



PCOS 101

Your Guide to Health and Hope

MESSAGE FROM THE AUTHOR

As a woman with PCOS, **I know what it is like to suffer with the physical and emotional symptoms of PCOS.** For so many years, I felt lousy and looked for an answer, a way to feel better and live the fullest life possible. I spent countless hours pouring through research, talking to doctors and professionals, and hoping for a cure. I tried medications; they made me feel worse.

Finally, after extensive research and much trial and error, the answers began to emerge. I pieced together a holistic approach to managing my PCOS naturally. **As my PCOS fog began to lift, I felt clearer, stronger, and altogether healthier. I even became pregnant naturally.** I found my

inner Diva and discovered my life's work. Now, as a Certified Health Coach, I help women become healthier and more empowered.

Whether you've just been diagnosed, or have tried to manage your PCOS symptoms for a great length of time, this PCOS 101 Guide is your next step toward taking control of your health.

Information is your most effective tool, and this guide is loaded with helpful, reliable information about the causes, risks, resources, tests, and treatments for PCOS. You will learn to recognize knowledgeable professionals and understand how to advocate for the best possible medical care.

My mission is to help women with PCOS live their best lives. My deepest hope is that you find your inner PCOS Diva! Your Diva will discover that PCOS doesn't have to slow you down. **You can live the life you envision for yourself, manage PCOS symptoms with ease, and thrive.**

In good health,
Amy Medling, CHC



*Like the butterfly, I have the strength and the
hope to
believe that I will in time, emerge from my cocoon...*

Transformed.



INTRODUCTION

You are not alone. Polycystic Ovarian Syndrome (PCOS) is one of the most common endocrine disorders found in women, affecting approximately 5-10% of women worldwide, with less than 50% diagnosed.¹ The syndrome is present throughout a woman's lifespan from puberty through post-menopause and affects women of all races and ethnic groups.² Women with PCOS wrestle with an array of possible symptoms, including excess weight or resistant weight loss, irregular menstrual cycles, infertility, depression, acne, and hair loss. Far-reaching health implications such as increased risk of cardiovascular disease and diabetes, make these already stressful symptoms even more daunting.

If you are a woman struggling with PCOS, I have good news: **there is hope!** While you cannot cure PCOS, you can "render it almost inactive by

losing weight through healthful eating and moderate exercise."³

Lifestyle change is key for women with PCOS, whether they are overweight or not. We need to be thoughtful about the foods we use to fuel our bodies, the exercise we choose, the toxins we are exposed to, and, just as importantly, our emotional and mental care. Dr. Samuel Thatcher, an early pioneer in PCOS research and treatment of PCOS, is quoted as saying, "A more holistic approach to PCOS is certainly warranted and can have a significant effect in altering quality of life."⁴

PCOSDiva.com is an online resource for women with PCOS which embraces a holistic approach. As the founder of PCOS Diva, I have worked with thousands of women, teaching them how to make sustainable lifestyle changes, which,

in turn, positively impacts their health and minimizes PCOS symptoms. These "PCOS Divas" are able to regain control of their bodies and take back their fertility, femininity, health, and happiness. Many of my clients don't know where to begin. Education and awareness about this syndrome are the starting points to healing, as knowledge is power. I encourage women to educate themselves, then consult with a physician who is up to date with the latest knowledge about PCOS. This PCOS 101 Resource Guide was developed for women with PCOS and their advocates to use in order to educate, empower, and advocate for themselves when working to get the care they need and deserve.

WHY DO I HAVE PCOS?

What causes PCOS? The simplest answer is that researchers are not entirely sure. We know that PCOS is a syndrome that affects the endocrine system and causes a hormonal imbalance in all of your body's glands, including the pituitary, pineal, thyroid, parathyroid, thymus, adrenal, and pancreas. You may not know that hormones control more than your reproductive organs; they also control things like body temperature and insulin levels. There are many theories about the cause of this particular hormonal disorder. It is possible that there is more than one cause, which would account for the wide range of symptoms that PCOS women exhibit. Ultimately, genetic and environmental factors, together with obesity,

hormonal issues, and ovarian and metabolic dysfunctions, are at the root of PCOS.^{5,6}

Could it be genetic? Many studies suggest that genes predispose a woman to PCOS.⁷ In fact, research shows that a woman with PCOS has a 40% likelihood of having a sister with the syndrome and a 35% chance of having a mother with the disorder.⁸ If heredity is the cause, a woman's PCOS may be triggered by rapid weight gain or other risk factors. This being said, the interaction of a woman's diet and environmental factors can likely worsen or improve the symptoms associated with PCOS.⁹ These environmental triggers may even begin in prenatal life and include the mother's obesity or high intake of

advanced glycation end products (AGEs) and Bisphenol A (BPA).¹⁰

High insulin levels (hyperinsulinemia) and **insulin resistance are common in women with PCOS.** Insulin's job is to transport glucose (sugars) throughout the body. Hyperinsulinemia (caused by an abundance of insulin, a powerful growth hormone) causes a vicious cycle of weight gain. Weight gain is known to increase insulin levels, while high insulin spurs weight gain—and so the pattern begins. On the other hand, an insulin resistant person's cells do not react properly to amounts of insulin in their body. In this case, the cell will not take on the glucose, and therefore, will not deliver glucose to their cells that need it.

