

### **Article No. 3**

#### **The Beneficial Effects of Different Types of Olive Oil, Flaxseed Oil and Their Blend on CCl<sub>4</sub> – Induced Liver Hepatitis in Rats**

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#### **Abstract**

This study was conducted to evaluate the hepatoprotective effects of olive, flaxseed oil and their blend on the hepatocytes liver of rat fed on basal diet supplemented with these oils. The effect of feeding rats on deferent levels of these oils on lipid profile was studied. The results indicated that the diet containing olive and flaxseed oils (at 100% from the oil content of the diet) led to significantly increase in the weight of rats compared to the control positive group. The results showed that the diet containing olive oil, flaxseed oil and blend oils 100% substitution caused significantly decrease of total cholesterol and recorded 79.71, 76.18 and 76.66 mg/dl respectively, compared to the positive control group while there were no significantly differences between these three treatments regarding to the triglyceride. The Histopathological examination indicated that after CCl<sub>4</sub> treatments, the livers of injured rats showed centrolobular coagulative necrosis, fatty change of the hepatocytes and dilatation with congestion in the central vein. The results revealed that feeding of rats on basal diet containing olive oil 100%, flaxseed oil 100% and mixed oil 100% lead to the best improvement in liver and significantly ameliorated the CCl<sub>4</sub> induced necrosis and infiltration of lymphocytes. Keywords: Olive oil, Flaxseed oil, Liver histopathology, Omega-3 oils, Hepatitis.

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