

# Low sperm count may be associated with prenatal testosterone excess

September 23 2008

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Exposure to an excess of sexual steroids, like testosterone, during fetal development may be a potential risk factor for low sperm count and motility, according to a new study accepted for publication in *Endocrinology*, a journal of The Endocrine Society.

"The majority of disorders affecting sperm count in humans are originated during fetal life," said Professor Sergio Recabarren of the University of Concepcion in Chillan, Chile and lead author of the study. "A developing fetus is very vulnerable to its environment, and when that environment is exposed to excess sexual steroids, it may have a significant deleterious effect on a male offspring's fertility."

Prenatal exposure to excess sexual steroids can occur in two ways, said Dr. Recabarren. First, the exposure may be a product of increased sexual steroids in the maternal environment due to a hormonal condition such as polycystic ovary syndrome. Second, humans are exposed to several industrial pollutants which can act as steroid mimics, causing the body to inhibit or accelerate native steroid production.

In this study, researchers treated pregnant sheep with 30 mg testosterone propionate twice weekly from days 30 to 90 of pregnancy and with 40 mg testosterone propionate from days 90 to 120 of pregnancy. They found a significant reduction in body weight, scrotal circumference, and sperm count in male sheep born to these mothers compared with control sheep.

"While this research involved sheep, it can certainly be argued that in humans, exposure to an excess of sexual steroids during fetal development could constitute a potential risk factor that may conduct to a low sperm count," said Dr. Recabarren.

Low sperm counts are also associated with testicular cancer, with an incidence rate 20 fold higher than men with normal sperm analysis, said Dr. Recabarren. The findings from this study highlight growing concerns of the detrimental effects of prenatal steroid excess on reduced sperm counts.

Source: The Endocrine Society

Citation: Low sperm count may be associated with prenatal testosterone excess (2008, September 23) retrieved 7 May 2024 from <https://medicalxpress.com/news/2008-09-sperm-prenatal-testosterone-excess.html>

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