18 Symptoms of Low Progesterone

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Symptoms of low progesterone (If you have read this and conclude this is the problem, here is something to hold you until you get to a Functional doctor-use my code:KimCrawford to get a group discounted rate)

You may have “heard” that premenstrual syndrome; PMS, or even the worse premenstrual dysphoric disorder (PMDD) is due to low progesterone. You might have read that one of the common signs of progesterone deficiency is premenstrual bloating. However, this article will review the common symptoms and then the signs of progesterone deficiency that are not often discussed. In fact, many symptoms (complaints) and signs (physical findings) related to low progesterone levels are simply not

widely known, even amongst even the most knowledgeable Ob-Gyns or Endocrinologists. Many of the patients I personally see have been to an array of doctors who haven't picked up on the fact that they are dealing with simple cases of low progesterone symptoms, which, in turn, cause a host of problems. All reversible. And yes, a Functional Internist who is an expert in female hormones is your best bet. Let's start with the obvious.

Gynecological Issues

Women often attribute all of their premenstrual symptoms to what they call PMS. There are a host of symptoms, with low progesterone as the root cause, but they are not all categorized together. I'll explain. You might be having fertility issues. You might develop ovarian cysts. Most women and even most doctors believe that fibroids and endometriosis are estrogen-dependent. Not so. It's the ratio of estrogen to progesterone that is important, so low progesterone can cause these issues too. Similarly, fibrocystic breast disorder can be caused by low progesterone.

Your libido is (mostly) controlled by your free testosterone level but progesterone also plays a role. Estrogen deficiency isn't the only hormone that can cause hot flushes. Progesterone deficiency or cortisol excess (early adrenal fatigue) can also cause hot flushes. Lastly, mold and mycotoxin exposure can also cause hot flushes. I won't go into these other little "nuggets of information" on this article, as they are off-topic. Let's get started with the major gynecologic issues.

Menstrual Irregularities

During the luteal (second) phase of your menstrual cycle, your uterine lining (endometrium) is building up to receive a fertilized egg. This phase becomes shortened when you are progesterone deficient. Your periods might then be irregular due to progesterone deficiency. You might have some spotting right before your period and then some clots during your period.

The principal cause of irregular periods is the lack of normal ovulation. Lack of normal ovulation, where the egg is not released from the ovary- causes low progesterone because your body is not preparing for pregnancy by building up the endometrium. Other reasons for irregular periods can be PCOS, stress (high cortisol), or simply coming off of oral contraceptives. However, remember that an

early “pre-menopause” can mean that you have lower-than-normal progesterone levels, with or without significant symptoms.

Heavy Periods

Approximately 50% of females who report heavy menstrual bleeding, do not meet the requirements of 80 mls (about 1/3 cup) or more of blood “release” per menstrual cycle. Heavy menstrual blood loss usually includes clotting and having to change pads or tampons every two hours or more. Heavy bleeding is thought to result from imbalances in estrogen and progesterone, and is generally successfully treated with supplemental progesterone. If you are experiencing heavy periods, you will need a full work-up to exclude other causes of heavy menstrual flow such as polyps, endometriosis or adenomyosis (endometrium growing in the uterine wall), as well as other (less common) issues including bleeding or clotting disorders.

PMS

Another one of the signs of progesterone deficiency is premenstrual syndrome- PMS. Premenstrual syndrome is defined as life-disrupting physiological and/or psychological signs or symptoms which occur in the luteal phase of the cycle. Symptoms include headaches, cramps, fatigue, bloating, nausea and mood swings. When menses begins, symptoms will generally disappear. The reason PMS is thought to occur is due to the difference in hormone levels between estrogen and progesterone. Many women respond to progesterone supplementation, while others need a more varied approach- similar to women suffering from the more severe variant- PMDD.

PMDD

Most women are aware of the typical symptoms of PMS. In fact, how many of us have experienced fluid retention (bloating), breast tenderness, or even a little bit of a mood swing? However, women with PMDD (less than an estimated 10% of the female menstruating population) have symptoms that can last all month. Not only that-the symptoms are a gross exaggeration of PMS symptoms. Mood swings are prevalent and severe. Depression brings on “fits” of crying or feelings of hopelessness. Often the most reasonable women experience intense anger and conflict with other people. Tension, anxiety, and irritability. No interest in your usual activities. Trouble concentrating. Fatigue. Appetite changes

with binge eating. Not your ordinary PMS. This disorder is associated with measurable drops in serotonin levels, as well as exaggerated estrogen to progesterone dips and drops. Treatment includes serotonin precursors, progesterone and more.

