Polycystic Ovarian Syndrome (PCOS) is one of the most common hormonal problems for women and a risk factor for type-2 diabetes – although it is one of the least publicised risk factors. Many women have PCOS for 20 or 30 years before they develop diabetes, and most don’t realise that their daughters and granddaughters are at high risk too.

**WHAT IS IT?**

PCOS is a group of conditions that affects 5–10% of women. Usually it begins in puberty and worsens with time, although fortunately it is a benign disorder. PCOS is complex because it is so much affected by a woman’s emotions, thoughts, diet and personal history.

Instead of producing eggs in the ovary and releasing them once a month – called ‘ovulation’ – women with PCOS produce eggs that do not mature properly but develop into multiple cysts on the ovaries. The woman’s body produces too many male hormones, known as androgens.

20–25% of women will have multiple ovarian cysts on the ovaries – PCO – but only half of these or fewer (5–10% of women) will actually have PCOS.

**WHAT IS THE DIFFERENCE BETWEEN POLYCYSTIC OVARIIES AND PCO SYNDROME?**

Polycystic ovaries (PCO) is a condition affecting only the ovaries, whereas PCOS involves other bodily systems and organs apart from the female reproductive system, such as blood sugars and insulin.

40% of women in families that have PCOS or type-2 diabetes have PCOS themselves, indicating a possible inheritable tendency or underlying cause.

Between 50% and 70% of women with PCOS have high insulin levels.

**SIGNS AND SYMPTOMS**

- Irregular or absent menstrual periods: usually the first warning sign
- Infertility: 75% of women with PCOS
- Hirsutism: excess body hair 60%
- Obesity: 40%
- Acne
- Irregular and profuse menstrual bleeding: 30%
- Deeper voice and masculine body shape: 20%
- Alopecia (hair loss/thinning on scalp and pubic hair)
- Craving sugars and starchy carbohydrates such as white flour products
- Hypoglycemia: imbalanced blood sugar levels
- Acanthosis nigricans: dark velvety patches on the skin
- Increased abdominal fat: the apple/android shape

**WHAT CAUSES PCOS?**

There are four primary underlying causes that all interact and contribute to varying degrees in different women, and all of which must be addressed. These include hormonal imbalance, insulin resistance, obesity and stress.

1. **Hormones**

Our hormones are controlled by the pituitary gland in the brain where lutenizing hormone (LH) and follicle stimulating hormone (FSH) are produced. These hormones stimulate the ovaries to produce oestrogen and progesterone. Directly above the pituitary is the brain’s fertility centre or clock that regulates the production of LH and FSH. In a woman, this centre works in a cyclic fashion, once every month, while in a man it works in a continuous fashion. In PCOS, there has been a functional derangement of this centre and thus also of these hypothalamic-pituitary hormones.

Excess LH production causes excess androgen production in the follicles inside the ovaries. This prevents...
The development of acne, male-pattern balding, excessive facial and body hair, and acanthosis nigricans (dark velvety patches on the skin) are unopposed by progesterone due to anovulation. The relatively high oestrogen levels in PCOS stimulate the continued release of LH, causing a cessation of menstruation and decreased conversion of androgens into oestrogens in the periphery, resulting in androgen accumulation. So PCOS is not just confined to women who are overweight as previously thought.

LONG-TERM COMPLICATIONS OF PCOS

Implementing prevention strategies is crucial to any treatment of PCOS and has also been shown to be very effective at reducing the increased risks of:

- Hirsutism (excess body and facial hair, acne, balding, deepening of voice, masculine body shape) due to high androgen levels.
- Infertility: decreased fertilisation due to lack of ovulation.
- Miscarriage which has 30 – 50% higher risk in first trimester, and there is a higher risk of pre-eclampsia in third trimester due to high LH levels adversely affecting egg quality.
- Endometrial hyperplasia and uterine cancer: increased cell proliferation or thickening of the uterus lining is caused by the unopposed oestrogens that are a precursor to endometrial cancer. A woman must have a minimum of 5 – 6 menstrual periods per year, or, if she is over 35 years of age, a period almost monthly. (Pap smears do not detect this, they investigate the cervix only).
- Hormonal and menstrual disturbances, ovarian cancer, breast cancer.
- Type-2 diabetes mellitus and gestational diabetes due to insulin resistance and obesity. The recent Diabetes Prevention Programme has shown that diet and exercise can prevent diabetes and is more effective than drug therapy (Metformin) in trials.
- Heart disease: increased risks of cardiovascular disease, hypertension (high blood pressure), heart attack and atherosclerosis.
- Osteoporosis: especially for women who are thin or adrenally exhausted from chronic stress.
- Obesity

The best indicator for the risk of these long-term complications is CRP (a chronic inflammatory marker), a blood test performed by a GP. It is probable that the CRP count is less than three, although the ideal is less than one.
WHAT ABOUT SIMPLY TAKING THE PILL?
In the past, doctors simply prescribed the oral contraceptive pill (OCP) as the standard treatment for PCOS, but the dangers of this are now being realised. The Pill masks the underlying condition and actually aggravates insulin resistance, hastening the onset of diabetes. A 1997 study of 98,590 nurses in the USA over a long period of time revealed that type-2 diabetes was 60% more prevalent in women taking oral contraceptives. According to Dr Kidson, if a woman is insulin resistant with PCOS, the Pill could be expected to increase the risk of diabetes by at least 100% and possibly by 200%.

