

Paracetamol in pregnancy may lower testosterone in unborn boys

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Tylenol 500 mg capsules. Credit: Wikipedia

Prolonged paracetamol use by pregnant women may reduce testosterone production in unborn baby boys, research has found.

Researchers say their findings could help to explain reported links between paracetamol use in pregnancy and reproductive health problems

in young boys.

Paracetamol is the primary medicine used for managing pain and fever during pregnancy.

The authors recommend that expectant mothers should follow existing guidelines that the painkiller be taken at the lowest effective dose for the shortest possible time.

Testosterone, produced in the testicles, is crucial for life-long male health. Reduced exposure to the hormone in the womb has been linked to an increased risk of infertility, testicular cancer and undescended testicles.

The University of Edinburgh study tested the effect of paracetamol on testosterone production in mice that carried grafts of human testicular tissue. These grafts have been shown to mimic how the developing testes grow and function during pregnancy.

Scientists gave the mice a typical daily dose of paracetamol - over a period of either 24 hours or seven days. They measured the amount of testosterone produced by the human tissue an hour after the final dose of paracetamol.

They found there was no effect on testosterone production following 24 hours of paracetamol treatment. After seven days of exposure, however, the amount of [testosterone](#) was reduced by 45 per cent.

The team - from the University's MRC Centre for Reproductive Health - say further research is required to establish the mechanism by which paracetamol might have this effect.

The study is published in the journal *Science Translational Medicine*. It is

funded by the Wellcome Trust, the British Society of Paediatric Endocrinology and Diabetes and the Medical Research Council.

Dr Rod Mitchell, a Wellcome Trust Intermediate Clinical Research Fellow at the University of Edinburgh, said: "This study adds to existing evidence that prolonged use of [paracetamol](#) in [pregnancy](#) may increase the risk of reproductive disorders in male babies.

"We would advise that [pregnant women](#) should follow current guidance that the painkiller be taken at the lowest effective dose for the shortest possible time."

More information: S. van den Driesche et al. Prolonged exposure to acetaminophen reduces testosterone production by the human fetal testis in a xenograft model. *Science Translational Medicine*, 20 May 2015. stm.sciencemag.org/lookup/doi/.../scitranslmed.aaa4097

Provided by University of Edinburgh

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