FOR A BETTER NUTRITION IN THE 21ST CENTURY

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NESTLÉ NUTRITION SERVICES

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Preface

This Workshop set out to consider a remarkable range of topics, all geared to an attempt to consider how best to anticipate developments with which those involved in the fields of agriculture and food will have to contend in the coming decades. Nutrition involves not only food production and processing, but also health, so an amazing range of interests is affected. This inevitably means that many organizations and disciplines have to be involved in developing a coherent view of nutrition and its relevance to national concerns. The intensity with which issues relating to nutrition are debated is not surprising or new, but it still comes as a surprise to those who do not spend time considering the history of nutritional ideas. The fascination of the ancient Greeks with the powerful effects of food on health was matched by the extraordinary changes in their capacity to survive in towns and cities once innovations in crop husbandry were successfully introduced. Thus, for millennia, nutritional ideas and food availability have been key components of society's thinking. The everyday interest in nutritional folklore, in superstition, and anecdotal observation on the effects of different foods have all contributed to the debate. Ideas on food policy and the control of food production have also been seen until recently as an issue of national survival. Only perhaps this century have we considered that the validity of scientific ideas should determine our thinking on the relationship between food and health. Political and economic ideas about food production are also changing. Within the last five years we have seen a serious attempt to consider the production and international trade in food as strictly analogous to that of any other business and not necessarily a fundamental priority for each nation.

Perhaps we should recognize that nutritional thinking has already seen three phases of development during this century. First, we have had the remarkable series of vitamin discoveries and the excitement of the early biochemical research which was all related to nutritional issues. Thus, the concept emerged that minute components of food could have fundamental effects on health. This, together with the striking improvements in the growth and health of children, led to easy assumptions which most nutritionists and the public accept to this day, i.e., the need for an ample and varied diet with sufficient energy, protein, vitamins, and minerals.

The success of rationing during the Second World War was based on scientific assessments, and the improved health of children and adults suggested that doctors and nutritionists had planned well in coping with the worries about potential vitamin and mineral deficiencies. The "problems" of poor nutrition were therefore seen as soluble. The principal issue then remained one of growing enough food efficiently so that even the poorest sections of society could afford to purchase a good diet.

The second phase began immediately after the Second World War and was essentially a science-led revolution in agriculture and an industrial development of the
food processing and retailing business. The spectacular success of this policy in Western Europe meant that by the end of the 1970s food surpluses were appearing, but the cost of food had fallen to a record low, with the retailing industry providing a plethora of choices of foods, some of which might come from remote parts of the globe.

The third phase or revolution is now upon us with renewed concern about the role of diet in modulating the aging process, and the development of a wide range of diseases, such as cancer, heart disease, diabetes, and many others. This leads us into many issues which will eventually be of concern to both the developed and developing world.

It is always easy to fall into the trap of believing that the latest phase in nutritional thinking is the one which will persist, but this Workshop provides ample evidence of major new developments which are already under way. These developments affect all aspects of society and involve technological opportunity, organizational change, and major shifts in public perceptions about food and health. With all the complexities and achievements in nutritional science, it is easy to conclude that we shall become ever more sophisticated and refined in our ability to provide an enjoyable and healthy diet.

This Workshop was fortunate to have as its opening speaker a man of formidable intellect who graced the Symposium with one of his last appearances when he was already unwell. The late Sir Kenneth Blaxter, my predecessor at the Rowett Research Institute in Aberdeen, made a major contribution to this Symposium by forcing us all to consider the stark future of our planet should the population outstrip our natural resources, as seems all too likely. Sir Kenneth has, for decades, been a champion of the poor, a passionate supporter of the farming world, and an incisive thinker on the fundamentals of energy needs, fossil fuel use, and world food supplies. His courtesy and unceasing search for truth were again evident to us all. We were privileged to have him with us.

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Foreword

The 27th Nestlé Nutrition Workshop was initiated on the basis of two very simple questions: "How can we use past and present knowledge to plan for better nutrition?", and "How can we translate practical, technical, and scientific knowledge into useful solutions for the future?".

Planning for better nutrition is a fascinating and complex enterprise. Several levels of need are covered by the consumption of food. At the most fundamental biological level, food has to provide adequate amounts of nutrients, but it also has to satisfy psychological, social, cultural, and symbolic needs, which can sometimes interfere with each other, making the task of achieving better nutrition ever more difficult.

The amount of information generated by nutrition research around the world is enormous. First class work is being accomplished in many areas of nutrition and related fields. How can this information be condensed and best used in practice? For each topic, there are usually several schools of thought, so consensus is often hard to reach. Add to this the unfortunate but not infrequent hurried publishing of doubtful results and their eager propagation by a nonspecialized press, and you obtain a situation of confusion in which the consumer is simply unable to interpret, despite the enormous public interest in nutrition and health. People want to know how to improve their diet. Even health professionals wishing to give useful advice are frustrated by the seemingly inconsistent and rapidly changing ideas of researchers and the dietary recommendations they generate.

In this workshop, we tried to avoid two traps. The first is to become lost in the complexity of the problem, and was summed up by Herodotus (5th century, B.C.) who said, "Of all human miseries the most bitter is to know so much and to have control over nothing". The second trap is to follow the unthinking optimists with their quick fixes, simplistic conclusions, and rushed decisions. As H. L. Mencken said, "To every human problem there is a solution that is simple, elegant . . . and wrong!".

The goals of this workshop were to assess dietary guideline strategy and its relationship with other factors that can influence food intake and choice. The Workshop covered three aspects: lessons we can draw from the past; a critical analysis of current nutritional thinking; and speculation as to future trends. It included considerations from nutrition to behavioral and cultural aspects of food consumption and, last but not least, a discussion on research planning for better nutrition from both governmental and industrial points of view.
FOREWORD

It is our hope that these proceedings will help all parties involved to move in the same direction and in the right direction. As it is important to communicate with decision makers, the different authors were careful to provide texts with sound and readable messages.

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