

Expert Pharmacist Advocates for Natural Progesterone Usage in Hormone Therapy

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STORY AT-A-GLANCE

- › In my interview with compounding pharmacist Carol Petersen, we discuss how bioidentical hormones mirror your body's natural hormones; Petersen strongly advocates for natural progesterone over synthetic progestins due to the latter's dangerous health risks including cancer
- › Standard methods of measuring estrogen through blood, serum, or urine tests can often mislead rather than inform. Monitoring prolactin levels provides a far more reliable and less expensive indicator of estrogen dominance
- › Progesterone benefits extend far beyond menopause, effectively modulating your stress, supporting neurological health, reducing allergic responses and helping maintain myelin sheath health in both men and women
- › Transmucosal administration (vaginal, sublingual or rectal) is the most effective delivery method for progesterone, offering better absorption than transdermal or oral routes
- › Environmental factors like polyunsaturated fatty acids (PUFAs), electromagnetic fields (EMFs) and endocrine-disrupting chemicals significantly impact hormonal health and progesterone therapy effectiveness

I recently had the privilege of interviewing Carol Petersen, a seasoned compounding pharmacist renowned for her expertise in bioidentical hormone replacement therapy (BHRT). Petersen's extensive background, coupled with her deep understanding of hormones, makes her an invaluable resource in your journey toward optimal health.

Petersen has been a dedicated pharmacist since 1972, a time when the pharmacy profession was markedly different from today. "There were a lot fewer drugs actually," Petersen recalls, emphasizing the shift toward a more isolated role for pharmacists over the decades.

Her early career was marked by a hands-on, patient-centric approach, which she believes has been lost in modern medical practice. "We've taken the soul out of medicine and turned it into a flow chart," she laments, highlighting the need for a more personalized approach to health care.¹

The advent of COVID-19 significantly altered Petersen's career trajectory. Pivoting from her role at Women's International Pharmacy, where she was a leading compounding pharmacist, she transitioned into health coaching. Her focus has since been on bioidentical hormone replacement therapy, an area where she possesses superior knowledge compared to many of her peers, including myself.

Understanding Bioidentical Hormone Replacement Therapy

Bioidentical hormones, which are chemically identical to those naturally produced by your body, are the preferred option for hormone replacement therapy. According to Petersen, natural progesterone is essential, as synthetic progestins mimic harmful estrogen rather than providing the benefits of natural progesterone.

In fact, synthetic progesterone, called progestins, should never be used and I believe it should be outlawed, due to the dangers associated with them. This includes increased risks of [brain cancer](#) and other health complications.

One of the primary concerns is the increased risk of breast cancer associated with progestin use. A substantial study published in the Women's Health Initiative highlighted that women using combined hormone therapy (estrogen and progestin) had a higher incidence of breast cancer compared to those not on hormone therapy.²

The American Cancer Society has also noted this association, suggesting that the risks of breast cancer should be weighed carefully against the benefits of HRT.

In addition to these risks, synthetic progestins can contribute to a range of other health complications. Some studies suggest associations with depression, weight gain, and mood swings, which can impact the overall quality of life for women using these hormones.

Petersen's expertise stems from her deep study of the works of Ray Peat and his mentor, Katharina Dalton. Dalton, a pioneer in the field, not only defined PMS but also discovered that women with severe PMS symptoms often had normal progesterone levels.

Yet, "she introduced progesterone and found it did enormous things for her," Petersen notes, suggesting that the issue might lie in an **estrogen burden** that conventional tests fail to detect. Petersen and I also discussed the ineffectiveness of standard estrogen testing. Relying on blood, serum or urine tests to measure estrogen levels is a ridiculous waste of money, as these tests do not accurately reflect your body's estrogen status.

Many people believe they are low in estrogen due to bloodwork, when they actually have high levels in their organs. This is because serum estrogen levels are not representative of estrogen that's stored in tissues. Estrogen may be low in plasma but high in tissues.

Prolactin levels serve as a reliable indicator of estrogen activity, as estrogen directly stimulates the pituitary gland to produce prolactin. When prolactin levels are elevated, it signals increased estrogen receptor activation, whether from the body's own estrogen production or environmental exposures like microplastics. This relationship is particularly significant when combined with low thyroid function, making prolactin an important marker for identifying hormonal imbalance.

