

NSAIDs, genetics and miscarriage

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NSAIDs – anti-inflammatory drugs including aspirin and ibuprofen – affect signaling pathways important in achieving and maintaining pregnancy. Studies of their impact on miscarriage risk, however, have produced mixed results.

Digna Velez Edwards, Ph.D., and colleagues evaluated [genetic variation](#)

in NSAID metabolism and related pathways and miscarriage risk in a group of 600 European-American women enrolled in the [Right from the Start](#) prospective cohort.

The researchers identified an association between a variant in the prostacyclin synthase gene, PGIS, and miscarriage risk that was modified by NSAID use during [early pregnancy](#). Among women with the PGIS variant, NSAID users were protected from miscarriage and non-NSAID users were at increased risk. The variant was also associated with increased levels of a pro-inflammatory prostaglandin.

The findings, published in *Scientific Reports*, suggest the potential for using genetic information to guide interventions that prevent adverse pregnancy outcomes. If verified, the results support NSAID treatment in women with the PGIS variant to reduce risk of miscarriage.

More information: Digna R. Velez Edwards et al. Nonsteroidal Anti-inflammatory Drug Interaction with Prostacyclin Synthase Protects from Miscarriage, *Scientific Reports* (2017). [DOI: 10.1038/s41598-017-10150-2](#)

Provided by Vanderbilt University

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