buys time, sometimes to transfer someone to a different medical center where there are neonatal intensive-care centers. That's why we really need research in this area. It's costing society an enormous amount of money as well as causing people heartache and causing illness to these infants.



What are the economic and medical consequences of babies born very prematurely [less than 28 weeks into pregnancy]?

They have a very much increased risk of ... hearing problems, eye problems, problems with schooling and education. And they also have pulmonary problems and gastrointestinal problems. Their hospital stays tend to be on the longer side, and they tend to be very costly. As a proportion of the \$26 billion a year that is

expended related to prematurity, they're a small proportion of that, even though the individual infants may cost a lot, because there are so few of them. Babies born at less than 28 weeks represent less than 1 percent of the premature births.

You note that African-American women are more likely to give birth to preterm babies, and not just because of socioeconomic conditions and maternal behaviors. Why?

It's really unknown. Even wealthy, well-educated black women have a greater risk than their white counterparts at the same education and economic level. There's some thought that there may be some genetic reason that makes them more vulnerable. There's also some thought that living in a society where they're subjected to more stress than their white comparison group may play some role in making them more vulnerable, but no one really knows for certain.

You found an increased chance of preterm birth among women 35 and older. Is that from in vitro fertilization and other assisted-reproductive technologies, or is age an independent risk factor?

Age is an independent risk factor. It's of minor or no consequence for women in their 30s. When we get beyond that, it becomes an independent risk factor unrelated to the risk of artificial technologies for reproduction.

Among infants conceived using assisted-reproductive technologies, nearly two thirds of twins and more than 97 percent of triplets and other higher-order multiples were born preterm. Do parents who use fertility treatments understand the risk?

There needs to be better communication between the fertility physicians or the OB/GYNs, who may be using the superovulatory drugs. They need to communicate better to parents, and parents need to better understand that there is increased risk of multiple pregnancies and that multiple pregnancies have an increased risk of having a preterm delivery.

Yet your report notes that only 33,000 out of 4 million births a year are the result of infertility procedures.

We know that it's a real relationship between the use of superovulatory drugs and assisted-reproductive technologies. There's a much greater risk of those women having preterm deliveries. But that's a small fraction of what's contributing to the 30 percent increase [since 1981]. We do not know what's causing the bulk of that increase.

Your report also notes that adolescents less than 16 years old are twice as likely as women over 18 to deliver preterm. Why?

We don't know why. [The younger adolescents] certainly are fully reproductively mature in the sense of being capable of conception. At least one of the theories is that many of those groups have other risk factors like smoking, alcohol abuse. It may also be related to stress from the community in which they live, lower socioeconomic status.

Urinary-tract infections are associated with prematurity, especially with African-Americans. Why?

Inflammation, which is part of infection, is a major part of the problem with those people who have genital urinary infections during pregnancy. Somehow that sets off a cycle that increases the risk of preterm delivery. We don't know how to interrupt it. It doesn't make sense to take antibiotics. We know that does not help except to treat a specific infection that has occurred.

Is it true that premature births also run in families?

It does run in families, and women should know [their] family history. A woman who is born prematurely is more likely to give birth to a premature herself. Whether it's inherited or not is not clear.

Why does prematurity increase the risk of so many health and developmental problems?

Development hasn't been completed in the uterus, and [the babies] are vulnerable outside the uterus to environmental things that can exacerbate the problems. Their neurodevelopment is not mature. And they may have lung problems, gastrointestinal problems and may be more vulnerable to infection ... Low birth weight is a marker of that, but it's their gestational age and immaturity that is really the problem.

Premature birth and a low birth weight have been associated with increased rates of coronary heart disease, stroke, hypertension and type 2 diabetes. Why would that contribute to these adult diseases?

The reasons are not clear at all. There are just theories that our systems may compensate to improve survival of the preterm, but that compensation when they become adults is an abnormality. They may alter their metabolism so they can survive as prematures. That alteration in their metabolism may wind up being permanent. When they become adults and are eating normally and involved in other kinds of adult activities, their metabolism and their biology may not be equal to the normal adult who wasn't premature.

What can parents-to-be do to lessen the odds of preterm birth?

They should stop smoking, and not drink. And pregnant women shouldn't expose themselves to environmental toxins. Even though we're not sure what the risk is from any particular ones, we know there is some risk from lead, some from mercury, some from PCBs.