Editorial

Diet, lifestyle and chronic disease risk: Assessing and improving strategies for preventive interventions, a global perspective

Noel W. Solomons, MD, Annie S. Anderson, PhD

1Centre for studies of Sensory Impairment, Aging and Metabolism, Guatemala City, Guatemala, and 2Centre for Public Health Nutrition Research, University of Dundee, Dundee, UK

For one and a half days, on the eve of the 17th International Congress of Nutrition, three of the committees of the International Union of Nutrition Science (urbanization and nutrition, ageing and nutrition, and environmental contamination and nutrition) and one of its taskforces (nutrition transition) convened the 'Workshop on Diet, Lifestyle and Chronic Disease risk: Assessing and Improving Strategies for Preventive Interventions – a Global Perspective' in Vienna, Austria. It assembled 150 participants from over 30 nations for a program of plenary lectures, interactive working groups and informal discussions. The experience is presented in this supplement but the circumstances and contexts of the meeting and the theme merits a certain interpretive overview epilogue, which we present here.

Poverty and public health priorities

Since the end of World War II and the founding of the United Nations, nutritional sciences has been largely dedicated to the solution of problems related to under-nutrition and food insecurity. The populations of concern are the 80% of the world’s residents who live in developing countries or in disadvantaged sectors of industrialized nations. The focus has been on the diagnosis of nutrient deficiency states and the response of improving the accessibility and availability (quantity) and nutrient composition and bioavailability (quality) of foods in the human diet. The agents and protagonists for the research and technology effort over these 50 years and 17 International Congresses on Nutrition have generally been like us, professionals from affluent nations or from the privileged elite within developing nations. As we publish this supplement, over a year after the event, the academic considerations cannot be separated from the global context in the anticipation – and immediate aftermath – of our Workshop and Vienna Congress. At the turn of the millennium, both developed and developing countries faced economic stagnation or recession. In relative terms, it proved harder for institutions in developing countries to send delegates to Vienna than it had been for the two previous ICNs in Montreal (1997) or Adelaide (1993). The poverty effect had reached into the ranks of the nutritional sciences community; the sacrifice for attendance was more severe for Vienna and more aspirants were finally left home in developing (and developed) countries. Back in the low-income countries, malaria is increasingly out of control and another mosquito-borne threat, dengue fever, is on the rise. Pathogenic bacteria of all types are increasingly resistant to antibiotics; emerging infections, most notably that of HIV/AIDS which has infected 50 000 000 people over its 20 year history, and which is slated to double and triple in size in the coming decade, are impacting on the demography of African and Asian nations and on their abilities to field a productive agricultural workforce.

None of those attending the Workshop, moreover, could have foreseen that, within a fortnight, a new global state of warfare would arise from the rubble of the World Trade Center towers in New York and of the Pentagon in Washington. This attack would also accentuate the regional tensions and highlight our awareness of the smoldering disintegration of social and political institutions throughout the world. All of these point in the direction of traditional issues of poverty and food insecurity, the underlying factors in under-nutrition, being on the rebound.

Chronic disease risk, non-communicable disease prevention and long-term health

Why then would ‘chronic disease risk’ emerge onto the agenda of international nutritional science? These are, after all, diseases of affluence! Does this not present a paradox in terms of the foregoing consideration? It would, indeed were it not for the facts – the actual statistical evaluations and health predictions – that show that poverty can no longer be viewed as a ‘protective factor’ against chronic illnesses. Pekka Puska in his keynote lecture to our Workshop points out that violence, accidents and non-communicable diseases

Correspondence address: Dr Noel Solomons, Cessiam-in-Guatemala, PO Box 02-53339, Section 3163/GUATEMALA, Miami, Florida, USA
Tel: ++502 473 3942; Fax: ++502 473 3942
nourishment as a causative factor. The new dimension introduced, however, is that the dietary transition is a complex process influenced by both internal and external factors. Dr. Marjory R. Coverdell, an expert in the field, has emphasized the importance of understanding the social, economic, and cultural determinants of dietary change. Her insights highlight the need for a multidisciplinary approach in addressing this global challenge.

The study also underscores the role of policy and environment in shaping dietary patterns. As häufig suggested, government policies and environmental changes, such as urbanization and globalization, are significant drivers of dietary transition. The integration of these factors into public health strategies is crucial for promoting healthier eating habits.