NATUROPATHIC TREATMENTS FOR PCOS

Self-Healing
Dietary and lifestyle changes are essential for successful treatment of PCOS and for maintenance of the condition long term to prevent complications.

Diet
- Eat regularly. Have three main meals and two snacks daily that stimulate your metabolism. If you skip meals, it slows your metabolism down and your blood sugar levels drop so that you crave sugar or a stimulant to bring them back up again quickly.
- Have protein in all your meals. This controls your blood sugars by slowing down the absorption of sugars, stimulating your metabolism, decreasing hunger and sugar cravings, as well as being important for liver detoxification of hormones. Protein foods are dairy products, eggs, legumes (dried beans and peas), nuts and seeds (and flesh foods).
- Eliminate all sugar-rich foods – sweets, chocolate, soft drinks, fruit juices (eat fruit maximum of three pieces/day), cordials, alcohol, dried fruit, anything with added sugar, honey and the artificial sweeteners – Splenda, Nutrasweet and aspartame.
- Decrease all refined carbohydrates – white flour products including white bread, noodles, pasta, packet biscuits and pastry. Also limit white rice and potatoes because they have high glycaemic indices. Dense, seeded breads and wholemeal pasta occasionally are fine.
- Low-glycaemic-index foods are best, for example, whole-grain breads, rolled oats, Basmati, Doongara or brown rice (not white or jasmine rice), temperate climate fruits, for example, apples (but not bananas).
- Avoid all junk foods, processed foods and deep-fried foods – anything batterered, hot chips, packet chips, doughnuts, packet cereals, packet biscuits.
- What can I eat for breakfast? Plain rolled-oat porridge or natural muesli with plain natural cultured yoghurt, fruit, nuts and seeds, or eggs or baked beans with whole-grain toast.
- Avoid coffee, alcohol, cigarettes or other stimulants as these increase levels of the stress hormone, adrenaline, which raises your blood sugars and insulin. As well, these stimulants provide numerous toxic chemicals.
- Include foods that contain phytooestrogens that help buffer against the stronger oestrogens in the body. Examples are 2 tablespoons of ground flaxseeds linseeds daily; 1/4 cup of alfalfa sprouts; beans and legumes instead of grains; sunflower seeds; non-genetically-modified soy products such as tofu, tempeh and miso. However, I do not advocate other Western-invented soy products such as sausages, soy protein powders, soy cheeses, etc.
- Omega-3 oils are anti-inflammatory and should be consumed daily. Sources are flaxseeds, avocado, walnuts and cold-water oily fish (if you eat fish).
- Herbal teas – roasted dandelion root is an excellent coffee alternative; or have green tea, nett leaf, red clover and calendula.

Lifestyle
- Regular moderate exercise. A minimum of 45 minutes 4 times a week (ideally daily) of exercise with stretching or yoga is essential to control insulin levels, increase circulation through the pelvis and for stress management. Even just doing hip circling, pelvic thrusts and hip stretches is very beneficial if done for 10 minutes every day.
- Castor oil applied to the lower abdomen with a hot water bottle on top is very anti-inflammatory. Apply for half an hour, three times a week, and pay attention to all thoughts, feelings and emotions that arise. Try to source an organic or pesticide-free castor oil.
- Adopt a lifestyle that balances work and relaxation, allowing some time to have fun, relax and have a good laugh! Consider a massage fortnightly, meditation, breathing techniques, aromatherapy, acupuncture, yoga and relaxing hot Epsom-salts baths with rose and lavender oils!
- Make time for some creative outlet for yourself – even if it's only an hour on a weekend. It can be something you love doing or are passionate about, into which you put all your stresses and emotions and start to move the energies in the body – for example, singing, dancing, gardening, art, woodwork, cooking. Our internal lives are very much reflected by our external lives and vice versa. Certainly, the female reproductive system is the utopia of creativity through fertility, whether or not it is being used for that. Therefore, it is important to look at where in your life you are being or expressing your creativity.
- Reconnect with other natural cycles such as the moon, sea or beach tides. Go out into natural light as much as possible (this does not necessarily mean direct sunlight). Natural light affects the pituitary gland and therefore ovulation. Even consider sleeping with the light on for three days in the middle of every month.
- According to Christiane Northrup, a gynaecologist in the USA who wrote the book, Women's Bodies, Women's Wisdom, stresses that have been found to suppress ovarian and menstrual cycle functioning include negative feelings about being female. Women who have such feelings often repress this side of themselves, so it may mean perhaps simply allowing themselves to reconnect with their feminine, creative, nurturing, gentler side, rather than the masculine, analytical, productive, goal-oriented side.
- Northrup writes that women who do not ovulate are often tense, anxious, more dependent and may also have suppressed rage against their mothers. This indicates how important it is to deal with childhood/parental dynamics and also to simply allow a full range of emotional responses to life's events. Commonly, anger is viewed as a negative emotion, but it is often very appropriate for the circumstance, and when expressed correctly is a very powerful force. It is interesting to note that road rage in Australia is highest among young female drivers. Perhaps this is because women are taught, albeit unconsciously, that anger is not an appropriate emotion for women and thus we have very few legitimate outlets for it compared to men. Perhaps try kickboxing or a free-form art class as an emotional outlet.
- It has also been noted that women with PCOS often have a need for outer or external approval, and place enormous pressure on themselves trying to live up to these societal or parental expectations. So perhaps take the pressure off yourself and start putting your own needs and desires first every now and then.
Supplements: Nutrients, Herbs

