

Editorial

Nutritional well-being among older people

The World Economic Forum (WEF; <http://www.weforum.org/>) and most governments in high-income countries promote longer working years and active retirement to combat the rising costs of the ageing population. Theoretically these efforts share the view put forward in the WHO Madrid meeting in 2002 of active ageing as 'the process of optimizing opportunities for health, participation and security in order to enhance quality of life as people age'^(1,2). At the practical level, their aim is to reduce the predicted burden of increasing numbers of older people, especially the oldest old, on society and especially on health-care services, by keeping people active in productive labour. But the WEF and its councils tend to discuss health deterioration as an unfortunate fact that will eventually stop people from being productive or that can be postponed with medical treatment⁽²⁾. In contrast, the WHO emphasizes health promotion and disease prevention, stating that 'Active ageing aims to extend healthy life expectancy and quality of life for all people as they age, including those who are frail, disabled and in need of care'⁽¹⁾.

We agree. Health deterioration with ageing is not inevitable. We also see a critical and largely overlooked role for the public health nutrition workforce. Poor nutritional status and failure to detect early signs of malnutrition at every stage of the life course will jeopardize active ageing, while unnecessary supplementation with 'magic vitamins' can mask deficiencies of others and lead to irreversible damage. A good example of this is folate supplementation without prior and concomitant monitoring of cobalamin (vitamin B₁₂) status and homocysteine levels. Safe ways of improving vitamin B status in the elderly without exposing some individuals to undue risk need to be fine-tuned^(3–5). Through good nutrition we can support active ageing, but this requires sound nutrition policy that supports the availability of and equal access to health-promoting foods and evidence-based nutritional advice and services, and the strong participation and increased visibility of the public health nutrition work force.

Further, good nutrition and good health are essential aspects of overall well-being. According to the Eurobarometer 2008⁽⁶⁾, 73% of respondents from thirty-one European countries considered health to be the most important value in relation to their idea of happiness, followed by love (44%) and work (37%). Yet a recent report offering guidance on well-being policy development in England⁽⁷⁾ barely talked about ways to secure health, and never mentioned nutrition as a factor in health. Rather, well-being, overall, was understood as a state of

happiness, with the suggestion that citizens' well-being should be promoted by strengthening their 'resilience in the face of adversity and ill-health'⁽⁷⁾. This approach ignores the effects of a lifetime's development of health problems, including diet-related problems such as obesity as well as malnutrition, which is associated with a decline in functional status, reduced cognitive function and impaired muscle function among other things⁽⁸⁾.

Good nutrition is required throughout the different life stages to maintain functional capacity, and each life stage affects the next in a cumulative manner⁽⁹⁾. Good examples of this are provided by the requirement for vitamin B₁₂ and the 'bone nutrients' (Ca, Mg, K, P and Zn plus vitamins K, C and D). Fetal stores of vitamin B₁₂ will last for several years after birth, but with insufficient daily intake from the diet or due to malabsorption, these stores will become depleted. Sufficient intakes of Ca and other bone nutrients during childhood and adolescence are needed to secure optimal bone mass accumulation, which along with sufficient weight-bearing exercise and continued good nutrition will prevent osteoporosis later in life⁽¹⁰⁾. These critical periods should not be forgotten when planning policies for active ageing.

In this issue of *Public Health Nutrition*, three papers focus on nutrition in later life in particular. Buja *et al.*⁽¹¹⁾ bring us findings from the Italian Longitudinal Study on Aging involving 3404 Italians aged 65–84 years. The results show that Mediterranean-style alcohol consumption does not impair renal function in the long term (3·5 years) for older men, but may in fact be harmful for renal function in older women. Depression is another concern among ageing populations. The above-mentioned *State of Happiness* report⁽⁷⁾ suggests that 'depression becomes more chronic in later life, and that a person's ability to deal with this will have much to do with their emotional resilience, and their adaptability and potential for continued development'. Kaburagi *et al.*⁽¹²⁾ report that nutrition might have something to do with it. In Kaburagi *et al.*'s study, nutritional status in 130 community-living people aged 65 years and above in Tokyo was strongly correlated with depression and with grip strength, an indicator of muscle strength, although cause and effect could not be ascertained due to the cross-sectional design of their study. Marital status was also linked with poor nutritional status, indicating that women who remained married were less likely to be at risk of malnutrition as indicated by Mini-Nutritional Assessment scores.

