NUTRITION OVERVIEW

The major nutritional problems in Fiji are anaemia among pregnant women and schoolchildren, infant malnutrition, iodine deficiency disorders and rapidly increasing in diet-related noncommunicable diseases.

NUTRITIONAL PROBLEMS

Birth weight

Almost all deliveries (99.9%) occur in health facilities. The 1993 National Nutrition Survey (NNS 1993) showed that an average 11% of infants were born with a low birth weight (<2500 g), 21% among Indians and 4% among Fijians.

Nationwide, the percentage of low birth weight infants decreased from 10.5% in 1995 to 8.52% in 2000\(^2\). However, some re-increases were reported due to unfavorable climatic conditions, mainly in the Western Division of Fiji. For example, during the 1998 drought, a detailed assessment of the health and nutrition status in the Western Division of Fiji showed a significantly increase in low birth weight infants to 12.8%. The most dramatic increase took place in the Indian population, where rates almost doubled from 12.4% (1997) to 22.9%, while Fijians showed only a slight increase from 4.3% to 5%.

Infant feeding

The National Nutrition Survey, 1993, showed that the proportion of infants ever breast-fed was 95%, 47% of them exclusively breast-fed at three months of age, and 25% at three to five months of age. The proportion of mothers breast-feeding children aged 12-17 months was 27%. The rate for breast-feeding initiation within one hour of birth was 87.6%.

In 2001, the rate for breast-feeding initiation within half an hour of birth was estimated at 98% at the hospital level. All babies were being breast-fed upon discharge (December 2000, Ministry of Health figures).

Weaning practices are poor. For instance, "Kali" (abrupt cessation of breast-feeding) still occurs in Fijian villages, where a child aged 9-12 months is taken away from the mother (breast milk) for four nights.

Child growth

The 1993 National Nutrition Survey showed that 7.9% of children under five years of age were underweight. For Indian children, the figure was 15.0% and for the Fijian children 3.1%. The same survey showed that 8.2% of children were wasted (15.5% for Indian and 2.7% for Fijian children), while 2.7% of children under five years old were stunted (4.0% of Indian and 2.2% of Fijian children).

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2 Ministry of Health Statistics Unit, Fiji 2000.
Fijian babies are usually born with an above-average birth weight, but their growth slows down after three to five months.

The 1993 National Nutrition Survey also reported the nutritional status of children aged from five to nine years and from 10 to 17 years. In the range 10 to 17 years, 4.4% of males and 0.4% of females were underweight amongst the Fijians, and 28.3% of males and 13.8% of females were underweight amongst the Indians; 6.3% of males and 3.3% of females were stunted amongst the Fijians, and 15.6% of males and 9.1% of females were stunted amongst the Indians.

In 1999, a cross-sectional study amongst a total of 33,074 children from 58 urban and 46 rural schools showed that malnutrition (both overweight and underweight) was highly prevalent among schoolchildren in Fiji, with only 52.3% of urban students and 58.4% of rural students being of normal weight. Underweight is much more prevalent in rural areas and overweight much more prevalent in urban areas. In urban schools, 24.2% of schoolchildren were overweight, compared with 8.7% in rural schools, including 39.5% of students in urban schools with >90 Fijian enrollment. In urban schools, 19.4% of schoolchildren were underweight, compared with 32.9% in rural schools, including 60.7% of students at rural schools with >90% Indian enrollment.

In 2002, 517 primary schools (of 700 nationwide), with a total of 96,365 children, were assessed. Using the reference standards for Fiji (proportion of children with weight for height: >120% = obese, between 110-120% = overweight, between 90-109% = normal, between 80-89% = moderate, <80% = severe underweight), 18.9% children were found to be overweight/obese, showing a rise in the prevalence of overweight and obesity, which is now comparable to the prevalence of underweight (16.5% of moderately underweight and 7.4% of severely underweight).

**Nutritional anaemia**

The 1993 National Nutrition Survey showed that 39% of children under five years of age were anaemic (Hb<11 g/dl) and 32% of women (Hb<12 g/dl) were anaemic.

