



What is P-HRT?

If you have POI, P-HRT can help.

Numbers to Know: .10, 10, 12, 45

A prolonged deficiency of estradiol has potentially deadly consequences for women. The evidence supports replacing the missing estradiol in a physiologic manner, which means mimicking how the ovaries naturally provide this hormone. One way to restore the normal ovarian hormone levels is physiologic hormone replacement therapy (P-HRT). As with any treatment, it's important to understand both the benefits and risks, and the relationship between primary ovarian insufficiency (POI) and P-HRT is sometimes misunderstood.

It should be noted that cardiovascular disease (CVD) is the leading cause of death in women. Both age and estradiol deficiency with the menopausal transition independently increase a woman's risk of CVD. Also of note is that women with early menopause (before the age of 45) have an increased risk for death from coronary heart disease, as well as a 12 percent higher risk of all-cause mortality compared with women who experience menopause after age 45.

In particular, women with POI are at increased risk of several long-term health complications, including osteoporosis, fractures, depression, anxiety, and cognitive decline. Additionally, women with POI are at increased risk of developing ischemic heart disease (hazard ratio 1.69) and total CVD (hazard ratio 1.61) compared with healthy control women.

That said, the elevated CVD risk among women with POI is primarily due to estradiol deficiency. In naturally menopausal women and surgically induced menopause, hormone therapy with estrogen reduces the risk of CVD.



Understanding Ovarian Hormones

Estradiol (an estrogen)
Progesterone (a progestin)
Testosterone (an androgen)

The National Institutes of Health (NIH) study of P-HRT in POI used transdermal estradiol as the estrogen and oral medroxyprogesterone acetate as the progestin. Evidence to date suggests this should be the first line approach to P-HRT in women with POI.

- Progestogens are hormones that have an effect similar to the hormone progesterone. Progesterone is produced by the ovary after ovulation has taken place, which most commonly happens on day 14 of a normal 28-day menstrual cycle.
- Progesterone's role is to signal the lining of the womb (endometrium) to prepare to nourish a newly established pregnancy. The endometrium changes so it will be able to secrete nutrients for the embryo.
- The ovary produces significant amounts of progesterone for only 14 days of each 28-day menstrual cycle. If a pregnancy occurs, the ovary continues to produce progesterone until the placenta takes over this role. If no pregnancy occurs, the ovary stops making progesterone and this causes menstrual bleeding to start on day 28. Then the cycle begins over again.



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