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Ovarian Hormone Therapy for Women with Early Menopause

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We hear a lot of things about hormone therapy (often wrongly called Hormone *Replacement* Therapy or HRT) (1 [1]). Most of the time when “HRT” is used it is referring to the treatment of women who had natural (not surgical) menopause at a normal age. Before about 1998 we believed that estrogen made everything better, but now most of what we hear is bad. And that bad news doesn’t apply to you! Early or surgical menopause needs hormone therapy, but natural, normally timed menopause does not. Some women with early menopause have told me that their doctors stopped their hormone treatment when the Women’s Health Initiative results came out. That’s how confused even doctors are! The purpose of this is to help you feel confident about knowing how and when to take ovarian hormone therapy for a long and healthy life.

What is Ovarian Hormone Therapy?

When I say “Ovarian Hormone Therapy” (OHT for short) I mean estrogen and progesterone, the two hormones normally made by women’s ovaries. I also mean that this therapy is taken for a good reason (and normal menopause without symptoms is not a good reason). However, having a genetic or an unknown problem, surgery removing or cancer treatments destroying the ovaries, that cause menopause to come before age 40 or 45 is a very good reason! When I say OHT, I am also referring to taking bio-identical hormones and estrogen that is given through the skin rather than as a pill. But more about this later.

What’s the ideal menstrual cycle pattern for estrogen and progesterone in women?

During flow, estrogen levels are low (as low as in a child or a man) and then gradually rise over about two weeks to a peak level. At the middle of the cycle, estrogen levels are 200% higher than what they were during flow.

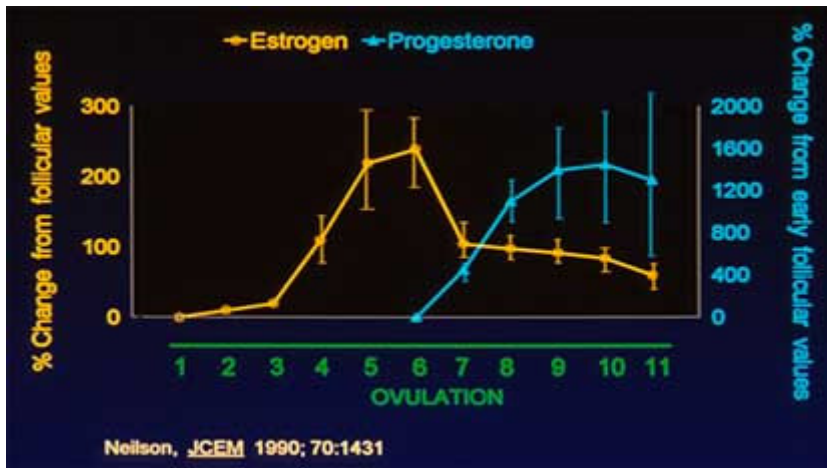


Figure 1

Estrogen levels then drop by about 100% as the follicle from which the egg was released gears up to make a new hormone, progesterone. After ovulation, progesterone levels rise to 1,400% above the low baseline and stay almost that high for an average of 14 days. This huge rise in progesterone tells me that it is a very important hormone. Then both estrogen and progesterone levels drop to low levels and the period starts.

What is women's pattern for estrogen and progesterone from childhood to old age?

Estrogen and progesterone have a typical pattern across the lives of all women that seems to have been maintained for thousands of years. We'll start with estrogen.

