

Common antidepressants in pregnancy may alter fetal brain development

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(HealthDay)—Pregnant women who take certain antidepressants may unknowingly compromise the brain development of their child, researchers suggest.

The concern is based on a new analysis of [brain](#) scans involving nearly 100 newborns, some of whom were born to mothers who took selective serotonin reuptake inhibitors (SSRIs) while pregnant. Some examples of SSRIs are Zoloft, Lexapro, Celexa and Prozac.

The scans indicated that SSRI exposure in the womb was associated with an increase in the size of gray matter found in two parts of the brain: the amygdala and the insula. Maternal SSRI use was also linked to an increase in white matter connections between the two regions.

Animal research has linked such increases to a higher risk for developing anxiety and [depression](#), explained study author Jiook Cha, an assistant professor in the division of child and adolescent

psychiatry at Columbia University Medical Center in New York City.

What's more, the changes Cha and his colleagues saw were "much greater than the brain changes or abnormalities associated with psychiatric disorders that we usually observe in children or adults," he said.

Still, Cha noted that the study "does not demonstrate cause and effect." And he added that his team "did not test long-term consequences of the brain changes associated with prenatal exposure to SSRIs."

But Cha stressed that the association "may make it difficult to think prenatal exposure to SSRIs may have no impact on [fetal brain](#) development."

Generally speaking, gray matter facilitates most of the brain's signaling and is central to sensory perceptions, while white matter is largely nerve fiber bundles that enable communication between brain regions. The specific brain regions in question are critical to the processing of emotions.

All the mothers in the study were between the ages of 18 and 45 while pregnant between 2011 and 2016. Nearly a third were white, a quarter Hispanic, and a quarter black.

Most of the mothers had been examined for depression before, during and after pregnancy, and those prescribed an SSRI during their pregnancy were assigned to the "SSRI group."

All of the newborns had brain scans at an average age of just 1.5 weeks.

The scans revealed that babies in the SSRI group had "significant" increases in the size of amygdala and insula [gray matter](#), compared with those born to mothers who had been diagnosed with depression but not given an SSRI *and* those born

to moms without depression.

SSRI group infants also had "a significant increase" in white matter connections between those two regions, relative to the other groups.

Cha noted that while maternal depression (with or without SSRI treatment) was accounted for, the study did not examine other critical factors that could affect fetal development, including a family history of depression.

He also said more and larger investigations will be needed to see how fetal [brain changes](#) linked to maternal SSRI use might translate into mental health difficulties later in life.

In the meantime, what should pregnant women struggling with depression do?

"Unfortunately right now, based on the study, we cannot advise mothers and their doctors on whether to start or continue SSRIs through pregnancy," said Cha. "For now, each mother and their team of doctors should discuss the pros and cons of medication, and choose the option that makes the most sense for their particular situation."

But Dr. Nada Stotland, past president of the American Psychiatry Association and a professor of psychiatry at Rush Medical College in Chicago, characterized the finding as "interesting, but extremely preliminary." She was not involved with the study.

"Implying this association between fetal brain region development with how a child is going to behave for the rest of his life is very premature," she said. "And it's something we never hear said about other medications that pregnant women take all the time for asthma, or heart disease or diabetes."

"Of course, no medication can ever be proven to be absolutely safe for the unborn child," Stotland acknowledged. "But we do know that untreated depression is a risk for the pregnancy, the fetus and the newborn. So this doesn't belong in the public sphere, because it will alarm people unnecessarily."

More information: Jiook Cha, Ph.D., assistant professor, division of child and adolescent psychiatry, Columbia University Medical Center, New York City; Nada Stotland, M.D., M.P.H., past president, American Psychiatry Association, and professor, psychiatry, and obstetrics/gynecology, Rush Medical College, Chicago; April 9, 2018, *JAMA Pediatrics*, [Abstract/Full Text](#)

There's more on SSRIs and pregnancy risks at [U.S. Centers for Disease Control and Prevention](#).

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