

# Priority nutritional concerns in Asia

E-Siong Tee

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## Abstract

*The sustained economic growth and increasing economic stability in the Asian region over the last three decades have been accompanied by changing lifestyles leading to significant changes in the food and nutrition issues facing Asian countries. The chronic diseases associated with excessive consumption of nutrients, especially fat, are becoming increasingly apparent. At the same time, Asia has a disproportionate share of the malnutrition problem. Underweight and stunting remain significant problems in many Asian communities, and micronutrient deficiencies of iron, iodine, and vitamin A continue to afflict large population groups. Effective data collection and analysis are essential to formulate and implement intervention programs to address both sides of the changing nutrition scenario in Asia.*

**Key words:** Nutrition, undernutrition, overnutrition, Asia

More than three decades of sustained economic growth in the Asian region and increasing political stability in many Asian countries have brought about rapid advances in socioeconomic status. Even the least-developed countries in the region have made significant progress. Some, for example, China, are recognized as economically stable despite global economic uncertainties. Such rapid developments have brought about marked lifestyle changes, including food purchasing and consumption patterns. Significant demographic changes have also occurred. As a result, there is a definite change in the food and nutrition issues facing communities in the countries of the region.

While nutritional deficiencies in many Asian countries are slowly decreasing in magnitude, significant

proportions of Asian population are now facing the other facet of the malnutrition problem: diet-related chronic diseases such as hypertension, coronary heart disease, diabetes mellitus, and certain types of cancers. Because of the different stages of socioeconomic development, the extent of both malnutrition extremes varies considerably among the different countries in the region. Asia thus needs to address both extremes of the nutrition situation.

## Changes in the Asian nutrition scenario

Dramatic socioeconomic developments over the past 30 years have brought about increased nutrient availability in many countries in the region as well as improved health facilities. These improvements have led to improvements in morbidity and mortality and a marked decrease in nutrient deficiencies. Nevertheless, the extent of the undernutrition problem is still large, and the magnitude varies markedly among the countries in the region.

In addition to changes in the amounts of available nutrients in Asian countries, there have been marked changes in the sources of nutrients and the composition of diets. Significant changes in consumption patterns in Asian countries occurred from 1960 to 1990. Cereal consumption decreased in most countries, except in the low-income countries, where average consumption has remained more or less stable. There also have been increases in the percentage of energy from fat, and there has been an increased consumption of added fats in most countries. The most affluent countries show an increase in vegetable and fruit consumption. Meat consumption (and thus the consumption of saturated animal fat) has increased markedly in some countries; for example, Japan, China, and South Korea recorded increases of 250% to 330%. Consumption of milk and dairy products has increased in only a few countries [1].

There have also been other changes in dietary behav-

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The author is affiliated with the Cardiovascular, Diabetes and Nutrition Research Centre, Institute for Medical Research, Kuala Lumpur, Malaysia.

ior. More families eat out, and the consumption of fried foods is increasing. Overeating is a concern among some. The use of dietary supplements is also increasing, and some individuals have the mistaken belief that supplements can replace missed meals. Other significant lifestyle changes have also taken place, including decreased physical activity, even in rural areas. The high prevalence of smoking in the region, however, remains unchanged.

The combined effect of these lifestyle changes is causing a significant change in the food and nutrition issues facing Asian countries. Of growing concern are the significant proportions of the population now faced with the other facet of the malnutrition problem: the chronic diseases associated with excessive consumption of various nutrients (e.g., fat), on the one hand, and low levels of intake of other nutrients (e.g., complex carbohydrates and fiber) on the other. The increased prominence of these diseases is evident in the mortality and epidemiologic data, which vary markedly among countries in the region. On the one hand, for the most developed countries, such as Japan and South Korea, the problem of diet-related chronic diseases predominates. On the other hand, less-developed countries in South Asia and the Indo-Chinese countries are burdened with a greater share of the undernutrition problem. Between these two extremes, China and most countries in Southeast Asia are faced with a significant chronic disease problem while also struggling with the persistent nutrient deficiencies that persist to some extent. These new dimensions in the nutrition situation in developing countries pose great challenges to nutritionists and other health workers.

### **Undernutrition: a huge and persistent problem in Asia**

In spite of the economic advances in the region, undernutrition, including underweight and stunting, remains a significant problem in many Asian communities. Micronutrient deficiencies, especially those that result in iron-deficiency anemia, iodine-deficiency disorders, and vitamin A-deficiency disorders, afflict large population groups, especially young children [2–7].

Indeed, Asia has a disproportionate share of the malnutrition problem, where the number of malnourished children is mind-boggling. In 1980 there were 174 million stunted preschool children in Asia, constituting more than three-quarters (78.3%) of the stunted children in all developing countries. In 2000, this total declined to 128 million, but Asia still had two-thirds (70%) of the developing countries' stunted preschool children. In 1980, 52% of Asian preschool children were stunted—the highest rate of any region in the world. This figure has steadily declined, and in 2000, 34% of Asian preschool children were stunted.

A similar picture is presented for underweight preschool children in Asia. In 1980, there were 146 million underweight preschool children in Asia, constituting 83% of the underweight preschool children in developing countries. In 2000, the number declined to 108 million, or 72% of the total of underweight preschool children in all developing countries. The prevalence of underweight preschool children in Asia, 44%, was the highest of any region of the world in 1980, although it declined to 29% in 2000.