WHY DO I HAVE PCOS?

As a result, the body produces more insulin cells to increase the likelihood of glucose getting to cells. More insulin means more weight gain, and the cycle continues. In either case, this cycle results in a host of related health risks.

It is possible that a defect in a hormone producing organ could be the cause? In an analysis of

current research, the PCOS Australian Alliance found that an underlying hormonal imbalance may lead to a combination of increased androgens and/or hyperinsulinemia as a result of insulin resistance.¹¹ A problem with the hypothalamus could stimulate the ovaries to produce too many male hormones. Likewise, a defect in the production of testosterone in the

ovaries would result in the same effect. An excess of male hormones can cause anovulation (failure to ovulate) in women.¹² A dysfunction in androgen production may be a cause as well. These hormones (primarily testosterone) are produced in the ovaries and cause many of the commonly presented PCOS symptoms.¹³

*When we long for life without difficulties,
remember that oaks grow strong in contrary winds
and diamonds are made under pressure.
- Peter Marshall*

SYMPTOMS

PCOS has three main hallmark symptoms: obesity, irregular menstruation/fertility issues, and hair or skin problems. **It is unusual to exhibit every symptom of PCOS; rather, most women living with PCOS have some combination of symptoms.** You may be slim, but have irregular menstruation, or you

may have skin problems and polycystic ovaries, but not hirsutism (excessive hair growth on parts of the body where hair does not normally occur in women). To further complicate the issue, many symptoms cascade from others. For example, cardiovascular disease may result from insulin

resistance. **Depending upon how it is defined, roughly 5-20% of women worldwide possess characteristics of PCOS.** It is a constellation of symptoms that define PCOS (we will address this in greater depth in the section on diagnosis).

- Easy weight gain , and/or Obesity
- Fertility Issues
- Acne
- Cardiovascular issues
- Polycystic ovaries
- Type 2 diabetes
- Depression
- Anxiety
- Poor body image and/or eating disorders

- Sexual dysfunction
- Hyperandrogenism
- High levels of androgens
- High levels of insulin/insulin resistance
- Irregular menstruation
- Hirsutism (excessive hair growth)
- Skin tags
- Sleep apnea
- Gray-white breast discharge

- Scalp hair loss
- Darkening skin areas (acanthosis nigricans), particularly on nape of neck
- Pelvic pain
- Painful boil-like abscesses in the groin (hidradenitis suppurativa)

RISK FACTORS

Without proper management, symptoms of PCOS place women at risk for a host of cascading ailments. On the upside, **while women with PCOS are susceptible to these health risks, they are not “condemned” to any of them.** Infertility is what brings many women to a diagnosis of PCOS, but this syndrome is not just a fertility issue. In fact, **80-90% of women with PCOS will achieve a pregnancy.**¹⁴ It is important to take control of your symptoms because PCOS lasts a lifetime. There is no cure; you will not grow out of it. After menopause or hysterectomy, you will still have to manage your PCOS. **Taking control of your PCOS through management of your lifestyle, diet, and exercise routines can lessen PCOS symptoms, as well as lessen risk**

of potentially serious conditions.¹⁵

Obesity is a leading symptom of PCOS and carries with it many serious health risks. The typically obese PCOS woman seems to be heavier than the average woman without PCOS, and those who have it carry more weight around the middle.^{16,17} This excess weight may trigger the onset of PCOS and may also increase the severity of the syndrome by worsening androgen and insulin levels.^{18,19} In the case of obese women with PCOS, it is difficult to lose weight. This may be attributable to an insulin disorder. Insulin is a hormone released by the pancreas to help process sugars. An imbalance of insulin may cause women to overproduce the hormone,

making them crave sugary foods and consequently raising their insulin further. As the cycle continues, the health risks are clear. Obesity leads to greater risk of high blood pressure (hypertension), diabetes, and cholesterol (lipid) abnormalities. Certainly, weight loss is necessary to treat PCOS. While weight loss is complicated by genetic, metabolic, and environmental issues, it can be managed with exercise and proper food choices. **If a woman with PCOS is obese, losing just 7-10% of her body weight—and keeping it off—can noticeably reduce PCOS symptoms.**²⁰

RISK FACTORS

Insulin resistance and hyperinsulinemia are conditions in which the body becomes increasingly less efficient in processing and managing overall levels of sugar (glucose) in the bloodstream. **When insulin is unable to lower glucose levels in the blood, type 2 diabetes results.** In women with PCOS, elevated insulin levels cause the body to store fat and prevent the breakdown of fats. Hyperinsulinemia and insulin resistance may be the root of other disorders such as hyperandrogenism, chronic fatigue syndrome, immune system defects, eating disorders, hypoglycemia, gastrointestinal disorders, depression, and anxiety. Hardening of the arteries (atherosclerosis) is a common result of insulin

dysfunction and may lead to an increased risk of high blood pressure and stroke.

