

# *Menopause*



# Effectiveness of a low dose testosterone undecanoate to improve sexual function in postmenopausal women.

Tungmunsakulchai R, **Chaikittisilpa S**, Snabboon T, **Panyakhamlerd K**, **Jaisamrarn U**, **Taechakraichana N**.

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## Abstract

### **BACKGROUND:**

Adding testosterone to hormonal therapy could improve sexual function and general well-being among women during climacteric. We evaluated the effectiveness of testosterone undecanoate on sexual function in postmenopausal women utilizing the standardized questionnaire FSFI score.

### **METHODS:**

Postmenopausal women with sexual complaints and Female Sexual Function Index (FSFI)  $\leq 26.5$  were enrolled in to this randomized, double-blinded, placebo-controlled trial. Participants were randomly assigned to 8-week treatment with either oral testosterone undecanoate 40 mg or placebo twice weekly with daily oral estrogen. The FSFI scores before and after treatment were compared to assess any improvement of sexual function.

### **RESULTS:**

Seventy women were recruited of which each group had 35 participants. The baseline characteristics and baseline FSFI scores were comparable between both groups. After 8 weeks of treatment, the FSFI scores significantly improved in both groups when compared to the baseline but the FSFI scores from the testosterone group were significantly higher than in the placebo group post-treatment ( $28.6 \pm 3.6$ ,  $25.3 \pm 6.7$ , respectively,  $p = 0.04$ ). There was no difference in adverse effect between the two groups

### **CONCLUSIONS:**

The twice weekly addition of testosterone undecanoate to daily oral estrogen was associated with a significant improvement in sexual function among postmenopausal women than the use of the estrogen alone.

# Effects of estrogen therapy on postmenopausal sleep quality regardless of vasomotor symptoms: a randomized trial.

Tansupswatdikul P, **Chaikittisilpa S**, Jaimchariyatam N, **Panyakhamlerd K**, Jaisamrarn U, **Taechakraichana N**.

Climacteric. 2015 Apr;18(2):198-204. doi: 10.3109/13697137.2014.964670. Epub 2014 Nov 27.

## Abstract

### **OBJECTIVE:**

To determine the effects of estrogen therapy on objective sleep quality in insomniac postmenopausal women without severe vasomotor symptoms and/or recognized hot flashes during sleep. Study design Randomized, double-blinded, placebo-controlled trial, parallel design (ClinicalTrials.gov Identifier: NCT01501422).

### **METHODS:**

Forty insomniac postmenopausal women with no severe vasomotor symptoms and/or recognized hot flashes during sleep were randomized into 2 months' treatment with a 50- $\mu$ g transdermal estradiol patch or placebo. Sleep quality was determined objectively with wrist actigraphy. Sleep efficiency, total sleep time, wake up after sleep onset and number of awakenings were compared before and after treatment. The Insomnia Severity Index (ISI) and Epworth Sleepiness Scale (ESS) questionnaires were used for subjective sleep quality assessment before and after treatment.



### **RESULTS:**

The study showed no significant difference in sleep efficiency improvement between women having estrogen alone or placebo (median 85.7% vs. 85.2%, respectively,  $p = 0.71$ ). Similarly, sleep quality scores assessed by ISI and ESS were not significantly different.

### **CONCLUSION:**

Estrogen therapy in insomniac postmenopausal women without severe vasomotor symptoms and/or recognized hot flashes during sleep was not found to improve sleep efficiency during the study period.

### **KEYWORDS:**

ACTIGRAPHY; ACTIWATCH; ESTROGEN; INSOMNIA; POSTMENOPAUSE; SLEEP DISTURBANCE

# Newly developed vaginal atrophy symptoms II and vaginal pH: a better correlation in vaginal atrophy?

Tuntiviriyapun P, **Panyakhamlerd K, Triratanachai S**, Chatsuwan T, **Chaikittisilpa S, Jaisamrarn U, Taechakraichana N.**

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## Abstract

### **OBJECTIVES:**

The primary objective of this study was to evaluate the correlation among symptoms, signs, and the number of lactobacilli in postmenopausal vaginal atrophy. The secondary objective was to develop a new parameter to improve the correlation.

### **STUDY DESIGN:**

A cross-sectional descriptive study.

### **METHODS:**

Naturally postmenopausal women aged 45-70 years with at least one clinical symptom of vaginal atrophy of moderate to severe intensity were included in this study. All of the objective parameters (vaginal atrophy score, vaginal pH, the number of lactobacilli, vaginal maturation index, and vaginal maturation value) were evaluated and correlated with vaginal atrophy symptoms. A new parameter of vaginal atrophy, vaginal atrophy symptoms II, was developed and consists of the two most bothersome symptoms (vaginal dryness and dyspareunia). Vaginal atrophy symptoms II was analyzed for correlation with the objective parameters.

