Malaysia has undergone a transition from undernutrition to an increasing prevalence of diet-related noncommunicable diseases associated with changes in diets and lifestyles. The national plan of action for nutrition, finished in 1995 as the result of a multisectoral effort, was funded for several years and is now being revised in line with the proposed national nutrition policy.

### NUTRITIONAL PROBLEMS

#### Birth weight

In 1998, 9.6% of infants were born with a low birth weight (<2500 g).

#### Infant feeding

In 1997, the proportion of infants ever breast-fed was 89%. At four months of age, 29% of infants were being exclusively breast-fed, 10% were being predominantly breast-fed and 12% were receiving mixed feeding. At six months, 27% were being exclusively breast-fed. Twelve per cent were still being breast-fed at two years of age. The mean duration of breast-feeding was 4.5 months.

#### Child growth

A nationwide descriptive cross-sectional household-based study was conducted in 1999 among children under five years of age (n=5108). Overall, the prevalence of total underweight, stunting, and wasting found were 19.0%, 15.6%, and 13.3%, respectively. Severe underweight, stunting, and wasting occurred in 2.7%, 5.3% and 3.3% of the children, respectively. These prevalences were slightly higher in males than females. The median values of the children’s weight-for-age, height-for-age and weight-for-height were, respectively, 1.08, 0.63, and 0.69, with standard deviations (or Z-score) below the medians of the NCHS reference.

The 2002 National Nutrition Survey data showed that 0.8% of children under five years of age were severely underweight (0.5% in 1993, 1.0% in 1997, 1.0% in 1998, 1.0% in 1999, 1.0% in 2000 and 0.9% in 2001) and 11.3% were moderately underweight (23% in 1993, 18% in 1997, 17% in 1998, 15% in 1999, 13% in 2000 and 11.5% in 2001).

#### Nutritional anaemia

A 1994 study of anaemia among adolescent girls found that 19% were anaemic (Hb<12 g/dl). In children aged six months to two years, the estimated prevalence of anaemia (Hb<11 g/dl), ranged from 12% to 83% in Peninsular Malaysia.

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In Sabah, a 1996 study conducted among undernourished and normal weight pre-school children found that 31% of undernourished children had a Hb<11.6 g/dl, while the average Hb level for normal weight children was 12.06 g/dl.

Among pregnant women attending government antenatal clinics, the percentage with moderate anaemia (Hb<9 g/dl) decreased from 4.6% in 1998 to 2.8% in 2002. Mild anemia (Hb 9 - < 11 g/dl) among pregnant women also decreased from 25.7% in 2001 to 24.4% in 2002.

**Iodine deficiency**

A 1995 survey of primary-school children aged 8-10 years throughout the whole of Peninsular Malaysia showed a total goitre rate of 2.2%, indicating that iodine deficiency disorders (IDD) were not a significant problem. As the prevalence rate was less than 5%, this indicated that Peninsular Malaysia was an IDD-free area (ICCIDD/WHO/UNICEF).

However, results from the survey also showed that some districts in the states of Kelantan, Kedah, Perlis and Pahang had IDD prevalence rates of more than 5%, with a median urinary iodine level of 82.2 µg/litre. In the State of Sabah, the total goitre rate among 8-10 year-old children in 1994/1995 was 18% and the median urinary iodine level was 66.0 µg/litre.

Based on those results, immediate steps were taken to formulate a state-level programme (universal salt iodization at the state level). Legislation for iodized salt was gazetted in December 1999 and implemented fully on 1 June 2000. Meanwhile, the Health Department continued distributing iodized salt to pregnant and lactating women attending government clinics throughout the state, and to maintain and install new iodinators in the water supply of schools located in the interior. The Malaysian Food Act 1985 stated that iodine content in iodized salt should be 20-30 ppm (20 – 30 mg iodine per kilogram of salt).

Monitoring of urinary iodine among schoolchildren of 8 -10 years is being carried out in the state of Sabah. The median urinary iodine level (among 775 school children from 29 schools) was 170.0 µg/litre in 2001 and 240.0 µg/litre in 2002. These monitoring data indicate a significant improvement in the IDD situation in Sabah and show the effectiveness of the salt iodization programme.

In Sarawak, a statewide survey among 8 -10 year-old schoolchildren found a total goitre rate of 0.7% and a median urinary iodine of 126.0 µg/litre in 1997. Malaysia started to use iodized salt in Sarawak in 1957. Only salt for human use is iodized. Presently, 36% of the population at risk of IDD in the State of Sarawak is covered by adequate iodized salt.

