

## REPORT

## The Overlooked Female Hormone

By Melissa L. Block, M.Ed.



Hormone deficiencies can wreak havoc with a woman's health and feeling of well-being.

Mainstream medicine has focused on the drop of estrogen as being the culprit behind menopausal miseries. The scientific literature, however, reveals that an imbalance of several hormones is responsible for many of the discomforts and lethal diseases that women face during most phases of their lives.

Concern about the life-threatening side effects of synthetic drugs has caused many women to be deprived of the benefits of safe natural hormone therapy. When hormones are properly replaced, the risk of contracting degenerative disease is reduced. Attaining optimal hormone balance can also dramatically improve women's emotional and physical spheres of life.

This article introduces a new concept to explain why so many females suffer hormone-related problems and provides a simple solution that has been overlooked by most conventional doctors.

With female life span currently hovering around 80 years, the fact is most women spend a significant percentage of their lives in a state of hormone imbalance that began with the onset of menopause. In the U.S. alone, approximately 36 million women have entered menopause, and many of those women experienced troublesome symptoms both before and during "the change."

It's clear that as long as there has been menopause, there have been women who suffer greatly as a consequence of this transition. Once they've passed through this complex transition, women find themselves at increased risk of heart disease, osteoporosis and cancer.<sup>1</sup>

Efforts to help those women who suffer from menopausal symptoms and diseases of aging have moved along two paths. Mainstream medicine's path has led to the widespread prescription of conjugated estrogens, most commonly sold today as Premarin, and synthetic progestins. The second path has led to the development and use of natural estrogens and progesterone. While the first path has led to temporary relief for many women, it has done so at great cost. The second path, although given little credence by the medical mainstream, works without the side effects characteristic of conjugated estrogens and progestins, because its goal is to duplicate the hormonal balance that naturally occurs in a healthy young woman's body.

## Conventional vs. natural hormone replacement therapies

The primary aim of both types of hormone replacement therapy (HRT) is to relieve menopausal symptoms. Both have proven capable of achieving this end. HRT research has also focused on its ability to reduce risks of age-related diseases such as heart disease, osteoporosis and cancer.

## Possible Premenopause Symptoms

Conjugated estrogens and progestins effectively relieve menopausal symptoms but at the risk of significant side effects, including breast tenderness, vaginal bleeding and mood changes. Some studies have appeared to support HRT's effectiveness at

preventing heart disease, but the overall weight of the research data does not support it as preventive medicine against cardiovascular diseases.<sup>2</sup>

The most recent large-scale study showed that this combination of synthetic hormones increased the likelihood of strokes (41%), invasive breast cancer (26%) and heart attacks (29%) in women who used it for less than five years. The results of this study, which involved over 16,000 menopausal women, were so alarming that it was halted prematurely.<sup>3</sup>

Natural estrogens and progesterone, on the other hand, pose little to no risk of adverse effects when they are used properly. Unlike the synthetic progestins and conjugated estrogens, their molecular structure is identical to the hormones made in the human body. When the molecular structure of a hormone is "tweaked" to make it patentable (thus enabling drug companies to charge what they like without fear of competition), it does not function the same as its natural counterpart. This can lead to other actions in the body resulting in unpleasant or dangerous side effects. Natural progesterone and estrogens, which are made from soy or wild yams, are bioidentical - indistinguishable from the real thing, both under a microscope and within the human body.

Bioidentical progesterone and estrogens, when used appropriately, also relieve vasomotor symptoms and help to build bone.<sup>4</sup> They pose no increased risk of heart attack, and their physiological effects on the circulatory system are likely to aid in the prevention of cardiovascular disease.<sup>5-7</sup> Evidence exists that natural (bioidentical) progesterone is more effective at building bone than synthetic estrogens.<sup>8</sup>

Natural hormones are also useful for maintaining or reviving libido during "the change." Unlike any type of synthetic HRT, natural hormones - more specifically, natural progesterone - appear to help prevent breast cancer.<sup>9-13</sup> An added advantage of natural hormone therapy is that it can be used by women who have yet to pass into

menopause. Growing numbers of women in Westernized nations begin to experience premenopause symptoms as early as their 30s and 40s (see a partial list of premenopause symptoms, above).

