

ESTROGENS

NHRT (NATURAL HORMONE REPLACEMENT THERAPY)

Naturally occurring Estrogens include *estradiol*, *estrone*, and *estriol*. These estrogens are prescribed for replacement therapy due to menopause, ovarian failure or for women who have had a hysterectomy with removal of their ovaries. The estrogens can be used as a single agent or combined with each other. Sometimes referred to as: Tri-Est or Est-Tri, Bi-Est or Est-Bi, or sometimes used individually as: estradiol, estrone, and estriol.

We use only natural estrogens in our compounded prescriptions. The term "natural" means that they are derived from a plant source and are exact duplicates to those hormones the body naturally produces. This is also called bio-identical hormone replacement therapy. These hormones differ from commercially available hormones that have been chemically altered which can have a negative impact on the body. The plant source of these chemicals is the soybean or yam.

There are benefits in using natural forms of estrogen for replacement therapy. When prescribed for menopause, estrogens can alleviate in most cases, hot flashes, vaginal and urinary tract dryness, night sweats, and mood swings. There are also cardiovascular benefits to estrogen replacement, such as: increasing HDL (good cholesterol) and decreasing LDL (bad cholesterol), protecting against heart disease, and maintaining good blood vessel supply. Lastly, estrogens can help prevent bone loss when begun early.

As with any medicine, and as is seen naturally in some women, natural estrogen replacement can have some side effects that can include nausea, loss of appetite, breast tenderness, headaches, and alterations in body chemistry. These conditions may be eliminated by adjusting the dose. The increased risk of cancer is also present, although, the concern of cancer can be mediated by lowering the dose of estrogen and by adding natural progesterone. A thorough evaluation of the benefit to risk ratio with your physician or health care provider is wise.

Estrogen can be taken by mouth, dissolved under the tongue, as a topical cream or gel, vaginal cream, through the skin in a patch, or by injection. There are three types of estrogen produced by the body, *estradiol* (E2), *estrone* (E1), and *estriol* (E3). Each estrogen has a specific action for different receptors and produce different effects. Normal blood levels of estrogens in the body are approximately 80% estriol, 10% estradiol, 10% estrone. That is why they are most often given in this ratio. The therapy that may be best for you should be discussed with your physician and pharmacist.

-Estradiol is the strongest and most dominant estrogen produced by the ovary. Estradiol production declines by 40 to 60 percent during menopause and only a small supplementation may be necessary to ameliorate night sweats and hot flashes. Estradiol may be the estrogen responsible for the cardio-protective effect and protection against bone loss.

-Estrone is a weaker form of estrogen and is produced by the conversion of cholesterol and other elements found in fatty tissue. Estrone also has some protective effect against bone demineralization similar to estradiol.

-Estriol is the weakest estrogen at alleviating hot flashes and night sweats. Estriol levels in the blood are the highest of all three estrogens because it results from the metabolism of both estradiol and estrone within the body.

The information in this monograph is not intended to cover all possible uses, directions, precautions, drug interactions, or adverse effects. The information is generalized and is not intended as specific medical advice. If you have questions about the drugs you are taking, check with your prescriber or pharmacist.