

Exercise, Smoking, and Calcium Intake as Determinants of Peak Bone Mass

Thesis

Submitted for Partial Fulfillment of MD Degree in
Internal Medicine

By

Sally Nabil Abo Elsoued

Assistant Lecturer of Internal Medicine, Fayoum University

Under Supervision of

Prof. Dr. Soliman Nasr

Professor of Internal Medicine & Endocrinology
Faculty of medicine, Cairo University

Prof. Dr. Amin Roshdy

Professor of Internal Medicine & Nephrology
Faculty of medicine, Cairo University

Prof. Dr. Souad Soultan

Professor of Internal Medicine
National Research Center

Faculty of Medicine
Cairo University

2013

SUMMARY

Osteoporosis is a major global health problem. The prevalence of osteoporosis and associated fractures is projected to increase markedly as the population ages.

Correct determination of the risk factors in adult Egyptians is important to improve the bone mineral density & subsequent decrease of fracture risk.

The aim of our study was to detect the BMD of Egyptians population and studying its correlation to cigarette smoking adequate dietary calcium & practicing regular BMD is a strong indicator for peak bone mass societies measure can reflect the fracture risk.

The study included 1001 subjects of them were males and of them were females with their ages ranges from 20-77 years.

Subjects were divided into groups according to sex, age residency, BMI, menopausal state, smoking, amount of dietary calcium, performing regular exercise & consuming regular caffeine.

For all subjects assessment were done including self designed questionnaire and BMI was calculated.

BMD & T-score were measured in every subject using peripheral DXA scan.

BMI was positively correlated with BMD, and cutoff points were obtained or osteopenia & osteoporosis of value 243 Kg/m² & 226 kg/m² respectively osteoporosis prevalence is high in Egyptian population.

Females have higher prevalence especially the postmenopausals, osteoporosis was positively correlated to age, sex, menopausal state, parity.

In the studied group cigarette smoking, caffeine consumption, lack of exercising & inadequate found to have deleterious effect of BMD.

We recommend starting a National Public Health both preventive program including males & females, explaining the undesired effect of smoking, caffeine consumption & value of adequate calcium intake exercise.