

**T**HE ABBREVIATION may seem unfamiliar, but if you experience irregular menstrual periods, have trouble losing weight (especially around your middle), notice excessive facial hair, or have difficulty conceiving, you could have PCOS—or polycystic ovary syndrome.

Lisé Coyle had never heard of PCOS when she was studying to become a physical therapist at a college in upstate New York, poring over textbooks to learn how she could help heal injured bodies. But when she started experiencing odd physical changes, it soon became clear that her own body was her biggest challenge. "I weighed 175 pounds, and I couldn't lose weight no matter how hard I tried," she says. Complicating her weight problem was an erratic menstrual period, sometimes lasting a day, other times dragging on for a week. "I missed four periods, even though I wasn't pregnant," she recalls. Fearing she had some type of cancerous tumor, Coyle made an appointment to see her gynecologist. The good news: no cancer. The not-so-good news: Coyle had PCOS.

With that diagnosis Coyle joined the approximately 6 million American women who have PCOS—a condition usually characterized by abnormal ovaries that can grow up to three times the size of normal ones and are covered with cysts containing immature eggs. These cysts produce an excess amount of male hormones, interrupting the normal menstrual cycle and preventing ovulation. The

Irregular periods and unexplained weight gain are two signs of PCOS.

## weighty matters

*Polycystic ovary syndrome can cause weight gain and infertility and lead to life-threatening diseases. Here's how to avoid the risks.*

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Photography by MARK VIKER





*For PCOS patients, nutritionists recommend fresh fruits such as grapefruits, plums, and apples, which are low on the glycemic index, to help keep blood sugar steady.*

syndrome can start to manifest itself as early as the teen years, says Samuel S. Thatcher, M.D., Ph.D., author of *PCOS: The Hidden Epidemic* (Perspectives Press, 2000), and is commonly thought to have a genetic component.

While irregular periods and difficulty conceiving are common symptoms, they aren't as dangerous as PCOS's association with a condition known as insulin resistance—a prediabetic state that can lead to obesity, diabetes, and heart disease. Because of those risks, it's important to get an early, proper diagnosis and take measures to treat the associated symptoms.

### The symptoms

"Reproductive problems are just one slice of the PCOS pie," says Walter Futterweit, M.D., author of *A Patient's Guide to PCOS* (Owl Books, 2006). "What's most important are the medical risk factors, such as distribution of fat in the belly, an indicator of insulin resistance that puts women at increased risk of developing life-threatening diseases." In fact, up to 70 percent of PCOS patients have high cholesterol levels, and as many as 40 percent develop type 2 diabetes by the age of 40.

High insulin levels in the blood, another indicator of insulin resistance, account for some PCOS symptoms. They may suppress ovulation (the infertility link), cause drops in blood sugar (creating food cravings), increase your risk of gaining weight (nearly half of women with PCOS are obese), and affect sex-hormone ratios (increasing levels of testosterone, causing excess facial hair and male pattern baldness). And if that's not enough, women with PCOS often develop acne. "PCOS generates a tremen-



dous amount of anxiety about appearance as well as health," says Stephanie Kaufman, a psychoanalyst who counsels women with PCOS in New York City. "Women with PCOS often suffer from depression and low self-esteem."

### The diagnosis

It's estimated that three of four women with PCOS don't even know they have it. They may be experiencing symptoms and may even have sought medical help, but they still don't know what's wrong. Since physical symptoms and lab test results can bear a striking similarity to other medical conditions, including Cushing's syndrome and an adrenal abnormality known as congenital adrenal hyperplasia, women typically see several doctors before getting a correct diagnosis. When they do, it's usually made from a combination of clinical findings. They include abnormal menstrual cycles, suppressed ovulation, excess hair growth or loss, and obesity; an ultrasound to detect abnormalities in the ovaries; hormonal testing; and standard laboratory tests for glucose, insu-

lin, and cholesterol levels. For the most accurate diagnosis, a woman should be off the Pill for at least three months.

