

Gestational exposure to type of antidepressants associated with adolescent depression

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A study to be published in the May 2016 issue of the *Journal of the American Academy of Child and Adolescent Psychiatry* (JAACAP) reports that use of certain antidepressants during pregnancy can result in offspring depression by early adolescence.

Using national register data from Finland, researchers found that [children](#) exposed to selective serotonin reuptake inhibitors (SSRIs) during gestation had more chance of being diagnosed with depression after age 12, reaching a cumulative incidence of 8.2% by age 15. For children exposed to maternal psychiatric illness but no antidepressants, the incidence was 1.9%. Rates of anxiety, autism spectrum disorder (ASD), and attention-deficit/hyperactivity disorder (ADHD) diagnoses did not differ significantly between the two groups. Comparing SSRI-exposed children to children of mothers with neither antidepressant use nor psychiatric diagnosis, researchers found the rates were significantly elevated for each outcome.

Animal studies already demonstrated that exposure to SSRIs during early brain development can result in depression-like behavior in adolescence; this is the first study that follows children beyond childhood to monitor the development of depressive disorders, which typically emerge after puberty has started. The increasing rate of SSRI prescriptions to pregnant women since their introduction 30 years ago makes the study of affected children particularly urgent. Today 6% of pregnant women in

the US and 4% in Finland are on SSRIs at some stage of pregnancy.

To investigate whether using SSRIs during pregnancy is associated with [offspring](#) psychiatric disorders, researchers from Columbia University, New York State Psychiatric Institute, and Sackler Institute for Developmental Psychobiology joined forces with researchers from the University of Turku and Helsinki in Finland. They examined psychiatric diagnoses, including depression, anxiety, ASD, and ADHD, in the offspring of nearly 16,000 mothers who had used SSRIs during pregnancy between 1996 and 2010. Children in this cohort ranged in age from 0 to 15 years old. Because maternal psychiatric illness can affect offspring neurodevelopment in the absence of SSRIs, primary comparisons were made between offspring of the SSRI group and offspring of mothers with a psychiatric disorder diagnosis but no antidepressant use.

"The results are in line with studies in rodents, suggesting that SSRI use during pregnancy increases the risk of offspring depression," Dr. Heli Malm, the first author of the study, said. "However, the oldest subjects had only just entered the age of risk for depression, and we know that mood disorders typically emerge after the onset of puberty. Further research is therefore urgently needed to follow these children as they get older to substantiate our findings. Until confirmed, these findings must be balanced against the adverse consequences of untreated maternal depression. While some women with mild to moderate depression may do well coming off antidepressants during pregnancy, severe depression when left untreated can lead to serious consequences in the mother and can have direct and indirect adverse effects on the pregnancy, the fetus, and the child."

While it might seem reassuring that the results showed no elevated risk of ASD and ADHD for SSRI-exposed offspring, there may still be significant effects on offspring risk for [depression](#). Dr. Andre

Sourander, co-author of the study, added: "Further studies should determine whether the developing fetus is particularly sensitive to the effects of SSRIs in different trimesters, whether some medications may be safer than others for the fetus, and whether evidence-based psychotherapies could be better utilized to maximize maternal benefits while minimizing risk to the long-term health of the developing fetus."

More information: Heli Malm et al, Gestational Exposure to Selective Serotonin Reuptake Inhibitors and Offspring Psychiatric Disorders: A National Register-Based Study, *Journal of the American Academy of Child & Adolescent Psychiatry* (2016). [DOI: 10.1016/j.jaac.2016.02.013](https://doi.org/10.1016/j.jaac.2016.02.013)

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