#### Premenopause symptoms

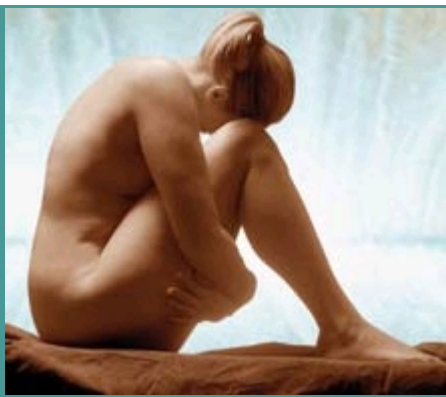
Most women who experience premenopausal symptoms are not ovulating with each menstrual cycle, and so do not make the progesterone needed to balance out the estrogens that build up the uterine lining. Studies have shown that by the age of 35, approximately 50% of women are having at least some anovulatory cycles.<sup>14,15</sup>

Constant exposure to estrogen-mimicking chemicals in the environment - found abundantly in everything from plastics to cleaning solutions - further elevates these women's estrogen load. The result is an imbalance that hormone expert and author John Lee, M.D. has named estrogen dominance. Estrogen dominance occurs when the tissue-building properties of estrogen are not adequately countered by the normalizing, balancing effects of progesterone, a hormone that can be physiologically supplemented in a manner that mimics the hormonal cycles of a healthy young woman.

A common age for the initial detection of breast cancer is five or more years before menopause. This indicates that factors in play before the menopausal transition - most likely, estrogen dominance - create an ideal environment for the development of breast tumors. According to Dr. Lee and biochemist David Zava, Ph.D., the authors (along with medical writer Virginia Hopkins) of *What Your Doctor May Not Tell You About Breast Cancer* (Warner Books, 2002) balancing hormone levels through the proper use of natural progesterone can prevent breast cancer in estrogen dominant women.

Even younger women, including those in their teens and 20s, can suffer from estrogen dominance. Their symptoms may include PMS, weight gain, fibrocystic breasts, bloating, troublesome periods, infertility, endometriosis, depression or repeated miscarriage. Natural progesterone works to relieve symptoms in these younger women as well.

Some menopausal women find that their symptoms are relieved with natural progesterone alone. This is due to two factors: first, estrogens are made in fat cells, which means that heavier (or extremely estrogen dominant) premenopausal women may actually continue to be estrogen dominant well into menopause; and second, natural progesterone supplementation has the effect of "waking up" estrogen receptors, increasing their uptake of available estrogens.



- Weight gain
- Bloating
- Depression
- Migraine headaches
- Fibrocystic breasts
- Breast tenderness
- Hypothyroidism
- Uterine fibroids
- Decreased libido
- Extremely heavy or extremely painful periods
- Moderate to severe PMS
- Endometriosis
- Infertility
- Repeated miscarriage

The use of estrogen drugs in women with premenopause symptoms is not helpful. That's because the last thing any estrogen dominant woman needs is more estrogen, and synthetic progestins can't replace the real thing. Many women with premenopause symptoms end up using oral contraceptives to control them, and these drugs have their own hazards. This is no surprise when one considers that they contain the same kinds of synthetic hormones found in conventional HRT (see "The hazards of oral contraceptives," left).

Dr. Lee and other experts have found that natural progesterone is the best treatment for the symptoms of estrogen dominance, and thousands of women have discovered this firsthand.

If natural hormones are superior to synthetic ones, one might ask, where is the research to support this claim? Natural substances cannot be patented, and so the potential for huge profits from their manufacture and sale can't match those of synthetic versions. Because of this fact, it has been impossible to secure the funding necessary for the large-scale trials that could pit natural hormone therapy against the synthetics.

