

Steroid treatment for IVF problems may do more harm than good

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Pregnancy test. Credit: public domain

Researchers at the University of Adelaide are urging doctors and patients to refrain from using a specific steroid treatment to treat infertility in women unless clinically indicated, because of its links to miscarriage, preterm birth and birth defects.

Writing in the journal *Human Reproduction*, researchers from the University's Robinson Research Institute, led by Professor Sarah Robertson, say widespread use of the drug is not warranted, given there is a high degree of suspicion that corticosteroid drugs – such as prednisolone – can interfere with embryo implantation, and may have

harmful effects on pregnancy and the child.

Corticosteroids are increasingly used to treat infertility in women with repeated IVF failure and [recurrent miscarriage](#). Many women receive the drug in the belief that reducing [immune cells](#) called "natural killer" cells will facilitate a pregnancy. However, this belief is mistaken, as despite their alarming name these cells are actually required for healthy pregnancy.

Professor Robertson says there is a great deal of medical and consumer misunderstanding about the role of the immune system in fertility and healthy pregnancy.

"Steroid drugs such as prednisolone act as immune suppressants, preventing the body's immune system from responding to pregnancy. But by suppressing the natural immune response, these drugs may lead to further complications," Professor Robertson says.

"The immune system plays a critical role in reproduction and fertility. Natural killer cells and other immune cells help to build a robust placenta to support healthy fetal growth. But if we suppress or bypass the body's natural biology, there can be dire consequences that don't appear until later," she says.

"For example, suppression of the [immune system](#) through inappropriate use of these drugs is linked to impaired placental development, which in turn elevates the risk of miscarriage, preterm birth and birth defects."

Research shows that women taking corticosteroids over the first trimester of pregnancy have a 64% increase in miscarriage; the risk of [preterm birth](#) is more than doubled; and their children have an elevated risk of [birth defects](#), including a 3-4 times greater risk of cleft palate.

"Our main message to clinicians and to women hoping to achieve pregnancy is that they should be focused on achieving good-quality pregnancy and the life-time health of the child, not just getting pregnant," Professor Robertson says.

"Corticosteroids such as prednisolone may impair healthy [pregnancy](#), which may lead to poorer long-term outcomes for the baby.

"We believe IVF doctors should not be offering this treatment to most patients, and should discuss concerns with [women](#) who request it.

"The exception would be in specific cases where the patient has a diagnosed autoimmune condition, but those cases are rare," she says.

More information: Sarah A. Robertson et al. Corticosteroid therapy in assisted reproduction – immune suppression is a faulty premise, *Human Reproduction* (2016). [DOI: 10.1093/humrep/dew186](https://doi.org/10.1093/humrep/dew186)

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