

Babies placed in incubators decrease risk of depression as adults

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Babies who receive incubator care after birth are two to three times less likely to suffer depression as adults according to a new study published in the journal *Psychiatry Research*. The surprising discovery was made by scientists from the Université de Montréal and Sainte Justine Hospital Research Center in collaboration with researchers from McGill University, the Douglas Hospital Research Centre and the Institute of Psychiatry at King's College in the U.K.

"In mammals, separation between mother and child after birth has always been considered a major stressor that can cause behavioural problems well into adulthood," says coauthor Richard E. Tremblay a professor of psychology, pediatrics and psychiatry at the Université de Montréal and director of the Research Unit on Children's Psycho-Social Maladjustment at the Sainte Justine Hospital Research Center. "Our hypothesis was that mother-baby separation resulting from incubator care could heighten depression in adolescence or adulthood. Instead, we found that incubator care could decrease the risk of depression two-to-threefold by the age of 21."

For this study – the first to examine the impact of incubator care on adult depression – the research team studied a subsample of 1212 children recruited from a longitudinal study launched in 1986. Children were recruited from Quebec kindergartens and facts on birth condition, obstetrical complications and incubator care were obtained through hospital medical records. Participants received psychiatric assessments when they were 15 and 21 years old. Researchers found that:

- Of the 16.5 percent babies placed in incubators only 5 percent suffered major depression by age 21.
- Among participants who were not placed in incubators, 9 percent developed depression, which is the average rate for general society.
- Correlation between decreased depression and incubator care remained after factoring participant age, weight at birth, family adversity or maternal depression.

The research team also found that girls were three times less likely to experience depression by the age of 15 if they had received incubator care at birth. "This difference was due to the fact that more girls experience depression than boys during adolescence and how boys suffer depression in later adolescent years," says co author Frank Vitaro, a Université de Montréal professor and member of the Research Unit on Children's Psychosocial Maladjustment.

Chain of biological and emotional factors

The research team found that direct and indirect stimuli – not just incubators per se – could decrease depression. For instance, incubators are controlled environments where body temperature, brain oxygenation, sound and light are adjusted to maximize neuronal development. What's more, children who received incubator care as babies typically received more emotional support from their mothers throughout childhood because they were perceived as more vulnerable.

"Incubator care was not the sole factor that shielded participants from future depression," says first author David Gourion, formerly of the Université de Montréal and Sainte Justine Hospital Research Center and now at psychiatrist at the Hôpital Sainte-Anne in Paris.

"We believe that incubator care is a trigger for a complex chain of biological and emotional factors that helped decrease depression."

Source: University of Montreal

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