### The treatment options

Physicians who treat PCOS and its associated symptoms include obstetricians/gynecologists, endocrinologists, and dermatologists. According to Thatcher, it is important to ask prospective physicians whether they have a standard treatment for PCOS (the answer should be no, Thatcher says, because effective treatment plans must be individualized) and to inquire about nutrition and exercise.

While there is no one-size-fits-all solution, a variety of treatments are available to help alleviate symptoms and reduce risk factors. Sometimes a regimen of prescription medications is in order, but emerging research shows that overcoming PCOS may be as much a matter of changing habits as taking the right mix of pharmaceuticals.

### The best diet

For obese women battling PCOS, shedding excess pounds is an

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## A SUCCESS STORY

Allison Rudow, 36, a full-time mom in Westfield, N.J., was diagnosed with PCOS in 2000. Although she was having trouble conceiving, her diagnosis had been somewhat elusive because she wasn't a typical PCOS case. "I didn't have the classic symptoms of weight gain or insulin resistance, so I think the doctors were confused." She suffered from acne, but it was dismissed as "normal."

Rudow took the fertility drug Clomid for six months and underwent in-vitro fertilization to help her conceive her first child. Prior to her second pregnancy, she took metformin for six months. But after delivering her second child, Rudow's fertility turned a corner. "After my second child, I never thought I'd be able to get pregnant on my own, so I didn't use protection," she explains. Fourteen months later, without the use of fertility medications, Rudow conceived her third child.

How did it happen? "I'm sure that the changes I'd made during my earlier pregnancies helped," she says. Rudow added more fruits and vegetables to her diet, gave up sweets, and started running and working out at the gym at least three times a week. "My periods have become more regular, and I just feel better, overall, than I ever have." As this issue goes to print, Rudow is six months pregnant with her fourth child—without any extra medical help.





*A low-carb diet used to treat PCOS is similar to a Mediterranean diet and includes plenty of fresh, nutrient-dense vegetables.*

important first step. According to Futterweit, losing as little as 5 percent to 7 percent of body weight can help women resume more normal menstrual patterns, even if they have long histories of infertility. In one small, London-based study, 40 percent of obese women with PCOS who lost more than 5 percent of their body weight by restricting calories got pregnant. Weight loss can also improve symptoms by reducing insulin resistance and male-hormone levels. "The women I see are motivated to change their diets because they know it can help decrease their symptoms," says Martha McKittrick, R.D., a New York City-based dietitian who specializes in PCOS. "And once they feel better, they're encouraged to keep following the plan because they're empowered by the results."

High protein, low-carbohydrate diets are most often recommended by nutritionists who treat PCOS patients. "If a woman is highly insulin resistant, I may cut her total carbohydrate intake from the standard recommendation of 55 percent of total calories to 30 percent," says McKittrick. Most experts also favor foods that are low on the glycemic index, which measures how quickly a particular food raises blood sugar levels. These include fresh fruits such as grapefruit, plums, and apples; fresh vegetables such as asparagus, broccoli, tomatoes, and spinach; legumes; and whole-grain breads, pasta, and cereals. Eating frequent small meals, rather than two or three large ones, also helps keep blood sugar steady. For protein, nutritionists generally recommend lean meats, fish and shellfish, poultry without skin, low-fat cottage cheese, egg whites, skim milk,





Good fats help balance blood sugar.

and low-fat, sugar-free yogurt.

Coyle, now 26, was referred to McKittrick after clinical testing revealed she had insulin resistance, high testosterone levels, and cysts on her ovaries. McKittrick prescribed a reduced-calorie, lean-protein, low-carb diet and a strict exercise regimen. After a year and a half, Coyle lost 40 pounds—and her fears of a childless future. “Even if I have to take fertility drugs to get pregnant someday, I feel so much healthier and more confident because my periods are completely regular,” she says.

Engaging in regular exercise can help improve insulin resistance and reduce its related risk factors—even if you don’t lose weight—by improving the uptake of sugar from the bloodstream into the body’s cells. Experts rec-

ommend aerobic exercise like running or brisk walking for up to 30 minutes, 5 times per week. “The key is to increase your level of activity from whatever it is currently,” says McKittrick.

