

# Depression during pregnancy can double risk of preterm delivery

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Depressed pregnant women have twice the risk of preterm delivery than pregnant women with no symptoms of depression, according to a new study by the Kaiser Permanente Division of Research. The study is published online in the Oxford University Press's journal *Human Reproduction* on behalf of the European Society of Human Reproduction and Embryology.

The study found that pregnant women with symptoms of depression have an increased risk of preterm delivery, and that the risk grows with the severity of the depressive symptoms. These findings also provide preliminary evidence that social and reproductive risk factors, obesity, and stressful events may exacerbate the depression-preterm delivery link, according to the researchers.

Because the majority of the women in the study did not use antidepressants, the study provides a clear look at the link between depression and preterm delivery.

The study -- which is among the first to examine depression and preterm delivery in a representative and diverse population in the United States -- looked at 791 pregnant Kaiser Permanente members in San Francisco city and county from October 1996 through October 1998.

Researchers interviewed the women around their 10th week of pregnancy and found that 41 percent of the women reported significant or severe depressive symptoms. The women with less severe depressive

symptoms had a 60 percent higher risk of preterm delivery -- defined as delivery at less than 37 completed weeks of gestation -- compared with women without significant depressive symptoms, and the women with severe depressive symptoms had more than twice the risk.

"Preterm delivery is the leading cause of infant mortality, and yet we don't know what causes it. What we do know is that a healthy pregnancy requires a healthy placenta, and that placental function is influenced by hormones, which are in turn influenced by the brain," said lead author Dr. De-Kun Li, a reproductive and perinatal epidemiologist at Kaiser Permanente's Division of Research in Oakland.

"This study adds to emerging evidence that depression during early pregnancy may interfere with the neuroendocrine pathways and subsequently placental function. The placenta and neuroendocrine functions play an important role in maintaining the health of a pregnancy and determining the onset of labor," Li explained.

"Post-partum depression has been extensively studied and discussed by the public, but depression during pregnancy is significantly under-recognized and under-diagnosed. Clinicians should pay close attention to depression during pregnancy to catch it early," Li said. "If prenatal depression is indeed as prevalent as reported in this and other studies and doubles the risk of preterm delivery, then bringing depression to the forefront of prenatal care could lead to a significant reduction of preterm deliveries."

In addition to being the leading cause of infant mortality and morbidity, preterm delivery is also the leading medical expenditure for infants, with estimated annual cost of about \$26 billion in the United States alone. Presently, other than a prior history of preterm delivery and some pregnancy complications, very little is known for its risk factors and origins.

"The key strengths of this study are that it ascertained the depressive symptoms early in pregnancy, long before the preterm delivery occurred, therefore avoiding recall bias. In addition, the study was not clouded by antidepressant use because only 1.5 percent of the study population was prescribed antidepressants and we could exclude them in the analyses," Li said. "Considering the increased use of antidepressants among pregnant women, this study's findings may provide a rare opportunity to evaluate the effect of depression on risk of preterm delivery without the entanglements of antidepressants."

Source: Kaiser Permanente

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