NUTRITION AND HEALTH CONFERENCE

Recognition of nutrition as fundamental to health is "a cause for celebration"

Over 500 health professionals attended a conference held in London on November 21-22 to hear about recent developments in nutrition and health. Dr Pamela Mason reports

Only by influencing food choice can health be improved

In the keynote address, Professor Alan Jackson, chairman of the United Kingdom Scientific Advisory Committee on Nutrition, said that issues of food, nutrition and health were now taken seriously. Nutrition is widely recognised as being fundamental to health, with current diet carrying profound implications for the risk of disease in the short and the long term. There is also broad agreement on the patterns of diet and the style of life which are associated with health.

Over the past decade there has been a systematic approach to developing the capability to provide people with the best advice and guidance, both in the UK and more widely across Europe. Most recently, the Curry report on the future of farming and food made it clear that human health and well-being should be an underlying driver in the formulation of policies which determine agricultural production and food availability in the UK.

"All of this is a cause for celebration," Professor Jackson said. However, it does make heavy demands on health professionals. Health professionals are the most highly respected sources of advice on diet, health and nutrition and the public expects them to be competent. It is therefore imperative that the dietary advice provided to the public is clear, reliable and consistent. The health team must work together in the promotion of this.

However, providing nutritional information is not enough to change the diet of the population. It is only by influencing food choice that health can be improved. An effective strategy must therefore address a wide range of issues that help or hinder good nutrition. To achieve this, needs a broader, public health approach. All health professionals will need adequate training, to be safe in their own practice and, equally importantly, to know how best to use the specialised skills of dietitians and public health nutritionists.

Professor Jackson went on to say that a wide range of nutritional problems continue to exist in the UK. One of his own studies on household food insecurity (the limited or uncertain availability of nutritionally adequate and safe food) and hunger in the UK has shown that 10 per cent of people suffer from hunger, 20 per cent live in circumstances of poverty sufficient to cause hunger and around one million experience food insecurity and hunger. The highest rates of hunger were found in younger people, those who find healthy eating expensive and the unemployed. The study also demonstrated that food insecurity is associated with increased incidence of obesity and that a combination of food insecurity and hunger is associated with a greater risk of obesity.

The National Diet and Nutrition Survey in older people found that 5–10 per cent of over 65s have a low body mass index and one in three have biochemical measures of vitamin deficiency. Poor nutrition in the elderly is becoming sufficiently common to be a public health problem. This situation highlights the need to identify those at special risk. For this, the British Association of Parenteral and Enteral Nutrition (BAPEN) has developed a screening tool that is evidence-based and effectively identifies those at special risk of poor nutrition and provides guidance on management. The tool is a simple five-step process which can be used in different settings and by all health care workers.

Dr Pamela Mason is a pharmacist and freelance writer with a special interest in nutrition

ATKINS DIET — NO LONG-TERM DATA

In a presentation about the Atkins diet, Dr Susan Jebb (head of nutrition and health research, Medical Research Council Human Nutrition Research Centre, Cambridge) said that there were no long-term data on the effect of high protein, low carbohydrate diets on clinical outcomes.

Although it is true that individuals consuming such diets do lose weight during the first six months, evidence shows that beyond that time weight gain may recur, and adherence to the diet plan wanes.

Claims made that weight loss occurs as a result of ketosis and metabolic stimulation are theoretically plausible, but practically will make little impact on energy balance. For example, ketosis certainly leads to loss of energy (calories) because dietary fat is incompletely metabolised during the ketotic state. Ketones also have a role in appetite suppression, but there is little evidence of any major impact of either of these mechanisms on energy (calorie) balance. In addition, diet induced thermogenesis (DIT) may be increased by high protein, but DIT represents only 10 per cent of energy expenditure, so again, the influence on energy balance is likely to be small.

Most scientists argue that weight loss on the Atkins diet is directly related to a reduction in energy intake (weight cannot be lost in any other way). This is facilitated by reduction in variety of foods, the constraints on the intake of many energy dense foods (eg, biscuits, cakes, confectionery) and the satiating properties of a relatively high protein diet. All of these factors may reduce dependence on calorie counting.

However, it is important to remember that successful treatment of obesity is about more than weight loss. It must also improve overall health and reduce the risk of chronic disease. Low carbohydrate diets do not meet the recommended intakes for a range of vitamins and minerals so supplementation is recommended. "Weight loss does occur with Atkins, at least for six months, and is similar to that found with an isocaloric low fat diet. However, we don't know what the long-term health outcomes with Atkins are, but we do know the health benefits of a low-fat diet."