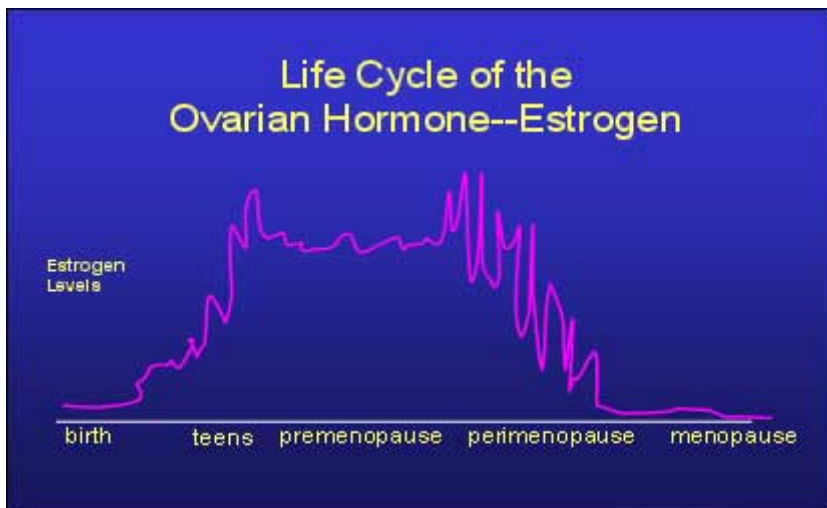


Figure 2

Estrogen levels are low during infancy and childhood, and begin a gradual rise in middle-school years to reach a higher than usual peak shortly after the first period at about age 12. Then the menstrual cycle pattern (described above) becomes established and lasts for about 35-40 years. The several years preceding menopause, called perimenopause, is a time of ovarian chaos. Estrogen levels become variable and may be an average of 30% higher than normal (2 [2]). Over about 4-10 years they gradually settle into the normally low levels of menopause that continue for the rest of our lives.

Progesterone's life cycle has similarly low levels during infancy and childhood until after menarche (the first period) when it begins to be made in low levels and for a week or so at a time (3 [3]).

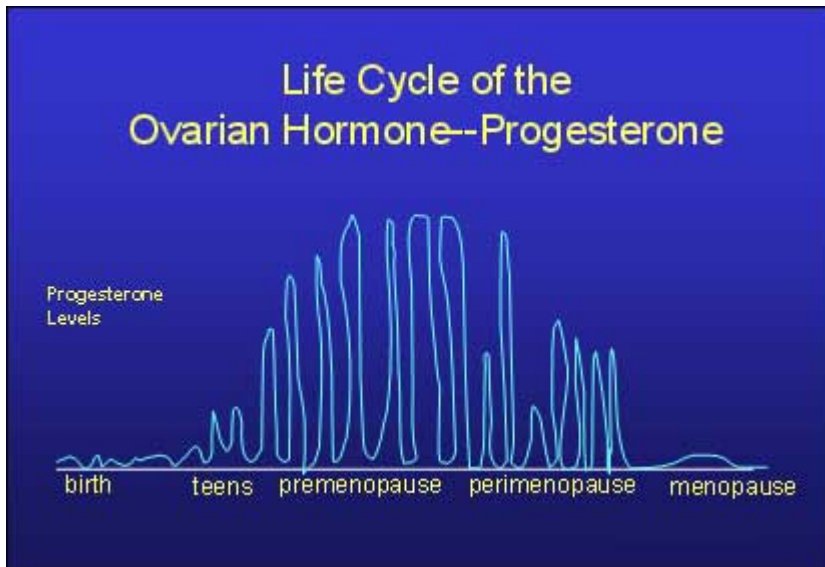


Figure 3

By the early twenties most cycles have 14 days of normal progesterone levels. However, during perimenopause, the ovaries and the brain develop a lack of coordination that causes progesterone levels to decrease even though estrogen is still chaotically high. Perimenopause is the most difficult time for all women, but I think it is especially difficult for women with early menopause. Often perimenopause seems longer than usual and is really confusing for both women and their doctors to figure out what is happening. After perimenopause, both estrogen and progesterone levels normally become low and remain low through the remainder of our lives.

The "bad news" hormone story for menopausal women—Women's Health Initiative (WHI)

I am joking about "bad news" because that is how many women and doctors view it. Estrogen was believed to prevent heart attacks and help menopausal women stay attractive and mentally sharp. The WHI, is a well designed, large, randomized, controlled trial. This study had two parts – an estrogen only arm and an estrogen and progestin (progesterone-like hormone) arm. Both of these arms were stopped early because the results showed more harm than benefit. Estrogen therapy alone in women who had a hysterectomy caused strokes and didn't prevent heart attacks (4 [4]). Estrogen with very low dose medroxyprogesterone (5 [5]) caused increased strokes, blood clots, heart attacks and breast cancer, but fewer broken hips and other fractures, and less colon cancer. What you need to know is that these results say that continuing OHT after age 52 is likely to become harmful rather than beneficial.