### **RESULTS:**

A total of 132 naturally postmenopausal women were recruited for analysis. Vaginal pH was the only objective parameter found to have a weak correlation with vaginal atrophy symptoms ( $r = 0.273$ ,  $p = 0.002$ ). The newly developed vaginal atrophy symptoms II parameter showed moderate correlation with vaginal pH ( $r = 0.356$ ,  $p < 0.001$ ) and a weak correlation with the vaginal atrophy score ( $r = 0.230$ ,  $p < 0.001$ ). History of sexual intercourse within 3 months was associated with a better correlation between vaginal atrophy symptoms and the objective parameters.

### **CONCLUSION:**

Vaginal pH was significantly correlated with vaginal atrophy symptoms. The newly developed vaginal atrophy symptoms II was associated with a better correlation. The vaginal atrophy symptoms II and vaginal pH may be better tools for clinical evaluation and future study of the vaginal ecosystem.

### **KEYWORDS:**

DYSPAREUNIA; LACTOBACILLI; POSTMENOPAUSE; VAGINAL ATROPHY; VAGINAL HEALTH; VULVOVAGINAL ATROPHY

# The factors associated with mild cognitive impairment (MCI) in surgical menopause women.

Kengsakul M, **Chaikittisilpa S**, Hemrungron S, **Panyakhamlerd K**, **Jaisamrarn U**, **Taechakraichana N**.

J Med Assoc Thai. 2015 Apr;98(4):327-33.

## Abstract

### **BACKGROUND AND OBJECTIVE:**

As a sizeable proportion of persons with mild cognitive impairment will progress to frank dementia, early detection is an important strategy to prevent and decelerate the progression of cognitive decline. In Thailand, the prevalence of mild cognitive impairment in surgical menopause women has not been well established. The objectives of the present study were to determine the percentage and factors associated with mild cognitive impairment in women with surgical menopause.

### **MATERIAL AND METHOD:**

Between October 2013 and July 2014, 200 eligible women at King Chulalongkorn Memorial Hospital were enrolled. The self-reported questionnaires were used to obtain the demographic data and the Thai version of the Montreal Cognitive Assessment (MoCA) was used to detect mild cognitive impairment (MCI). The MCI was diagnosed when the MoCA score was less than 25. The data were statistically analyzed using SPSS version 17 for student t-test, Chi-square test, and multiple regression analysis.

### **RESULTS:**

The percentage of MCI in the present study was 43.5%. The univariate analysis showed that factors significantly related to MCI were marital status, educational levels, occupation, monthly income, and duration of hormone replacement therapy (HRT). Nevertheless, multiple regression analysis revealed that only older age at enrollment, marital status, low educational level, and low monthly income were significantly related to MCI.

### **CONCLUSION:**

Almost half of the surgical menopause women in the present study had MCI. Older age at enrollment, marital status, low educational level, and low monthly income were significantly related to MCI. Age at surgical menopause and HRT were not found to be associated with MCI in this study.



# Validation of the Thai Osteoporosis Foundation and Royal College of Orthopaedic Surgeons of Thailand Clinical Practice Guideline for bone mineral density measurement in postmenopausal women

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## Abstract

### **OBJECTIVES:**

The primary objective of this study was to determine the sensitivity, specificity, and predictive values of the Thai Osteoporosis Foundation (TOPF) and Royal College of Orthopaedic Surgeons of Thailand (RCOST) Clinical Practice Guideline for bone mineral density (BMD) measurement for the detection of postmenopausal osteoporosis. Its secondary objective was to find better indicators to detect postmenopausal osteoporosis.

### **METHODS:**

Postmenopausal women were enrolled in this study between June and December 2014. The clinical risk factors following TOPF and RCOST Clinical Practice Guideline for BMD measurement were collected. Bone mineral density was measured using dual energy X-ray absorptiometry.

