

Soymilk intake is associated with plasma and liver lipid profiles in rats fed a high-cholesterol diet

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Abstract

Objective

This study investigated the effects of soymilk on lipid metabolism in Sprague-Dawley rats fed a cholesterol-enriched (0.3%) diet.

Methods

Thirty male Sprague-Dawley rats weighing 230.0 ± 9.8 g were randomly assigned to one of three groups: control, S1 (containing 15% soymilk powder in the diet), and S2 (22.5%). After 8 wk, lipid profiles of the plasma, liver, and feces were determined.

Results

Body weight gain, daily food intake, and feeding efficiency showed no differences across groups ($P > 0.05$). The experimental groups had significantly lower plasma levels of cholesterol, triacylglycerol, and low-density lipoprotein cholesterol than the control group ($P < 0.05$) at weeks 4 and 8. However, total fecal excretion of neutral steroid did not significantly differ across groups ($P > 0.05$).

Conclusion

Soymilk affects the metabolism of plasma cholesterol in Sprague-Dawley rats.