

Diabetes drug may prevent or delay development of polycystic ovary syndrome

June 29 2011

A recent study accepted for publication in *The Endocrine Society's Journal of Clinical Endocrinology & Metabolism (JCEM)* found that early, prolonged treatment with the diabetes drug metformin may prevent or delay the development of polycystic ovary syndrome (PCOS) in adolescence.

PCOS affects 7 to 10 percent of women of childbearing age and is the most common cause of infertility, affecting an estimated 5 to 6 million women in the United States, according to The Hormone Foundation.

"PCOS often presents in adolescence, with irregular menstrual cycles, acne, or too much body hair," said the study's senior author, Lourdes Ibáñez, MD, PhD, professor of pediatrics at the University of Barcelona in Spain and lead author of the study. "But we believe the critical years for PCOS development may be during childhood and puberty when excessive amounts of fat are stored. That excessive weight gain overexposes the ovaries to insulin, causing them to stop ovulating and start releasing male hormones, resulting in PCOS."

In this study of 38 girls with low birth-weight and early puberty, researchers compared the efficacy of early versus late metformin treatment to prevent adolescent PCOS. A group of 19 8-year-old girls were treated with daily doses of metformin for four years. A second group of 19 girls waited five years before they began receiving daily doses of metformin at age 13 and then continued treatment for only one year. They found that early metformin therapy prevented or delayed the

development of hirsutism, androgen excess and PCOS more effectively than late metformin treatment.

"Metformin, when given across the potentially critical window of puberty, may have the capacity to reprogram metabolism toward less abdominal and liver fat," Ibáñez concluded. "In the years ahead, the focus of attention should shift from late treatment of PCOS and its complications, toward the early and large-scale prevention of PCOS, with measures such as diet, exercise and metformin in young girls."

More information: The article, "Early Metformin Therapy (Age 8-12yr) in Girls with Precocious Pubarche to Reduce Hirsutism, Androgen Excess and Oligomenorrhea in Adolescence," appears in the August 2011 issue of *JCEM*.

Provided by The Endocrine Society

Citation: Diabetes drug may prevent or delay development of polycystic ovary syndrome (2011, June 29) retrieved 20 September 2024 from <https://medicalxpress.com/news/2011-06-diabetes-drug-polycystic-ovary-syndrome.html>

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