

# Pregnant women with PTSD more likely to give birth prematurely, study finds

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Pregnant women with post-traumatic stress disorder are at increased risk of giving birth prematurely, a new study from the Stanford University School of Medicine and the U.S. Department of Veterans' Affairs has found.

The study, which examined more than 16,000 births to [female veterans](#), is the largest ever to evaluate connections between PTSD and preterm [birth](#).

Having PTSD in the year before delivery increased a woman's risk of spontaneous premature delivery by 35 percent, the research showed. The results will be published online Nov. 6 in *Obstetrics & Gynecology*.

"This study gives us a convincing epidemiological basis to say that, yes, PTSD is a risk factor for preterm delivery," said the study's senior author, Ciaran Phibbs, PhD, associate professor of pediatrics and an investigator at the March of Dimes Prematurity Research Center at Stanford University. "Mothers with PTSD should be treated as having high-risk pregnancies."

Spontaneous preterm births, in which the mother goes into labor and delivers more than three weeks early, account for about six deliveries per 100 in the general population. This means that the risk imposed by PTSD translates into a total of about two additional premature babies for every 100 births. In total, about 12 babies per 100 arrive prematurely; some are born early because of medical problems for the mother or baby, rather than because of spontaneous labor.

## **A piece of the prematurity puzzle**

"Spontaneous preterm labor has been an intractable problem," said Phibbs, noting that rates of spontaneous early labor have barely budged in the last 50 years. "Before we can come up with ways to prevent it, we need to have a better understanding of what the causes are. This is one piece of the puzzle."

Doctors want to prevent prematurity because of its serious consequences. Premature babies often need long hospitalizations after birth. They are more likely than full-term babies to die in infancy. Many of those who survive face lasting developmental delays or long-term impairments to their eyesight, hearing, breathing or digestive function.

Phibbs' team analyzed all deliveries covered by the Veterans Health Administration from 2000 to 2012, a total of 16,344 births. They found that 3,049 infants were born to [women](#) with PTSD diagnoses. Of these, 1,921 births were to women with "active" PTSD, meaning the condition

was diagnosed in the year prior to [giving birth](#), a time frame that the researchers thought could plausibly affect pregnancy.

The researchers examined the effects of several possible confounding factors. Being older, being African-American or carrying twins all increased the risk of prematurity, as extensive prior research has shown.

The researchers also looked at the effects of maternal health problems (high blood pressure, diabetes and asthma); possible sources of trauma (deployment and military sexual trauma); mental health disorders other than PTSD; drug or alcohol abuse; and tobacco dependence. However, these factors had little influence on risk for premature birth.

## **The effect of stress**

In other words, although pregnant women with PTSD may have other health problems or behave in risky ways, it's the PTSD that counts for triggering labor early.

"The mechanism is biologic," Phibbs said. "Stress is setting off biologic pathways that are inducing preterm labor. It's not the other psychiatric conditions or risky behaviors that are driving it."

However, if a woman had been diagnosed with PTSD in the past but had not experienced the disorder in the year before giving birth, her risk of delivering early was no higher than it was for women without PTSD.

"This makes us hopeful that if you treat a mom who has active PTSD early in her pregnancy, her stress level could be reduced, and the risk of giving birth prematurely might go down," said Phibbs, adding that the idea needs to be tested.

Although PTSD is more common in military veterans than the general population, a fairly substantial number of civilian women also

experience PTSD, Phibbs noted. "It's not unique to the VA or to combat," he said, noting that half of the women in the study who had PTSD had never been deployed to a combat zone. "This is relevant to all of [obstetrics](#)."

The VA has already incorporated the study's findings into care for [pregnant women](#) by instructing each VA medical center to treat pregnancies among women with recent PTSD as high-risk. And Phibbs' team is now investigating whether PTSD may also contribute to the risk of the mother or baby being diagnosed with a condition that causes doctors to recommend early delivery for health reasons.

Provided by Stanford University Medical Center

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