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DRIED BLANCHING VEGETABLES MIX AS HYPOGLYCEMIC AND HYPOLIPIDEMIC AGENT IN ALBINO RATS

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ABSTRACT

The hypolipidemic and hypoglycemic effect of some blends of dried vegetables formula containing Carrot (*Daucus carota*), sweet potato (*Ipomoea batatas*), potatoes (*Solanum tuberosum*), okra (*Abelmoschus esculentus*), and Jew's mallow (*Corochorus olitorius*) represents the aim of the present study. Such effect was biologically evaluated through assessment of four biochemical parameters that reflect the blood serum lipid and blood glucose, namely total cholesterol, low- and high-density lipoproteins, triglyceride and blood glucose levels during a feeding experiment for 6 successive weeks using male albino rats. Four blends of dried vegetables formula containing 25 % sweet potatoes + 75 % carrot B1), (25 % Jew's mallow + 75 % potatoes B2), (75 % Okra + 25 % potatoes B3) and (65 % Jew's mallow + 10 % Okra + 15 % carrot + 5 % sweet potatoes + 5 % potatoes B4) were used. The serum glucose level was determined after alloxan injection with 72 h and it was found to be raised to an average value ranged from 281.99 to 299.69 mg/dl in all groups. Glucose level were reduced after two or three weeks and were consistent till the end of five to six weeks. In case of rats fed on diets containing 10% dried carrot, sweet potatoes, potatoes, okra and Jew's mallow glucose level were 176.66, 166.88, 159.88, 162.99 and 159.66 mg/dl, respectively at the end of experiment. While, blends of dried vegetables B1, B2, B3 and B4 were 145.51, 139.22, 141.33 and 149.22 mg/dl, respectively at the end of experiment. However, rats fed on diets containing blends of vegetables powders had an obvious decrease in serum glucose than rats given 10% dried vegetable. serum total lipids, triglycerides and total cholesterol significantly decreased in rats fed on diet containing 10% dried carrot, sweet potatoes, potatoes, okra and Jew's mallow and their blends (B1, B2, B3 and B4) were in ranged from 301.25 to 346.92 mg / d1 for total lipids, While, triglycerides were in ranged from 127.95 to 149.49 mg / d1 and total cholesterol was in ranged from 79.99 to 109.11 mg /d1compared with diabetic control. The average value of (LDL) in serum increased from 32.02 mg/dl in normal control to 122.22 mg/dl, while (HDL) decreased from 60.22 mg/dl to 43.47 mg/dl. When added 10% dried carrot, sweet potatoes, potatoes, okra, Jew's mallow and their blends (B1, B2, B3 and B4), significant decrements in (LDL) occurred, the decrements were 49.22, 44.92, 42.88, 38.28, 36.99, 51.81, 50.25, 50.99 and 52.56 mg/dl, respectively in comparison with diabetic control. Furthermore, (HDL) in rats increased compared with diabetic control. The increments were 135.52, 138.25, 136.46, 131.51, 127.95, 146.33, 141.92, 144.81and 149.49 mg/dl, respectively which compared to diabetic control. Generally, dried vegetables because

that their blends rich in antioxidant and dietary fiber, its can be reduce serum glucose, total lipids, total cholesterol, triglycerides, LDL and HDL.
Key words : antioxidant , hypolipidemic and hypoglycemic , (HDL) , (LDL) , total lipids, triglycerides and total cholesterol ,