Sex differences: Stress during pregnancy affects babies' physical and mental health — but males and females are impacted differently

In <u>a new longitudinal study</u> where individuals are followed over a course of 45 years, [researcher Jill] Goldstein and her colleagues provide concrete evidence that men and women whose mothers were significantly stressed during pregnancy respond differently to stress, 45 years later.

The study is based on a group of 80 individuals, half of whom were diagnosed with major depression, bipolar disorder, or schizophrenia.

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"The pathways for effects differ between males and females, underscoring contributions of sex-based biological differences to aspects of brain-behavior outcomes. Because different lifestyle factors are associated with changes in immune activity, such as stress, depression, illness, pollution, and compromised nutrition, these results suggest that health promotion for pregnant people, including mental health, may help them, as well as optimize development for the next generation. A key take home message from this study: Brain development begins before birth and is shaped by qualities of the mother's life," [says medical psychology professor Catherine Monk.]

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These results, in conjunction with the team's earlier studies emphasize the need to develop sex-specific psychiatric drug targets.

"Given that these psychiatric disorders are developing differently in the male and female brain, we should be thinking about sex-dependent targets for early therapeutic intervention and prevention," says Goldstein. Yet challenges abound in making this a reality.

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