Breast Tenderness

Another sign of low progesterone is breast tenderness. This is a PMS symptom that will typically occur and then worsen during the mid to late luteal phase. Imbalances in estrogen and progesterone can worsen breast tenderness and pain.

Cyclic mastalgia is not considered as a part of PMS, even though it is indeed related to the menstrual cycle. It is bilateral, diffuse, poorly localized, and generally described as soreness that often radiates to the underarms and even down the arms. It occurs mostly during the luteal phase of the menstrual cycle due to increased water content in breast stroma caused by increasing hormone levels. Cyclic breast pain occurs more commonly in younger women, often will resolve spontaneously, and is classified differently than as being a part of premenstrual syndrome.

Bloating

Bloating is a common sign of low progesterone. Studies have shown that, during the luteal phase, water and sodium retention increase with low levels of progesterone and high levels of estrogen. This occurs because the estrogen lowers what is called the “osmotic threshold,” for which water is reabsorbed in the body. The hormone ADH (arginine vasopressin) is responsible for the reabsorption of water into the bloodstream. When estrogen levels are high, this threshold is lowered, and therefore less water will be excreted through urine. This then causes the body to retain water and creates the sensation of bloating. It could be as little as noticing your rings are tight or as much as being unable to zip up your jeans. This looks and feels differently than the belly fat you start accumulating during pre-menopause.

Painful Periods

Dysmenorrhea (painful periods) is typically experienced as painful cramps before or during menstruation. Secondary dysmenorrhea is due to gynecological issues such as endometriosis or adenomyosis. What we’re discussing here is simply primary dysmenorrhea as a result of “normal”

female anatomy. The cramps in the uterus are caused by high levels of prostaglandins. Prostaglandins are a group of fatty molecules made at sites of tissue damage or infection. They control processes such as blood flow, the formation of blood clots, degree of inflammation, and even the induction of labor. Prostaglandins work in opposition to progesterone, so when progesterone decreases right before menstruation, prostaglandin levels will increase. This then causes uterine contractions, cramps and pain. Treatment is not necessary for “mild cramps”, but more severe cramps usually require prostaglandin inhibition. “Natural” ways to do this are with fish oils and curcumin supplements.

Ovarian Cysts

Ovarian cysts are sacs filled with fluid that are attached to or adjacent to the ovaries. Ten percent of women have ovarian cysts, which can be an “incidental finding” on pelvic exam or ultrasound, or a cause for pelvic pain and other symptoms. Cysts are usually classified according to whether they are a variant of the normal menstrual cycle, referred to as a functional or follicular cyst. Frequent follicular cysts can be one of the signs of low progesterone.

Ovarian cysts are considered “large” when they are over 5 cm and giant when they are over 15 cm. Most cysts are benign and cause no pain, but others do cause pain as they sometimes don’t resolve with the menstrual cycle and then grow larger over time. Symptoms of an ovarian cyst are heavy cramping with abdominal pain, irregular periods, and pain during bowel movements. In some studies, progesterone supplementation in the early stages of cyst growth reduced its size, ability to grow and sometimes induced ovulation.

Infertility

Adequate progesterone is necessary for healthy fertility. Progesterone helps to maintain the integrity of the uterine lining so that a fertilized egg can implant. Without optimal progesterone, you are at a higher risk of miscarriage. Many studies have documented the benefits of administering progesterone to patients who are experiencing infertility to increase conception as well as to-term pregnancy rates. This leads us to the next logical topic; miscarriage.

First Trimester Miscarriage

It is critically important to have optimal progesterone levels for a healthy pregnancy. The first trimester of pregnancy is typically when most miscarriages occur. If progesterone levels are low, studies have found that those who are administered progesterone in the first trimester have a better chance of reducing their chances of miscarriage.

