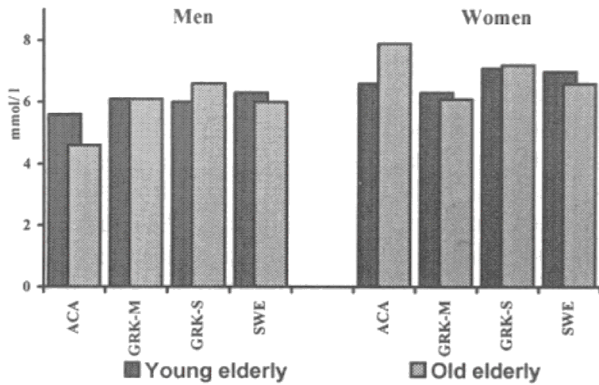


**Figure 19.** Average total serum cholesterol, by study community, age group and gender



The Anglo-Celtic young elderly men had the lowest average total serum cholesterol (5.8mmol/ l) compared to the other Caucasian communities (6 to 6.5mmol/ l). Cholesterol values tended to be higher amongst the old elderly (Figure 19).

### Discussion

The first part of the IUNS study has provided us with a unique data set on health, dietary patterns, social activity and lifestyle in 13 disparate communities. The most striking differences in health profiles and food intake patterns are seen between Caucasian and Asian communities, rather than between individual communities.

Notwithstanding the differences in cultural or ethnic background, the well-being is comparable and high across all elderly communities. In the main, whatever their circumstances, disability or disease profile, elderly people regarded themselves as happy. Social network and activity levels appeared to account best for a sense of well-being in those communities where we were able to examine the relationships. It would seem that elderly people do not need to have a sense of good health to feel happy. The different dietary methods used on Caucasian elderly and Asian elderly should be taken into account when interpreting the food intake data (see Methods). The use of 24-hour recall in Chinese and Japanese communities may result in underestimation of food intake, when compared to data obtained with food frequency questionnaires in the Caucasian communities. The findings described so far will be used in further cross-sectional analyses on the role of differences in dietary habits and nutrition on health, taking into account living habits and lifestyle. The results allow identification of nutritional risk profiles in the elderly, of which the importance and impact on health should be confirmed in a follow-up study. Prospective studies linking dietary intake of nutrients with nutritional status, health, and especially functional capacity, will provide a better understanding of the nutritional requirements of the elderly and the establishment of RDAs and dietary guide-lines for the various subsets of older populations of different ethnicities.