Pregnancy and fertility issues are two of the main drivers for a woman to seek help for PCOS. The risk of pregnancy loss in the first trimester is higher in women with PCOS, possibly due to low egg quality, low levels of progesterone, or problems at the time of fertilization. Additionally, women living with PCOS have greater risk of gestational diabetes and hypertension. This may be related to higher pre-pregnancy weight. However, there is positive evidence that **nutrition and exercise increases the chances for a successful pregnancy.** Most women with PCOS can get pregnant, and have beautiful, healthy babies when

they take the necessary lifestyle (and possibly medical) steps to do so.

Uterine cancer and endometrial hyperplasia may be of concern to women with PCOS as well. Endometrial hyperplasia is a condition of excessive proliferation of the cells of the endometrium, or inner lining of the uterus. For many women, the small follicles (cysts) of PCOS produce enough estrogen to build the uterine lining. When ovulation and shedding do not occur, the uterine lining continues to build and be bombarded with estrogen. This can lead to endometrial hyperplasia and possibly uterine cancer. While rare in women under 40, most occurrences of uterine cancer have associations with PCOS.

RISK FACTORS

Cardiovascular risk factors should not be underestimated.

Women with PCOS are at higher risk for development of cardiovascular disease due to a prevalence of hypertension, high cholesterol, endothelial (the most interior wall of blood vessels) dysfunction and atherosclerotic disease.²¹ PCOS has been linked to high blood pressure, high cholesterol, abnormal carbohydrate metabolism (insulin issues, type 2 diabetes), metabolic issues, coagulopathy, and hypothyroidism. In several international studies, women with irregular menstrual cycles were found to be more likely to develop coronary artery disease at a younger age. Insulin resistance seems to be the cause of cholesterol issues and high blood pressure.²²

Autoimmune disease is more common among women with PCOS than in those without the syndrome and is known to effect fertility. Autoimmune disease is a category of conditions in which the body's immune system mistakenly attacks its own organs or other tissues. It may be a result of any combination of genetic factors, hormone disorders, gender, or environmental factors.²³ In a recent study, researchers found a link between PCOS and the autoimmune disease Hashimoto's thyroiditis (also known as Hashimoto's disease and autoimmune hypothyroid).²⁴ This disease attacks the thyroid, which is necessary for reproductive health and fertility. In fact, 27% of PCOS women were found to have elevated thyroid-specific antibodies and 47% have ultrasound images that are

typical for a woman with Hashimoto's Thyroiditis. From these studies, we know that 40% of PCOS women have some type of autoimmune disorder.²⁵ It is important for PCOS women to **reduce the risk of autoimmune reactions by removing inflammatory triggers (especially gluten) from their diets** and add foods that support thyroid function.

Hypothyroidism is a condition of the thyroid in which the gland doesn't produce enough hormones, upsetting the body's required balance. A woman with hypothyroidism may experience dry skin, fatigue, and weight gain. Untreated, this condition can cause obesity, joint pain, infertility, and heart disease. It is suspected that 90% of hypothyroid is autoimmune.

RISK FACTORS

Sleep apnea is reported in about 8% of PCOS women. Sleep apnea occurs when a person stops breathing for 10 seconds at least 5 times an hour while asleep. This condition is a result of excess weight and/or high testosterone. Symptoms may include snoring with intermittent pauses, sleepiness during the day, gasping or choking during sleep, decreased sex drive, and morning headaches. This lack of oxygen as you sleep is a dangerous condition and should be treated right away with a combination of weight loss and a Continuous Positive Airway Pressure (CPAP) mask to be worn while sleeping.²⁶

Eating disorders are common in women with PCOS; many have eating disorders as a method for

coping with emotions or stress. Anorexia nervosa, bulimia nervosa and binge eating may have a biological cause as well. In women with PCOS, the hypothalamic -pituitary-adrenal (HPA) axis may be compromised. These chemical messengers in the brain regulate mood, stress, and appetite. An abnormality in any of the three may play a role in an eating disorder.²⁷ These serious disorders range from emotional eating to bulimia and anorexia. Eating disorders are life-threatening and tend to worsen over time. Treatment for these disorders should involve a team of at least a behavioral health professional/ therapist, nutrition professional/ dietician, and a physician.²⁸

Mental health issues are extremely prevalent in women with PCOS. This is likely the result of a combination of factors including an imbalance of hormones, erratic periods, and the frustration of dealing with PCOS and its various symptoms. Anxiety and depression are quite common among women with PCOS. If you are struggling with either of these issues, it is important to seek professional assistance.

