Nowadays, osteoporosis (OP) is an increasing public health problem worldwide. It has been proved that early detection and prevention is very necessary to minimize the effect of OP. High risk population usually are elderly people should be paid much attention.

In Vietnam, life expectancy is increasing as the economy improves, and with an increased lifespan, there is concern about an increased prevalence of OP. So far, there were few studies where characterize the prevalence of OP in Vietnam, whereas calcium intake in Vietnamese was very low (<500 mg/day) and local calcium rich foods is cheap and available. For those reasons, we conducted studies to determine the prevalence of OP in Vietnam, and to research on approaches to control this problem in Vietnamese population. The results of our studies are as following:

**Study 1:** A cross-sectional study to determine the prevalence of osteoporosis in 2,232 Vietnamese adult women aged from 20 and above was carried out in 2003. We discovered the overall prevalence of osteoporosis in our subjects was 9%, and the prevalence in postmenopausal women was 28.3%, relatively higher than those in other surrounding countries. The study confirmed the fact that osteoporosis has been public health problem in Vietnam.

**Study 2:** A study to develop and validate a food frequency questionnaire (FFQ) for assessing calcium intake of Vietnamese women was conducted in 2004. The results showed that our developed FFQ is useful and reliable for estimating calcium intake in population-based epidemiological studies in Vietnamese women.

**Study 3:** An intervention study
was conducted to examine the effect of community-based nutrition education intervention during 18 months on calcium intake and bone loss in Vietnamese postmenopausal women.

Two communes of Hai Duong province were selected and assigned randomly to be intervention place or control place. In each commune, women who were aged 55-65 years, with low calcium intake (<400 mg/day), and more than 5 years postmenopausal were screened for the study. Subjects were excluded if they had diseases affecting to bone metabolism. After screening, 70 women eligible for participation were randomly recruited for the study in intervention commune. Then, in control commune, total of 70 women who met the criteria were selected and matched with those in intervention group about age, years of postmenopause, educational level, life-long occupation, current weight bearing exercise, weight, height and calcium intake.

Subjects in intervention group were given nutrition education to improve calcium intake up to 800 mg/day, whereas those in control group kept usual diet. Calcium intake and bone mass were evaluated every 6 months. Anthropometric indices and serum parathyroid hormone (PTH) were determined at baseline and the end of intervention.

The results indicated that calcium intake in intervention group increased significantly from 345 ± 54 mg/day at baseline to 657 ± 64 mg/day after 18 months (p< 0.01), while it had no significant changes in controls. Bone mass values were not changed significantly in intervention subjects while it decreased significantly by 0.5% in controls (p< 0.01). The intervention led to a decrease in serum PTH by 12% (p<0.01). In the controls, there was an increase in PTH by 32% (p<0.001).

In conclusion, nutrition education intervention was effective in improving calcium intake and retarding bone loss in Vietnamese postmenopausal women. Therefore, it will be prospective approach to control osteoporosis in Vietnam.