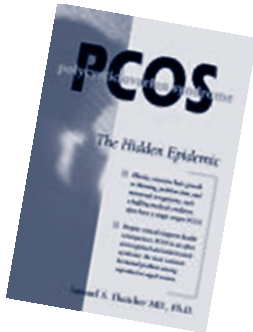




PCOS: The Hidden Epidemic

by Samuel S. Thatcher M.D. Ph.D.



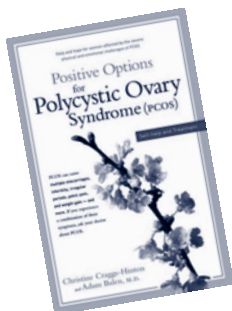
This book provides great explanation, insight and direction regarding PCOS. In a comprehensive yet easy to read format, the author has provided a text that has all of the answers known at this time on PCOS.

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Positive Options for Polycystic Ovary Syndrome: Self-Help and Treatment

by Christine Craggs-Hinton & Adam Balen, M.D.



This book puts together PCOS information in an accessible format and includes topics such as individual health issues; getting a diagnosis; and traditional and alternative treatments.

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Polycystic Ovarian Syndrome and Risk of Type 2 Diabetes

By: Sarah Dillenbeck, RD, CD, CDE
Madison, Wisconsin



What is Polycystic Ovarian Syndrome?

Polycystic ovarian syndrome or polycystic ovary syndrome (PCOS) is an endocrine disorder that is characterized by a collection of symptoms, including abnormal menstrual cycles, acne, obesity, insulin resistance, facial hair (hirsutism), and dark patches of skin in the neck folds, armpits, folds of the waistline or the groin (acanthosis nigricans). PCOS affects 5-10% of women of reproductive age and is diagnosed by a number of tests. ⁽¹⁾ These tests may include blood work revealing elevated free testosterone, increased ratio of luteinizing hormone to follicle stimulating hormone (two pituitary hormones that control ovulation), and fasting blood insulin levels. A physical exam is also performed that may show excess facial hair, acne, and acanthosis nigricans. Despite the name, polycystic ovarian syndrome, ovarian cysts do not need to be detected by an ultrasound for a diagnosis. ⁽²⁾

PCOS interferes with ovulation and can cause infertility. Women with PCOS are up to seven times more likely to develop type 2 diabetes than women without the syndrome due to the association with insulin resistance. ⁽³⁾

The cosmetic changes associated with PCOS; facial hair, acne, dark patches of skin, and weight gain, can decrease a woman's self-esteem, sense of femininity, and body image. PCOS has also been linked to higher rates of eating disorders. ⁽⁴⁾

Not all women will present with the cosmetic changes outlined above. Many women do not gain weight, develop facial hair, acne, or dark patches of skin. However, it has been shown that women with PCOS, both lean and overweight, will most likely have insulin resistance to some degree. ⁽¹⁾

PCOS and Risk of Type 2 Diabetes

Insulin stimulates cells to absorb and use glucose. In women with PCOS, insulin resistance is present and glucose is not used as efficiently. Hyperinsulinemia occurs when the pancreas produces more insulin in an attempt to help the cells use the glucose. When the glucose is not used efficiently it is stored as fat. Therefore, we see an increased rate of obesity among PCOS patients. Fifty to sixty percent of patients with PCOS are overweight or obese. It is not uncommon to see weight gains of twenty to thirty pounds in one year. ⁽⁵⁾ As weight increases, insulin resistance increases, thus causing a vicious cycle. Excessive fat tissue, insulin resistance, and hormone irregularities put women with PCOS at a higher risk for the development of coronary artery disease and type 2 diabetes. Up to 40% of women with PCOS will develop type 2 diabetes by the age of 40. ⁽³⁾

It should be noted that the insulin resistance in PCOS is not uniquely due to the obesity. Lean women with PCOS have also been shown to be insulin resistant. ⁽¹⁾ Insulin resistance is aggravated by pregnancy, age, medications, physical inactivity, hyperandrogenism, as well as obesity. ⁽⁶⁾ Genetic factors are thought to be a major factor in insulin resistance and PCOS. ⁽⁷⁾

Treatment of PCOS

Due to the high risk of type 2 diabetes associated with PCOS, diabetes management therapies are suggested as a treatment approach. Prior to the last few years, the symptoms of PCOS were managed without having a treatment for the underlying causes of the



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International Diabetes Center

◆Team Management of Diabetes
January 10-12, 2005
Minneapolis, MN
www.internationaldiabetescenter.com



In The Loop....

KIDNEY DISEASE IS PREVALENT IN PEOPLE WITH DIABETES

"Diabetes is a leading cause of kidney failure in the United States and is increasing more rapidly," said Thomas Hostetter, MD, director of the National Kidney Disease Education Program (NKDEP.) In an effort to raise awareness about the seriousness of kidney disease, the NKDEP has launched the "You Have the Power to Prevent Kidney Disease" campaign. The campaign stresses the following 3 key messages; (1) know if you are at risk, (2) have your kidneys tested if you are at risk, (3) kidney failure can be slowed or prevented if kidney disease is detected early. The NKDEP is an initiative of the National Institute of Diabetes and Digestive and Kidney Diseases, one of the National Institutes of Health.

For additional information, go to:
www.nkdep.nih.gov

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syndrome. Diabetes management strategies aimed at decreasing the insulin resistance and hyperinsulinemia associated with PCOS can decrease testosterone and hormone abnormalities and improve glucose, insulin, and lipid profiles. ⁽²⁾

Weight loss is often suggested as a first line of treatment. A weight loss of 5% of total body weight is associated with lower insulin levels, improved menstrual function, less hirsutism and acne, and lower free testosterone levels. ^(2,8) However, many women with PCOS experience difficulty with traditional low-fat weight loss programs. Following a lower carbohydrate eating plan with more monounsaturated fats can be beneficial in reaching weight loss goals. The American Dietetic Association and the American Diabetes Association recommend that the majority of energy intake be divided between monounsaturated fats and carbohydrates to provide 60-70% of daily needs. Exercise also needs to be encouraged to help promote weight loss and improve insulin resistance by improving the body's use of insulin. ⁽⁹⁾

Another treatment strategy often used in women with PCOS is the use of insulin-sensitizing medications. Metformin and rosiglitazone have been shown to help improve the use of insulin, decrease excess androgens and promote normal ovulation and menstrual cycles. In a recent Stanford University study, more than half of the women enrolled in the 12 week study ovulated while taking rosiglitazone and insulin resistance fell by 28% for women on the highest dose of the medicine. ⁽¹⁰⁾

Using a combination of these treatment techniques can help a woman with PCOS feel her healthiest. Educating women with PCOS on the effects of carbohydrates, insulin, and exercise on the body can be a very useful tool. A registered dietitian experienced in both diabetes management and disordered eating will be a valuable person to have on the PCOS patient's treatment team. A licensed therapist may also be beneficial to help the patient through body image concerns, lack of sense of femininity, and low self-esteem.

Polycystic ovarian syndrome is being detected earlier and the treatment strategies outlined above are becoming more accepted. Hopefully, with earlier detection and better treatments, women with PCOS will not have to suffer for long before a diagnosis is made. Including a multi-faceted treatment approach is sure to produce the best outcomes.

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