NEW DIETETIC GUIDELINES

The conference also saw the launch of new dietetic guidelines for the secondary prevention of cardiovascular disease. Developed by UK Heart Health and the Thoracic Dietitians Group of the British Dietetic Association, the guidelines are based on systematic reviews of dietary interventions in heart health. According to Elsa Griffiths, dietitian, Royal Brompton and Harefield NHS Trust, London, who provided an explanation of the guidelines, giving evidence-based dietary information to all people with coronary heart disease (myocardial infarction or angina) will save more lives than concentrating dietary advice on those in need of weight loss or lipid lowering.

The guidelines state that all people with existing heart disease should be advised to increase their omega-3 fat intake. The dose required is two to three large portions of oily fish per week (or 0.5–1g of omega-3 fats per day). Saturated fat intake should be reduced, although this dietary change appears to need to be sustained for more than two years to reduce cardiovascular events. Saturated fat should be replaced totally or partially with unsaturated fats (olive oil or rapeseed oil). In addition, following MI all people should be given advice on a Mediterranean-style diet, which includes increased omega-3 fats, fruits and vegetables and fresh foods, reducing saturated fat and processed food.

"The practice of prioritising dietetic time in secondary prevention to those with raised lipids is out of date since the advent of statin therapy. However, there is good systematic review evidence that dietary advice to all those with coronary heart disease can reduce mortality and morbidity as well as modify risk factors. Dietary advice that does this most effectively should be prioritised."

Following myocardial infarction, all people should be given advice on a Mediterranean-style diet

CHOLESTEROL LOWERING

Professor David Jenkins, faculty of medicine, University of Toronto, Canada, asked whether diet could be used like a drug in lowering cholesterol. Drugs have proved effective in lowering serum cholesterol and reducing the risk of coronary heart disease, he said. By comparison, the impact of diet has been considered too small to sustain much clinical interest. Recently, however, to reverse this trend, the American Heart Association and the adult treatment panel of the national cholesterol education programme have advocated the use of specific dietary components, including viscous fibres, plant sterols, soy protein and nuts. These foods have also been allowed health claim status by the US Food and Drug Administration for cardiovascular risk reduction related to their ability to reduce cholesterol.

Professor Jenkins went on to describe his own trials with these four ingredients — soy protein foods (soy milk, tofu, soy burgers), viscous fibre foods (oat bran, barley, psyllium), plant sterols (in enriched margarines) and almonds — in the same diet. Their combined effect in a group of hyperlipidaemic men and women was to reduce low-density lipoprotein cholesterol by approximately 30 per cent, which was the same as found with lovastatin (20mg daily) and with a reduction in C-reactive protein, a potential risk factor for heart disease.

"Our studies lead us to believe that by combining foods with cholesterol lowering properties in the same diet, clinically meaningful reductions in LDL cholesterol can be achieved, which justify continued interest in diet as therapy. The use of aspirin, a statin, an ACE inhibitor and a beta-blocker will become routine for increasing numbers of people unless we make a major effort in terms of diet and lifestyle," said Professor Jenkins

NUTRITION AND BONE HEALTH

In a presentation about nutrition and bone health, Dr Roger Francis, chairman of the nutrition forum of the National Osteoporosis Society, said that although high dietary calcium intake may increase the bone mass acquired during adolescence and reduce postmenopausal bone loss, both calcium and vitamin D play a more critical role in the maintenance of bone health in older people.

Calcium and vitamin D supplementation has been shown to decrease the risk of fracture in older people, but studies of the effect of vitamin D alone on fracture risk have yielded inconsistent results. This suggests that combined calcium and vitamin D supplementation is required to obtain optimal anti-fracture benefit in older people. Recent studies show that combined calcium and vitamin D supplementation also decreases postural sway, improves muscle function and reduces the risk of falls in older people by 50 per cent. This may contribute to the observed reduction in fracture risk, he said.

Vitamin K is another nutrient that may also be important for bone health, according to Dr Margaret Ashwell, of Ashwell Associates, UK. She described a project funded by the Food Standards Agency that looked at the potential protective effect of vitamin K, calcium and vitamin D in women over the age of 60 years.

The two-year intervention study included four arms: (i) placebo, (ii) vitamin K 200µg, (iii) calcium 1,000mg plus vitamin D 10µg daily, and (iv) combined supplementation with vitamin K (200µg), calcium (1,000mg) and vitamin D (10µg). There was a statistically significant effect of supplementation in the combined calcium, vitamin K and vitamin D supplementation group for wrist, but not hip, on bone mineral content. "This suggests significant interaction between vitamins D and K in reducing bone loss," she concluded.