Plenary 5: Nutrition and Ageing

Healthy ageing: 10-year trends in food and nutrient intakes among older Australians

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Background – Healthy aging depends, in part, on good nutrition, to compress morbidity, or, in other words, to minimize the time spent in states of ill-health in the later years of life. Little information is available in Australia about trends in food and nutrient intakes of any age group, including older people. The Blue Mountains Eye Study, a population based cohort study, provided an excellent opportunity to study trends in intakes of foods and nutrients, measured three times over a 10-year period on a large cohort of older people. Such data enable the exploration in patterns of dietary change among the same people as they age over time, which is not possible with population cross sectional surveys. We have also begun to analyse the dietary trend data in relation to health outcomes, to see whether particular patterns of intake predict better health status and longevity.

Review – The Blue Mountains Eye Study is a population-based cohort of older people living in two postcode areas west of Sydney. At baseline (1992-1994) 3654 people aged 49 years and over (82% of those eligible) were examined (mean age at baseline 62 years). Five years later (1997-1999) 2334 people were re-examined, and ten years after the baseline data collection (2002-2004) 1952 people were re-examined (75% of survivors). A validated 145 item food frequency questionnaire (FFQ) was used to assess food and nutrient intake at each of the three assessments. During the ten year period, 1166 people completed the FFQ satisfactorily on all three occasions. Mean intakes of foods and nutrients were examined. In addition, food and nutrient intakes at baseline were examined in relation to various health outcomes, including weight gain, eye disease, and mortality. Mean intakes of energy and sugars significantly increased among women over the 10 year period (7920kJ vs 8272kJ, p<0.05; 118g vs 127g sugar, p<0.05). Mean intakes of n-3 polyunsaturated fatty acid (PUFA) and fish significantly increased among women and men over the ten year period (n-3 PUFA: women 0.9g vs 1.1g, p<0.05; men 1.0g vs 1.1g, p<0.05) (fish: women 27g vs 38g, p<0.0001; men 26g vs 36g p<0.0001). Mean dietary folate intake increased in women and men, reflecting changes to food supply during the study period (folate (µg): women 323 vs 376, p<0.001; men 346 vs 393, p<0.001). Study participants consumed significantly lower quantities of cuts of red meat (red meat cuts: women 42g vs 36g, p<0.0001; men 49g vs 40g, p<0.0001), but more mixed dishes containing red meat over the ten year period (red meat dishes: women 54g vs 62g, p<0.001; men 69g vs 73g, p=0.23 not sig). Whole milk consumption decreased and low fat yoghurt increased (whole milk: women 98g vs 78g, p=0.002; men 131g vs 102g, p=0.002; yoghurt: women and men 18g vs 30g, p<0.0001). There were no significant changes in total fruit and vegetable intake, though some sub-types of fruits and vegetables increased, notably canned fruit and avocado (p<0.05). Mean intakes of wholemeal bread decreased over the 10 year period (52g vs 40g, p<0.05). Amongst men, mean intake of beer decreased but wine increased (210g vs 166g for beer, p<0.01, 68g vs 78g for wine, p=0.051). People who consumed the highest tertile of fruit and vegetables were more likely to consume lean red meat and fish (p<0.0001). At baseline 57.9% of participants were overweight or obese and ten years later 65.9% were overweight or obese. During the 10 years of follow-up median weight gain was 2.4kg and 31% of people had weight gain greater than 5kg. Participants with the highest vs lowest quintile of n-3 PUFA at baseline had a lower risk for incident early age-related macular degeneration (ARM) at five years (OR 0.41, 0.22-0.75), and there was a 40% reduction of incident early ARM associated with fish consumption of at least once a week (OR 0.58, 0.37-0.9).

Conclusions – Many of the observed changes in diet over a 10-year period among older Australians were in line with current population dietary recommendations, including, an increase in intakes of fish, n-3 fatty acids, folate and low fat dairy products. However, some changes resulted in poorer dietary choices, such as decreasing use of wholemeal bread. A full analysis of the dietary trends will inform nutrition policy and programs targeted to older Australians.

References

Funding support: National Health and Medical Research Council, Meat and Livestock Australia