Some studies have been done to show the bioavailability and overall value of natural HRT,<sup>4,16,17</sup> but natural hormone researchers have not been able to compete with the enormous, pharmaceutical company-funded studies that have been published on conventional HRT. As a result, most women have been led to believe that conventional hormone replacement therapy was their only option at menopause. The role of synthetic progestins in HRT has been relegated to little more than a preventive measure against uterine cancer. Mainstream medicine has ignored the many important roles natural progesterone plays in reproductive health and in the complete health picture of women in every stage of their life spans.

Natural progesterone, delivered to the body via a skin cream that contains this hormone, is all that many women need to regain and maintain hormone balance. Women who are in or past menopause may also need other hormones, including natural estrogens, testosterone and DHEA.

#### The many uses of natural progesterone

Progesterone's best-known role is in maintaining a healthy pregnancy. When a woman ovulates, the follicle that has burst to release the ovum becomes the corpus luteum. The corpus luteum secretes anywhere from 4 mg to 28 mg of progesterone per day during the two weeks between ovulation and menstruation, with the average being 22 mg to 25 mg. If pregnancy takes place, the corpus luteum continues to make progesterone throughout the first trimester, playing an indispensable role in maintaining the pregnancy until the placenta can take over the job of providing progesterone. By the third trimester of pregnancy, the placenta is making up to 400 mg a day of this pro-gestational hormone.

Women who suffer from repeated miscarriages may suffer from luteal insufficiency, meaning that their ovaries are not making enough progesterone to protect the pregnancy through the first trimester. It makes sense for women vulnerable to miscarriage to supplement with natural progesterone, starting as soon as they know they are pregnant. A recent study has concluded that injections of a metabolite (breakdown product) of progesterone are highly effective at preventing pre-term births in women who are at risk for them.<sup>18</sup> Transdermal progesterone is likely to have the same beneficial effect.

It is important for women who are pregnant or trying to conceive to use a pure progesterone cream-one that contains no estrogens or estrogenic herbs. If you would like to use progesterone cream to prevent miscarriage, enhance fertility or prevent pre-term birth, consult with an obstetrician or other health practitioner knowledgeable in the use of natural



#### Hazards of Oral Contraceptives

Birth control pills contain the same synthetic hormones that have been linked to serious health risks when used after menopause. They have been found to increase risk of cardiovascular disease (strokes, heart attacks and blood clots that can become lodged in leg vessels or vessels that feed the lungs), as well of the risk of developing cancer of the breast, cervix and liver.

The cardiovascular risks of the Pill use are often underestimated. It's likely that the increasing use of oral contraceptives for the symptoms of premenopause will lead to more cardiovascular adverse events, because women in the premenopausal age bracket already have elevated risk of such problems.

In some women, oral contraceptives cause depression, anxiety and mood swings. These side effects can be severe enough to affect quality of life and the ability to have healthy relationships.

hormones, or refer to *What Your Doctor May Not Tell You About Premenopause* by John Lee, M.D., Jesse Hanley, M.D. and Virginia Hopkins (Warner Books, 1999).

Continued on Page 2 of 2

[Back to the Magazine Forum](#)

## REPORT

### The Overlooked Female Hormone

By Melissa L. Block, M.Ed.

If ovulation does not occur, no progesterone is made. Anovulatory cycles are not easily detected, since menstruation still happens on schedule as long as estrogen does its part. The resulting imbalance of estrogen (which reaches its highest levels at around the 12th day of the menstrual cycle, with the first day falling on the first day of menstruation) and progesterone leads to a condition of estrogen dominance. When this cycle repeats itself frequently, and when it is amplified by environmental estrogens and those made in excess body fat, the body is in a near-constant state of estrogen overload. Estrogen-sensitive tissues get the message to grow and proliferate, and the symptoms listed in the sidebar on page 73 are the end result. By adding progesterone back into each cycle, and gently augmenting progesterone production during ovulatory cycles, balance can be reestablished.

Women who are in or past menopause can also benefit from natural progesterone supplementation. Natural progesterone stimulates the formation of new bone and may help to prevent breast cancer. It counteracts the blood clotting effects of estrogens, improves vascular tone (the ability of blood vessels to stretch and contract in response to the body's requirements), and is believed to protect against the buildup of atherosclerotic plaques and coronary artery spasms that lead to heart attack.<sup>5-7</sup> It's a gentle mood enhancer and helps to maintain normal libido.

