



## NEW PUBLICATIONS

01. Altorf-van der KW, Engberink MF, van Rooij FJ et al. Dietary protein and risk of hypertension in a Dutch older population: the Rotterdam study. *J Hypertens* 2010.
02. Basu A, Du M, Leyva MJ et al. Blueberries Decrease Cardiovascular Risk Factors in Obese Men and Women with Metabolic Syndrome. *J Nutr* 2010.
03. Hachul H, Brandao LC, D'Almeida V, Bittencourt LR, Baracat EC, Tufik S. Isoflavones decrease insomnia in postmenopause. *Menopause* 2010; 19.
04. Jenkins DJ, Srichaikul K, Wong JM et al. Supplemental Barley Protein and Casein Similarly Affect Serum Lipids in Hypercholesterolemic Women and Men. *J Nutr* 2010.
05. Llanaez P, Gonzalez C, Fernandez-Inarrea J et al. Soy isoflavones, diet and physical exercise modify serum cytokines in healthy obese postmenopausal women. *Phytomedicine* 2010.
06. Ricci E, Cipriani S, Chiaffarino F, Malvezzi M, Parazzini F. Effects of soy isoflavones and genistein on glucose metabolism in perimenopausal and postmenopausal non-Asian women: a meta-analysis of randomized controlled trials. *Menopause* 2010.
07. Taku K, Lin N, Cai D et al. Effects of soy isoflavone extract supplements on blood pressure in adult humans: systematic review and meta-analysis of randomized placebo-controlled trials. *J Hypertens* 2010.
08. Taku K, Melby MK, Kurzer MS, Mizuno S, Watanabe S, Ishimi Y. Effects of soy isoflavone supplements on bone turnover markers in menopausal women: Systematic review and meta-analysis of randomized controlled trials. *Bone* 2010.
09. Wien M, Bleich D, Raghuwanshi M et al. Almond consumption and cardiovascular risk factors in adults with prediabetes. *J Am Coll Nutr* 2010;29:189-97.
10. Yamori Y, Taguchi T, Mori H, Mori M. Low cardiovascular risks in the middle aged males and females excreting greater 24-hour urinary taurine and magnesium in 41 WHO-CARDIAC study populations in the world. *J Biomed Sci* 2010;17 Suppl 1:S21.:S21.

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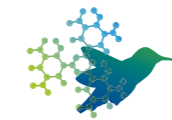
# ALPRO FOUNDATION HEALTH & NUTRITION NEWSLETTER April 2011



## NEWS

In 2011, Alpro Foundation will present for the forth time two Awards for Master students: The National Alpro Foundation Award for Master students consists of a €2,500 honorarium. This award is presented in 5 different EU countries (Belgium, Germany, Italy, The Netherlands, United Kingdom & Ireland).

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## ALPRO FOUNDATION SYMPOSIUM ON PLANT NUTRIENTS AND CANCER PREVENTION

Dr Frankie Phillips, Independent Registered Dietitian

### INTRODUCTION

In an ageing UK population, cancer is one of the main causes of mortality. Nutrition is one of the environmental factors which can play a role in the development of many cancers. The evidence for the potential role of plant-derived nutrients in cancer prevention was examined at a recent symposium, hosted by the Alpro Foundation at King's College London.

### VEGETARIAN DIETS AND CANCER PREVENTION -EPIC-OXFORD STUDY FINDINGS

Dr Francesca Crowe from the Cancer Epidemiology Unit (University of Oxford) presented an overview of findings from the Oxford cohort of the European Prospective Investigation into Cancer (EPIC).

To introduce the theme, she gave a review of the multi-stage theory of carcinogenesis, highlighting that the link between diet and cancer is complex as dietary factors can have an influence at different stages of the disease.