Metabolic Issues

Chronically low progesterone levels are often associated with low-grade depression, a topic we'll cover soon. Low progesterone will lower serotonin levels. If you get sugar cravings, they are often due to low serotonin levels. If you crave sugar and feel happier after you eat an ice cream cone or cookie, this is likely a physiological fact. If you self-medicate your low serotonin levels with too much sugary food, you'll gain weight, raise your blood sugar, and levels of inflammation in your body.

And it's not just the serotonin. Low progesterone (in and of itself) is the beginning of the rise in the hunger hormones leptin and ghrelin. Ghrelin is an actual "hunger hormone", stimulating your appetite but leptin is a bigger problem for most women. As leptin rises, your fat cells will "hold onto fat", starting often with belly fat. This makes fat loss much more difficult if you are progesterone deficient.

Since progesterone helps to normalize thyroid hormones, it can lower those, causing your metabolic rate to drop. This will often be reflected in a lowering of your morning basal temperature as well as your energy levels. However, fatigue is more likely to occur due to another problem which I'll discuss next.

Sleep issues

You need two brain chemicals (neurotransmitters) to help you fall asleep and then stay asleep for the night. The fall-asleep brain chemical you need is called GABA, and the stay-asleep chemical is our good friend, serotonin. When progesterone levels fall, so do levels of both GABA and serotonin. This then makes both falling and staying asleep more difficult. When these two neurotransmitters drop, women often get a poor night's sleep which leads to daytime fatigue and, eventually, all sorts of other problems. Women's sleep cycles have been studied in depth.

Many studies have found changes in sleep architecture across the phases of the menstrual cycle, with most sleep disturbances occurring in the luteal phase. In the luteal phase, women experience increased sleep onset and awakenings and lower sleep efficiency and quality compared to the

follicular phase. Women in the luteal phase have less REM sleep and more non-rapid-eye-movement (NREM) sleep, with an increase in slow wave sleep (SWS) in particular. EEG (electroencephalogram) power density varies throughout the menstrual cycle, with the highest density of sleep spindles occurring in the luteal phase.

The luteal phase is also associated with elevated core body temperature, which could potentially interact with sleep processes to impact sleep quality. During the luteal phase, some women experience nocturnal PMS symptoms of discomfort, such as stomachache, backache, headaches, and nausea. And as a corollary, those with PMS are more vulnerable to sleep disruptions during the luteal phase. Women with PMS report having more unpleasant dreams, nocturnal awakenings, morning tiredness, and increased mental activity at night in comparison with women without PMS.

Several studies have shown that progesterone supplementation has a better ability to restore normal sleep when there was a disturbance in the night compared to the control groups. Progesterone administration seems to enhance sleep duration and sleep quality, mainly by improving slow-wave sleep (SWS). As an aside, let me mention that disturbed sleep and daytime fatigue are very common issues for all of my women patients. I usually end up giving at least half of my patients integratives to raise their GABA and serotonin levels; not just supplemental progesterone. As a final note in this section; ongoing research is pointing to the increasing role of progesterone in regard to growth hormone and melatonin secretion as well. And yes, both of these carry implications for sleep as well.

Mood issues

We touched on the topic of mood swings during the discussion of PMDD. You might recall that as your progesterone levels drop, so too, do your serotonin levels. Serotonin is one of your happy neurotransmitters, so for some, this drop is enough to cause depressive symptoms. Don’t think that anti-depressants are the answer. Why wouldn’t you want to treat your mood issues more physiologically with progesterone and some serotonin precursors?

We also discussed the diminution of GABA levels in regard to sleep initiation. But GABA levels also control how much anxiety and even panic you’ll have to deal with as you move through peri-menopause and then menopause. However, the degree of symptoms you’ll experience as a result of decreased serotonin and GABA levels is a reflection of your “baseline” levels.

Anxiety is the experience of feelings of worry, fear, or at worst-panic attacks that can completely overpower aspects of your day. Progesterone has anti-anxiety effects due to its boosting relationship with GABA, your natural relaxation mood chemical. If your progesterone is low or you are not producing enough each cycle this can show up as anxiety because you are not producing as much GABA. This is often corrected with supplemental progesterone and pure GABA. A word of warning: if your doctor prescribes an anti-anxiety medication such as Xanax, run, don't walk, to find a Functional Specialist that won't give you prescriptions for highly addictive drugs.

