

Helwan Univeristy

**Effect of Whey Protein and Some Whey
Products on Serum and Fecal Steroids in
Rats.**

BY

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THESIS

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ABSTRACT

Effect of Whey Protein and Some Whey Products on Serum and Fecal Steroids in Rats.

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This study was undertaken to study the effect of whey protein and some whey product on serum and fecal steroids in rats. The rats (72) were divided into main groups (8 rats fed basal diet and the other fed hyperlipidemic diets). After three weeks eight rats of each groups both (Negative and Positive control) were killed and their blood were collected. Then the positive group were classified into seven groups each 8 rats. The diet had 10 % protein level from the following protein sources: Positive control (casein); Whey; soy; meat; meat+ whey; meat+ soy; and meat+ soy+ whey. At the end of the experimental period all groups of rats were sacrificed and blood samples were subjected to determination of: total lipids; cholesterol; triglycerides; high density lipoprotein cholesterol (HDL-C); Low density cholesterol (LDL-C). Fecal excretion of Neutral steroids and bile acids, the results revealed that groups of rats fed whey protein were significantly lower at ($P \leq 0.01$) in body weight, while the meat group resulted in a significantly higher at ($P \leq 0.01$), liver weight group of rats fed whey protein were significantly higher ($P \leq 0.01$) when compared with positive control group. Serum total lipids of all groups fed different protein sources were significantly lower ($P \leq 0.01$) except meat group. Serum cholesterol; triglycerides; low density lipoprotein cholesterol; high density lipoprotein cholesterol of all groups of rats fed different protein sources were significantly lower ($P \leq 0.01$) when compared with positive control group. Fecal excretion of Neutral steroids of all groups of rats fed different protein sources were significantly higher ($P \leq 0.01$) except the group fed mixture of (meat+ soy+ whey). The study recommended that whey protein is satisfied protein quality with good palatability when incorporating with meat.

Keywords: Whey protein- cholesterol- (HDL-C)- (LDL-C)- Fecal Steroids- bile acids.