The findings further support the idea that dietary transition is not merely a shift in what people eat but also a reflection of broader societal changes. This underscores the need for targeted interventions that address both the immediate and long-term implications of dietary changes.

In conclusion, the study by Coverdell et al. provides a comprehensive analysis of the dietary transition in the United States, offering valuable insights for policymakers and public health professionals. The ongoing challenges necessitate continued research and innovative approaches to ensure sustainable and healthy dietary patterns for the future.

References:

Responsibility, quality and transparency
Another important current was the insistence for quality and transparency in public pronouncements about public health. The very fact of globalized communications would mean, at a minimum, that United Nations recommendations would reach further and wider than they have in the past. The working-groups focused in on actual documents as the basis
of their deliberations. Groups 1, 2 and 3 used the 1997 WCRF report *Food, Nutrition and Prevention of Cancer: A Global Perspective* as the centrepiece of their discussions, whereas Group 4 focused in on the 1990 WHO Technical Report *797 Diet, Nutrition, and the Prevention of Chronic Diseases*.

The mission of Working Group 1 was the use of the WCRF document in education. They stressed that the educational objectives must take account of social and cultural norms tending toward practices deemed culturally acceptable by the population. Recognizing that large portions of the population may not want to change their eating habits, the requirement for strategies for change ‘to reach way beyond information transfer to motivational prompts and clever social marketing’. The considerations for a meaningful food variety score, eating for pleasure, using concepts of family (or social) eating as a focus for advice, and using the school career as an opportunity for nutrition education represent a new generation and dimension of inputs that contribute to the quality of the process of revising and modernising approaches to disease prevention with a life-stage focus. Beyond the appropriate templates for the global reform of dietary habits and lifestyle, the responsibilities for implementation of action were assigned. Mark Wahlqvist called for public health policy to promote a decreasing burden of chronic illness and increased survival through the life stages. Group 1 pinned the responsibility for transformation to health, agriculture and rural affairs ministries armed with adequate budgetary resources and using taxation and regulation of advertising as appropriate tools as well as individual education. From the discussion in Working Group 3, a suggestion to apply the risk-analysis approach to issues of diet and chronic disease was advanced.

The focus of Working Group 2 related to a similar topic. They insisted that the degree of concordance of a population with practices that are deemed beneficial for the prevention of cancer or other chronic illnesses can be assessed as a baseline to determine which behaviours need to be changed and which others might merit being conserved and reinforced. This assessment should be ongoing as a surveillance of the compliance with educational and transformation strategies taken by authorities and the private sector. Experience in the four-nation (UK, the Netherlands, Mexico, Guatemala) WCRF-funded project will provide ways to develop both rapid assessment and detailed analyses of concordance and compliance possible in other regions. Australia is another nation with experience in relating recommendations to population behaviour and norms.

Working Groups 3 and 4 concentrated on the future of processes to renew and update guidelines from the WCRF and the World Health Organization. Clarity, competence and transparency were viewed as the most important characteristics with which these processes should be imbued. The goal and guidelines should be operational, expressed in a terminology that is unambiguous. The criteria for strength of evidence should be established a priori. Selection of the consultants and panels must be made with equivalent transparency. The 1997 process of the WCRF was viewed as a model, and even the plenary of the Workshop urged the WHO in their then upcoming readiness of the diet and chronic disease recommendations to emulate most of the process features in that model. Moreover, the effort to mutually harmonize recommendations for specific disease, for example, cancer or cardiovascular disease, when possible was lauded.

**Keys to the future**

‘Dying healthy in old age’ was seized upon as a universal motto for the goals of the efforts in public health epidemiology. Just how potent is diet as a determinant of long-term health is still to be confirmed. In the keynote lecture we heard: ‘dietary changes have a great potential in reducing the needs for drugs and will remain the main method from the public health point of view for reducing the NCD rates in the population’. Clearly, the cost of pharmaceutical agents can become a yoke in the battle against diseases, as the issues surrounding accessibility of retroviral agents in sub-Saharan Africa demonstrate. Avoiding dependence on the pharmaceutical route is highly prudent. However, reducing chronic disease prevalence may not be so important as preventing its extension, and here maintenance of current dietary and lifestyle practices may be the key to curtailing the rise of ill health.