DIAGNOSIS

PCOS is unquestionably underdiagnosed. The primary reason is that women do not report all of their symptoms. They may be embarrassed to speak openly with their doctor, or they may not even recognize their symptoms as unusual. For example, a typical PCOS woman may think, “all of my aunts have thinning hair and are overweight. It just runs in my family.” That may be true—likely because PCOS runs in her family. Commonly, women do not recognize that all of their seemingly “unrelated” symptoms have a common cause. To further complicate things, many doctors lack knowledge about PCOS and attempt to treat each symptom separately or attribute these symptoms to other lifestyle factors, such as stress or obesity. Finally, Polycystic Ovarian Syndrome has a name problem. **Approximately 20% of women who do not have PCOS have cysts on**

their ovaries. Similarly, about 30% of women that do have PCOS have no cysts.²⁹

In an effort to better define PCOS and facilitate diagnosis and treatment, the European Society for Human Reproduction and the American Society for Reproductive Medicine agreed upon a common definition. **Diagnosis is now largely based upon these new symptoms dubbed the “Rotterdam criteria.”**³⁰ These criteria include the original National Institutes of Health³¹ and Androgen Excess and PCOS Society diagnostic criteria.

To be diagnosed with PCOS, a woman must have two out of the three criteria:

1. Ovarian dysfunction including, lack of ovulation or less frequent ovulation
2. High levels of androgens hormones including DHEA,

testosterone and/or androstenedione.

3. Polycystic Ovaries (on an ultra sound)

Even with these criteria in place, diagnosis can be tricky. Characteristics can vary widely based on life stage, genotype, ethnicity, and environmental and lifestyle factors such as body weight and eating habits. **Birth control may also interfere with test results** because they lower androgens. With this in mind, diagnosis must eliminate other possible causes of a woman’s symptoms. Finally, developing a diagnosis is an opportunity to screen for cardiovascular risks that may develop or worsen with time.³² If detected early, prevention and treatment can save a life.

LABS

It is crucial that certain tests are performed so that you and your health care team can accurately diagnose your condition and monitor its progress. Keep in mind that lab results and reference ranges determining what is “normal” may differ slightly from lab to lab, so it’s best to use the same lab when comparing results over time. Most women with PCOS will have at least subtle lab abnormalities. These anomalies may indicate a problem with the hypothalamus, pituitary, ovaries, and adrenal glands working together. Generally, **endocrine testing is best performed in the morning, soon after the end of your period.** Drawing blood later in the day may not catch early morning spikes of androgens, prolactin, and adrenal hormones. Avoid testing around ovulation or mid-cycle.^{33,34} Many of these tests are looking for indicators of insulin resistance. Most women that have PCOS are

also insulin resistant. People with insulin resistance often also have high blood pressure, high levels of triglycerides, and low HDL levels. Aside from contributing to infertility, hair and skin problems, insulin resistance puts PCOS women at **much higher risk of developing heart disease and diabetes.**³⁵ **Thus, testing for insulin resistance can help you make changes that will prevent serious health issues.** **Pay special attention to thyroid testing.** While all doctors run thyroid labs, many run only thyroid stimulating hormone (TSH) test, which is easy to misinterpret and often reveals little about thyroid function.³⁶ As a result, millions of people suffering from thyroid dysfunction are left undiagnosed. **Thyroid testing is not cut and dry. Each doctor may have their own opinions on what to test and how to interpret the tests.** I always ask my doctor to test free T4 (FT4) and

Total T3 as well as thyroid autoantibodies, thyroid peroxidase antibodies (TPOAb), thyroglobulin antibodies (TgAb) It is important to keep in mind that thyroid testing is complex and best left in the hands of professionals who primarily treat metabolic and endocrine conditions. Sometimes women can still have thyroid symptoms and “normal” labs.

The following list of labs is extensive. Bear in mind that every woman is different, and everyone requires a different constellation of testing. Consult with your health care team to decide which tests are right for you. The examples are common measurements for results for these tests. Normal ranges may vary among different laboratories. Some labs use different measurements or test different specimens. Talk to your doctor about the meaning of your specific test results.

LABS

Test	What is this test measuring?	Normal ranges
Total Testosterone (TT)	Measures the amount of free and bound testosterone your body produces.	Under 50 ng/dL is considered “normal”
Free Testosterone (Free T)	Measures the free or not bound level of testosterone in your bloodstream.	0.1-6.4 pg/mL is normal range. Greater than 8 pg/mL is abnormally high.
Luteinizing Hormone (LH)	Measures amount of LH (important part of egg development and release)	
Follicle Stimulating Hormone (FSH)	Measures FSH (important for egg maturation)	
LH: FSH Ratio	Compares levels of LH and FSH to measure health of ovaries	Normal ratio is 1:2; women with PCOS may have ratios of 2:1 or 3:1 but relevance of LH:FSH ratio in PCOS is not clear and is not part of the clinical diagnosis of PCOS.
DHEA-Sulfate	Measures level of androgens in your body, may rule out issues co-existing with other androgens.	

LABS

Test	What is this test measuring?	Normal ranges
Prolactin	Measures prolactin (hormone secreted from pituitary gland); may rule out pituitary tumor	Sometimes mildly elevated in PCOS. In excess it causes unwanted milk production in the breasts.
Liver Functioning Tests (LFT)	Monitors liver function (enzymes aspartate aminotransferase (AST) is also known as serum glutamic oxaloacetic transaminase (SGOT) and Alanine aminotransferase (ALT) is also known as serum glutamic pyruvic transaminase (SGPT)) may indicate liver damage or presence of fatty liver. Tests are particularly important to women taking medication since all medication is filtered through the liver.	Importance in PCOS has to do with fatty liver disease which may be more common in women with PCOS.
High Sensitivity C-Reactive Protein (hsCRP)	Measures level of C-Reactive Protein (systemic marker of inflammation)	Levels over 3.0 mg/L may indicate increased inflammatory response which is a risk factor for many chronic conditions including heart disease.