Practical ideas about how to take OHT

Let's start with the kinds of hormone preparations that are available. Although Premarin® (estrogen from pregnant mare's urine) is bio-identical for horses, it's not natural for women! What I learned from the WHI is that pill forms of estrogen carry too high a risk for clots (an increase of 211%). The kinds of estrogen given through the skin (transdermal) as gels, creams or patches appear to be less likely to cause clots because they don't stimulate the liver to make clotting proteins like pill estrogens do (6 [6]). I will never again prescribe pill estrogen. Creams and gels (Estragel®, Estradot® and Climara®) work very well, and are all bio-identical to what our ovaries make. Many local pharmacists can make the bio-identical estrogen, estradiol or a mixture of three estrogens (called TriEst®) in a cream form. The dose of estrogen to match the normal menstrual cycle levels is 25-50 micrograms of estradiol (from Estradot or Climara) or one pump of Estragel®.

Bio-identical progesterone is available as Prometrium® or it can be made using micronized progesterone in oil by compounding pharmacists. I recommend that progesterone be taken by mouth rather than as a cream because the pill form has useful “side effects” of helping with sleep (7 [7]) and decreasing anxiety (8 [8]). Pill forms of progesterone do not increase clotting. The amount of progesterone needed to match the second half of the normal menstrual cycle is 300 mg at bedtime, for at least 14 days each month.

Ovarian Hormone Therapy timing depends on whether or not you want flow

Following the pattern of the menstrual cycle, estrogen should be taken days 1-27 of the month. (I use the month because it is close to a 4-week or 28 day schedule and is easier to remember). Why do I recommend that you take no estrogen for the last 3-4 days of the month? Because, as Figure 1 shows, it is not normal to have continuously high estrogen levels all cycle. The only time that occurs in nature is during pregnancy when higher progesterone levels counterbalance it.

With the progesterone schedule, you can choose whether or not you want flow. If you would like to have a normal period, progesterone is taken days 14-27 of the month. If you do not want flow, take progesterone every day of the month (continuously). There may be some spotting in the first months, but after that flow should stop entirely. The other reasons I would give progesterone daily is to help build new bone for women who have osteoporosis (9, 10 [9]). Finally, for women who have migraine headaches and whose brains are sensitive to going on and off of hormones, I would prescribe estrogen and progesterone daily.

How to *stop* Ovarian Hormone Therapy

When a woman reaches about 50 or 52 she should begin the slow process of tapering estrogen treatment (see [Stopping Estrogen](#) [10]) (11 [11]). It is mysterious who will get hot flushes/night sweats and who won't—both estrogen and progesterone/progestins have been shown to be effective in treatment and prevention of hot flushes. The surest way to get night sweats is to stop estrogen suddenly! I believe all women should taper off estrogen treatment. For those women who have also been taking progesterone days 14-27 of the month, the first change before tapering estrogen is to take oral micronized progesterone daily.

Before tapering estrogen treatment, all women with early menopause need a bone density test, if they haven't had one before. If bone density is low, start a non-hormonal medicine to prevent bone loss (like a bisphosphonate such as Etidronate®) that will prevent the bone loss that normally occurs when stopping estrogen (12 [12]).

The goal is to gradually stop estrogen over a minimum of three months but some women will need to stop it much more slowly. Oral micronized progesterone can continue to be taken for low bone density and for treatment of hot flushes if these occur. Progesterone will also have positive effects on the vagina (13 [13]), sleep (7 [14]), anxiety (8 [15]), blood pressure (14 [16]) and possibly on risks for heart attack (15 [17]).

Making adjustments in Ovarian Hormone Therapy

Ovarian Hormone Therapy is something you need to live with happily. If you get sore breasts, an increase in migraine headaches, or a period while taking cyclic progesterone, you need to adjust the dose of estrogen. The most important thing to know is that sore breasts and flow before day 25 of the month mean that you have too much estrogen for the amount of progesterone (which should be 300 mg at bedtime). Decrease the estrogen you are taking by about a quarter and see what happens the next month. It is important to keep a careful record of your experiences and write down what you are taking both before and after making any changes. The [Daily Perimenopause Diary](#) [18]© is a form for you to use which can be printed from the Centre for Menstrual Cycle and Ovulation Research website. Keep your diary with you

when you discuss this with your doctor.

Wrapping it up

It is important to mimic the natural life cycle and menstrual cycle patterns of bio-identical hormones (transdermal estradiol and oral micronized progesterone) for women with early menopause. The bad news from the Women's Health Initiative simply says that women who have had 35-40 years of their own hormones are harmed rather than helped by hormone "replacement".

Ovarian hormone therapy is an essential part of the treatment of women with early menopause and is most healthfully taken and stopped in ways that copy natural, normal patterns.

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