Maternal Chronic Conditions and Cerebral Palsy: An Association Worth Exploring
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The causes of cerebral palsy (CP) are multifactorial and is associated with a range of antenatal, perinatal, and postnatal risk factors. Much work has been done to describe these risk factors and develop prediction models. Strøm et al (10.1542/peds.2020-1137) explore whether there is an association with parent chronic disease and CP. The authors share with us an analysis of a prospective cohort study involving data obtained from the Medical Birth Registry of Norway (1990-2012) along with information on mothers and fathers in the Norwegian Patient Registry (2008-2014). Of the 1.36 million children in the registries, 3,575 were diagnosed with cerebral palsy. The authors found an increased risk of infants being born with CP if mothers had autoimmune illnesses such as diabetes, lupus, and Crohn's disease during pregnancy. However, no similar association was found with fathers.

What do these associations tell us and how worried should pregnant mothers with autoimmune illnesses be about having a baby born with CP? Not very worried, according to an accompanying commentary by Drs. Hollung, Vik, and Andersen (10.1542/peds.2020-033720) also from Norway, who are experts in the study of risk factors contributing to CP. They note the strengths of this large population-based registry study, but also its limitations, such as not being able to have access to information needed to study mechanisms responsible for this association. Although the relative risk is significant, the absolute risk is small suggesting that most women with a chronic autoimmune disorder will not have a meaningful increase in risk. The authors of the commentary also note that the Strøm study does not tell us if mothers were receiving treatment for their autoimmune condition. They note that the Strøm study raises many new important research questions regarding how autoimmune inflammatory responses might lead to CP. Check out both the study and commentary, which serve as great reviews of what we know regarding the complex and multiple etiologies that can cause CP.