Indian women (15-44 years) had a higher rate of anaemia (40%) than Fijian women (24%). In contrast, 16% of men over 15 years of age were found to be anaemic.

Among pregnant women, 62% of the Indians and 52% of the Fijians were anaemic.

In 1998, a subnational survey among pregnant women showed that 40% were anaemic.

The 2001-2002 study on helminthiasis among schoolchildren showed a prevalence of anaemia (Hb <11.5 g/dl) of 2.5% and 8.3% in two different schools.

**Iodine deficiency**

A 1994 survey, carried out in Ba, Sigatoka and Suva, showed a total goitre rate (TGR) of 48.6% among 669 schoolchildren (Fijians and Indians, boys and girls), and a rate of 14.1% among 110 pregnant women. The TGR for pregnant women in CWM Hospital was 60%, while that for pregnant women in Sigatoka Hospital was 39.6%. However, those data, measured by ultrasonography, have not been included in the WHO global database. The WHO database instead reports median urinary iodine for the same 1994 survey: the value is 26 µg among schoolchildren, 137 µg in Suva Antenatal Clinic and 74 µg in Sigatoko Antenatal Clinic.

Fiji started salt iodization in 1996 when restrictions were placed on the import of non-iodized salt for human consumption. In 1998, the total population at risk of iodine deficiency disorders was covered by iodized salt.

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1 Ministry of Health statistics for the 2002 report, not yet published.
2 Hughes R. *Environmental influences on helminthiasis and nutritional status among Pacific Schoolchildren*. Not yet published. For the purpose of this study, country governments selected two schools to be surveyed, one from the capital or commercial centre and the other less accessible. Approximately 150 children aged 5-12 years of age were selected from each school.
3 [http://www3.who.int/whosis/](http://www3.who.int/whosis/)
Vitamin A deficiency

Vitamin A deficiency is not considered as a problem in Fiji at present. However, no nationally representative survey on vitamin A deficiency has been reported within last ten years.

Obesity

The 1993 National Nutrition Survey showed that 23% of adults 18 years and older were overweight, and 10% were obese. Different BMI cut-off points were used for the two major ethnic groups: BMI ≥ 27 (overweight)/32 (obese) for Fijians and BMI ≥ 25 (overweight)/30 (obese) for Indians. Larger proportions of Fijians than Indians were identified as overweight and obese.

Women had a markedly higher rate of overweight/obesity (BMI ≥ 25) than males; 41% compared with 24%. This was particularly high among Fijian women of middle age, reaching 70%. However, it was Indian women who had the greatest increase in BMI with advancing age.

People engaged in light work were more likely to be overweight or obese than those in heavy work, 48% compared with 28%.

The WHO Global Database on BMI reports rates of overweight and obesity (%) in 1993 as follows:

<table>
<thead>
<tr>
<th>Country</th>
<th>Year survey began/ended</th>
<th>Sex</th>
<th>Age range (years)</th>
<th>Overweight (BMI ≥ 25)</th>
<th>Pre-obese (BMI 25-29.99)</th>
<th>Obesity (BMI ≥ 30)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fiji</td>
<td>1993</td>
<td>Male</td>
<td>≥18</td>
<td>32.4</td>
<td>25.1</td>
<td>7.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Female</td>
<td></td>
<td>50.4</td>
<td>29.9</td>
<td>20.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Both sexes</td>
<td></td>
<td>41.7</td>
<td>27.6</td>
<td>14.1</td>
</tr>
</tbody>
</table>

SPC Demography Projections 2001 and Coyne 2000[^4] showed comparisons between the levels of urbanization and obesity in some Pacific island countries; for Fiji, 46% of the population is urban. Among Fiji islands Fijians, 43.2% of males and 64.0% of females have BMI ≥ 25. Among Fiji islands Indians, 18.0% of males and 33.7% of females have BMI ≥ 25.

POLICIES AND PROGRAMMES DIRECTED AT NUTRITION

The 1995 National Food Policy and Nutrition Policy have not been formally endorsed and hence have remained policy guidelines. National Dietary Guidelines were set up for use by professionals in 1991, and published as the *Health and Nutrition guidelines for Fiji*. They were revised in 1999.

