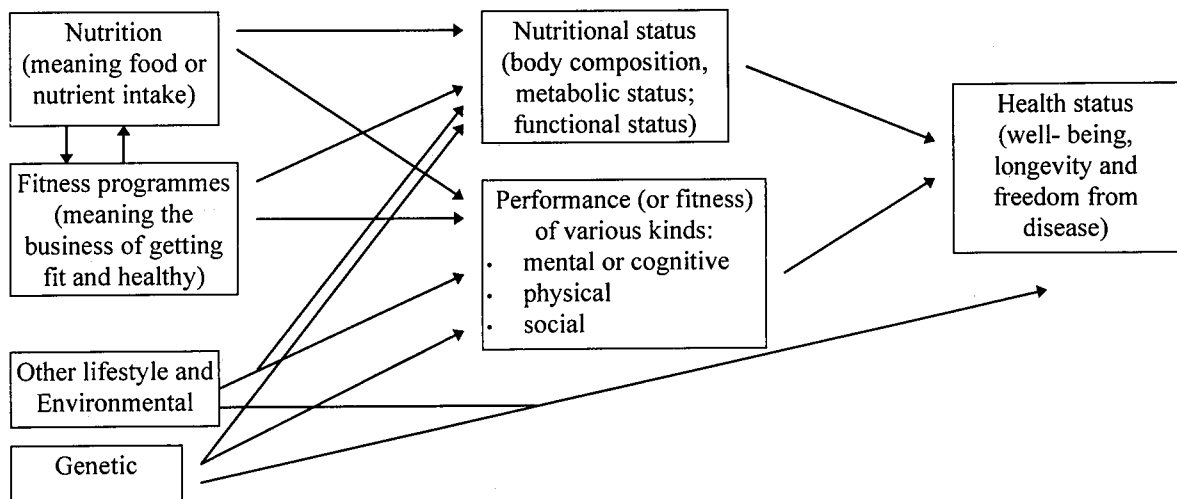


## Nutrition & fitness-- an overview

The International Symposium on Nutrition and Fitness held around this theme in Beijing, 17-18 October 1994, provoked a good deal of review and re-thinking about the conjunction between physical activity and nutritional status. Partly this was because the Symposium descriptor "Nutrition and Fitness" could be read in various ways, since each of the two words may be regarded as *a method to achieve health or a health state* in its own right:



Inevitably, genetic and environmental and lifestyle factors other than nutritional and physical activity must be acknowledged in such a discussion. But, in this particular Symposium, the genetic factors received a great deal of attention insofar as they may or may not be expressed, depending, as we now know, on nutritional and exercise factors (the molecular mechanisms are becoming clearer and of increasingly practical importance); they may allow more individual difference in ways of eating and exercise than heretofore thought; and may require a strategic combination of public health and individualised approaches.

That the Symposium took place in China was of considerable moment. First, the Chinese and English language and speaking cultures allow and require different ways of thinking about these issues. In Chinese, a distinction between "fitness" and "health" is not made; there is also a blurring of the boundaries between food and medicine and how they, in turn, might be drawn on to improve physical performance. We heard from Dr Chen Ji Di of the Chinese Institute of Sports Medicine at Beijing Medical University of Chinese trials of food and nutrients, with various limiting nutrients like zinc, on psychological and physical performance and on immune function; and also of the trials of traditional tonics and of medical foods (even of turtle soup!) on similar parameters.

China is undergoing rapid change in its food supply, its proneness to sedentariness, and in its focus on sporting excellence at an internationally competitive level. The search for preferred ways of eating against this background is vigorous, as evidenced by accounts from Professor Ye Guang-Jun (of the Institute of Child and Adolescent Health, Beijing Medical University) for children and adolescents and Prof Chen Chun-Ming (of the Institute of Nutrition and Food Hygiene, Chinese Academy of Preventive Medicine) for adults.

Colleagues who work with athletes and the nutrition science of performance (Dr Ron Maughan, and Dr Louise Burke) clearly showed how dietary guidelines, which emphasise unrefined carbohydrate intakes in a demonstrably healthful way for sedentary or moderately active people, fail the active, where increased intake of refined carbohydrate in conjunction with root vegetables and various cereal-based foods like rice, noodles and pasta, is required. Often athletes are confused about what constitutes high carbohydrate food, believing fatty cream cakes or pastries or green leafy vegetables (with much bulk from water and dietary fibre) to be examples.

The importance of higher planes of energy nutrition throughout life (more physical activity and more to eat) was a recurrent theme, with qualifiers about limits on certain forms and levels of movement during growth and development; and the maintenance of physical activity with advancing years, with its potential benefits on lean mass and eating behaviour was seen as a high priority in ageing populations.

There will be trade-offs between different stages of life, individual and public health, when the risks and benefits of different ways of eating and exercising are considered. Newer factors are also appearing in the analysis of nutrition and fitness, of an economic, socio-cultural and ecological kind. These are nowhere more in evidence than in emerging and dynamic economies like those in Asia, where this meeting took place. Fortunately, scientific minds are at work to take account of these broader dimensions and are ones which will work together with the agricultural, industrial, educational, recreational and governmental sectors.

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Beijing, October 1994