

### **What are some red flags that could be revealed on a Billings Ovulation Method® chart that might indicate PCOS?**

As PCOS is the persistent lack of ovulation, and thus progesterone production, the Billings Ovulation Method® chart could have several appearances:

My clinical experience has shown a connection between PCOS and endometriosis. Chronic anovulation leads not only to the dysfunctional bleeding and physical symptoms associated with PCOS but also contributes to the development of endometriosis because of the chronic pro-inflammatory function of excess estradiol. No ovulation means no down-regulation of estradiol receptors wherever they may be in the body. Since there is no corpus luteum, (bloody scar on the ovary), androgens are not transformed into progesterone and estrogen. This leads to acne and excessive hair growth in the skin and uninterrupted production of blood vessels and glands, both in the uterine lining and wherever endometrial cells have fallen, or formed.

My observations of women with the severe menstrual pain associated with endometriosis often have a prolonged, unchanging slippery discharge indicative of S and P6 cervical mucus. If the follicle cannot rupture, then no progesterone can “dry” the wet sensation, and the slippery pattern continues unchanged.

A changing Basic Infertile Pattern (a time of infertility before ovulation that some women have) is explained by the presence of those multiple “arrested” follicles and the changing metabolic status during the cycle and daily life, as these follicles which are “waiting in the wings” for the dominant follicle to fail, will either progress or regress.



### **What kind of testing would you do to confirm PCOS?**

Ultrasound confirms a suspected ovarian diagnosis and allows one to measure the endometrial lining of the uterus, while checking for free inflammatory fluid and the rare ovarian tumor. The 5 most common causes of ovarian suppression are: excess insulin, excess prolactin, excess cortisol, thyroid dysfunction and inflammation. Thyroid Stimulating Hormone and Prolactin need to be measured via blood. The others can be measured via saliva testing.

### **What are the levels you look for once the testing is done?**

TSH should be less than 2.5 and prolactin less than 10. Testing 4 levels of cortisol demonstrates the effect of insulin and rules

out adrenal disorders. Extremes of insulin, after fasting all night and after a carbohydrate challenge, demonstrate an inherent or acquired glucose processing disorder. The marker for gluten, or other food intolerance may be measured as well. Failing to identify and address these common barriers to ovarian function consigns a woman to the progression of metabolic dysfunction.

### **If PCOS is determined, what are the steps you recommend taking and are there any natural ways of treating it?**

Exercise, to activate the Glut 4 alternate pathway for glucose entry into the cell, will help those cases due to insulin-resistance. Dietary changes, which may be as simple as calorie shifting, while limiting sugars and starches and maximizing the slow digestion of foods by emphasizing fat, fiber and protein in meals, will result in slower rises of insulin.

Metformin may help by increased insulin-binding, to a small degree, while preventing the liver from “overcompensating” for high insulin levels by cranking out stored glucose into the bloodstream.

Excess prolactin is treated with bromocriptine, a prescription medication which feeds back to the pituitary gland, causing less prolactin production. Dexamethasone, a low-dose steroid can do the same, while having the added benefit of decreasing elevated cortisol levels. Both drugs are discontinued if pregnancy occurs.

Thyroid conditions are treated medically, although bringing blood levels of Vitamin D over 50 seems to lower the need for thyroid supplementation, as does correcting insulin and prolactin.

Some women are sensitive to dairy, soy and eggs. Eliminating the offending food often restores normal ovarian function. Gluten free foods are available everywhere.

### **Is there a risk of infertility or other medical conditions among women with PCOS?**

As PCOS is the result of medical conditions which chronically suppress ovulation, it is associated with infertility, all of the gynecologic disorders, including polyps, fibroids, heavy irregular bleeding and possibly adenomyosis, which is where the uterine lining invades into the uterine muscle. Conversely, failing to diagnose the underlying medical disorders, but ablating the endometrium, or performing hysterectomy, consigns the patient to the progression and development of diseases which lie subclinically behind ovarian dysfunction.

### **Do most women have to stay on the same treatment plan for the rest of their lives?**

It would appear so, but consider that the menstrual cycle is a barometer of the metabolism, if ovulation does not occur regularly, infertility and gynecologic disorders occur. By diagnosing and correcting the metabolic problems, such diseases as high blood pressure, diabetes, stroke and heart disease may be avoided. Breast and uterine cancer are stimulated by high estradiol levels and, along with ovarian cancer, risk is decreased by carrying a pregnancy to term and breast feeding; the mechanism thought to be decreased menstrual cycles. Isn't it plausible then that correcting ovulation defects by correcting the metabolic issues limits the overproduction of estradiol while down-regulating the receptors with progesterone, and that decreasing ANOVULATORY ovarian activity is what conveys decreased cancer risk?

### **Is PCOS connected with having severe PMS or other problems?**

Premenstrual syndrome results from dropping estradiol and progesterone levels. Professor Jim Brown's “Continuum” demonstrates that follicles are unique in their estradiol

## WOMEN ARE EXPERIENCING MORE AND MORE CYCLE IRREGULARITIES

While some of the problems are attributed to environmental or hereditary factors, some women have a medical issue called Polycystic Ovarian Syndrome (PCOS). This piece is designed to help the reader have a better grasp of what PCOS entails and how it can be helped. BOMA-USA enlisted the expertise of Mary Martin, M.D., Ob/Gyn of Oklahoma City, OK to help with unraveling what PCOS is and how it can be managed.

### What is Polycystic Ovarian Syndrome?

PCOS is a temporary, reversible condition which is easily diagnosed and treated. The classic bleeding patterns of irregular cycles are the result of chronic anovulation, which results in a thickened, unstable uterine lining. In fact, per Pilar Vigil, MD, Ph.D of Chile, PCOS is the result, and not the cause, of anovulation. To be revealed soon, is why some anovulatory women bleed, develop fibroids, polyps, and "ovarian cysts," and other anovulatory women rarely bleed.