### References

- Andrews GR, Esterman AJ, Braunack-Mayer AJ, Rungie CM (eds). Aging in the Western Pacific-- A four country study. World Health Organization. Western Pacific Reports and Studies no.1, Manila, 1986.
- Bjorntorp P. Distribution of body fat and health outcome in man. *Proc Nutr Soc Aus* 1987; 12: 11-22.
- de Groot LCPGM, van Staveren WA, Hautvast JGAJ. (eds). Euronut-Seneca, Nutrition and the elderly in Europe, A concerted action on Nutrition and health in the European Community. *Eur J Clin Nutr* 1991; 45 (Suppl 3): 5-185.
- Deurenberg P, van der Kooy K, Evers P, Hulshof T. Assessment of body composition by bioelectrical impedance in a population aged >60 y. *Am J Clin Nutr* 1990; 51: 3-6.
- Friedewald WT, Levy RI, and Fredrickson DS. Estimation of the concentration of low density lipoprotein cholesterol in plasma, without use of the preparative ultracentrifuge. *Clin Chem* 1972; 18: 499-502.
- Heikinen E, Waters WE, Brzezinski ZJ (eds). The elderly in 11 countries-- a sociomedical survey. World Health Organization Regional Office for Europe, Public Health in Europe, series no.21, Copenhagen: WHO, 1983
- Hodgson JM, Hsu-Hage BH-H, Wahlqvist ML. Food variety as a quantitative descriptor of food intake. *Eco Food Nut*, 1994 (in press).
- Horwath CC, Campbell AJ, Busby W. Dietary survey in an elderly New Zealand population. *Nutr Res* 1992; 12: 441-453.
- Horwath CC. A random population study of the dietary habits of elderly people. PhD thesis. University of Adelaide, 1987.
- Horwath CC. Dietary survey of a large random sample of elderly people: energy and nutrient intakes. *Nutr Res* 1989; 9: 479-492.
- Kouris A, Wahlqvist M, Trichopoulos A, Polychronopoulos E. Use of combined methodologies in assessing food beliefs and habits of elderly Greeks in Greece. *Food Nutr Bull* 1991a; 13 (2): 139-144.
- Lawton MP, Moss M, Fulcomer M, Kleban MH. A research and service oriented multilevel assessment instrument. *J Gerontol* 1982; 37: 91-99.
- Scrimshaw, S. and Hurtado, E. Rapid Assessment Procedures. UCLA: United Nations University, Latin American Centre Publications, 1987.
- Wahlqvist M, Kouris A, Gracey M, Sullivan H. An anthropological approach to the study of food and health in an indigenous population. *Food Nutr Bull* 1991b; 13 (2): 145-149.
- Wahlqvist M, Kouris-Blazos A, Trichopoulos A, Polychronopoulos E. The wisdom of the Greek cuisine and way of life: Comparison of the food and health beliefs of elderly Greeks in Greece and Australia. *Age Nutr* 1991c; 2 (3): 163-173.
- Wahlqvist ML, Davies L, Hsu-Hage BH-H, Kouris-Blazos A, Scrimshaw N, Steen B, van Staveren W (eds). Food habits in later life: Cross-cultural approaches. United Nations University Press; 1994 (in press).
- Wahlqvist ML, Kouris A, Davies L, Scrimshaw N. Development of a survey instrument for the assessment of food habits and health in later life. In: *Dietetics in the 90's. Role of the Dietitian/ Nutritionist*. M Moyal (ed). John Libbey Eurotext Ltd; 1988: 235-9.
- Wahlqvist ML, Kouris A. Trans-cultural aspects of nutrition in old age. *Age Aging* 1990; 19 (supp): 43-52.
- Fillenbaum GG and Smyer MA. The development, validity, and reliability of the OARS multidimensional functional assessment questionnaire. *J Gerontol* 1981; 36: 428.

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Wahlqvist ML, Hsu-Hage BH-H, Kouris-Blazos A, Lukito W and IUNS study investigators:

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## 國際營養科學聯合會 (IUNS) 的晚年飲食習慣的跨文化研究

### —— 主要發現的評論 ——

#### 摘要

自 1986 年世界衛生組織 (WHO) 在印度海德拉巴 (Hyderabad) 舉行專題討論會後，人們要求了解老年人營養與健康的問題更加迫切。Gary Andrew 博士代表 WHO 在 1986 年發表了一份西太平洋老年人的社會與健康狀況的研究。儘管跨文化比較困難不少，但在社會因素和自覺健康指標方面已發現有重大差異，這些差異說明了有必要在更大的國際範圍內進行進一步的跨文化研究。IUNS 委員會在「營養與益壽」這個問題上，已開始用社會——人類學的方法去研究跨文化方面的營養與健康的關係，因而誕生了一個「晚年飲食習慣」的研究項目。參加這個科研項目的團體不強調生物樣本的收集，只集中研究食物文化與健康的關係，是非侵害性的。從 1988—1992 年研究了澳大利亞、中國、希臘、日本、菲律賓和瑞典等國家的 13 個老年社會，將結果匯集成書，該書把老年人的跨文化研究收集在一起，同時作為 IUNS 研究項目，考慮食物與健康的關係。這些研究包括歐洲老年人 (EC SENECA) 的研究，一個由北京營養與衛生研究所進行的，包括 6 個華人社會的獨特食物模式的研究，一個新西蘭——澳大利亞兩個社會的研究和一個中美洲的研究。IUNS 研究本身有其生態學調查及與此有關的局限性的特徵，但將研究重點集中在人種學和人類學上會體現了一種優勢，因為在幾個人種中得到的結果要比任何單一人種的結果好得多，IUNS 研究在可變因素研究的範圍內是很好的，其中一些被研究的社區將繼續追蹤並獲得利益。