Low thyroid activity is a common problem for postmenopausal women. Estrogen inhibits thyroid hormone activity.<sup>19</sup> Balancing excess estrogens with progesterone enables the body to better utilize thyroid hormone, and can help women to wean themselves off of thyroid hormone replacement drugs.

#### Progesterone builds bones

One of the main arguments in favor of HRT is that it has been shown in multiple studies to preserve bone mass and protect against osteoporotic fractures. The truth is that while estrogens - even the horse-derived estrogens that comprise Premarin - do preserve bone mass, the overall risks of HRT have been found to outweigh any beneficial effects it might have on bone health.

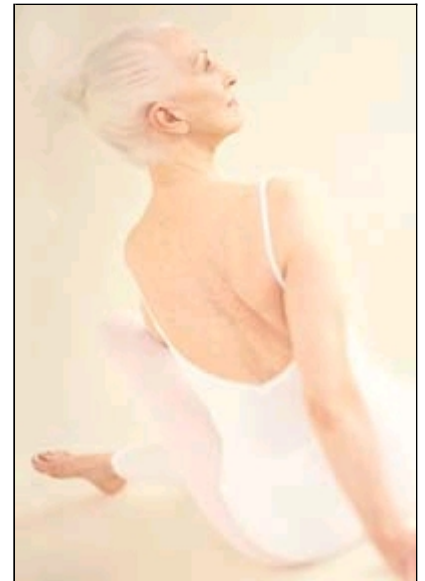
The synthetic progestin medroxyprogesterone has been found to increase bone density when given to young women who are not menstruating or ovulating.<sup>20</sup> The work of John Lee, M.D., and other like-minded clinicians has shown that natural progesterone has the same bone-building effect in both pre- and postmenopausal women, without the side effects that often occur with the synthetic progestins.

Estrogen maintains bone mass by subduing the activity of osteoclasts - specialized bone cells that break down old bone to make room for new. Progesterone builds bone by stimulating the activity of osteoblasts, bone cells that pull calcium, magnesium and phosphorus from the blood so that it can be incorporated into the bones.

#### Progesterone and breast cancer

Progesterone modulates much more than the course of a pregnancy. It interacts with estrogen in dozens of ways; the best detailed explanation of these effects can be found in Dr. Lee's writings. The short story on progesterone's relationship with cancer is that while estrogen encourages cellular growth (which is why it is carcinogenic in excess), progesterone encourages cells to differentiate, or mature. Immature cells are more likely to turn into cancerous cells.

Progesterone also encourages cells to undergo apoptosis - programmed cell death. A cell that becomes cancerous avoids apoptosis; it can continue to divide and survive as long as it has fuel and a place to grow. The mechanisms by which estrogen encourages cell growth are also thought to help switch off the genetic machinery that brings on programmed cell death.<sup>9-12</sup>



Progesterone also reduces the production of a carcinogenic form of estrogen (4-hydroxyestrogene) and enhances the production of estriol, a safer, non-carcinogenic estrogen. Breast cancer surgery or biopsy performed during the luteal phase of the menstrual cycle - the phase during which progesterone levels peak - is associated with significant improvements in prognosis and survival time.<sup>21-23</sup> Progesterone counteracts estrogen's effects on breast duct cells, which are usually the place where breast tumors begin to form.

Estrogen encourages breast duct cell proliferation; progesterone encourages those cells to mature and differentiate. This is how estrogen and progesterone interact during pregnancy to ready the breasts for lactation. Mature, differentiated cells are far less vulnerable to cancerous changes, a fact that explains why women who have had full-term pregnancies are at less risk of developing breast cancer.

Pro Fem  
Progesterone  
Cream



[Click to purchase](#)



#### How to Supplement with natural progesterone

When taken orally, natural progesterone is almost completely degraded by the liver before it can reach the tissues that need it. Even micronized natural progesterone - now available as a prescription drug called Prometrium® - must be given in high doses to make it through the first pass through the liver. This puts undue stress on the liver and may create metabolites that have harmful effects.