The WCRF/AICR report (2007) has given some indication regarding which aspects of the diet increase or decrease risk of cancer. In particular, colorectal cancer, one of the most common cancers linked with high mortality in the UK, has been associated with a Western-type diet and each additional 100g/day of red meat increases colorectal cancer risk by 5%. The WCRF report suggested that red meat, processed meat, obesity and alcohol increase risk of colorectal cancer, whereas there is a probable decreased risk from consuming foods containing dietary fibre (plant-based foods), garlic, milk and calcium. The EPIC -Oxford study is a prospective cohort of over 65000 British men and women, including 33900 meat eaters,

18840 lacto-ovo-vegetarians, 10100 fish eaters and 2596 vegans. Such a cohort provides a valuable insight into the difference in the incidence and types of cancer in vegetarian and non-vegetarians, in a very healthy cohort of adults. The study started in 1993, and collected diet and biomarker data, with participants followed up for cancer incidence using the UK National Health Service Cancer Central database.

The latest data from the EPIC Oxford cohort shows that there is not much difference in cancer rates between vegetarians and meat eaters. Dr Crowe pointed out that a curious anomaly of the data has shown that in this cohort the vegetarians have a higher rate of colorectal cancer than the meat-eaters (Relative risk: 1.49; 95% CI: 1.09-2.03), but when these data were combined with a previous cohort (the Oxford Vegetarian Study), there was no significant difference. Furthermore, additional analysis of the combined cohorts showed that the vegetarians had a slightly lower risk of all-sites cancer (RR 0.90; 95% CI: 0.82- 0.97) (Key et al. 2009).

Dr Crowe concluded that the EPIC-Oxford study is relatively new and, although we are still unclear whether vegetarian diets protect against cancer, it is hoped that longer follow-up will reveal more information. She also pointed out that it needs to be borne in mind that the meat-eaters in the study have a relatively low intake of meat. Finally, she suggested that the observed lower vitamin D and lower intake of long-chain PUFAs amongst participants might also be implicated, or some other dietary component that remains to be identified.

## RECOMMENDATIONS AND INSIGHTS FROM THE WORLD CANCER RESEARCH FUND AND THE UK WOMEN'S HEALTH COHORT

Professor Janet Cade (University of Leeds) posed the question 'Can plant-based diets help in the fight against cancer?' was the question posed by. She highlighted the commonly-quoted '30% of cancers in Western countries and 20% of cancers in developing countries involve diet', asking whether we can back up this statement with evidence.

In answer, Professor Cade gave a summary of the WCRF/AIRC report 'Food, Nutrition, Physical Activity and the Prevention of Cancer: A Global Perspective' (2007). This report used a thorough systematic reviews approach and evidence was graded, with convincing and probable evidence from the studies reviewed providing the basis for recommendations. Some of the strongest evidence in the report supported the importance of fruit and vegetable consumption. Fruit and vegetables provide less than 5% of total energy in the diet (and therefore may play a role where BMI is a risk for cancer) as well as being good sources of fibre, vitamins and minerals. Professor Cade reported that fruit and vegetables probably decrease risk of cancer. Non-starchy fruits and vegetables in general probably protect against mouth, pharynx, larynx, oesophagus and stomach cancer; allium vegetables (e.g. leek, onion) probably protect against stomach cancer, and garlic against colorectal cancer.

A range of recommendations for reducing cancer risk were made by WCRF.

These include:

- Maintain a healthy body weight
- Sustain physical activity
- Eat more of a variety of vegetables, fruits, wholegrains and pulses

In terms of public health goals, Professor Cade suggested this translates into an average daily consumption of 600g/day of non-starchy fruit and vegetables and at least 25g/day of non-starch

polysaccharides from relatively unprocessed cereals/pulses and other fibre rich foods. Personal goals would be at least 5 portions of fruit and vegetables and eating relatively unprocessed starchy foods with every meal.