One of the papers related to nutritional well-being in later life raises the question regarding the life-long effects

of dietary habits earlier in life. In a study of 438 older, postmenopausal American-Indian women conducted by Supplee *et al.*⁽¹³⁾, osteoporosis risk was associated with age and BMI, but not with current soda consumption. With a cross-sectional design the study was not able to link childhood or adolescent dietary habits with later-life bone mass density, but it is of interest to note that soft drinks consumption in the USA more than doubled between 1965 – when Supplee *et al.*'s study participants were young – and 1999 with a concomitant decrease in milk consumption among adolescents⁽¹⁴⁾. This is the life stage at which peak bone mass is laid down, and adequate intakes of Ca, vitamin D and other bone nutrients are crucial⁽¹⁵⁾. Future longitudinal studies are needed to give evidence to this potentially detrimental, long-term effect of soft drinks consumption on the formation of strong bones.

In today's sociodemographic and economic circumstances, this issue of *Public Health Nutrition* provides several important public health messages which we hope will encourage you to advocate for nutritional well-being at all ages. To affect global policy, professional associations like the World Public Health Nutrition Association (<http://www.wphna.org/>) provide a good platform for active participation.

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References

1. World Health Organization (2002) Active Ageing. A Policy Framework. A contribution of the World Health Organization to the Second United Nations World Assembly on Ageing, Madrid, Spain. http://whqlibdoc.who.int/hq/2002/WHO_NMH_NPH_02.8.pdf (accessed August 2011).
2. Olshansky JS, Biggs S, Achenbaum WA *et al.* (2011) The global agenda council on the ageing society: policy principles. *Global Policy* **2**, 97–105.
3. Andr s E, Loukili NH, Noel E *et al.* (2004) Vitamin B₁₂ (cobalamin) deficiency in elderly patients. *CMAJ* **171**, 251–259.
4. Malouf R & Grimley Evans J (2008) Folic acid with or without vitamin B₁₂ for the prevention and treatment of healthy elderly and demented people. *Cochrane Database Syst Rev*, issue 4, CD004514.
5. Selhub J, Troen A & Rosenberg IH (2010) B vitamins and the aging brain. *Nutr Rev* **68**, Suppl. 2, S112–S118.
6. European Commission (2008) Eurobarometer 69. 1. Values of Europeans. http://ec.europa.eu/public_opinion/archives/eb/eb69/eb69_values_en.pdf (accessed September 2011).
7. Bacon N, Brophy M, Mgnuni N *et al.* (editors) (2010) *The State of Happiness: Can Public Policy Shape People's Wellbeing and Resilience?* London: The Young Foundation.
8. Stratton RJ, Green CJ & Elia M (2003) *Disease Related Malnutrition: An Evidence Based Approach to Treatment*. Oxford: CABI.
9. Darnton-Hill I, Nishida C & James WPT (2004) A life course approach to diet, nutrition and the prevention of chronic diseases. *Public Health Nutr* **7**, 101–121.
10. New SA, Bolton-Smith C, Grubb DA *et al.* (1997) Nutritional influences on bone mineral density: a cross-sectional study in premenopausal women. *Am J Clin Nutr* **65**, 1831–1839.
11. Buja A, Scafato E, Baggio B *et al.* (2011) Renal impairment and moderate alcohol consumption in the elderly. Results from the Italian Longitudinal Study on Aging (ILSA). *Public Health Nutr* **14**, 1907–1918.
12. Kaburagi T, Hirasawa R, Yoshino H *et al.* (2011) Nutritional status is strongly correlated with grip strength and depression in community-living elderly Japanese. *Public Health Nutr* **14**, 1893–1899.
13. Supplee JD, Duncan GE, Bruemmer B *et al.* (2011) Soda intake and osteoporosis risk in postmenopausal American-Indian women. *Public Health Nutr* **14**, 1900–1906.
14. Cavadini C, Siega-Riz A-M & Popkin BM (1996) US adolescent food intake trends from 1965 to 1996. *Arch Dis Child* **83**, 18–24.
15. Bonjour JP, Carrie AL, Ferrari S *et al.* (1997) Calcium-enriched foods and bone mass growth in prepubertal girls: a randomized, double-blind, placebo-controlled trial. *J Clin Invest* **99**, 1287–1294.