

## **Effect of a low glycemic index diet with soy protein and phytosterols on CVD risk factors in postmenopausal women**

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### **Abstract Objectives**

Cardiovascular disease (CVD) is the leading cause of death in women. Hyperlipidemia is a major risk factor for CVD, but research suggests that metabolic syndrome and type 2 diabetes are also key factors in CVD in postmenopausal women. Most dietary programs, however, focus only on hyperlipidemia and not on insulin resistance associated with diabetes and metabolic syndrome. This 12-wk trial compared the effects of a dietary program combining a low glycemic index diet with a functional food delivering 30 g of soy protein and 4 g of phytosterols per day (LGID) with a standard dietary program (American Heart Association Step 1 diet; AHAD) in postmenopausal women.

### **Methods**

Fifty-nine postmenopausal women (average age 54.6 y, range 44–65 y) with a body mass index of 27 to 39 kg/m<sup>2</sup> were randomly assigned to the LGID or the AHAD program for 12 wk. Total caloric intake and exercise were matched in each arm.

### **Results**

Twenty-seven women completed the LGID program, and 26 completed the AHAD program. The participants on the LGID program showed statistically significant decreases in total cholesterol (15.8%,  $P = 0.0036$  between-group comparison), low-density lipoprotein cholesterol (14.8%,  $P = 0.004$  between-group comparison), and triacylglycerol (44.8%,  $P = 0.006$  between-group comparison). In addition, significant improvements were observed in ratios of total to high-density lipoprotein cholesterol and of triacylglycerol to high-density lipoprotein cholesterol, blood pressure, and Framingham risk assessment for coronary heart disease compared with the AHAD program.

### **Conclusions**

A significantly greater improvement was observed in CVD risk factors in postmenopausal women on the LGID program (incorporating 30 g of soy protein and 4 g of phytosterols per day) than with a standard therapy.