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## **ABSTRACT**

Understanding the risks and benefits of HT is critical to clinical decision-making around menopause and beyond. The purpose of this population-based cohort study was to investigate whether HT has an effect on mortality and diabetes morbidity and also to investigate whether calcium or calcium + vitamin D supplementation has an effect on CHD morbidity in ageing women. Agreement analysis was performed to verify the accuracy of self-reported estrogen use versus prescription data. Validity analysis showed that a postal inquiry is a reliable method of recording long-term HT use.

This study is part of the large Kuopio Osteoporosis Risk Factor and Prevention (OSTPRE) population-based prospective cohort study. The study population consisted of 11 667 women resident in Kuopio Province and a postmenopausal subgroup of 9354 women who responded to postal inquiries in 1989 and 1994 and whose HT and calcium or calcium + vitamin D supplementation use was verified. A total of 8483 postmenopausal women who were non-diabetic in May 1994 also responded to a third follow-up inquiry in May 1999 which formed the final study population concerning HT and DM morbidity.

The results showed that a history of HT use does not affect overall or CHD mortality in women. Breast cancer mortality tended to be associated with HT use > 5 years (HR 2.62, 95% CI 0.98–7.00) in the entire study population. In the postmenopausal subgroup, breast cancer mortality was not associated with HT use. The results of this study show that HT has a beneficial (protective) effect on DM morbidity. Postmenopausal women who were past HT users had a 19% (nonsignificant) lower risk of DM than postmenopausal women who had never used HT. HT use during the 5-year follow-up decreased the incidence of DM as follows: part-time use (< 2.5 years) by 47% (HR 0.53, 95% CI 0.24–1.15) and continuous use (2.5–5.0 years) by 69% (HR 0.31, 95% CI 0.16–0.60). In addition, calcium or calcium + vitamin D supplementation appears to be associated with an increased risk of CHD among women aged 52–68. Postmenopausal women who used calcium or calcium + vitamin D supplements had a 26% (HR 1.26, 95% CI 1.01–1.57) increased risk of CHD than nonusers.

National Library of Medicine Classification: QV 276, WP 522, WP 870

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Neoplasms/mortality; Diabetes Mellitus/epidemiology; Osteoporosis, Postmenopausal/prevention & control;

Morbidity; Female; Middle Aged; Aged; Finland; Cohort Studies