Progesterone: The Cornerstone of Hormonal Balance

Progesterone is a pivotal hormone in maintaining hormonal balance for men and women alike. While progesterone therapy is often associated with menopause, it has benefits for a broader population, including men and individuals with neurological conditions. In neurological contexts, progesterone supports myelin sheath health and reduces neuropathy symptoms.

Petersen shares her personal experience with progesterone, stating, "I started using progesterone and almost all the fibrocystic breast disease I had suffered with for a couple of decades disappeared."³ This dramatic improvement underscores progesterone's efficacy in alleviating estrogen-related symptoms.

She also highlights the multifaceted roles of progesterone beyond reproductive health. "Progesterone helps keep your myelin sheath healthy," Petersen explains, revealing its significance in neurological health. Additionally, progesterone aids in reducing histamine release from mast cells, thereby mitigating allergic responses and inflammation.

The distinction between natural progesterone and synthetic progestins is important to be aware of. Progestins, like norethindrone and medroxyprogesterone acetate (Provera), have been linked to serious adverse health outcomes, including birth defects and osteoporosis. In contrast, bioidentical progesterone offers therapeutic benefits without these risks.

Petersen recounts historical practices where synthetic progestins were used as pregnancy tests, inadvertently causing fetal damage. This dark chapter in hormone therapy history serves as a cautionary tale against the use of synthetic hormones.

The Role of Lifestyle and Detoxification

Hormonal balance is not achieved through hormone therapy alone. Petersen emphasizes the necessity of addressing lifestyle factors that contribute to hormone imbalance. This includes diet, stress management and detoxification. We're in this toxic chemical soup, including the pervasive presence of **endocrine-disrupting chemicals** (EDCs) like plastics that activate estrogen receptors and wreak havoc on your hormonal systems.

Polyunsaturated fatty acids (PUFAs) and electromagnetic fields (EMFs) also adversely affect hormonal health. PUFAs, commonly found in **seed oils** and processed foods, mimic estrogen in their actions, contributing to estrogen dominance. PUFAs are really similar to estrogen and can disrupt hormonal harmony and mitochondrial function.

Additionally, EMFs – ubiquitous in our modern environment – are known to interfere with your body's endocrine system, further exacerbating hormone imbalances.

Minimizing exposure to these environmental toxins is part of a comprehensive approach to hormone health. By reducing intake of PUFAs and limiting EMF exposure, you can support your body's natural hormone regulation and enhance the effectiveness of bioidentical hormone replacement therapy.

Detoxification strategies, such as sauna therapy and dietary adjustments, are integral components of a holistic hormone therapy regimen. Progesterone is one of the pillars of the program, but it shouldn't be regarded as the only component.

Further, hormonal systems are intricately connected, and imbalances in one affect others. Petersen discusses how progesterone interacts with insulin, [cortisol](#) and thyroid hormones to maintain overall health. She points out that insulin resistance and cortisol surges deplete progesterone levels, leading to a cascade of health issues, including anxiety and sleep disturbances.

By supplementing with progesterone, you alleviate these symptoms, promoting a more balanced hormonal state. "Progesterone moderates insulin glucose swings," Petersen notes, highlighting its role in stabilizing blood sugar levels and reducing strain on your adrenal glands.

Routes of Progesterone Administration: Comparing Transdermal, Transmucosal and Oral

Understanding the optimal route of progesterone administration is essential for maximizing its therapeutic benefits. Petersen emphasizes that the "best absorption is transmucosal, either vaginal or in the mouth or rectal."⁴ Transmucosal administration ensures that progesterone is effectively absorbed into your bloodstream, bypassing your liver's first-pass metabolism, which degrades the hormone and reduces its efficacy.

- **Transdermal administration** – Transdermal methods, such as creams and gels, have been widely used but come with limitations. "Creams do work, capsules do work," Petersen acknowledges, but she notes that higher doses are often required to achieve the desired effect.

In my experience, transdermal progesterone works initially. However, over time, the effectiveness wanes, suggesting that transdermal delivery alone may not sustain long-term benefits.

- **Transmucosal administration** – Transmucosal routes – including vaginal, sublingual (under the tongue) and rectal administration – are superior in terms of absorption efficiency. Petersen explains, "Suppositories, inserts, lozenges, oils, all kinds of things to get that progesterone in," ensuring that the hormone reaches your bloodstream intact.

