

The Hormone Replacement Therapy Controversy

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The glands of the endocrine system and the hormones they release influence almost every cell, organ, and function of our bodies. In fact, research over the years points to declining hormone levels as a key factor in the aging process, and is responsible in large part for decreased energy and muscle strength, loss of libido, depression, mood swings, inability to cope, and an increase in the symptoms of PMS and menopause. As men and women undergo these hormonal changes, hormone replacement therapy (HRT) is frequently necessary and beneficial for supporting good health as we age.

When HRT went mainstream over fifty years ago, the focus was primarily on supplementation of women's hormones. Research and development of synthetic and equine hormones since the 1940's has provided the basis for most references on HRT. Based on this research, the medical community has approached conventional HRT by relying on a variety of "synthetic" estrogens and progestins products that come only in one-size-fits-all doses.

Given that millions of women were taking synthetic hormones, in 1991 a government study called the Women's Health Initiative (WHI) was designed to assess the balance of risks and benefits of synthetic estrogens or a combination of estrogen and progestins (synthetic progesterone) on reducing and/or eliminating certain diseases. The long-term studies in the WHI were initiated because over the years a number of research studies presented a complicated picture of the risks and benefits of hormone therapy, and its continued use for prevention of cardiovascular diseases was controversial.

Although the results from the study were originally scheduled to be released in 2005, the Estrogen-Progestin arm of the study was stopped in July 2002, and Estrogen-alone study was stopped in March 2004. Surprisingly to many in the conventional medical community, the preliminary date of the uncompleted WHI study indicated that synthetic hormones (brand names: Premarin and Prempro) appeared to increase disease in the women being studied, including a 22% increase in heart disease, a 26% increase in breast cancer, a 50% increase in the number of blood clots, and a 41% increase in the incidence of stroke.

The abrupt cessation of the WHI study caused a media frenzy and raised concerns regarding Hormone Replacement Therapy (HRT) by both the professional and lay community. Physicians and patients alarmed by these results decided to discontinue synthetic hormones and began looking for alternatives to their menopausal symptoms. However, women found that as soon as they stopped taking their synthetic hormones, their menopausal symptoms came back. This was discouraging for women struggling to deal with their symptoms but afraid of the health risks of hormone replacement therapy.

Healthcare providers and their patients have been left wondering where to turn in the wake of the Women's Health Initiative (WHI) decision to stop part of its study regarding hormone replacement therapy (HRT). Unfairly, the WHI has left the impression that all HRT is the same and poses the same health risks identified in the study. This is simply not the case. There are safe and effective alternatives to the "synthetic" one-size-fits-all dosage form of hormone, which was the focus of WHI.

Bio-Identical Hormone Replacement Therapy (BHRT) attempts to restore a "bio-identical" hormone balance through the use of plant-derived hormone precursors that are modified to become structurally identical to those found in human beings. By reestablishing a "natural" hormonal balance, BHRT helps alleviate the symptoms caused when the body's hormone production decreases with age. It also confers the many protective benefits provided by naturally occurring hormones. Because bio-identical hormones are molecularly identical to those the patient naturally produces, they may not cause the uncomfortable side effects that synthetic hormone replacement products do.

There are two primary differences between "conventional" hormone therapy (as used in the WHI study) and "bio-identical" hormones:

1. **Chemical Structure**

Bio-identical hormones are those that are biologically identical to the hormones found naturally in the body. They come from plant-derived sources of estrogen, such as yams and soy products. Their effects are identical to the hormones they are supplementing or replacing. The family of estrogens found in women are Estriol, Estrone, and Estradiol, which occur in approximation of 90%, 3%, and 7%.

The WHI used the most frequently prescribed HRT products Premarin or Prempro in their study. Premarin is said to contain conjugated equine estrogens (CEE). Premarin is a complex extract of pregnant mares' urine and contains at least 10 estrogens in their sulfate ester form. Unfortunately, most all of the estrogens are foreign to a woman's body. Below is a breakdown of major estrogens found in conjugated equine estrogens:

- Estrone 50-60% (natural to humans and horses)
- Equilin 23-30% (natural only to horses)
- Equilenin 13-20% (natural only to horses)
- Estradiol (natural to humans and horses) and other equine estrogens 2-8% (natural only to horses)

A woman's body has none of the enzymes and cofactors required to metabolize horse estrogens, nor does it have enough of these important substances to deal with the excessively large amounts of Estrone found in Premarin. Therefore it should come as no surprise that the presence of Premarin in the human body induces a hormonal imbalance that can have adverse consequences.

The WHI also studied Prempro, which contains the conjugated equine estrogens found in Premarin and the synthetic progesterone type product called medroxyprogesterone. Again, the main difference between bio-identical micronized progesterone and the synthetic counterpart is that medroxyprogesterone is merely an analog or "look alike" of progesterone. The synthetic progesterone products are known as progestins. Unlike medroxyprogesterone, natural micronized progesterone is an exact chemical duplicate of the progesterone that is produced by the human body. Natural progesterone duplicates the body's progesterone exactly, causes fewer side effects and can be more consistently utilized by the body.

2. **Variable dosing options**

The combination of synthetic estrogen and progestin used in the study conducted by the Women's Health Initiative (WHI) come in just a few standardized doses. Bio-identical Hormone Replacement Therapy (BHRT) prescription dosage can be easily customized for each woman's unique needs. Individualization includes testing a woman's current hormone levels, determining the specific combination of hormones she requires, and prescribing at the lowest effective dosage, thereby minimizing unwanted effects. These prescriptions can be administered in a variety of forms including tablets, capsules, patches, and creams.

When discussing hormone replacement therapy most people think it is reserved solely for women. However, men also experience hormonal and physiological change with age. Andropause, also known as male menopause, is more gradual than that experienced by women, but it is just as real. Over the past 5 to 10 years the practice of HRT has become as routine for men as for women. Maintaining adequate levels of testosterone in the body is critical to many systems to include muscle and bone health, cardiovascular health, stamina, sexual health and mental function.

The best way to support healthy endocrine function is with adequate nutrition, exercise and stress relief. Hormonal supplementation should be considered as adjunct therapy. You don't have to be afraid of all forms of hormone replacement therapy. There's no evidence that bio-identical hormones increase the risk of hormonally induced cancers or disease. Patients must work with a knowledgeable healthcare practitioner to provide careful monitoring. Bio-identical hormones are very helpful in treating symptoms of hormonal imbalance.