Natural progesterone can be given in the form of suppositories and injections. Both work to move progesterone into the bloodstream, but the first is messy and the latter is inconvenient. The simplest way to supplement with progesterone is transdermally, in the form of a skin cream that contains bioidentical progesterone made from soy or wild yams. When the cream is smoothed onto the skin, the progesterone molecules are absorbed into the layer of subcutaneous fat. The bioavailability of transdermal progesterone has been proven in several studies.

Once absorbed through the skin, the progesterone molecules gradually diffuse into the circulation. This method provides the closest possible approximation to the natural production of progesterone by the ovaries - as long as the dosages are properly timed.

Massage progesterone cream into the breasts, chest, underarms, face, abdomen, buttocks or inner thighs. Rotate the site where cream is applied so that subcutaneous fat cells don't become saturated in any one site. Use a cream that contains 500 mg to 700 mg of progesterone per ounce.

**Premenopausal women:** Women who have not gone through menopause and have estrogen dominance symptoms (including fibrocystic breasts and ovarian cysts) should use 1/4 to 1/2 tsp of progesterone cream, an amount which should provide 20 mg to 40 mg of progesterone, starting on the 8th day of the cycle. (Day one is the first day of menstruation.)

Continue to apply the cream until day 26 of the cycle, and allow seven days (whether menstruation occurs or not) before beginning to apply it again.

**PMS:** Begin to apply 1/4 tsp of cream on the 12th day after the first day of menstruation and continue until day 26.

**Endometriosis:** Women with endometriosis should use 1/2 tsp twice a day from days 6 through 26 of the menstrual cycle.

**Menopausal and postmenopausal women:** Women who are past menopause or who have had a hysterectomy should use 1/4 to 1/2 tsp of cream twice a day for 25 days, followed by five days off. Repeat this cycle for three months, then decrease the dosage to 1/4 tsp twice a day. If you have a uterus and are using supplemental estrogen of any kind, use progesterone cream every day of the month.

**Osteoporosis:** To help prevent osteoporosis in postmenopausal women, use 1/8 to 1/4 tsp daily from the 12th day to the last day of each monthly cycle. If still menstruating, use the first day of your period to mark the first day of the cycle. Women who have been diagnosed with osteoporosis should apply 1/2 teaspoon morning and night until the first jar is used up, and then 1/4 teaspoon morning and night until the second jar is used up. The latter dosage can be used for maintenance, or can be cut in half once again if bone scans show improvement. In addition to progesterone, supplementation with at least 1000 mg a day of calcium along with magnesium, zinc, boron,

manganese, vitamin D and vitamin K are essential in the prevention of osteoporosis.

### Progesterone supplementation

Natural progesterone cream is increasingly being used in lieu of synthetic progestin drugs. Like any hormone - natural or synthetic - it's bound to have more significant effects in some people than in others, because of subtle biochemical differences. Fortunately, there is no risk involved in trying it as long as it is used properly. Natural progesterone is now available in an enhanced delivery skin cream (QuSome® encapsulated) to better maintain a consistent youthful level of progesterone in the body.