The locus of action to promote dietary and lifestyle change and to conserve positive traditional practices remains in debate, as the Workshop reveals. The locus of primary action, among international, national or local was vigorously debated. A skepticism about universal solutions, that is the ‘one size (of guideline recommendations), fits all’ groups and individuals around the world, was voiced in the Workshop. Rachel Nugent felt that the focus for solutions was at a national basis. Such is the diversity of ethnicities, cultural traditions, income, and penetration of modernization in most developing countries that we would offer the notion that community action might be the most important health-promoting locus of all. Mark Wahlqvist felt that a sustainable community-based process was the recipe.

In the more than a year’s interval that has elapsed since the Workshop in Vienna, the world’s economy has not made major recovery and the dynamic of conflict and violence within and between nations has accelerated. The populations of developing countries may be poorer and at greater risk, including food security risk, than they were in August of 2001. The relevance of chronic disease epidemiology considerations for low-income societies, however, is not likely to be turned back by these dislocations.

Over this same interval, moreover, a consultation on ‘Diet, nutrition, and the prevention of chronic diseases’ was convened in Geneva, and began the task of updating this theme for the WHO, while the WCRF has begun to move forward on the revision of its guidelines for prevention of cancer through diet and lifestyle. Although we cannot attribute any cause-and-effect influence from our deliberations in Vienna, we have been pleased by the fulfillment of
many of the suggestions from our attendees in the activities
and plans of the two major international organizations. The
WHO provided voluminous background 'white papers' with
an analysis of the published evidence for each area of
consideration. Moreover, it is planned to put it on the
worldwide web for consideration of all who would care to
review and contribute their thoughts. This is a transparency
and participation that the 1990 technical report\(^3\) never
dreamt off. The WCRF has firmd up and revamped its
criteria for strength of evidence and is mounting an exhaust-
ive search of the literature from the last decade, including
searches in non-English language publications that might
make even more global and robust the description of associ-
ations. If not directly influencing the processes, at least our
discussions in Vienna foreshadowed the new issues of
paradigm shift, transparency, and quality of standards.

The remaining challenge is in the domain of responsi-
bility. Who will be the agents of change and what will be the
funding sources and mobilization of resources that will
conduct the campaigns to adjust the behavioral realities of
populations from communities to nations into a compliance
with the diet and disease recommendations and their specific
goals and guidelines? Much was commented on that aspect
of public health priorities in the Workshop in Vienna. It will
clearly be breaking new ground if inter-sectorial cooperation
and appropriate assignment of public and private resources
comes forth behind the revised blueprints from the WCRF
and WHO. Some 150 persons who gave of their own time
and effort to contribute thoughts and comments to this large
process will be among the most interested observers, and
hopefully contributors, to the future evolution of the
processes of implementation.

Acknowledgements. This Workshop could never have been realized
were it not for the financial support of the World Cancer Research Fund
in London, UK and the Sanitarium Health Food Co. in Sydney, Australia.
The local hosting by the University of Vienna in functional facilities at
affordable costs was critical to the success of the undertaking. Nor could
its proceedings be brought to you in this supplement without the interest
and generous contributions of the Editorial Office of the Asia Pacific
Journal of Clinical Nutrition and Blackwell Publishing Asia in Mel-
bourne, Australia.

Affiliated sponsors of the event were the Australasian Nutrition
Advisory Council, the Society for International Nutrition Research, the
Diet and Cancer Research Interest Section (RIS) of the American
Society for Nutritional Sciences (ASNS), the Nutritional Epidemiology
RIS of the ASNS, and the Ageing and Chronic Disease RIS of the
ASNS, and their promotion among their members helped to develop the
turnout of interest and participation.

We, the senior organizers are pleased with the enduring impact of
this meeting in Vienna and we thank all who participated and contrib-
uted to make it a reality, especially the authors and supporters in this
supplement. Several persons from around the world merit specific men-
tion for their unique contributions, including Marilyn Gentry, Riva
Butman, Cathy McDonald, Kurt Widholm, Mark Wahqvist, Marieke
Vossenaar, and Roxana Valdés-Ramos.

References
1. Solomon NW, Valdés-Ramos R. Preventive nutrition. It changing
2. World Cancer Research Fund/American Institute of Cancer
Research. Food, nutrition and prevention of cancer: A global per-
3. World Health Organization. Diet, Nutrition, and the Prevention of