



Impacts of Bee Pollen on Lipid Profile and Hepatic Enzymes

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Abstract

Bee pollen, as a well-known apitherapeutic product, is of considerable benefit due to diverse medical and nutritional potencies demonstrated for this compound in various studies. Bee pollen consists of approximately 250 components, namely amino acids, lipids (e.g., triglycerides and phospholipids), macro- and micronutrients, vitamins, and flavonoids. Experiments in animals indicated a decline in the plasma total lipids and triacylglycerols following the application of this product. In addition, the reduced serum lipid level correlated with the concentrations of some hormones, such as insulin, testosterone, and thyroxine, that contribute to a higher rate of lipid metabolism. In patients with atherosclerosis, pollen decreased the cholesterol level in serum. Furthermore, investigations on laboratory animals revealed the detoxifying effects of this product on the liver. Bee pollen lowered the serum levels of alanine transaminase, aspartate transaminase, acid phosphatase, and bilirubin in rats affected by intense hepatic damage, steatosis, and cirrhosis even to physiological values. Therefore, further studies could be recommended regarding bee pollen usage in distinct lipid metabolism disorders, atherosclerosis, and a wide range of hepatic injuries. Moreover, the influences of plant origin, season, and the region as cofactors need to be evaluated.

Keywords: Bee pollen, Honey bee, Hormone, Lipid, Liver, Pollen