# Circulating Cytokines May Retard Fetal Growth

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Circulating cytokines appear to influence fetal growth in pregnant women who have rheumatoid arthritis, results of a Dutch study suggest.

High levels of interleukin-10, IL-6, and TNF-alpha might all play a role – at different stages of pregnancy – to increase the risk of low birth weight among infants born to these mothers.

Dr. Radboud Dolhain of Erasmus University Medical Centre, Rotterdam, the Netherlands, and associates examined circulating cytokines in 134 pregnant patients with RA in their first trimester, 168 in their third trimester, and 33 healthy controls (J. Reprod. Immunol. [doi: 10.1016/j.jri.2010.08.010]).

Disease activity was based on the disease activity score for 28 joints (DAS28).

Among first trimester patients, 12 had detectable IL-10; all had a higher disease activity score than did those with no IL-10 (mean DAS28 4.4 vs. 3.6).

"In the first trimester, elevated IL-10 seems to protect against the negative influence of RA disease activity on birth weight, [while] IL-6 seems to amplify this negative influence," they wrote. "In the third trimester, there is no influence, suggesting an early critical window."

TNF-alpha, however, did exert an influence in the third trimester. This association was not present in the first trimester. This finding implies that "TNF blockers, which are more and more prescribed during pregnancy to treat [RA], should be used with caution," they said.

The study was funded by the Dutch Arthritis Association. Dr. Dolhain did not disclose any pertinent conflicts. ■