Professor Cade's then continued her presentation with a focus on the UK Women's Health Cohort, which she leads. This study started collecting data in 1995 and follows 35000 women with diverse dietary practices, around 28% of whom are self-defined as vegetarian. The study has found that for pre-menopausal women, increasing intake of dietary fibre is associated with reduced risk of breast cancer (Cade et al. 2007). A number of hypotheses suggest that fibre may influence breast cancer through some involvement in oestrogen metabolism. Professor Cade also reported that the UK Women's Cohort study has found that for every 50g extra of meat consumed, risk of pre- and post-menopausal breast cancer increased by 10-12% (Taylor et al., 2007). She concluded that if we ate more fibre-rich foods and less meat, this might prevent breast cancer, but it may also have a positive effect on obesity rates, hypercholesterolaemia and diabetes.

## THE PRACTICAL AND ENVIRONMENTAL ASPECTS OF PLANT-BASED DIETS

The final presentation of the symposium was from Tanya Haffner (MD, Nutrilicious Ltd), who starting with a passionate account of her own journey into a love of food and health linked with the survival of the planet, fuelled by reading Frances Moore Lappe's book entitled 'Diet for a Small Planet' (Lappe 1982). The book was first published in the 1970's suggesting that the concept of eating to save the planet is not new, despite currently being hot news. Ms Haffner commented that the literature describes plant-based eating as consisting of fruit, vegetables, wholegrains and legumes, with significantly less meat and dairy products, it is not the same as being vegetarian. She suggested that experts are predicting that soya will play a crucial role in sustainable eating; if animal protein intakes were to decline, soya



could be very important in terms of agricultural and eating systems, since it is the highest quality source of vegetable protein as well as being low in saturated fat, containing a range of vitamins and minerals and a source of fibre.

Regarding health aspects of plant-based eating, Ms Haffner gave an overview of the health organisations which advocate a plant-based diet as a means of reducing risk of cancer and other chronic conditions, including cardiovascular disease. She quoted the Chief Medical Officer, who in 2009 stated "Reducing consumption of animal products by 30% would cut greenhouse gases substantially and it would reduce heart disease by 15% and would prevent 18000 premature deaths every year".

Health is one of the drivers encouraging a shift towards a plant-based diet which is low in energy density, high in antioxidants, low in saturated fat and high in fibre. Furthermore, the environmental advantages of a plant-based diet are gaining support from an impressive body of evidence (Carlsson-Kanyama & Gonzalez, 2009; Marlow et al., 2009). At a time when there is an increasing ecological debt, where we are currently liv-

ing 40% beyond the Earth's ecological limits, research supports the fact that plant-based foods are more efficiently produced than livestock products. Plant foods require less land, water and energy resources and produce fewer environmentally-harmful emissions.

Ms Haffner ended her presentation with a very practical overview of what it would mean, in dietary terms, to adopt a healthy, sustainable plant-based diet, based on the current UK healthy eating guidelines.

Tips included:

- Reduce intake of red meat and dairy products
- Introduce soya
- Control portion size
- Use seasonal and locally-produced foods
- Include more wholegrains (3-a-day)
- Consider water use
- Choose oily fish from sustainable sources.

She concluded with a call to action, stating that dietitians have a crucial part to play in communicating these tips, helping people to understand suitable

portion sizes, and marketing behaviour change strategies to meet the needs of health and the planet.

Professor Tom Sanders (King's College London), who chaired the symposium, summed up the symposium. He recalled that 10 years ago the message to eat at least 5-a-day of fruit and vegetables was considered second only to stopping smoking as the answer to cancer prevention. Now, the major risks are known to be smoking, obesity and alcohol. Overall, a sustainable diet for the UK population needs to be matched with the health and nutritional benefits, and this remains the real challenge.

## REFERENCES

- Cade JE et al. (2007) *Int J Epidemiol* 36: 431-438
- Carlsson-Kanyama A & Gonzalez AD (2009) *Am J Clin Nutr* 89: 1704s-9s
- Key T. et al. (2009) *Am J Clin Nutr* 89: 1620s
- Marlow HJ et al. (2009) *Am J Clin Nutr* 89: 1699s-703s
- WCRF/AIRC (2007) *Food, Nutrition, Physical Activity and the Prevention of Cancer: A Global Perspective*. Washington DC: American Institute for Cancer Research.