- For insulin resistance and obesity: chromium, alpha-lipoic acid, gymnema, magnesium and goat’s rue have all been found to be effective.
- For acne: zinc, chromium and lots of liver support are necessary, with herbs such as dandelion root, calendula, burdock and echinacea.
- Facial and body hair requires 6–12 months’ treatment as it is more stubborn to treat. Try fenel cream at a concentration of 25 ml in 100 gm vitamin E base cream applied 3 times daily, zinc, pumpkin seeds 1–2 tablespoons per day, peony and licorice, saw palmetto.
- Treatment of infertility depends on whether the woman is currently on assisted reproductive techniques, such as IVF, because the naturopathic remedies need to be adjusted so as not to interfere with IVF drugs, although naturopathic treatment is possible concomitant with IVF treatment. In fact, naturopathic remedies have been shown to increase the chances of successful IVF conception.
- There is no single remedy that will improve PCOS, and for any remedies the dosages will vary according to the potency and quality of the product and the severity of the symptoms. It is recommended to see a practitioner experienced in treating PCOS to prescribe herbal medicines and nutritional supplements.

Professor Robert Norman and Dr Ann Clarke of Adelaide were world pioneers when they showed that diet, regular exercise and weight reduction in women with PCOS, who had failed to conceive with IVF, brought about conception in 75% of cases without IVF!

Peony and licorice are a common herbal combination for PCO, together with lady’s mantle, chaste tree and shatavari, all of which help regulate the hormones. However, licorice should not be taken by anyone with high blood pressure.

THE AUTHOR
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"Great spirits have always encountered opposition from mediocre minds." – Albert Einstein

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CHEAPER MEAT DOESN’T EQUAL HAPPIER MEALS

The giant feedlots and factory farms that have brought us cheaper meat also are fanning the spread of bird flu and mad cow disease, says a new report from a prominent environmental think tank.

"Factory farms are breaking the cycle between small farmers, their animals, and the environment, with collateral damage to human health and local communities," says the Washington, D.C.-based Worldwatch Institute.

According to the report, ‘Happier Meals: Rethinking the Global Meat Industry,’ consumers can help by buying meat that is organic or from grass-fed livestock or that comes from smaller producers and by embracing vegetarianism.

Research Associate, Danielle Nierenberg, salutes the World Bank for backing away from funding large-scale livestock projects in the developing world and adds that in June, 167 governments belonging to the World Organization for Animal Health agreed on new voluntary standards for the humane transportation and slaughter of animals. Even so, industrial systems generate 74% of the world’s poultry products, 50% of all pork, 43% of beef, and 68% of eggs. Feedlots account for more than 40% of world meat production, up from 30% in 1990. Industrial countries dominate production but factory farming is expanding rapidly near the major cities of Asia, Africa and Latin America. Here, “high population densities and weak public health, occupational and environmental standards are exacerbating the impacts of these farms.”

Crowded, inhumane and unhygienic conditions on factory farms can sicken animals and create “the perfect environment for the spread of diseases including avian flu, bovine spongiform encephalopathy (BSE) and foot-and-mouth disease,” according to Nierenberg. Additionally, factory-farmed meat and fish contain “an arsenal of unnatural ingredients” including chemical and other pollutants, arsenic and hormones. From the early 1970s to the mid-90s, meat consumption in developing countries grew by 70 million tons, nearly triple the rise in industrial nations. Nierenberg adds, “The true costs of factory farming are not reflected in the low price consumers currently pay for meat.

"Environmental and health effects - such as rising antibiotic resistance and cardiovascular disease – are absent from most assessments of the costs and benefits of this growing trend... Overuse of antibiotics and other antimicrobials in livestock and poultry operations, meanwhile, is undermining the toolbox of effective medicines for human use.”

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