### The fat factor

Healthy fats, including nut oils and olive oils, may also play a special role in a PCOS diet. Monika Woolsey, R.D., a dietitian in Phoenix, surveyed 183 women with PCOS and found that the group’s rates of inflammatory disorders such as irritable bowel syndrome, food allergies, and eczema were higher than those among the general population.

“It makes sense for women with PCOS to try an anti-inflammatory diet,” says Woolsey, who describes the diet as “aggressively Mediterra-

nean.” It includes plenty of fish and produce, a daily dose of nuts, meats in moderation, and a focus on olive oil for cooking.

The diet also includes a healthy balance of omega-6 to omega-3 fatty acids. A typical American diet is high in omega-6 fatty acids (found in processed foods made with vegetable oils such as corn, safflower, sunflower, and soybean oils), and low in omega-3s (found in foods like canola oil, flaxseed, and fatty fish). “The proper balance may be critical for reducing food cravings that can lead to weight gain,” says Woolsey, who often finds that when women with PCOS balance this ratio in their diets, their cravings for carbohydrates disappear. The reason, Woolsey explains, is that a poor omega-6 to omega-3 ratio results in overstimu-

lated brain cells, which draw more sugar from the bloodstream; it is this depletion of sugar that causes carbohydrate cravings.

One way to balance the ratio is to increase omega-3 intake with supplements. Woolsey describes a patient who suffered from intense carbohydrate cravings. “I started her on four-gram supplements of fish oils daily, and when I saw her again 10 days later she told me about a chocolate cake she had baked but kept forgetting to eat.” Another way is to eliminate as many sources of omega-6 fats from your diet as possible. “Get rid of almost everything that contains vegetable oils—foods like salad dressings, dips, margarines, crackers, and cookies—unless they’re made with canola or olive oil,” Woolsey recommends. >>



Omega-3 supplements calm cravings.



## Good Medicine

### The alternative

Nutritional supplements such as chromium picolinate and magnesium, which are often associated with treatment of insulin resistance, have yet to prove effective against PCOS in clinical studies. And you won't find a plethora of scientific information on the outcomes of herbal treatments given to women with PCOS. But that doesn't stop practitioners from using alternative approaches—and achieving success. One registered dietitian and licensed acupuncturist uses Traditional Chinese Medicine (TCM) to treat the syndrome. "PCOS is a Western diagnosis. I have to translate it into a TCM diagnosis in order to provide the appropriate treatment," says Karen Siegel, M.P.H., R.D., of the Acupuncture and Nutrition Wellness

Clinic in Houston. A TCM diagnosis might include damp phlegm accumulation, which translates to ovarian cysts, or kidney yang deficiency, which indicates irregular periods, fatigue, or a cold feeling. "I'll give an herbal treatment that regulates the kidney yang and resolves damp phlegm," says Siegel. Her prescription might include a combination of 10 different Chinese herbs, including dong quai root, morinda root, eucommia bark, and Chinese licorice root. "This is not something you can find at your local drugstore," says Siegel. "You must go to an herbalist or a licensed acupuncturist." Regular acupuncture sessions are part of Siegel's treatment as well. "Acupuncture helps to clear the damp and can alleviate painful periods," says Siegel. ✎

### THE Rx ROUTE

The most popular medications for treating PCOS target the underlying insulin resistance. The diabetes drug metformin (Glucophage), known to reduce insulin resistance and related risk factors for cardiovascular disease, is often prescribed off-label to women with PCOS. Metformin may help PCOS sufferers lose weight and improve fertility by restoring ovulation. Other medical treatments that target the symptoms of PCOS include anti-androgen medications such as spironolactone to help to lessen the severity of male-hormone-related symptoms, laser treatments or electrolysis to remove facial hair, and oral contraceptives to balance menstrual irregularities, decrease male-hormone production, and treat acne.