

Measuring new hormone may reduce teenagers wrongly diagnosed with PCOS

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Measuring blood levels of the recently discovered hormone irisin may improve diagnosis rates of teenagers with polycystic ovary syndrome, according to research presented today at the 55th Annual European Society for Paediatric Endocrinology Meeting. The findings may reduce the number of unnecessary treatments prescribed to otherwise healthy girls.

Polycystic ovary syndrome (PCOS) is a common endocrine disorder affecting up to 12% of women. Women with PCOS are more likely to suffer from irregular periods, have excessive levels of male hormones and may have difficulty in conceiving due to irregularities in the ovaries. Doctors are cautious when diagnosing PCOS in teenagers because the symptoms can be confused with normal pubertal changes. Having tools that make diagnoses more accurate can reduce unnecessary treatment for otherwise healthy teenagers at a critical stage in their lives.

The cause of PCOS is unknown and there is currently no cure for the condition. Previous studies have associated high levels of irisin, a newly discovered hormone which is released from muscles and regulates energy metabolism, with PCOS in adults.

In this study, Greek researchers from Aghia Sophia Children's Hospital in Athens compared the hormones of 23 teenagers with PCOS with 17 healthy teenagers of the same age and BMI. They found that teenagers with PCOS had significantly higher irisin levels compared to the control group, and that this was associated with higher levels of the male sex

hormone testosterone, a key marker of PCOS.

The findings suggest that irisin could be a marker for PCOS allowing the condition to be diagnosed more easily. "Teenagers who get an early diagnosis of PCOS can sooner start to deal with the physical and psychological symptoms caused by this lifelong condition," said lead researcher Dr Flora Bacopoulou. "Whether it's through counselling or medication, girls can manage their symptoms and decrease the risk of further complications such as fertility problems, hirsutism (excessive hair growth) and type-2 diabetes".

The group will next focus on confirming their results and investigate the biological role of irisin in PCOS. "If high irisin levels in [teenagers](#) with PCOS is established, this could lead to the development of treatments for PCOS. Lifestyle changes and different exercise-related signals that regulate the secretion of irisin could provide a potential option for the management of PCOS. The potential of irisin as a meaningful drug target in PCOS is very promising," said Dr Bacopoulou.

More information: "Serum irisin concentrations in lean adolescents with polycystic ovary syndrome" 55th Annual European Society for Paediatric Endocrinology Meeting, 2016.

Provided by European Society for Paediatric Endocrinology

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