## References

1. Prior JC. Perimenopause: the complex endocrinology of the menopausal transition. *Endocr Rev* 1998 Aug;19(4):397-428.
2. Teede HJ, et al. A placebo-controlled trial of long-term oral combined continuous hormone replacement therapy in postmenopausal women: effects on arterial compliance and endothelial function. *Clin Endocrinol (Oxf)* 2001 Nov;55(5):673-82.
3. Writing Group for the Women's Health Initiative Investigators. Risks and benefits of estrogen plus progestin in healthy menopausal women: principal results from the Women's Health Initiative randomized controlled trial. *JAMA* 2002;288:321-333.
4. Leonetti HB, Longo S, Anasti JN. Transdermal progesterone cream for vasomotor symptoms and postmenopausal bone loss. *Obstet Gynecol* 1999 Aug;94(2):225-8.
5. Mercurio G, et al. Effects of acute administration of natural progesterone on peripheral vascular responsiveness in healthy postmenopausal women. *Am J Cardiol* 1999 Jul 15;84(2):214-8.
6. Ylang YL, et al. Effects of estrogen and progesterone on age-related changes in arteries of postmenopausal women. *Clin Exp Pharmacol Physiol* 1997 Jun;24(6):457-9.
7. Hata K, et al. Transition of ovarian arterial compliance during the human menstrual cycle, assessed by Doppler ultrasound-correlation with serum hormone levels. *Nippon Sanka Fujinka Gakkai Zasshi* 1990 Jul;42(7):662-6.
8. Prior JC. Progesterone as a bone-trophic hormone. *Endocr Rev* 1990 May;11(2):386-98.
9. Chang KJ, et al. Influences of percutaneous administration of estradiol and progesterone on human breast epithelial cell cycle in vivo. *Fertil Steril* 1995 Apr;63(4):785-91.
10. Foidart JM, et al. Estradiol and progesterone regulate the proliferation of human breast epithelial cells. *Fertil Steril* 1998 May;69(5):963-9.
11. Horita K, et al. Progesterone induces apoptosis in malignant mesothelioma cells. *Anticancer Res* 2001 Nov-Dec;21(6A):3871-4.
12. Formby B, Wiley TS. Progesterone inhibits growth and induces apoptosis in breast cancer cells: inverse effects on Bcl-2 and p53. *Ann Clin Lab Sci* 1998 Nov-Dec;28(6):360-9.
13. Desreux J, et al. Progesterone receptor activation. An alternative to SERMs in breast cancer. *Eur J Cancer* 2000 Sep;36 Suppl 4:S90-1.
14. Zapantis G, Santoro N. Ovarian ageing and the menopausal transition. *Best Pract Res Clin Obstet Gynaecol* 2002 Jun;16(3):263-76.
15. te Velde ER, et al. Developmental and endocrine aspects of normal ovarian aging. *Mol Cell Endocrinol* 1998 Oct 25;145(1-2):67-73.
16. Leonetti HB, Wilson KJ, Anasti JN. Topical progesterone cream has an antiproliferative effect on estrogen-stimulated endometrium. *Fertil Steril* 2003 Jan;79(1):221-2.
17. Cooper A, et al. Systemic absorption of progesterone from Progest cream in postmenopausal women. *Lancet* 1998 Apr 25;351(9111):1255-6.
18. Annual meeting of the society for maternal-fetal medicine, February 6, 2003.
19. Vasudevan N, Ogawa S, Pfaff D. Estrogen and thyroid hormone receptor interactions: physiological flexibility by molecular specificity. *Physiol Rev* 2002 Oct;82(4):923-44.
20. Prior JC, et al. Perimenopausal bone loss: more than estrogen depletion. *J Bone Miner Res* 2001 Dec;16(12):2365-6. 25.
21. Cooper LS, et al. Survival of premenopausal breast carcinoma patients in relation to menstrual cycle timing of surgery and estrogen receptor/progesterone receptor status of the primary tumor. *Cancer* 1999 Nov 15;86(10):2053-8.

22. Badwe RA, Mitra I, Havaladar R. Timing of surgery during the menstrual cycle and prognosis of breast cancer. J Biosci 2000 Mar;25(1):113-20.

23. Macleod J, Fraser R, Horeczko N. Menses and breast cancer: does timing of mammographically directed core biopsy affect outcome? J Surg Oncol 2000 Jul;74(3):232-6.

[Back to the Magazine Forum](#)

All Contents Copyright © 1995-2009 Life Extension Foundation All rights reserved.

**LifeExtension**<sup>®</sup>

These statements have not been evaluated by the FDA. These products are not intended to diagnose, treat, cure or prevent any disease. The information provided on this site is for informational purposes only and is not intended as a substitute for advice from your physician or other health care professional or any information contained on or in any product label or packaging. You should not use the information on this site for diagnosis or treatment of any health problem or for prescription of any medication or other treatment. You should consult with a healthcare professional before starting any diet, exercise or supplementation program, before taking any medication, or if you have or suspect you might have a health problem. You should not stop taking any medication without first consulting your physician.