The National Food and Nutrition Committee (NFNC) was established in 1982. At the beginning of 1999, the NFNC was incorporated into the Ministry of Health and became the National Food and Nutrition Center (NFNC).

The Fiji Plan of Action on Nutrition (FPAN) was completed in 1997, submitted to the Development Sub-Committee and endorsed by Cabinet in 1998.

The NFNC is mandated by the Ministry of Health to facilitate and coordinate all food and nutrition programmes in Fiji through the framework of the FPAN. This multisectoral committee also monitors the progress of implementation of the FPAN.

The FPAN is being revised into a more practical and easy-to-follow document and will be updated into a plan for the next five years.

Recommendations on infant feeding have been issued by the Ministry of Health in collaboration with the National Food and Nutrition Center. *Canteen Guidelines* were drafted in 2001.

A National Noncommunicable Disease Plan, with an intersectoral mechanism for implementation, is being developed.

A National Coordinating Committee for the Control of Iodine Deficiency Disorders was established in 1994 and is chaired by the Director of Primary and Preventive Health Services, Ministry of Health. Legislation on exclusive importation and sale of iodized salt was produced in 1995. A National Plan of Action for Iodine Deficiency Disorders was adopted in 1998. The ‘Pure Food Act Cap 116’, governing the use of iodized salt, has been drafted.

**Breast-feeding policies**

There is a National Breast-feeding Policy, a National Breast-feeding Committee (BFC) and a Coordinator, and the Baby-Friendly Hospital Initiative (BFHI) has been launched. By the end of 2002, four of the 23 Government maternity facilities (17.4% of government hospital) had been declared baby-friendly and one facility had received a Certificate of Commitment. Reassessment of these hospitals for BFHI was carried out in May 2001.

Training in breast-feeding counselling has been established and World Breast-feeding Week is celebrated. Information materials have been developed. The BFC decided that the curricula of professional schools would integrate all elements of the WHO/UNICEF 18-hour course.

In 1994, the Government adopted the Policy Guideline on Breast-feeding for health workers. Recently, this policy was revised, with the assistance of UNICEF, to make it consistent with international recommendations (exclusive breast-feeding for the first six months of life). The new Breast-feeding Policy for subdivisional maternity facilities and health services and Implementing the BFHI Best Practice Guideline were launched during National Breast-feeding Week Celebrations in August 2002.

In Fiji, the promotion and advertising of the breast-milk substitutes is banned, even though the National Code has been awaiting approval by Cabinet since the 1980s. Some provisions are addressed and taken care of in the Food Safety Bill recently endorsed/approved by Cabinet.

Less than a quarter of women participate in the paid workforce and paid maternity leave is 12 weeks for the public sector and four to eight weeks for the private sector.

**Monitoring and surveillance of nutritional status**

Nutritional status is monitored mainly by dieticians in the divisional and subdivisional hospitals, as well as those working in the public health field. Information is collected routinely on birth weight, nutrition during pregnancy, infant feeding, child growth, BMI and obesity, nutritional anaemia and iodine deficiency. The nutritional status of pre-school children and primary-school children is monitored regularly in maternal and child health clinics and during school visits.

An impact assessment of the FPAN will be made possible through the 3rd National Nutrition Survey, which is to take place in 2003-2005.
\textbf{Intervention programmes}

Most interventions are conducted through the hospitals. There is nutrition counselling for mothers in antenatal and postnatal clinics, as well as maternal and child health clinics, and iron supplementation is provided to anaemic mothers. There are also demonstrations on the preparation of infant foods. Nutrition education/counselling is provided in hospital wards and outpatient clinics, as well as through the media, including radio broadcasts.

In the Makoi district in Suva, a pilot project on obesity and weight control prevention started in 1999.

The Milk Supplementation Program, for moderate and severely undernourished pre-school children, was restarted during World Health Day, April 7\textsuperscript{th} 2002.

Iron/micronutrient fortification/enrichment of flour is in progress and is expected to be launched in 2004.

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