A water-iodination programme has been instituted in some states since 1995.

**Vitamin A deficiency**

A 1996 study conducted among undernourished and normal children in Sabah showed that 21% of undernourished children had serum retinol levels below 30 µg/dl. The mean serum retinol level was 38.4 µg/dl.

In 1999, a nationwide study carried out by the Ministry of Health showed low serum retinol (<0.7 µmol/L) in 3.7% of children under five years old.

**Obesity**

A 1997 study showed a prevalence of obesity in adults of 4% overall, with 17% overweight and 25% underweight. The prevalence of obesity among Malay adults (5.1%) and Indian adults (5%) was significantly higher than among Chinese adults (3.5%).
The WHO Global Database on BMI reports rates of overweight and obesity (%) in 1998 as follows:

<table>
<thead>
<tr>
<th>Country</th>
<th>Year survey began/ended</th>
<th>Sex</th>
<th>Age range (years)</th>
<th>Rates of overweight and obesity (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Overweight (BMI ≥ 25)</td>
</tr>
<tr>
<td>Malaysia</td>
<td>1996</td>
<td>Male</td>
<td>≥20</td>
<td>23.9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Female</td>
<td></td>
<td>28.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Both sexes</td>
<td></td>
<td>26.2</td>
</tr>
</tbody>
</table>

**POLICIES AND PROGRAMMES DIRECTED AT NUTRITION**

The National Nutrition Policy is in the final stage of development.

In 1994, the National Coordinating Committee on Food and Nutrition initiated the drafting of the National Plan of Action for Nutrition (NPAN), which was finalized in 1995. The NPAN provides a multisectoral framework for the country’s nutrition interventions. The National Coordinating Committee on Food and Nutrition works in collaboration with four technical working groups for training, research, dietary guidelines and policy. The memberships of the National Committee and the working groups are multisectoral and include nongovernmental organizations. The secretariat is under the Family Health Development Division of the Ministry of Health. In addition, a National Resource Centre has been established to facilitate the updating and sharing of information on nutrition. The NPAN is currently being reviewed in line with the proposed National Nutrition Policy.

The Technical Working Group for Dietary Guidelines has published National Dietary Guidelines for Malaysians and is in the process of developing RDAs for Malaysians.


A National Coordinating Committee for the Control of Iodine Deficiency Disorders was established in 1994, chaired by the Ministry of Health. A National Plan of Action for the Control of IDD was adopted in 1994 and revised in 1996. The quality of iodized salt is defined under the Food Act 1983 and Food Regulations 1985.

**Breast-feeding policies**

A National Breast-feeding Policy was developed in 1993, followed by the formation a Baby-Friendly Hospital Initiative Recognition Committee. There is a breast-feeding coordinator. A total of 118 hospitals (113 public hospitals; two army hospitals; one university hospital and two private hospitals) have been declared baby-friendly. In March 1998, Malaysia was declared by WHO as the third country in the world where all public hospitals are baby-friendly. It is planned to extend the Baby-friendly Hospital Initiative concept to health centres.

The Food Regulations (1985) under the Food Act (1983) have several provisions to protect breast-feeding. In addition, a National Code of Marketing of Breast-milk Substitutes was adopted in 1979 and is undergoing its fourth revision. Some indirect promotion of infant formula still persists, however.

Breast-feeding counselling training has been established. Media campaigns are held and World Breast-feeding Week is celebrated. Some active mother support groups have been established at community level throughout the country with assistance from the Malaysian Breast-feeding Mothers Advisory Association.
More than 50% of women participate in the paid labour force. Paid maternity leave is 60 working days (12 weeks) for the public sector and six to 12 weeks for the private sector. The Government has directed the public sector to set up crèches to facilitate breast-feeding at the workplace and there are tax exemptions for private employers who do this.

**Monitoring and surveillance of nutritional status**

To assess, analyse and monitor the situation for the priority nutrition issues (protein-energy malnutrition, nutritional status of the elderly, low birth weight, breast-feeding and complementary feeding practices, food consumption, micronutrient deficiencies and diet-related noncommunicable diseases), national surveys and studies on dietary intake are periodically conducted. In addition, mother and child health and nutrition are monitored regularly through the antenatal and the under-five clinics.

**Intervention programmes**

Various nutrition-related programmes have been implemented, such as Healthy Lifestyle Campaigns, the Rehabilitation Programme for Malnourished Children and Antenatal Mothers, the Iodine Deficiency Control Programme, Nutrition Promotion Programmes and the Noncommunicable Disease Control Programme. Monitoring and evaluation are part of these programmes.

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