

# Biologically Identical Hormone Replace- ment Therapy



**It's all about balance!**



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## Biologically-identical Hormone Replacement Therapy for Women

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*(Rebecca Knight, MD addition in italics)*

Menopause is defined as the cessation of a woman's menstrual cycling. It is a perfectly natural, biologically pre-programmed event and signals the end of the reproductive years. Is that so bad? Well, its consequences often lead to trouble. Sex hormones are not just about sex! Let's review some facts.

Children of both sexes have low levels of sex hormones and their bodies look alike. What makes the difference between these juvenile forms and the robust adult physiques they'll show at age 18? Two things: The increased production and the differentiation of sex hormones at puberty. Hormones cause responsive tissues to differentiate into their mature, adult forms – starting way down at the cellular level.

Gonads of both sexes – ovaries and testes – produce all the same hormones but in a different balance. Men produce enzymes creating a “yang,” masculinizing dominance, resulting in the macho physique and attitude of legend. Activating different enzymes, women fashion their hormones into a “yin,” feminizing balance and produce a mature, reproductively active female body with a different psyche, perhaps.

Now, view these adults at age 90. The womanly hourglass and manly wedge-shape have slumped to a unisex bowling-pin form. Hormone production *and* their yin/yang differentiation slack off at mid-life.

No, hormone production doesn't stop at menopause but it sure changes a lot. Symptoms of menopause are caused by these changes. The first phase has been described as “hormone withdrawal.” Declining estrogen and progesterone and rising pituitary hormones produce the early-onset symptoms of hot flashes; insomnia; mood swings; reduced sex drive and “brain fog” (technically, impaired cognition).

After a few years, these tend to fade away but are replaced by something worse – “hormone deficiency.” Without the sustaining (“trophic”) effects of sex hormones, many tissues suffer: Facial skin thins and grows hair; the vaginal wall becomes thin, dry and fragile; the bladder drops; bones lose calcium; insulin resistance worsens and cholesterol rises; blood vessels are damaged and arthritis advances.

Over another few decades, the “hourglass” figure is lost; the risks of colon cancer, strokes and heart attacks rise and epidemiological studies show women not taking estrogens are more likely to develop senile dementia. This accelerated aging happens to both sexes. Men with low testosterone (andropause) similarly have more problems and a significantly higher death rate than men with “normal” testosterone.

So, you see these hormones are not just about feeling sexy, flirting and fooling around. The loss of sex hormones can create many degenerative disorders, lots of misery and frankly shortens your life.

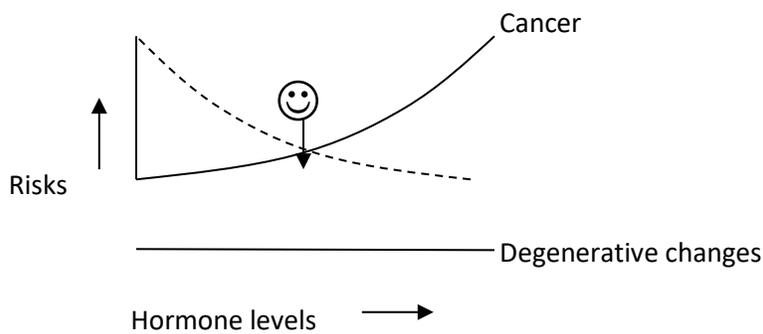
Only in fairly recent history have most women survived long enough past menopause for these degenerative changes to become a real concern. Physicians have been able to intervene meaningfully by giving hormones only since the early 1950s. Unfortunately, back then there were no lab tests to measure these hormones and convey to doctors and their patients the concept of balanced hormones.

The dangers of taking hormone replacement treatment (HRT) are subtle and were appreciated only after their general use for 20 years. We believe that using **biologically-identical** hormones is safer, yet risks persist. Making sure that hormones are balanced is “key” – but even so, they can still cause trouble.

There is now a bitter argument over women’s HRT. The people who insist the lack of hormones is damaging, dangerous and will both reduce the quality and the length of women’s lives are correct. The opposing side, arguing that giving hormones stimulates the growth of hormone-sensitive cancers, is also correct. No wonder it is such a contentious debate – both sides are right! So, is there any solution?

Yes, there is; it is the “Goldilocks answer.” If one is too hard and the other is too soft, somewhere in between, one is just right. We probably don’t have to choose whether we want degeneration or cancer risk. Let’s graph the two positions defined above, so you can see it:

Figure: Risks and HRT



When hormones get too high, the risk of cancer rises significantly.

The lower your hormones drop, the greater is your risk of degeneration.

If indeed there is a “minimal-risk” amount of HRT, what is it? There is no “evidence-based” research answer but perhaps another question will serve: When in their menstrual cycle do most women feel best? The vast majority feel their best from the end of their menstrual flow to a few days before ovulation – about cycle days 5 to 12. The hormone levels during those good days are modest and easy to reproduce.

It may be simple to achieve sufficient testosterone levels with the precursor DHEA. Likewise, the precursor pregnenolone can be converted straight-away to progesterone in good quantity. Only estradiol, the active form of estrogen (translates to “generates the menstrual cycle”) *must* be taken as a hormone. All of these steps accomplished, it is wise to wait a few weeks and then test your blood levels (*for sure!*).

Let’s take another look at risks, OK? First, it is better to start HRT\* sooner than later. A “window of opportunity” for several benefits of HRT narrows if delayed for too long. An early start maximizes the benefit-to-risk ratio. (\*We believe wise practitioners use biologically-identical hormones)

Secondly, as above, the higher your hormone levels rise above their ideals, the greater the risks of cancer and complications like blood-clots and gallstones. Taking estradiol through the skin (transdermal) gets better-balanced blood levels and minimizes risks with just one-tenth the dose needed for oral use.

The issue of breast cancer is complex. *The Women's Health Initiative arm of the study that gave only Premarin (17 estrogens) group had 40% less breast cancer than the placebo controls. The group given Prempro (17 estrogens plus synthetic progestin) had 40% MORE breast cancer than the placebo control group. The latter scared many from taking HRT forever but the former when it was announced a year later didn't even make headlines.*

There is no proof that natural estradiol causes cancers – but there is little argument that it stimulates their growth. But the HRT women's cancers were easier to cure. Another study showed women taking estrogens had more breast cancers but – get this – fewer breast cancer deaths! Here's why: The most dangerous cancers are undifferentiated; they look like fetal cells. As noted above, sex hormones cause juvenile cells to mature into adult forms. Though estrogen increases breast cancer's growth, it also stimulates its differentiation into more mature, less aggressive and more-curable forms. Similar results have been reported in men, from a study of hormone-deprivation and prostate cancer.

Is there anyone who should not take HRT? First, there are a few people who simply don't need it. With your clinician, make this determination by properly evaluating symptoms, hormone levels and following indicators of risk, like bone mineral density, cardiovascular risk-factors and lifestyle choices.

Secondly, some families inherit a great risk of cancer and their members ought not to take HRT! Your family history is far more important than any current genetic test. These tests can't rule-out danger because the great majority of "cancer genes" have not yet been identified.

Finally, nobody who is uncomfortable about using HRT should feel compelled to take it! Do what *feels* right. The goal of HRT is to improve the quality of people's lives and living in anxiety hardly qualifies!

When do you stop HRT? A canny professor said to quit it three years before you die. Though ironic, that's not just a joke; physiologically, it's about right. Our goals are to balance hormones in sufficient and sensible amounts; then to be vigilant in follow-up to maximize our patients' benefit/risk balance.