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Preventing Bone Loss

One of the major benefits of estrogen therapy is prevention of the bone loss associated with osteoporosis. Postmenopausal women taking estrogen experience 50% fewer bone fractures than women of comparable age who have not taken estrogen.

Although no studies have yet been conducted in the U.S. to determine if estriol therapy can prevent osteoporosis, a prospective, double-blind study was recently completed in 136 postmenopausal women at the Chinese Great Wall Hospital in Beijing, China with Nylestriol (CEE,), a long-acting, estriol derivative that is metabolized into ethynyl estriol and estriol within the body.

The subjects took 2 mg. of CEE, or placebo every day for up to a year, with measurements of forearm bone mass and lipoprotein levels performed every 3 months until the end of the study.

They found significantly greater loss of bone mass and higher low-density lipoprotein levels in the placebo group. The authors concluded that:

"CEE, is an effective estrogen for preventing bone loss and lipid disorders in postmenopausal women just as the most popular conjugated estrogen (Premarin), but is more convenient. Long-term CEE, medication, its effects on endometrium and the regimen of progestin combination await further study. "

The most recent study with estriol therapy was conducted by gynecologists at the Veterans General Hospital Tapei in Taiwan. They gave 20 patients, age 44-62, who had undergone either natural or surgical menopause, 2 mg/day of estriol succinate for 2 years.

They found that "estriol was very effective in improving major subjective climacteric complaints in 85% of patients, especially hot flushes and insomnia... The atrophic genital changes caused by estrogen deficiency also improved satisfactorily."

ESTRIOL INTRAVAGINAL CREAM

Further evidence that estriol is effective in counteracting the symptoms of the menopause comes from studies with **estriol intravaginal creams**. One such study, conducted by scientists from the **Technion Faculty of Medicine** in Haifa, Israel, looked at urinary tract infections, a common affliction in post-menopausal women who suffer from an atrophying vagina characterized by elevated pH and a disrupted flora caused by lack of estrogen.

In this study, 93 postmenopausal women with a history of recurrent urinary tract infections were enrolled in a randomized, double-blind trial of a topically applied intravaginal 0.5 estriol cream. One group received 0.5 mg. of estriol every night for two weeks, followed by twice-weekly applications of the cream for eight months, and the other group received a placebo cream in the same manner.

Episodes of Infection in the Two Groups

	Estriol Group n=50	Placebo group n=43
Episodes of bacteriumia	12	111*
Symptomatic	10	103 ^t
Asymptomatic	2	8
Total person-months of observations	310	225
Urinary tract infections per patient/year	0.5	5.9

* p<0.005

^t p<0.001

The results of the study showed a dramatic reduction in urinary tract infections in the women receiving the estriol cream

compared to those receiving the placebo cream. The incidence of infection was almost 12 times greater in the placebo group (5.9 per patient year) compared to the estriol group (0.5 per patient year). According to the Israeli scientists, "The intravaginal administration of estriol prevents recurrent urinary tract infections in postmenopausal women, probably by modifying the vaginal flora."

EVIDENCE THAT ESTRIOL CAN PREVENT BREAST CANCER

There is also direct evidence from animal studies and indirect evidence from human studies that estriol can prevent breast cancer. Much of this work has been done by Dr. H. M. Lemon and associates of the Department of Internal Medicine at the University of Nebraska Medical Center in Omaha.

In one study, they induced mammary tumors by wholebody gamma radiation in female Sprague-Dawley rats. Subcutaneous treatment with estriol for 331-to-449 days reduced the incidence of mammary tumors from 75% in controls to 48% in the animals receiving estriol.

In another study by Lemon et al., estriol was shown to have "the most significant anti-mammary carcinogenic activity of 22 tested compounds (because)...estriol is less likely to induce proliferative changes in the target organs of cancer-prone women than estrone or estradiol. "

EVIDENCE IN HUMANS

Because of the anti-cancer effects of estriol in animals, Dr. Lemon looked at the question of whether estriol is related in any way to breast cancer in humans. He collected 24-hour urine samples from both healthy women and women with breast cancer. Dr. Lemon found that women with breast cancer had much lower levels of estriol relative to estradiol and estrone than women without breast cancer.

DR. WRIGHT'S SPECIAL ESTROGEN FORMULA

One American doctor who has been using estriol for estrogen replacement therapy in postmenopausal women is Dr. Jonathan V. Wright of Kent, Washington, who's been prescribing estriol since the early 1980s.

Dr. Wright has concluded that the best way of using estriol is in combination with the more commonly used estrogens (estradiol and estrone). His reasons for this are as follows: Dr. Wright found that, in some women, the amount of estriol required to relieve menopausal symptoms was as high as 1015 mg/day, and that as much as 12 mg/day were required to prevent osteoporosis. He found that some women suffered from nausea at such high doses of estriol that was severe enough to force him to cut down on their dosage level of the hormone.

Dr. Wright determined that the ideal estrogen therapy for postmenopausal women is a combination of 80% estriol, 10% estrone, and 10% estradiol. He named his special formula Tri-estrogen and found that 2.5 mdday of tri-estrogen is usually effective in treating postmenopausal symptoms, although some women need 5 mg/day of Tri-estrogen.

Another reason for including estradiol in estrogen replacement therapy is the increasing body of evidence that estrogen improves learning, memory, and other mental functions that decline with advancing age, and that estradiol may be the key estrogen in improving mental function.

HOW TO OBTAIN ESTRIOL PRODUCTS

There are several mail-order pharmacies in the United States that custom compound the estriol form of estrogen used in Europe to treat estrogen deficiency safely. Estriol can also be obtained in capsule form, or as an intravaginal cream from European companies. In pursuing estrogen replacement therapy, you should only do so under the care of a physician, preferably a gynecologist.

Blood assays may not accurately reflect a women's individual need for hormone replacement. Some clinicians have told us that hot flashes, dry skin, and vaginal dryness during and after menopause may be better indicators of the need for estrogen replacement therapy than blood tests.

One protocol to treat vaginal dryness is to use one gram of low potency estriol cream for seven continuous days, and then drop back to two-to-three applications a week. If low potency estriol cream does not work, you should order cream with a more potent concentration of estriol. If you take estriol in capsules, the appropriate dosage range is 4-to12 mg/day.

If you wish to use Dr. Wright's formula, it is available under the name TriEst. TriEst contains:

- 10% estrone estrogen
- 10% estradiol estrogen
- 80% estriol estrogen

To treat mild-to-moderate hot flashes and vaginal dryness, capsules or cream containing 1.25 mg of TriEst should be taken twice a day. For moderate to severe estrogen deficiency symptoms, 2.50 mg. of TriEst should be taken twice a day.

DHEA Boosts Estrogen Levels

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