Irritability

Pain and discomfort cause feelings of stress and elevated cortisol levels. As described above, there are many ways that having low progesterone levels cause you discomfort- from cysts, to cramps, to PMS, to sleep disruption. Stress will lower dopamine levels, and this then causes irritability and can even contribute to a depressed mood. Low dopamine lowers GABA even further, thus compounding any anxiety issues you might have. We're talking about close to half of a month of distressing symptoms, all due to a simple lack of progesterone! Studies have found that there were significant improvements in mood and irritability due to progesterone administration compared to a placebo. And please *do* note: there are ways to naturally increase dopamine levels as well. Also note: oral GABA is destroyed by stomach acid and rendered ineffective.

Cyclical headaches

Cyclical headaches are defined as recurrent headaches which occur during the same time with each menstrual cycle. They are classified as a complication of PMS, and are one of the less common signs of low progesterone. When progesterone is low, you are in (by definition) an estrogen-dominant state. Early to mid-luteal cyclical headaches are thought to be caused by the estrogen-dominant effect on cerebral blood vessels. These cyclical headaches are successfully treated with progestins (synthetic progesterone) in clinical studies. It would make sense that the more safe, bioidentical progesterone would be effective for these types of headaches. To make matters just that much more complicated, a small percentage of women get "estrogen-drop" headaches at the very end of their luteal phase, just as menses starts.

Migraines

Speaking of headaches, we must differentiate cyclical headaches from migraine headaches which are also associated with low progesterone levels. Low levels of brain serotonin have been linked to migraines, accounting for the statistical increase in migraines reported by women with documented low progesterone levels. Indeed, bioidentical progesterone is an effective (partial) treatment for a select group of migraine sufferers. Recent studies have shown that, compared to a regular diet, a nutritional ketosis diet might also help to ears to be great for keeping migraines at bay. And speaking of headaches……

Constipation

This is one I'll bet you didn't know about. While normal levels of progesterone and indeed the progesterone spike a week before your period can cause constipation which is immediately relieved when you get your period, if progesterone levels are low for your entire luteal phase, it's a different story. It's also a different story if you are pre-menopausal, with constantly low progesterone levels or post-menopausal, with inadequate progesterone replacement dosing.

Numerous studies suggest that the interplay between progesterone and the serotoninergic system could underlie altered bowel habits in women. Serotonin (5-hydroxytryptamine or 5-HT) is known to play a key role in the motor function of the GI tract by stimulating smooth muscle contractility. It has been shown that progesterone administration increases 5-HT levels by decreasing the level of 5-HT reuptake, monoamine oxidase mRNA expression, and increasing the availability of 5-HT precursor, tryptophan. This effect of progesterone on the serotoninergic system is not surprising because 5-HT promotes peristalsis. The moral of this story is that curing chronic constipation in women is often a matter of simply restoring progesterone and serotoninergic balance.

Memory issues

It astounds me that so many women who I speak with about hormones think that it is "normal" to start becoming forgetful and foggy-brained at age 40! However, being foggy-brained and having memory lapses can indeed by directly caused by progesterone deficiency. We don't think of progesterone as a sleep supplement or a brain supplement, but in fact, BI progesterone is just that. As with so many hormonal issues, this is also complex.

Studies demonstrate that increased levels of GABA increase our cognitive performance. Other studies demonstrate that serotonin is important for memory consolidation and storage in the hippocampus. In fact, there is a higher incidence of dementia in people with chronically low serotonin levels. And finally, progesterone is neuroprotective in animals and women. There is a firm biological rationale for the view that progesterone plays an important role in brain function and there are discernible effects on cognition in animals. Moreover, progesterone exposures are linked to patterns of brain activation during cognitive processing in women.

However, if I am to be scientifically accurate; despite my bias, it remains to be shown that endogenous progesterone or exogenous progestogens exert clinically meaningful effects on short-term or long-term cognitive function in healthy women.

Footnote

Studies are ongoing to investigate the role that progesterone may have in preventing or lessening seizure activity. As noted above, it is thought to be neuroprotective in animals and in women. As such, it is being investigated as a modality to aid in the treatment of traumatic brain injury.

VIEW REFERENCES