LABS

Test	What is this test measuring?	Normal ranges
Fasting Insulin	Detects elevated insulin or insulin resistance.	Normal range is <10 IU/mL but should be interpreted with fasting glucose, or an unusually high response to a glucose tolerance test.
Fasting Blood Glucose	Measures glucose (sugar) in your blood.	Normal range is 70-99mg/dL; diabetes is diagnosed if levels are over 126mg/dL
Fasting Glucose to Insulin Ratio	Used to diagnose insulin resistance by comparing levels of glucose and insulin.	Ratio of less than 4:5 indicates insulin resistance.
Hemoglobin A1c (HA1c)	Measures long term blood sugar levels over 3 months	Greater than 5.7 may indicate increased risk for PCOS and/or diabetes. Levels above 6.5 indicate diabetes.
Homeostatic Measurement Assessment-Insulin Resistance (HOMA-IR)	A screening test for detection of glucose intolerance.	HOMA-IR over 2.0 may be more common in PCOS.

LABS

Test	What is this test measuring?	Normal ranges
Vitamin D	Measures levels of vitamin D	Levels should be more than 50 ng/dL
Fasting Comprehensive Metabolic Profile	Group of blood tests that measures electrolytes, salt and fluid balance, glucose, and kidney and liver function	
Sex Hormone Binding (SHBG)	Protein that binds to testosterone	A low SHBG in PCOS means that there is more active bioavailable testosterone around which is then able to act on ovary and skin and cause the symptoms of PCOS. A low SHBG may also correlate with increased risk of insulin resistance and diabetes.

LABS

Thyroid Tests:	What is this test measuring?	Normal ranges
Thyroid Stimulating Hormone (TSH)	Blood test which assesses the pituitary hormone which controls thyroid function.	Normal range at commercial labs is usually 0.4-4.5; may consider a range up to 3.5 as normal but this has to be interpreted carefully
Free T3 (FT3)	Measures unbound levels of T3 (hormone) in blood	Normal range is approximately 2.3 to 4.2. If your result was less than 2.3, your doctor might consider that indicative of hypothyroidism.
Free T4 (FT4)	Measures unbound levels of T4 in the blood	Normal level is 0.7 to 2.0. Less than 0.7 is considered indicative of possible hypothyroidism.
Reverse T3 (RT3)	Measures an inactive form of the T3 hormone	Normal level is 90–350 pg/ml
Total T3	Measures Triiodothyronine which is the active thyroid hormone	Normal range is approximately 80 to 220. If your result was less than 80, your doctor might consider that indicative of hypothyroidism
Total T4	Measures the total amount of circulating thyroxine in your blood. A high value can indicate hyperthyroidism, a low value can indicate hypothyroidism	Normal level is approximately 4.5 to 12.5
Thyroid autoantibodies - thyroid peroxidase antibodies (TPOAb), thyroglobulin antibodies (TgAb)	TPO antibodies can be evidence of tissue destruction, such as Hashimoto's disease Thyroglobulin antibodies are positive in about 60 percent of Hashimoto's patients	

LABS

Fasting Lipid Profile includes	What is this test measuring?	Normal ranges
Total Cholesterol	Total amount of cholesterol in your body	Should be less than 200 mg/dL
High Density Lipoproteins (HDL)	“Good” cholesterol	Higher is generally better. Low levels of HDL may indicate an increased risk of heart disease and stroke. HDL rises with oral contraceptive use.
Low Density Lipoproteins (LDL)	“Bad” cholesterol	Ideal level in an individual person has to be interpreted. Generally the lower the LDL the better. Higher LDL increases risk of heart disease and stroke.
Triglycerides (TG)	Fat in blood	Ideal level is less than 150 mg/dL

ASSEMBLING YOUR HEALTHCARE TEAM

Healthcare professionals are a vital part of taking control of your PCOS, and **assembling a team of practitioners is one of the first steps toward healing.**

You must begin to assemble a team with whom you are comfortable speaking, who you trust, and who will communicate with and respect each other and you.³⁷ Faith in your team is important, so choose wisely.

Studies show that 70% of

any treatment's success results from the patient's belief that treatment works.³⁸ Together, you and your team can develop a plan to control your PCOS for a lifetime.

