

3536313 PHPH/M : MAJOR : NUTRITION ; M.Sc. (PUBLIC HEALTH)

KEY WORDS : FACTORS / ANTIOXIDANT VITAMIN LEVEL / PRE - AND POST - MENOPAUSAL WOMEN

PICHADA THONGWAT : FACTORS RELATED TO SERUM ANTIOXIDANT VITAMIN LEVELS IN PRE - AND POST - MENOPAUSAL WOMEN. THESIS ADVISORS : DUSANEE SUTTAPRE - YASRI, M.D., Dr.P.H., NAIYANA BOONYATAWEEYUWAT, B.Sc., M.Sc. WONGDYAN PANDII, Dr.P.H 103 p ISBN 974-662-115-7

Post - menopausal women are known to have a higher risk of developing atherosclerosis, a major cause of coronary heart disease (CHD). It has been hypothesized that the antioxidants such as beta - carotene and vitamin E and A may reduce the risk of CHD. Few data are available in the literature on the vitamin status of pre - and post - menopausal women. To determine the serum values of these micronutrients and factors related to them, this study was carried out in 50 healthy women (35-54 yr): 43 pre - menopausal (aged 42.1 ± 5.0 yrs) and 7 post -menopausal women (aged 48.1 ± 5.2 yrs) living in 4 villages in Soongnern district, Nakornrajasema province. The data of history illness, menstruation, physical activity and 24 - hr - diet recalls were interviewed and blood samples were collected to determine serum lipid profiles and vitamin levels.

The results showed that post - menopausal women had a higher serum beta - carotene as compared to the pre - menopausal women. ($p > 0.05$). Levels of antioxidant micronutrients are affected by several factors. Body mass index (BMI) was considered to be significantly correlated with serum alpha - tocopherol level ($r = 0.38$, $p < 0.01$). Serum triglyceride level was negatively associated ($r = -0.35$, $p < 0.05$) and diastolic blood pressure (DBP) was positively associated with serum beta - carotene level ($r = 0.29$, $p < 0.05$). Caloric and nutrient intake estimated by 24 - hr - dietary recalls was not associated with the serum levels of all antioxidant micronutrients. In partial correlation, after adjustment for energy, carbohydrate intake was positively associated with serum retinol levels ($r = 0.631$, $p < 0.05$) and negatively associated with serum alpha-tocopherol levels ($r = -0.774$, $p < 0.01$). Fat intake was negatively associated with serum retinol levels ($r = 0.769$, $p < 0.01$). Vitamin C intake was negatively associated with serum alpha-tocopherol levels ($r = -0.667$, $p < 0.025$). The results indicated that serum antioxidant vitamin levels may be affected by menopause. Several risk factors including BMI, DBP and serum triglyceride levels have influenced on serum alpha - tocopherol and beta -carotene.