### **RESULTS:**

Four hundred postmenopausal women were enrolled in the study. The mean age of the studied population was  $66.16 \pm 6.04$  years. Twenty-seven percent of the participants had either osteoporosis of the lumbar spine, femoral neck, or total hip, of which 13.3% had osteoporosis at the lumbar spine, 21.3% had osteoporosis at the femoral neck, and 2.5% had osteoporosis of the total hip. The sensitivity and specificity for detecting osteoporosis of the whole TOPF and RCOST guideline were 96.2% and 16.7%, 98.8% and 18.7%, 90.0% and 15.1%, and 97.2% and 19.5% at the lumbar spine, femoral neck, total hip, and any sites, respectively. Multiple logistic regression analysis revealed that only  $OSTA \leq -1$ , osteopenia on X-ray and low trauma fracture after age of 40 years were significant clinical risk factors in the detection of postmenopausal osteoporosis. The Receiver Operating Characteristics (ROC) curve was used to obtain the optimum probability value of osteoporosis at any sites which revealed that the probability value of 0.2222236 would have a sensitivity of 67% and specificity of 62% as the optimal cut point to detect osteoporosis. A simple flow diagram of “ $OSTA \leq -1$ ”, “Osteopenia on X-ray” and “A history of low trauma fracture after age of 40 years” was developed as a better trade-off guideline for BMD measurement.

### **CONCLUSION:**

This study revealed that the TOPF and RCOST guideline for BMD measurement provided a high true positive rate of disease detection but with an expense of high false positive rate. The simple flow diagram was proposed as a more appropriate guideline for BMD measurement in postmenopausal women. © 2015 The Korean Society of Osteoporosis. Production and hosting by Elsevier B.V. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

### **KEYWORDS:**

Thai Osteoporosis Foundation (TOPF) Clinical Practice Guideline; Postmenopausal osteoporosis; Clinical risk factors

# What is an appropriate dosage and interval of vitamin D2 supplementation to achieve a sufficiency level in postmenopausal women of Thailand?"

## A randomized, double-blind, placebo-controlled trial

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### Abstract

#### **OBJECTIVES:**

This study primarily evaluated serum 25-hydroxy vitamin D levels in postmenopausal women with vitamin D insufficiency who received different dosages and intervals of vitamin D2 supplementation. We secondarily evaluated the percentages of those who achieved vitamin D sufficiency level (Defined as  $\geq 30$  ng/ml).

#### **STUDY DESIGN:**

Randomized double-blind, placebo-controlled trial.

#### **METHODS:**

Postmenopausal women who met the criteria of vitamin D insufficiency ( $< 30$  ng/mL) were randomized into 4 groups (N=25/group). Participants received a 12 week-treatment of different dosages and intervals of vitamin D2 (placebo, vitamin D2 20,000 IU/2 weeks, vitamin D2 20,000 IU/week, and vitamin D2 40,000 IU/week). Serum total 25-hydroxy vitamin D was determined at baseline, after 4 and 12 weeks of supplementation with electrochemiluminescence immunoassay (Elecys, Roche Diagnostics). Changes of 25-hydroxy vitamin D levels were compared among the groups.

#### **RESULTS:**

Forty seven percent of postmenopausal women (100/212) screened for study enrolment were found to have vitamin D insufficiency. At 12 weeks, serum 25-hydroxy vitamin D increased significantly from baseline in all groups ( $p < 0.01$ ) (mean serum 25-hydroxy vitamin D level increased from  $23.03 \pm 4.56$  at baseline to  $25.60 \pm 4.79$  ng/ml (placebo),  $23.54 \pm 5.14$  to  $27.83 \pm 5.27$  ng/ml (vitamin D2 20,000 IU/2 weeks),  $22.68 \pm 5.21$  to  $30.50 \pm 5.14$  ng/ml (vitamin D2 20,000 IU/week), and  $22.88 \pm 4.83$  to  $37.89 \pm 5.47$  ng/ml (vitamin D2 40,000 IU/week)). In addition, the 25-hydroxy vitamin D levels were statistically significantly different at 4 and 12 weeks ( $p < 0.01$ ) among all 4 groups. The percentages of those achieving vitamin D sufficiency level after 12 weeks of supplementation were 16% (placebo), 27.3% (vitamin D2 20,000 IU/2 weeks), 44% (vitamin D2 20,000 IU/week), and 86.4% (vitamin D2 40,000 IU/week); statistically significantly different among the four groups ( $p < 0.01$ ). There was no participant with 25-hydroxy vitamin D after 12 weeks of  $> 50$  ng/mL in this study.

#### **CONCLUSION:**

Vitamin D2 40,000 IU/week was found to be the most effective dosage for postmenopausal women in this study to achieve serum vitamin D sufficiency level. © 2015 The Korean Society of Osteoporosis. Production and hosting by Elsevier B.V. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

#### **KEYWORDS:**

Postmenopause; Vitamin D2; Ergocalciferol; Vitamin D insufficiency; Serum total 25-hydroxy vitamin D.