The healthcare team for a woman with PCOS should be comprised of multidisciplinary professionals, and this team may change across the lifespan. The composition of this team will depend upon the symptoms, but may

include a primary care physician, health coach, nutrition professional, dermatologist, psychologist, endocrinologist, gynecologist, and an exercise physiologist.³⁹

The symptoms of PCOS vary from woman to woman, so there is no prescribed list. **You need to build a team based on your own needs; it is your first step to taking control.**

ASSEMBLING YOUR HEALTHCARE TEAM

Primary Care Practitioner	This is the primary contact doctor. He or she will help you to coordinate all of your team members. It is important that you choose someone who is willing to be a team player. Internists often have a specialty such as endocrinology. Doctors may also be board-certified in family medicine. Physicians Assistants (PA-C) and Nurse Practitioners (NP, APRN) may also fill this role.
Gynecologist/Obstetrician	A gynecologist is a specialist in the female reproductive system. An obstetrician specializes in pregnancy and labor. An Ob/Gyn is an important team member whether the patient is trying to conceive or not.
Health Coach	A health coach is a wellness authority and mentor who motivates individuals to cultivate positive health choices. Health coaches educate and support clients to achieve their health goals through lifestyle and behavior adjustments. As more credence is given to preventative care, health coaching is seen as a vital aspect of creating healthy lifestyle changes. Health coaches are becoming increasingly recognized as essential to a person's health and well-being.
Nutrition professional: (Dietician, Licensed Nutritionist, CNS, CCN, CNP, RD)	Nutrition professionals are trained to give reliable recommendations on nutrition. Whether or not the PCOS patient is overweight, this element is critical and cannot be overemphasized. A good dietician will help patients make important changes to their diets as they become mindful eaters. They may also lend support in education and offer accountability.

ASSEMBLING YOUR HEALTHCARE TEAM

**Behavioral health professional:
Psychologist (Ph.D., Psy.D,
DBH), Psychiatrist (MD),
Licensed Professional
Counsellor (LPC**

These professionals can help with eating disorders, depression, anxiety, relationship or work stresses, and body image issues. The mind and body are inextricably connected. Having a healthy mind is important to keeping a healthy body.

**Endocrinologist or
Reproductive Endocrinologist**

An endocrinologist is a specialist in hormonal disorders and the endocrine system, which includes the thyroid, pancreas, pituitary, ovaries, and adrenal glands. Since PCOS is a disorder of this system, this doctor will lend important perspective and suggestions. This person is particularly important if diabetes or thyroid dysfunction is an issue. A reproductive endocrinologist specializes in reproductive hormones and fertility. They may be able to help a PCOS patient become pregnant and see her through the first trimester.

Exercise Physiologist (EPC)

These certified professionals are concerned with a patient's health and fitness. They can design a custom exercise program to help you meet your fitness goals. Overweight patients use exercise physiologists to help them achieve weight loss goals, while thinner patients use EPCs to build endurance, flexibility, and strength.

ALTERNATIVE MEDICINE

Increasingly, women with PCOS are seeking out professionals who will assist them in approaching their health from a holistic, whole-person perspective. Integrative practitioners and

holistic doctors consider a patient's history, lifestyle, and emotional and physical symptoms in order to best treat their patient.⁴⁰ The notion of "one size fits all" cannot apply to any one

person—least of all, women with PCOS. Consider adding the following professionals (following page) to your health care team.

"Treating is not the same as healing, which means helping physically, emotionally and spiritually"
—Rob Danoff, DO

ALTERNATIVE MEDICINE

Naturopath (ND)	Naturopathic physicians attend four years of residential naturopathic medical school and are trained as primary care givers. They focus on disease prevention and wellness by combining traditional treatments with modern evidence-based scientific studies. They are able to perform minor surgeries and prescribe prescription drugs in a few states, but these are typically last resorts. Treatment relies primarily on nutrition, acupuncture, detoxification, lifestyle modifications, supplements, and natural medicines.
Chiropractor (DC)	Chiropractic physicians focus on the structure and function of the spine and its effects on the musculoskeletal and neurological systems. This is a drug-free approach to health care. These practitioners may also offer guidance in nutrition and lifestyle.
Acupuncturist (LAc, DAc, M.Ac., AP, DOM)	Acupuncture is one of the oldest healing methods in the world. Typically, it involves penetrating the skin with thin needles to ease pain or alleviate various other health conditions. The National Institute of Health notes that use of acupuncture as an alternative or complementary method of healing is on the rise.
Traditional Chinese Medicine	Acupuncture and herbal remedies are the primary tools of this professional. The purpose of acupuncture is to balance the body's natural energy to release endorphins, increase circulation, and stimulate the nervous system. Diet, exercise and lifestyle modifications are typically important elements of this treatment.

WHERE DO I START?

Your first step is to locate competent professionals who are familiar with PCOS. Locate a doctor who:

1. Is experienced
2. Has an organized and friendly staff
3. Is willing to collaborate with you and the rest of your health care team

Where do I find these doctors?

- Ask friends and family for recommendations
- Check online rating sites (vitals.com, zocdoc.com)
- Ask your local teaching hospital
- Ask your primary care physician, gynecologist, or other physician that you trust
- Join a support group. You may have local options. Online, you can check out RESOLVE, PCOS

Foundation, PCOS Association or PCOS Awareness Association. These groups allow information swapping, which can be a great source of valuable information, as well as emotional support.

- Check professional organizations. The American Infertility Association, the American Society for Reproductive Medicine, the Endocrine Society, the Association of Clinical Endocrinologists, the Androgen Excess-PCOS Association and the International Council for Infertility Information Dissemination are good places to start.