This method minimizes the need for excessively high doses and reduces the likelihood of side effects. "Because it's dissolved, it has to be dissolved to get through transmucosally or through the skin or wherever," Petersen stresses, highlighting the importance of proper dissolution for effective absorption.

- **Oral administration** – While oral progesterone is available and may provide symptom relief, it undergoes significant liver metabolism, reducing its availability and efficacy. However, when combined with dietary fats, oral progesterone can be absorbed via your lymphatic system, like a fat, mitigating some concerns about degradation in your gut.
- **Innovative formulations** – Petersen highlights Peat's innovation in dissolving progesterone in vitamin E, which not only enhances absorption but also provides antioxidant benefits. "Vitamin E, as its antioxidant effects also help, it's also an active ingredient in helping you balance that excess estrogen activity," she notes. This formulation ensures that progesterone is delivered effectively while simultaneously combating oxidative stress and estrogen dominance.

Dosing Strategies for Effective Progesterone Therapy: Tailoring to Individual Needs

Progesterone dosing is highly individualized, contingent upon the specific symptoms and hormonal imbalances each person experiences. Petersen underscores the importance of symptom-based dosing: "The doses become very, very individualized. The end point has to be relief of symptoms."⁵

The primary symptoms to target with progesterone therapy include anxiety, breast tenderness and swollen breasts. "Anxiety because it flips so quickly. Also, breast tenderness and swollen breasts. That resolves pretty quickly," Petersen notes, adding that effective progesterone dosing provides rapid relief, acting like a "switch" to turn off anxiety and alleviate breast discomfort swiftly.

However, progesterone may also be used to support optimal health even in those not experiencing these symptoms.

While progesterone is generally safe, Petersen emphasizes the importance of monitoring and adjusting doses to prevent overshooting and causing additional symptoms. "You don't want to have progesterone so high in the follicular phase [the first phase of the menstrual cycle] that you suppress ovulation," she cautions, highlighting the need for balance in therapy.

- **Initial dosing** — For transmucosal administration, doses typically range from 25 to 100 milligrams, depending on the severity of symptoms. "With transmucosal it might be 25, it might be 50, might be 100. It depends," Petersen explains. This flexibility allows for tailored therapy that's adjusted based on patient response.
- **High-dose scenarios** — In cases of severe hormone imbalance, especially in women who have suffered from progesterone deficiency for decades, higher doses may be necessary. High doses are reserved for individuals with significant symptoms and require careful monitoring to ensure safety and efficacy.

- **Timing of doses** – Timing plays an important role in optimizing progesterone's effects. Petersen recommends administering progesterone an hour before bed to leverage its calming properties: "Progesterone ... [has an] ... effect on adrenaline, which calms your mind so you can sleep. It doesn't put you to sleep. It allows you to sleep." Additionally, incorporating progesterone during the day, particularly at mealtime, helps stabilize blood glucose levels.
- **Adjusting doses based on symptoms** – Progesterone therapy should be dynamic, with doses adjusted in response to ongoing symptoms. "If you're in that zone where you don't have quite enough progesterone and things like anxiety are increasing, you need another dose, maybe every 15 minutes till you get to the calmness," Carol advises. This approach ensures that you receive adequate progesterone to alleviate acute symptoms promptly.
- **Cycling for premenopausal women** – For premenopausal women, dosing strategies may involve cycling progesterone intake in and out of the luteal phase – the second phase of the menstrual cycle – to align with natural hormonal fluctuations.

"They might need more generous dosing during the luteal phase if there are symptoms. But if there's anxiety in the follicular phase, a little progesterone could help with that and their sleep," Petersen explains. This tailored approach helps maintain hormonal harmony throughout the menstrual cycle without suppressing natural ovulation.

Empowering Patients Through Knowledge and Access

Despite the clear benefits, hormone therapy is often mired in misconceptions and misinformation. Petersen discusses how some practitioners and patients are misled into avoiding progesterone, fearing abnormal bleeding or other side effects. However, she clarifies that proper progesterone use facilitates healthy menstrual cycles and alleviates symptoms without adverse effects, while supporting overall health.

By prioritizing bioidentical hormones, advocating for functional testing and emphasizing the importance of lifestyle factors, Petersen provides a comprehensive approach to achieving and maintaining hormonal harmony. You can find out more at Petersen's website, [The Wellness By Design Project](#). I encourage you to explore Petersen's resources and consider how natural progesterone might fit into your health journey.

