

Isoflavone intake in mid-life Australian-born women

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Phytoestrogen intake has been implicated in the prevention of a number of diseases, in particular cancer, heart disease and osteoporosis, as well as having an effect on symptoms associated with menopause. There are few studies on the intake of phytoestrogens by Australian-born women and whether there are any benefits from this dietary intake. The phytoestrogen content of many foods is still lacking or variable. The best data available in Australian foods are on isoflavones (1). The main isoflavones are genistein and daidzein and soy based foods are the main dietary source of these substances.

The aim of this study was to assess the dietary intake of isoflavone-rich foods in a population-based cohort of Australian-born women, and investigate whether a high intake is associated with other dietary characteristics and certain health-related variables. The cohort was from the Melbourne Women's Midlife Health project – a longitudinal population-based study. Women aged 51-62 years underwent interviews, anthropometric measurements and blood sampling taken in their own homes, and completed 2 food frequency questionnaires to assess usual eating habits and the intake of isoflavone-rich foods. The questionnaire measured usual eating habits over the past year. Most nutrients were computed using the Australian NUTTAM 95 database.

Three hundred and fifty-four women (98%) returned both dietary questionnaires. Two hundred and twenty-two (62%) reported consuming isoflavone-rich foods at least monthly, and 50% had more than 1 serve per week. Soy breads and milk provided the most servings per month. The mean intake of isoflavones calculated from soybeans, soy, grits, tofu, soy milk, soy and linseed bread in the whole cohort was 17 (SD 35, range 0 to 340) mg/day. Fifty-one women (14%) consumed >40mg isoflavone/day: compared to the rest of the cohort these women had higher intakes of fruit, energy, protein, vitamins, minerals; a greater variety of vegetables; were more likely to exercise; less likely to smoke; had lower mean BMI, waist and hip circumferences (all $P < 0.05$). They had lower negative mood scores. There was no association between isoflavone-rich food intake and age, menopause status or vasomotor symptoms after adjusting for menopausal status.

It appears that Australian-born women have a wide range of intake of isoflavone-rich foods. For those with a high intake it seems to be one component of a healthier lifestyle. It is thus difficult to assign particular health benefits to this one dietary component.

1. King R and Bignall C. Concentrations of isoflavone phytoestrogens in Australian soybeans and soy foods. *Aust J Nutr Diet* 2000:57