I picked a few. Now what?

Check their credentials:

- Where did they study?
- Where did they complete their residencies?
- What are their board certifications if any?
- Check online reviews, but be wary; these reviews are typically not vetted, and you do not know the stories behind them.

Have an office visit.

Ask questions:

- Does he/she explain clearly?
- Does he/she give you time for follow-up questions?
- Does he/she ask you questions?
- How would they communicate with other professionals on your health care team?
- Do you feel comfortable speaking with him/her?



TALK TO THE DOC

How to Have a Productive Conversation with Your Health Care Team: In order to get the most out of your health care team, you must do two important things. First, **you must be knowledgeable about your body and PCOS.** When you are informed about PCOS, you will easily recognize others who are equally informed. Your knowledge will help you and your team to devise an effective plan that you understand and will therefore follow.

Secondly, **you must be honest**

and open. When you go to a financial planner, you don't only tell them about your assets. They need to know your debts and spending habits. Withholding this information means that any plan they make for you cannot possibly work. The same is true with your health care team members. If you are embarrassed about a symptom, remember that the human body is their job. It is unlikely that you will tell them about a symptom or condition that they have never heard of before.

The bigger hurdle may be that you fear the advice they will give. If you are obese, you know they will tell you to lose weight. That may not be something you want to hear or a project you are willing to take on. Remember, your health care team is there to help, and they have your best interests at heart. **They must know about your symptoms, fears, and concerns before they can help you improve them.** Be forthright. It is an important step to getting healthy.



HELPFUL TIPS FOR A PRODUCTIVE DOCTOR VISIT

1. Before you go to the appointment, **make a list of the reasons you are there.** List every symptom, prescription request, and question. If possible, prioritize your list. Share the list you made with the doctor. It will help your doctor to focus the visit and will ensure that your discussion touches upon all of your most pressing concerns. Ask the provider to help determine which issues are the most important to tackle at this visit.
2. **Consider taking someone with you.** Sometimes a second set of ears will catch something you missed. You may also ask them to take notes. Office visits can be packed with a surplus of information that is difficult to keep straight when you leave. A study at Johns Hopkins Bloomberg School of Public Health found that patients who brought someone with them were 50% more likely to be satisfied with the doctor's ability to give information.⁴¹
3. **Be assertive and polite.** This is no time to be timid. As Dr. Thatcher stated, "Being a passive or non-participatory patient doesn't work with PCOS. In the hands of a less than knowledgeable or disinterested provider, there can be an escalation of symptoms resulting in the development of diseases."⁴² Be clear and concise about why you are there. If you don't feel that you have the doctor's attention, try to reengage them with a phrase like, "You seem like you're having a busy day today." Feel brushed off? Reassert that you are still concerned about [symptom X, Y, Z]. Sherrie H. Kaplan, PhD, co-director of the Center for Health Policy Research at the University of California at Irvine says that patient passivity, "should be treated as a risk factor for chronic disease."⁴³
4. **Answer questions truthfully.**
5. **Before the doctor leaves, make sure that a plan is in place.** Be certain that you and your doctor have clear expectations of what is to be done and why. Are you to fill a prescription? Verify the name, purpose, and dosage. What is the follow-up plan? Research shows that only 15% of patients fully understand their doctors' advice, and 50% leave their appointments feeling unsure of what they need to do.⁴⁴

TREATMENT

“With the right food management strategies, almost anyone suffering from PCOS can take control of her eating, her genetic influence, her metabolic resistance and, most importantly, her weight.”
- Dr. Walter Futterweit

There is no cure for PCOS; it is a lifelong condition. What you can do is address the root cause of symptoms. All of the research comes to a similar conclusion, the **best thing that any woman with PCOS can do is take control of herself and her environment.**

Managing diet, lifestyle, and emotional health will “redress the hormonal balances within her endocrine system and restore better health.”⁴⁵ Changing eating patterns, reducing stress and getting regular exercise will reduce insulin and androgen levels and increase ovulation. There is no magic pill that will clear up all of the symptoms of PCOS. What will work is

choosing to be healthy by implementing healthy choices with regard to what you put into your body. Whether you are overweight or not, this is where the remedy lies.

There are pharmaceuticals available to women with PCOS, though they should be used only as a second strategy. These **drugs are meant to augment the necessary dietary and lifestyle changes.** There are three commonly used drugs: the birth control pill, metformin (Glucophage), and spironolactone (Aldactone).

Birth Control: Doctors will often prescribe birth control,

typically as oral contraceptive, to alleviate symptoms of PCOS. While the pill may help clear up acne, regulate menstruation, and reduce the risk of ovarian and endometrial cancers, it is not a good alternative for women trying to conceive. In addition, it may lower libido while raising blood pressure, cholesterol, blood sugar, and insulin levels.⁴⁶ Studies have shown that **women with PCOS who take the pill have an increased risk of blood clots.** Some studies have linked long term use of birth control pills to cervical and liver cancers. You should not take the pill if you are a smoker.