### Generally, are there typical symptoms that women experience with PCOS?

The most classic symptom is irregular bleeds (any cycle longer or shorter than 26-35 days). Classic physical signs include central obesity, acne, facial and midline hair, thin, flat hair growth or male pattern baldness, and acanthosis nigricans, which is skin darkening; particularly around the neck, waist, groin and joints. Tall, slender patients may manifest the acne and excess body hair. Hair growth depends upon genetics, so it may be subtle. I look for hair growth on the forearms. If the hair can be combed the same direction, regardless of how heavy or light, androgen stimulation of hair follicles is at work.

The classic ultrasound appearance of PCOS as a "string of black pearls" is matched, in my experience, by an increased number of similarly-sized follicles throughout the ovary, much like scattered chocolate chips in a cookie. It follows then, that something must be interrupting the rapid growth and development of the selected follicles, which have been stimulated by Follicle Stimulating Hormone (FSH). And in fact, I have classified five common metabolic issues which likely suppress follicle development: excess glucose/insulin, excess prolactin, excess cortisol, thyroid disorder and inflammation.

Chronic inflammation due to food intolerance, namely gluten, creates an inflammatory "soup" which forms a rubbery coating around the surface of the ovary, preventing "the blister from popping" to release the egg. So which came first: the inflammation which prevents follicle rupture, or chronic anovulation which leads to inflammation?

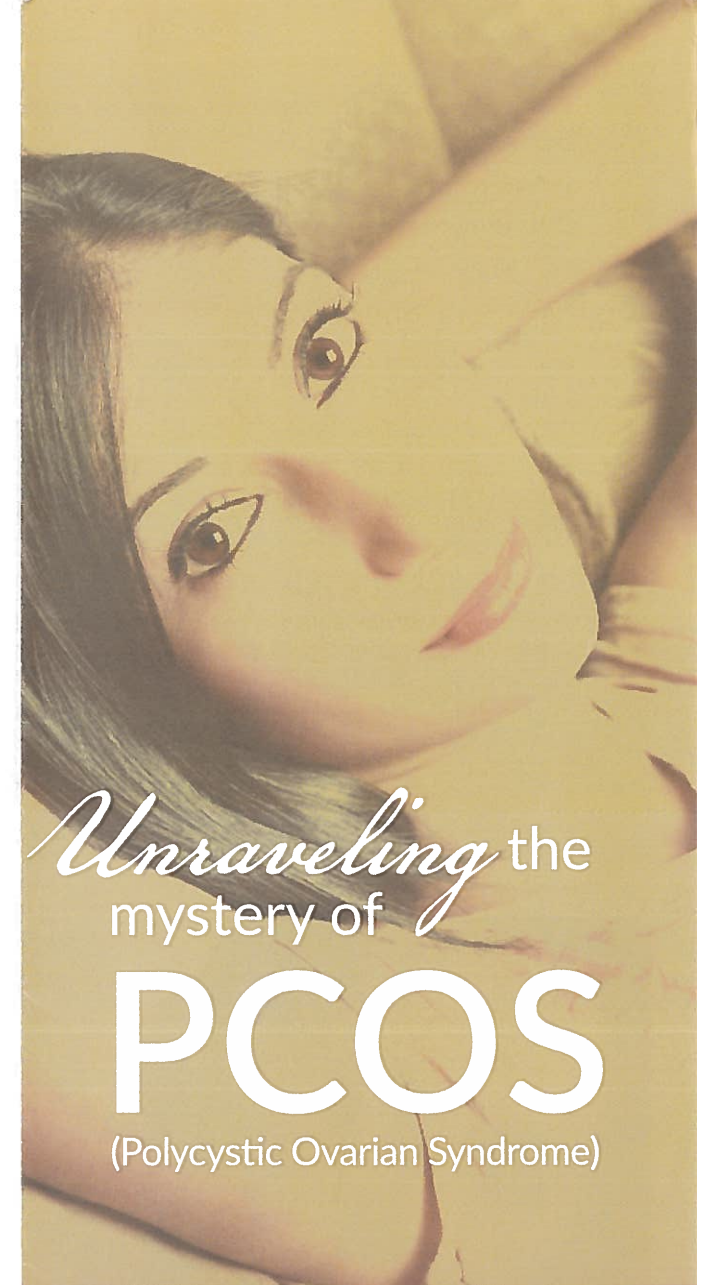
and progesterone production. But assume, for a moment, that follicle progression has been interrupted, either temporarily, or chronically, leading to relatively high levels of estradiol compared with minimal, or no progesterone. As the corpus luteum ages (if there is one), progesterone declines. The selected follicles, which have been producing estradiol have also aged, leading to a drop in cell-division, destabilizing the endometrium, which collapses, releasing chemicals which may trigger headaches, bloating, bleeding and pain. The thicker the endometrium, the more bleeding and pain. Progesterone matures the endometrium, relaxes the smooth muscle of the uterus and other organs and acts as a mood modulator. Thus, the overproduction of estradiol and the relatively suboptimal, or absent production of progesterone results in PMS, menstrual pain and heavy bleeding.

### Is PCOS more common now or just diagnosed more readily?

In my opinion, insulin resistance is more common now than 50 years ago, due to cultural changes in food preparation and work. Cultural changes could also explain excess cortisol, and since insulin affects cortisol, and the 5 common causes affect each other, anovulation may well be more common. A gynecologic practice attracts gynecologic and fertility problems, so virtually all the women seen have ovulatory dysfunction at the root of the diagnosis.



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Unraveling the  
mystery of  
**PCOS**  
(Polycystic Ovarian Syndrome)

Q. & A. with  
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