Iron-deficiency anemia also affects large numbers of Asians. Among preschool children, the prevalence of anemia is reported to be the highest in Africa and Asia. In Asia, the most affected subregion is South Central Asia, where the prevalence can be as high as 60%. Among pregnant women, Africa and Asia again have the highest prevalence of anemia. Anemia prevalences are as high as 75% in South Central Asia. Among school-age children, the prevalence of anemia is highest in Southeast Asia, where as many as 60% of children may be affected.

Huge numbers are similarly affected by iodine-deficiency disorders in Asia. In the Southeast Asian region alone, nine countries have been recognized as having iodine-deficiency disorders as a public health problem. A total of 172 million people, or 12% of the population, are affected by goiter, and another 41% are at risk for the disorder.

Vitamin A deficiency also remains a problem of immense magnitude, although data are not available to make good estimates of the extent of the problem. It is clear, however, that subclinical vitamin A deficiency in Asia should not be ignored.

Because the extent of the undernutrition problem remains huge, it is vital that actions be undertaken to tackle undernutrition-related issues. More thought should be given to implementing programs and activities relevant to local communities. Food fortification, supplementation in some cases, and efforts to increase food availability have all been tried in Asia with varying success. Nutrition education efforts have been going on in the region for three decades. Other factors related to malnutrition should be tackled at the same time, specifically environmental sanitation. The importance of infection should not be neglected.

### **Overnutrition: a major problem on the horizon**

Dramatic changes in socioeconomic conditions in the Asian region are expected to continue in the future. The associated increase in diet-related chronic diseases in developing countries in Asia should be a cause for real concern and for concerted interventions. For countries not yet afflicted with diet-related chronic diseases, it is important to avoid or reduce the onslaught of these

diseases. It is hoped that these countries will be able to learn from the mistakes of others, and not follow the same path.

The emerging problem of overweight in children cannot be ignored. The current proportion of overweight preschool children in developing countries is low, estimated to be 3.3% in 1995. There is, of course, considerable variation in this prevalence. The estimate for Asia was 2.9%, with a higher prevalence of 4.3% in Eastern Asia and 2.4% in Southeast Asia [8]. Data from individual Asian countries show higher proportions in Brunei Darussalam (9%), in Thailand (5.4%), among urban children in Kuala Lumpur (8%), and among urban children in China (6.5%). A total of 17.6 million preschool children in all developing countries were considered overweight. Of this total, 61%, or 10.6 million, were in Asia. The region therefore has the double burden of the highest number of stunted preschool children and the highest number of overweight children.

The problem of increasing overweight and obesity in Asian adults has been highlighted for more than a decade. The database on the extent of the problem is far from comprehensive, but various studies point to the severity of the problem. In Malaysia, the available data indicate that in urban communities the overall prevalence of overweight is probably about 29% and that of obesity about 12%. The combined prevalence of overweight and obesity (body mass index [BMI, expressed in  $\text{kg}/\text{m}^2$ ] > 25) in Malaysia ranged from 26% to 53%, with an overall mean of 39%. The problem also appears to be prevalent in lower-income urban adults and in rural communities [7]. In a study of a small number of urban subjects in 12 Asian cities, the prevalence of overweight and obesity (BMI > 25) was found to be high (more than 23%) in 5 cities: Beijing, Hong Kong, Kuala Lumpur, Manila, and Bangkok. It was also noted that the most affluent societies in the study, for example, Seoul and Tokyo, did not have the highest prevalence of overweight.\* In China, national nutrition surveys conducted in 1982 and 1992 showed that the prevalence of overweight and obesity in young adults increased from 9.7% to 14.9% in urban areas and from 6.2% to 8.4% in rural areas during the 10-year period [5].

Much of the overweight and obesity problem

described occurs in urban areas. For example, in a study of more than 5,000 primary schoolchildren in Kuala Lumpur, the prevalence of overweight was 8%, much higher than that in a similarly large study in rural areas in the other parts of Malaysia, which reported a prevalence of 2% [7]. However, several reports in recent years have also highlighted the increasing prevalence of the problem in rural areas.

The high prevalence of overweight and obesity is associated with increases in a whole host of diet-related chronic diseases in many communities in the Asian region. Coronary heart disease has been reported to be a main cause of death in many countries, and the prevalence of hypertension and diabetes has reached worrying proportions.

It is imperative that the problems associated with diet-related chronic diseases be identified and recognized early enough for firm actions to be taken immediately. It is indeed a challenge for governments to formulate intervention programs to tackle both facets of the malnutrition problem. Several governments in Asia have carried out interventions focusing on healthier lifestyles, including healthy eating. Some communities are earnestly seeking ways to achieve healthy eating, including healthier food alternatives and health supplements, whereas others are not. The extent of the diseases is certainly not decreasing. Thus, what works and what does not, and what works where, are going to be important questions to answer.

### Other nutritional concerns

Other nutritional concerns are the continued high prevalence of low birthweight, adolescent nutrition issues, and interactions between nutrition and infection. As the aging population of Asia increases markedly in the coming years, the nutritional needs of the elderly will be important issues to address.

Economic progress in the countries of the region will continue to be accompanied by lifestyle changes. It is therefore of the utmost importance to continue to monitor nutritional status. Systems to periodically collect data on nutritional status and dietary intakes should be in place in all countries. Indeed, comprehensive data specific to the communities concerned should be made available through systematic research programs to permit the formulation and effective implementation of intervention programs in developing countries. All countries in the region need to develop a national plan of action for nutrition, jointly formulated and implemented by all of the relevant sectors, including food, health, and education. Such plans should be periodically reviewed.

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