TREATMENT

Metformin: Metformin is commonly prescribed for regulating insulin. The FDA approved the drug for this purpose in 1994, noting its positive safety record. In women with insulin resistance or type 2 diabetes, it may provide some lessening of symptoms. The research shows that metformin can promote weight loss, improve lipid profiles, lower blood pressure and androgen levels, increase sensitivity to clomiphene (Clomid) for fertility, restore menstruation, prevent development of diabetes, and increase the likelihood of pregnancy. There is a 50% success rate in PCOS women. Metformin may help both overweight and normal-weight women achieve ovulation, though

it is likely due to the weight loss that occurs with insulin regulation.⁴⁷

The National Institute of Health found in its 2012 study that metformin “decreases androgen levels but has demonstrated only modest effect of fertility and has little effect on insulin action.”⁴⁸

One disadvantage of metformin is that it depletes the body’s levels of vitamin B12.⁴⁹ Monitoring levels of this important vitamin is recommended. Some woman cannot tolerate the gastrointestinal side effects of this drug.

Spirolactone: Spirolactone is prescribed off-

label to treat acne while it is actually a diuretic. This drug is effective for severe acne, but comes with serious side effects. Users must monitor carefully for dehydration, dizziness, urinary frequency, headaches, and more.⁵⁰ If you use Spirolactone, your blood should be regularly monitored to ensure that your potassium levels and kidney function are normal.

While these 3 drugs are effective, it is **important to keep in mind possible side effects.**⁵¹ All are to be tried only after efforts using only diet and exercise have been exhausted. There are also many nutritional supplements that can be helpful in managing the symptoms and risks of PCOS.

TREATMENT

Treatment must be centered on and driven by women individually. Few PCOS patients have the exact same spectrum of symptoms. **For nearly all, however, lifestyle changes are the centerpiece of taking control of one's health. Lifestyle therapy is deemed the first line of defense for women with PCOS, targeting prevention of weight gain and promoting weight loss where required with significant health benefits.**^{52,53,54}

When asked to compare the effectiveness of lifestyle interventions compared with pharmacological (metformin, clomiphene citrate) interventions, the PCOS

Australian Alliance offered four recommendations:

1. Lifestyle management should be used throughout the lifespan of a woman with PCOS to alleviate symptom severity and increase fertility;
2. In women with PCOS and a BMI of less than 30 kg/m², lifestyle modification alone would be the first line of therapy for 3-6 months;
3. In women who are morbidly obese, pharmacological ovulation induction should not be the first therapy until appropriate weight loss has been achieved

using other means; and

4. Pharmacological ovulation could be used as a second line of therapy only after lifestyle modifications have been made.⁵⁵

In the end, you may be able to control your PCOS symptoms by making lifestyle changes alone, or you may need to combine lifestyle changes with medication. You and your health care team will choose the right path for you.

PERSONAL HEALTH CARE PORTFOLIO

Here, you will keep an ongoing record of your medical life. Keeping all of this information in one place will save you and your healthcare team time and money in searching for information and in not duplicating treatments, tests, or medications. Bring this binder with you to all appointments, and be sure to record your thoughts afterward as soon as possible to ensure that the information you record is accurate. You may also keep this online. Check into services online

at Microsoft Heath Vault or myphr.com

Your portfolio will have 5 sections:

1. Financial: bills and insurance statements
2. Clinical: provider contacts, medications, dates and summary of visits, concerns
3. History: test results, treatments, pregnancy/delivery details, immunizations
4. Legal: proxy, etc.
5. Journal: keeping logs of what you eat, when you exercise, and how you feel

PCOS DIVA: HOPE STARTS HERE

It's time to begin your transformation into the healthy, happy person that you know you can be. This Resource Guide contains a great deal of information to digest, however it is a starting point to help you be more informed and empowered. There is never a better time than now to start making lifestyle changes that will positively transform your current and future health. Hope is at hand; you just have to take the next step.

As a Certified Health Coach and Founder of PCOS Diva, my mission is to guide women with PCOS as they make lifestyle changes that will transform their minds and bodies. PCOSDiva.com is the premier resource for information and programs for managing PCOS through nutrition and lifestyle

changes.

As you have learned, these adaptations are the first line of healing for women with PCOS. Visit PCOSDiva.com to read many [success stories](#) from women trying to conceive, as well as those simply striving to look and feel better.

You can get started with:

[PCOS Diva Seasonal Meal Plans](#) specifically designed for women with PCOS. These recipes will guide you as you begin eating to heal.

You could also join my 1500+ alumni who have started taking control with my [Discover Your Diva 7-day Jumpstart Program](#).

[Private Coaching](#) is the best option

for those who want one-on-one support.

I hope that the information provided in this Resource Guide has helped empower you to take on your health and your PCOS. It is **up to you to take the first step to live your best life and thrive**. Find your inner PCOS Diva! The Diva in you will discover that PCOS doesn't have to slow you down, and you can live the life that you have envisioned for yourself by managing PCOS symptoms with ease. For more information and support, visit www.PCOSDiva.com.

*For all article references, go to: <http://www.pcosdiva.com/2014/02/pcos101references/>



A journey of a thousand miles begins with a single step.
—Lao-tzu

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