

Autoimmune disease and pregnancy: Study challenges prevailing wisdom and unveils nuances

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For many aspiring mothers with autoimmune disease, pregnancy can be daunting and full of unknowns. In some cases, those suffering from

specific autoimmune conditions have chosen to forego pregnancy altogether due to concerns about their disease treatments and adverse pregnancy outcomes.

In a study published in the journal *eClinicalMedicine*, researchers at the Institute for Systems Biology (ISB) and Providence showed nuanced pregnancy outcomes for pregnant individuals with autoimmune disease. The findings reinforce that there isn't a one-size-fits-all approach, and provide important new avenues for further investigation.

"Research has been advancing rapidly. If you are living with an autoimmune disease and are currently pregnant or thinking of having a baby, I highly recommend you talk to your autoimmune disease specialist about pregnancy and the many factors to consider about your treatment and other important decisions," said Philip Mease, MD, a Providence rheumatology expert and part of the study team.

The research team examined the [electronic health records](#) of more than 365,000 pregnant individuals over a 10-year period, including more than 5,700 patients who had at least one of 12 autoimmune disorders: Psoriasis, inflammatory bowel disease, rheumatoid arthritis, spondyloarthritis, multiple sclerosis, [systemic lupus erythematosus](#), [psoriatic arthritis](#), [antiphospholipid syndrome](#), Sjögren's syndrome, vasculitides, sarcoidosis, and systemic sclerosis.

The researchers accounted for a large number of pregnancy and maternal characteristics associated with [preterm birth](#), as well as many other medical conditions, such as hypertension and diabetes. Their results provide an intricate relationship between autoimmune disease and pregnancy outcomes.

Notably, for pregnancy after 20 weeks of gestational age:

- In patients with autoimmune disease, the presence of other medical conditions is an important factor in risk for preterm birth, small for gestational age and low birth weight.
- Adjusting for other medical conditions reinforced that patients with lupus have higher risk for adverse pregnancy outcomes.
- Unexpectedly, after adjusting for comorbidities, patients with rheumatoid arthritis or inflammatory bowel disease did not show significantly higher risk for adverse pregnancy outcomes.

"A blanket statement that 'autoimmune disease is high risk for pregnancy' isn't sufficient. Each type of autoimmune disease is different, each person has their own medical history, and risk may change over the course of pregnancy. This study highlights the importance of taking comorbidities into consideration," said ISB Associate Professor Jennifer Hadlock, MD, who led the study.

"It was unexpected to see that in pregnancy after 20 weeks of gestational age, [rheumatoid arthritis](#) and [inflammatory bowel disease](#) were not necessarily associated with increased risk for preterm birth. This raises new questions about the interconnections between comorbidities and autoimmune disease."

There is a significant need for prospective studies that look across the duration of pregnancy and include more details on the severity and management of both autoimmune disease and other co-occurring medical conditions.

"These results can help reshape discussions surrounding autoimmune disease and pregnancy, and bring fresh perspective to a traditionally understudied area in research," Hadlock said.

More information: Maternal-fetal outcomes in patients with immune mediated inflammatory diseases, with consideration of comorbidities: a

retrospective cohort study in a large U.S. healthcare system, *eClinicalMedicine* (2024). [www.thelancet.com/journals/ecl ... \(24\)00014-2/fulltext](https://www.thelancet.com/journals/eclm/article/202400014-2/fulltext). On *MedRxiv*: [www.medrxiv.org/content/10.110 ... 023.08.07.23293726v1](https://www.medrxiv.org/content/10.1101/2023.08.07.23293726v1)

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