SOY ISOFLAVONES SLOW RISE IN PSA – MARKER OF PROSTATE CANCER GROWTH

Most research on soy and cancer has focussed on prevention, but people always ask about the effectiveness of soy for treating cancer. Dr Omer Kucuk, an oncologist from Wayne State University Karmanos Cancer Institute, Michigan, reported on one of the first studies conducted with prostate cancer patients. The study involved three groups of men. Group A: Those who had not received treatment for their cancer. Group B: Those who received local therapy – radiation or surgery to remove the prostate. Group C: Those treated with hormone therapy. The men were given an isoflavone supplement (77 mg per day) which they took for six months. Among other parameters, prostate specific antigen (PSA) levels were tracked. These indicate if and how fast the disease is progressing. Doctors usually check PSA levels in middle-aged or older men. Importantly, to be allowed to participate in this study, all the men needed to have already high or rising PSA levels as demonstrated on three separate occasions (patterns which indicate that the cancer is uncontrolled). 3 of the 18 patients in Group A and 6 of the 9 patients in Group C responded to the treatment with soy isoflavones. The rate of the rise in PSA levels decreased by 71% in Group A and by 56% in Group C. Dr Kucuk explained that the findings indicated that soy isoflavones slowed the rate of PSA levels and helped to stabilise the disease in men with both types of prostate cancer – the type of cancer which is stimulated to grow by hormones and the type which grows even in the absence of hormones. Previously only one case study had been reported in the Medical Journal of Australia of a medical practitioner who took a high dose of isoflavones from red clover (160 mg daily) for one week prior to surgical removal of his prostate gland for cancer. Examination of the resected prostate showed evidence which suggested tumour regression.

SOY IMPROVES MEMORY IN STUDENTS

It is widely theorised that oestrogen-related factors are important for cognitive function. The use of HRT in postmenopausal women, for example, has been associated with a lower risk of developing Alzheimer’s disease. Since soy naturally contains a high level of phytoestrogens – which share some similarities with oestrogen, researchers from King’s College, London, wanted to find out if a diet rich in soy foods could help improve memory in university students.

Rosanna Duffy reported the findings on 27 students who were fed either a phytoestrogen-rich diet or a typical English diet which is poor in phytoestrogens.

The meals were all prepared and supplied by the university and included a range of soy foods including commercially available soy milk, soy puddings, soy flour and textured vegetable protein (TVP). The diet supplied 100 mg of isoflavones daily (you can obtain this from approximately three servings of soy foods).

After consuming the test diets for 10 weeks, a battery of psychological tests was conducted to test memory and cognitive function.

Students who had consumed the phytoestrogen-rich diet were found to have significantly improved short-term and long-term memory and also reported reduced anxiety levels.

These are reassuring findings in view of an earlier report that mid-life intake of one soy food (tofu) among a group of American-Japanese men living on the Island of Oahu in Hawaii, was associated with early brain ageing later in life. The King’s College researchers are currently investigating the effects of soy on cognitive function in post-menopausal women.

HIGHER SOY INTAKE LINKED TO LOWER THYROID CANCER RISK

A study of soy intake and thyroid cancer risk among a cross-section of Caucasian and Asian women living in the San Francisco area was presented by Dr Pamela L. Horn-Ross from the Northern California Cancer Center. This cancer is of particular interest because some animal studies suggest (human studies suggest otherwise) that soy is goitrogenic and goitre appears to increase the risk of thyroid cancer. However, as pointed out by Dr Horn-Ross, cruciferous vegetables such as cabbage, broccoli and cauliflower also contain known goitrogens yet the intake of these vegetables is associated with lower rates of thyroid cancer. In this new study, a high intake of soy foods in total or individually was found to be protective against thyroid cancer. Phytoestrogen intake levels were estimated and women with the highest intake of phytoestrogens were found to have a 36% lower risk of thyroid cancer compared to women with a low intake of phytoestrogens.

Dr Daniel Doerge from the National Center for Toxicological Research in Arkansas, USA, also showed new data that helped to dispel any concerns that soy causes hypothyroidism. Media had blown out of proportion the meaning of his previous findings in rats showing that phytoestrogens from soy interfere with the key enzyme used to make thyroid hormones. The question that remained was whether the effect was so great as to cause hypothyroidism – an underactive thyroid gland which could lead to the development of goitre. The most recent data from this group shows clearly that although phytoestrogens can interfere with the action of this enzyme (TPO) – as can flavonoids from fruits and vegetables – there is so much of this enzyme in the thyroid gland that, overall, blood levels of thyroid hormones are not compromised.

OSTEARTHRITIS RISK CUT BY HALF WITH HIGHEST SOY INTAKE

In a study of 225 older Japanese American women living in Seattle, a 50% lower risk of osteoarthritis (OA) was found in those with the highest intake of soy foods and isoflavones, compared to those with the lowest. Although soy intake was quite modest (women in the third highest level of intake category consumed only 9 mg of isoflavones per day) isoflavones may have some oestrogen-like effects which are protective against osteoarthritis, according to Dr Johanna Lampe, who

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