

## **THE EFFECT OF CALCIUM NUTRITURE ON THE DEVELOPMENT OF OSTEOPOROSIS AMONG FILIPINO ADULTS**

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The study investigated the effect of calcium nutriture on the development of osteoporosis among Filipino adults. Calcium nutriture was determined among 47 subjects (16 males and 31 females), 40 years old and over, residing in Metro Manila, who were covered in the Fifth National Nutrition Survey of 1998. Calcium intake was estimated retrospectively from childhood (5-12 y), teen-age (13-19 y), young adulthood (20-39 y), adulthood (40-65 y), and old adulthood (>65 y). Intake was evaluated using arbitrary point scores. The average score of total lifetime calcium intake was computed and classified as low or high. The bone mineral density (BMD) of all subjects was measured using the Lunar Dual Energy X-ray Absorptiometry (DEXA) and assessed based on the WHO BMD classification. Data were analyzed using the strata v. 6 program.

Results showed the significant risk factors to osteopenia and osteoporosis at different periods in the life cycle. The identified risk factors to osteopenia during childhood were low intake of milk, fresh fish and green leafy vegetables. During teen-age years, these were low intake of green leafy vegetables; at young adulthood, low intake of milk and fresh milk; and low lifetime intake of green leafy vegetables.

The significant risk factors to osteoporosis during childhood is low intake of green leafy vegetables. During teen-age years, there were low intake of milk, ice cream fresh fish and green leafy vegetables as well as low lifetime intake of milk and ice cream.

Calcium intake during the crucial years of peak bone mass development is important. A bone bank (acquisition of peak bone mass) should be started as early as 9 to 18 years of age to have an adequate bank for adult life. It is recommended that intervention programs to enhance the genetically determined bone mass be undertaken at a young age in order to prevent osteoporosis. Such programs should focus on adequate calcium intake from dietary sources such as milk, dairy products, and other calcium- rich foods.