

Diabetes treatment may also provide protection against endometrial cancer

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This is Dr. Harpal Randeva of Warwick Medical School.
Credit: University of Warwick Medical

Research led by Warwick Medical School at the University of Warwick has found that Metformin, a drug treatment used to treat diabetes and also in women with Polycystic vary syndrome (PCOS), may potentially provide protection against endometrial cancer.

Endometrial cancer is the most common [malignancy](#) of the female genital tract and the fourth most common cancer in women in the UK and the US. Up to a third of PCOS women also have endometrial [hyperplasia](#) which, in turn predisposes these women to endometrial cancer. PCOS affects 5%-10% of women of reproductive age, where Metformin ameliorates [insulin resistance](#) and hyperinsulinemia in these women, but also long-term use of Metformin improves ovulation and [menstrual cycle](#) regularity.

Recent research has found that Metformin has anti-cancer properties e.g. in [breast cancer](#). Given that insulin resistant states, e.g. obesity, diabetes and PCOS are more at risk of developing endometrial cancer, the Warwick researchers studied the effects of metformin treatment on endometrial cancer cells. The researchers used serum from control and PCOS (before and after metformin treatment) subjects and carried out basic scientific experiments on endometrial cancer cells. The experiments revealed a decrease in endometrial cancer cell invasiveness in sera from metformin treated PCOS women.

The researchers found that serum samples from PCOS women who had completed the 6 month course of Metformin the rate of spread of endometrial cancer cells was around 25% lower than in the serum samples from PCOS women who had not started that treatment.

The principal investigators, Dr Harpal Randeva and Dr Bee K Tan, at Warwick Medical School said: "We are very excited about our findings, which reveal the significant impact of Metformin therapy use on human endometrial cancer cells. However, it is prudent that further research to explore if [Metformin](#) would actually be beneficial clinically as adjuvant therapy in endometrial cancer; this would need to be addressed through a randomized controlled trial."

More information: The research paper has been published in the *The Journal of Clinical Endocrinology & Metabolism* - [doi:10.1210/jc.2010-1803](https://doi.org/10.1210/jc.2010-1803)

Provided by University of Warwick

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