How to Use Progesterone

Before you consider using progesterone, it is important to understand that it is not a magic bullet, and that you get the most benefit by implementing a Bioenergetic diet approach that allows you to effectively burn glucose as your primary fuel without backing up electrons in your mitochondria that reduces your energy production. My new book, "Your Guide to Cellular Health: Unlocking the Science of Longevity and Joy" comes out very soon and covers this process in great detail.

Once you have dialed in your diet, an effective strategy that can help counteract estrogen excess is to take transmucosal progesterone (i.e., applied to your gums, not oral or transdermal), which is a natural estrogen antagonist. Progesterone is one of only four hormones I believe many adults can benefit from. (The other three are thyroid hormone T3, DHEA and pregnenolone.)

I do not recommend transdermal progesterone, as your skin expresses high levels of 5-alpha reductase enzyme, which causes a significant portion of the progesterone you're taking to be irreversibly converted primarily into allopregnanolone and cannot be converted back into progesterone.

Ideal Way to Administer Progesterone

Please note that when progesterone is used transmucosally on your gums as I advise, the FDA believes that somehow converts it into a drug and prohibits any company from advising that on its label. This is why companies like Health Natura promotes their progesterone products as "topical."

However, please understand that it is perfectly legal for any physician to recommend an off-label indication for a drug to their patient. In this case, progesterone is a natural hormone and not a drug and is very safe even in high doses. This is unlike synthetic progesterone called progestins that are used by drug companies, but frequently, and incorrectly, referred.

Dr. Ray Peat has done the seminal work in progesterone and probably was the world's greatest expert on progesterone. He wrote his Ph.D. on estrogen in 1982 and spent most of his professional career documenting the need to counteract the dangers of excess estrogen with low LA diets and transmucosal progesterone supplementation.

He determined that most solvents do not dissolve progesterone well and discovered that vitamin E is the best solvent to optimally provide progesterone in your tissue. Vitamin E also protects you against damage from LA. You just need to be very careful about which vitamin E you use as most supplemental vitamin E on the market is worse than worthless and will cause you harm not benefit.

It is imperative to avoid using any synthetic vitamin E (alpha tocopherol acetate – the acetate indicates that it's synthetic). Natural vitamin E will be labeled "d alpha tocopherol." This is the pure D isomer, which is what your body can use.

There are also other vitamin E isomers, and you want the complete spectrum of tocopherols and tocotrienols, specifically the beta, gamma, and delta types, in the effective D isomer. As an example of an ideal vitamin E, you can look at the label on our vitamin E in our store. You can use any brand that has a similar label.

You can purchase pharmaceutical grade bioidentical progesterone as Progesterone Powder, Bioidentical Micronized Powder, 10 grams for about \$40 on many online stores like Amazon. That is nearly a year's supply, depending on the dose you choose.

However, you will need to purchase some small stainless steel measuring spoons as you will need a 1/64 tsp, which is 25 mg and a 1/32 tsp, which is 50 mg. A normal dose is typically 25-50 mg and is taken 30 minutes before bed, as it has an anti-cortisol function and will increase GABA levels for a good night's sleep.

Unfortunately, this vendor frequently runs out of product, and if that's the case, then you can use [Simply Progesterone by Health Natura](#). It's premixed with vitamin E and MCT oil. Again, while Health Natura states that its product is for "topical use only," I recommend applying it transmucosally, by rubbing it on your gums.

If you are a menstruating woman, you should take the progesterone during the luteal phase or the last half of your cycle, which can be determined by starting 10 days after the first day of your period and stopping the progesterone when your period starts.

If you are a male or non-menstruating woman, you can take the progesterone every day for four to six months and then cycle off for one week. The best time of day to take progesterone is 30 minutes before bed as it has an anti-cortisol function and will increase GABA levels for a good night's sleep.

This is what I have been personally doing for over a year with very good results. I am a physician so do not have any problems doing this. If you aren't a physician, you should consult one before using this therapy, as transmucosal progesterone therapy requires a doctor's prescription.

Sources and References

- ^{1, 3, 4, 5} [Youtube, Dr. Mercola, Natural Progesterone Usage in Hormone Therapy Interview – with Carol Petersen](#)
- ² [BMC Ecol. 2009 Apr 9;9:6. doi: 10.1186/1472-6785-9-6](#)