

Polycystic Ovary Syndrome & Obesity: The Link



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face, chest, stomach, thumbs, or toes, is observed among affected women. Other common features include baldness, thinning hair, acne, oily skin, dandruff and patches of thickened dark brown or black skin.

In addition to these important clinical manifestations, PCOS has metabolic characteristics that include defects in insulin action and pancreatic β -cell function, resulting in an increased risk for glucose intolerance and the onset of type 2 diabetes.

Cardiovascular diseases, high blood pressure, cholesterol abnormalities, sleep apnea, abnormal uterine bleeding, uterine cancer, complicated pregnancies and even infertility are also associated with PCOS.

What is the Link between PCOS and Obesity?

Obesity is frequently associated with PCOS, whereby 40–80% of women with this condition are reported to be overweight or obese; it is noticeable that the prevalence of PCOS is increasing in parallel with the obesity epidemic. The relationship between PCOS and obesity is complex, not well understood, a likely explanation for the mechanisms underlying this relationship is the combined effect of a genetic predisposition to obesity, insulin resistance, an impairment in appetite regulating hormones mainly leptin and ghrelin in the context of an obesogenic environment (bad diet and reduced exercise).

The onset and development of obesity amplifies the biochemical and clinical abnormalities characteristic of PCOS, in other words, PCOS is a condition associated with and worsened by obesity.

There is no simple cure for PCOS. Regular exercise, healthy diet, weight loss, and quitting smoking as well as using medications to control hormones are all important parts of PCOS treatment.

Weight loss is a mainstay in the treatment of PCOS,

What is Polycystic Ovary Syndrome?

Polycystic Ovary Syndrome (PCOS) is a common hormonal disorder affecting 5 to 10 percent of women of reproductive age. The name “polycystic ovary syndrome” refers to the appearance of small cysts along the outer edge of the enlarged ovaries of affected females (fig.1).

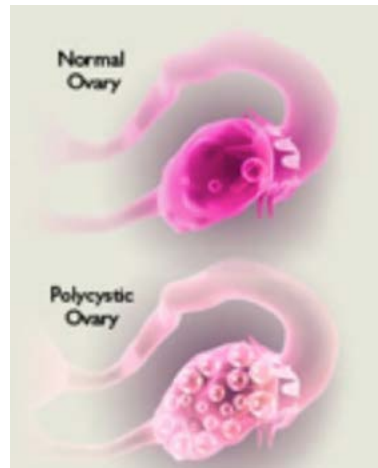


Figure 1: Normal vs. Polycystic Ovary

The etiology of PCOS is complex and multifactorial and its exact cause is unknown. However, evidence from family-based studies suggests that PCOS has a significant genetic basis, although the predisposing genes have not been clearly defined yet.

The clinical profile of PCOS encompasses various symptoms involving mainly a dysfunction in the production of ovulation controlling hormones (LH and FSH) manifested by infrequent or extended menstrual periods along with strong pelvic pain. Hirsutism, which is the excessive hair growth on the

even a modest weight reduction for about 10% is shown to be effective in improving the PCOS profile, reducing the level of androgens thus restoring regular ovulation and menses and increasing the chances for a healthy pregnancy. Moreover, weight loss helps in reducing the clinical symptoms, decreasing depression and improving the quality of sleep.

Conclusion

It is clear that the etiology of PCOS is complex, multifactorial and remains incompletely understood. This common hormonal disorder challenges the quality of life of the women who suffer from it. Yet with early diagnosis and proper treatment, PCOS can be managed and symptoms can be relieved and most importantly, the risk of long-term complications such as type 2 diabetes, heart disease and stroke could be reduced.

However, it is likely that we have only just begun to

understand the mechanisms linking obesity with PCOS, thus an important unanswered question remains: is obesity an innocent bystander or is it a major factor in the etiology of PCOS?

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