Abstract: Hormone replacement therapy (HRT) is effective for relieving vasomotor symptoms such as hot flash and vaginal atrophy and for preventing bone loss in postmenopausal and bilaterally ovariectomized women. However, compliance with HRT was reported to be low despite the benefits of HRT. In addition, results of several recent large-scale randomized clinical trials have demonstrated that protection from cardiovascular disease is not an indication for treatment with estrogen and progestin in postmenopausal women.

Recent studies have demonstrated that low-dose HRT is safe and effective for prevention of postmenopausal bone loss. Low-dose HRT has also been shown to be effective for reducing the number and severity of hot flashes, improving vaginal atrophy, and inducing favorable changes in lipids, lipoproteins and hemostatic factors. Moreover, low-dose regimens of CEE (conjugated equine estrogen) and MPA (medroxyprogesterone acetate) result in higher rates of amenorrhea and endometrial protection compared with the conventional dose of HRT. Low-dose HRT may improve the compliance rate and may be more effective than conventional-dose HRT for reducing the risk of breast cancer. On the other hand, it has been shown that transdermal estrogen treatment reduces the incidence and severity of hot flashes and that long-term treatment with transdermally administered estrogen is effective for protection against osteoporosis. Transdermal administration of estrogen is recommended in postmenopausal women with hypertriglyceridemia because this treatment has little effect on lipid metabolism.

The serum estradiol level was reported to be closely related to estrogenic effects on various tissues. An HRT regimen should be based on the needs of each patient. Serum estradiol levels in women should be maintained at appropriate levels for benefits and not be excessively high in order to prevent side effects. Selection of the most appropriate regimen of HRT (dose, route of administration and schedule) for the needs of the individual are important factors to increase the rate of continuation with HRT. J. Med. Invest. 50: 136-145, 2003

Keywords: hormone replacement therapy (HRT), low-dose HRT, transdermal estrogen, estrogen threshold
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**Hormone replacement therapy in postmenopausal women**

![Graphs showing mean change from baseline in Modified Intention-to-Treat and Efficacy-Evaluable Populations with different hormone replacement therapy dosages.](image)

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**Graph A:** Modified Intention-to-Treat Population

**Graph B:** Efficacy-Evaluable Population

**Graph C:** Modified Intention-to-Treat Population

**Graph D:** Efficacy-Evaluable Population

---

The graphs illustrate the mean change from baseline in Modified Intention-to-Treat and Efficacy-Evaluable Populations with different hormone replacement therapy dosages. The graphs show a comparison of the effects of CEEs (0.625 mg/d, 0.45 mg/d, 0.3 mg/d) and Placebo on hormone replacement therapy outcomes. The graphs display the changes in different parameters over time, highlighting the effectiveness of the treatments in maintaining or improving health indicators.
The Journal of Medical Investigation  Vol. 50  2003

A

- Placebo
- 0.625 mg/d
- 0.45 mg/d
- 0.3 mg/d

B

- Placebo
- 0.625/2.5 mg/d
- 0.45/2.5 mg/d
- 0.45/1.5 mg/d
- 0.3/1.5 mg/d

HDL-Cholesterol

Mean Percent Change from Baseline

- Cycle 6
- Cycle 13

LDL-Cholesterol

Mean Percent Change from Baseline

- Cycle 6
- Cycle 13
Hormone replacement therapy in postmenopausal women

T. Yasui et al.

The use of hormone replacement therapy (HRT) in postmenopausal women has been a topic of considerable interest and debate. HRT is commonly prescribed to manage menopausal symptoms such as hot flashes, night sweats, and vaginal dryness. However, concerns have been raised regarding the potential risks associated with HRT, including an increased risk of breast cancer and cardiovascular events.

In recent years, many randomized controlled trials and observational studies have been conducted to evaluate the long-term effects of HRT. These studies have provided valuable insights into the benefits and risks of HRT, helping to guide clinical practice and inform women about their options.

One of the most important considerations in using HRT is choosing the appropriate type and duration of therapy. Different formulations of HRT, such as estrogen alone or combined with progestin, have different effects on various health outcomes. The decision on whether to use HRT and which type to use should be individualized, taking into account the patient’s medical history, current health status, and personal preferences.

Despite the potential risks, HRT remains an important tool for managing menopausal symptoms and improving quality of life for many women. However, it is crucial to weigh the benefits and risks carefully before starting HRT and to monitor patients closely for any adverse effects.

In conclusion, the use of hormone replacement therapy in postmenopausal women is a complex issue that requires careful consideration. Further research is needed to better understand the long-term effects of HRT, and healthcare providers should continue to provide evidence-based guidance to help women make informed decisions about their care.

References


Hormone replacement therapy in postmenopausal women

A

B

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Discrete Annual Hazard

Women
Man

Women
HRT Nonusers
HRT Use <3 y
HRT Use 3-10 y
HRT Use >10 y
Man

Age, y

65 70 75 80 85 90 95 100

Discrete Annual Hazard

65 70 75 80 85 90 95 100

Age, y

65 70 75 80 85 90 95 100

Age, y