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Effect of Garlic on Serum Cholesterol Level in Rats on High Fat Diets

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Abstract

Garlic has been reported to possess the effect of lowering serum cholesterol level in blood thus may reduced the occurrence of cardiovascular disease but scientific reports are lacking. Twenty-four Sprague-Dawley rats of 16-weeks old were divided into four groups (n = 6). Hypercholesterolemia was induced by feeding 20% butter as high fat diet for two weeks and the treatment diet for three weeks. Group A was fed normal diet, group B fed normal diet + butter, group C fed normal diet + butter + garlic and group D was fed normal diet + butter + dexamethasone. The serum cholesterol concentration, average body weight and organ weight were determined for five weeks. The results showed a significant ($p < 0.05$) decrease in the serum total cholesterol concentration for groups C and D. The average body weight was significantly ($p < 0.05$) different between the initial body weight and final body weight. The organ weight showed a significant ($p < 0.05$) decrease in mean blotted dry liver weight in groups C and D. These observations indicate that consumption of raw garlic has beneficial effect in lowering serum total cholesterol concentration and promote weight control.

Keywords: Garlic, hypercholesterolemia, total cholesterol, butter