

Genetic evidence suggests men can develop PCOS-like condition

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New genetic research suggests men can develop characteristics of polycystic ovary syndrome (PCOS)—a common metabolic and reproductive disorder that affects women. The study was presented virtually at ENDO 2021, the Endocrine Society's annual meeting.

PCOS is a common disorder characterized by irregular menstrual periods, disruption of normal metabolism and elevated testosterone levels. PCOS affects up to 10% of all women of reproductive age. The disorder can lead to obesity, diabetes and cardiovascular disease, which are often life-long conditions.

Men who have genetic risk factors for PCOS face an increased risk of obesity, diabetes and cardiovascular disease as well as male pattern baldness, the study found.

Because men do not have ovaries, the findings show for the first time that the primary cause of PCOS may not be linked to the ovaries.

"The treatment of PCOS is limited by our incomplete understanding of the disorder," said lead researcher Jia Zhu, M.D., of Boston Children's Hospital. "Identifying the different causes for PCOS provides insights into the mechanisms of disease and is the first step in identifying future targets for treatment of the disorder."

The researchers used genetic data from 176,360 men in the United Kingdom to estimate genetic susceptibility for PCOS. They tested for associations with metabolic disorders (obesity, diabetes, and cardiovascular disease) and malepattern baldness. Men who had a high genetic risk score for PCOS had increased risk of obesity, diabetes, cardiovascular disease and male-pattern baldness.

"By demonstrating that genetic risk factors for PCOS are associated with obesity, diabetes and

cardiovascular disease and male-pattern baldness in men, we show that these genetic risk factors do not require ovaries to result in the characteristics of PCOS," Zhu said. "Thus, at least in some cases, the reproductive dysfunction of PCOS may be caused by biological mechanisms common to both men and women. Future studies of the genetic risk factors for PCOS could help us to better understand the causes and potential treatment targets for PCOS."

Provided by The Endocrine Society



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