



Ein Shams University  
Faculty of Education

## EFFECT OF FLAX SEEDS, PUMPKIN AND SESAME SEEDS ON BONE OF RATS SUFFERING FROM OSTEOPOROSIS

In partial fulfillment of philosophy doctorate of home economics

By

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# **Effect of flax seeds, pumpkin, and sesame seeds on bone of rats suffering from osteoporosis.**

**BY**

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## **BSTRACT**

This study was carried out to determine the effect of some different levels of some seeds on rats suffering from osteoporosis. Sixty female rats (spargue dawley strain) weighting an average of (200±10g) used in this study. The rats were divided into two main groups. The first main group (6 rats) fed on basal diet as a (control negative group). The second main group (54 rats) fed on diet containing prednislone acetate (Glucocorticoid) for two weeks to induce osteoprosis, then the second main group divided into nine subgroups as follows: The first subgroup (6 rats) fed on diet containing prednislone acetate as a (control positive group), the second and third subgroups fed on prednislone acetate diet containing (5% and 10%) flax seeds, respectively.

The fourth and fifth subgroups fed on diet containing (5% and 10%) pumpkin seeds.

The sixth and seventh subgroups fed on diet containing (5% and 10%) sesame seeds.

The eighth and ninth subgroups fed on diet containing (5% and 10%) combination of all seeds.

The results revealed that flax seeds, pumpkin seeds, sesame seeds, and combination especially 10% improved the nutritional status, the kidney functions (uric acid, urea nitrogen and creatinine), liver enzymes (AST, ALT and ALP), level of calcium and phosphorus,

femur bone calcium and femur bone phosphorus, and BMD, BMC compared to the negative group (rats fed on casein diet).

**Key words:** Flax seeds, pumpkin seeds, sesame seeds, osteoporosis, bone, calcium, phosphorus, liver function or liver enzymes, AST, ALT, ALP, kidney function, uric acid, urea nitrogen, creatinine, and weight of liver, kidney, heart, spleen and bone.