

# Researchers discover surprising link between chronic stress and preterm birth

July 16 2015

---



Credit: Anna Langova/public domain

Like most health professionals, David Olson has known for some time of the dangers posed by excessive stress. His latest research, though, is giving surprising new insight into how chronic stress in childhood can have an impact years after it occurred in women giving birth.

"Chronic stress is one of the better predictors of preterm birth," says

Olson, a professor of [obstetrics](#) and [gynecology](#) in the University of Alberta's Faculty of Medicine & Dentistry. "In fact, if women are exposed to two or more adverse childhood experiences while growing up, their risk of preterm birth doubles."

Olson, along with Kathleen Hegadoren, a professor in the U of A's Faculty of Nursing, and graduate student Inge Christiaens, are the authors of a new study in the journal *BMC Medicine* linking [chronic stress](#) with preterm birth.

The World Health Organization estimates 15 million babies are born preterm each year. It is the leading cause of death for children under the age of five, and babies who survive are at much higher risk of developing a number of health conditions including chronic lung disease, cardiovascular disease and metabolic diseases such as Type 2 diabetes. They are also at increased risk for both cognitive and behavioural issues.

As part of the study, the researchers recruited more than 200 women who had given birth in Edmonton-area hospitals. One-third of the women had given birth preterm, with the remaining women having delivered at term. The women were asked to fill out a stress questionnaire, giving researchers insight into their early life experiences and the stresses that resulted from those experiences.

"All of the adverse childhood events that we asked about had to occur prior to the age of 18, and the average age of delivery in our study was 28 years. These adverse childhood events occurred, on average, 10 years or more before the women actually delivered," says Olson.

"Although not inevitable, childhood adversity can result in long-term impacts on health across the lifespan, including pregnancy outcomes," adds Hegadoren. "Prenatal care providers need to ask pregnant women about past and current experiences that may have affected their health.

In doing that, they can help women understand a potential link between life experiences and preterm birth risk."

Though the research gives important new understanding about preterm birth, more answers are still needed. The researchers are now exploring how the body can "remember" traumatic events early in life in such a way that it affects health outcomes years later. Olson believes that a high burden of stressful experiences in [childhood](#) may cause changes in how genes are expressed in later life. He notes that earlier published studies involving preclinical models suggest that may be the case but that further human studies are needed.

Olson and Hegadoren hope to continue building upon the research to better predict which [women](#) will be at risk of [preterm birth](#). They also hope to develop early interventions.

"If we know who is at risk, we can begin to treat them before the end of their pregnancy—and hopefully they'll have improved pregnancy outcomes."

Provided by University of Alberta Faculty of Medicine & Dentistry

Citation: Researchers discover surprising link between chronic stress and preterm birth (2015, July 16) retrieved 26 April 2024 from <https://medicalxpress.com/news/2015-07-link-chronic-stress-preterm-birth.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
--