

**TABLE 21**  
**Prevalence of anemia in pregnant women<sup>a</sup> in selected countries in Latin America and the Caribbean.**

Country	Region	Year	Sample size	%	Source of data
Belize	National	1995	4,661	51.7	HC
Bolivia <sup>b</sup>	National	1993	3,606	50.5	HC
Chile	SE Santiago	1993	342	0.9 <sup>c</sup> 1.9	HC
Cuba <sup>d</sup>	Sentinel sites <sup>e</sup>	1993	NR	25.0–35.0	LS
Guatemala <sup>b</sup>	National	1993	NR	35.4 <sup>f</sup>	NS
Nicaragua	National	1993	NR	33.6 <sup>g</sup>	NS
Paraguay	National	1993	385	26.2	HC
Peru	Lima	1992	NR	54.6	LS

**Note:** HC, data from health centers; LS, local survey; NS, national survey; NR, not reported.

<sup>a</sup> Cut-off point Hb <11 g/dl.

<sup>b</sup> Adjusted for altitude.

<sup>c</sup> First trimester.

<sup>d</sup> Havana and Pinar del Rio.

<sup>e</sup> Second and third trimesters.

<sup>f</sup> Women 18–44 years old, pregnant or not.

<sup>g</sup> Adult women, pregnant or not.

ular manifestations of vitamin A deficiency, its consequences are potentially just as devastating for the Region's human and social development.

Most countries have relied on the supplementation of pregnant women with iron to control iron deficiency; no supervision or follow-up has been provided, however, and very little compliance has been reported. The fortification of a target food with iron is increasingly being acknowledged as an adequate solution, even though the impact of this intervention can only be measured in medium to long term. Currently, 18 countries are fortifying at least one product for mass consumption (114).

### Obesity among the Poor: An Emerging Problem in the Region

As a result of the economic difficulties that Latin America and the Caribbean experienced in the 1980s, vast segments of the population migrated from rural to poor urban areas and from poor to less poor countries in search of employment. These massive movements, which have substantially changed these groups' living conditions and lifestyles, have coincided with changes in epidemiological profiles and in dietary and physical activity patterns in the Region. As part of this transition, many countries are experiencing a decrease in mortality from infectious diseases, a reduction in the prevalence of protein-energy malnutrition, and a marked increase in the preva-

lence of overweight and obesity<sup>2</sup> and chronic diseases. For example, in Chile the percentage of children below one standard deviation from the median reference value is 3.7%, while the proportion above one standard deviation is 21.6% (115).

In São Paulo, Brazil, a study of 535 families in a marginal urban population found that 30% of the children had a relative height deficit, and that overweight associated with that condition was present in 5.8% of boys and 6.8% of girls. In addition, 9% of the families showed obesity in adults, coupled with low weight and height in children. These findings demonstrate the coexistence of malnutrition and obesity.

Results from Peru's 1990–1992 ENDES survey, which looked at 4,675 women who had given birth to at least one child in the preceding five years, showed an average body mass index<sup>3</sup> (BMI) of 26.3 kg/m<sup>2</sup>. Furthermore, it was estimated that 17.5% had a BMI of between 26 kg/m<sup>2</sup> and 28.9 kg/m<sup>2</sup> and that 13.2% were above 29 kg/m<sup>2</sup>. The average BMI in metropolitan Lima was 27.2 kg/m<sup>2</sup>. In another study conducted in community kitchens in poor neighborhoods in a Lima district, a 32.6% prevalence of overweight and a 13.1% prevalence of obesity were observed in women.

In Uruguay a greater proportion of obesity was found in women of low socioeconomic status (37.6%) compared to

<sup>2</sup> Obesity is an excess of body fat; consequently, its identification implies measurement of body composition. For simplicity, however, in this chapter the terms "obesity" and "overweight" are used interchangeably.

<sup>3</sup> Body mass index is the ratio of weight (kg) over height <sup>2</sup>(m).

women of high socioeconomic status. The greatest gender differences also were reported in the low-income strata. Based on information obtained during a 15-year period by the PAHO-Kellogg Multicenter Project, "Diet and Health in Latin America and the Caribbean," the proportion of obese adults rose in both Costa Rica and Panama (116).

The association of poverty with malnutrition and infectious diseases, and of affluence with obesity and chronic non-communicable diseases is no longer valid in the high-income countries, and is increasingly less so in the Region's poor countries (117). Obesity among the poor may differ from the obesity found among the more affluent groups within a single country or in the more developed nations. A number of factors may be instrumental in determining these differences, such as genetic-adaptive factors, dietary factors (increase in fat and sugar consumption, the cheapest source of energy, and a reduction in fiber consumption), and sociocultural factors (such as lack of systematic physical activity among poor, sedentary populations). The inequities governing access to promotional messages, health education, and adequate health services result in the public's lack of awareness about the importance that behavioral changes have in achieving healthier lifestyles.

If gender-related factors are taken into account, the gap between the "two obesities" is even more marked: women face greater opportunity limitations, heavier social burdens, and an undervalued image of their bodies. Furthermore, they traditionally have been socially subordinated to men, making them even more susceptible to this complex set of negative influences.

### Importance of Breast-Feeding

In 1997, the Pan American Health Organization sent questionnaires to 34 countries of the Region, to assess breast-feeding practices and activities as part of the implementation of the International Code of Marketing of Breast Milk Substitutes and the "baby friendly" hospital initiative. Twenty of the 25 countries that responded to the questionnaire have formally adopted the International Code, either as legislation or by Ministerial decree, but many have not yet put implementation and monitoring plans in place. Twenty-two of the countries reported that they had established a national breast-feeding committee, and "baby friendly" hospital initiative committees are in place in 17 countries.

Nongovernmental organizations play an active role in the promotion of breast-feeding in 20 of the countries. Twenty-two have written breast-feeding norms that are disseminated to all health personnel. Eighteen countries have a plan of action to implement the "baby friendly" hospital initiative. A

total of 981 hospitals have been designated as "baby friendly" and another 921 are reported to have a certificate of commitment to become "baby friendly." Only six of the responding countries have no such designated hospital. All the countries have shown efforts to prohibit the distribution of free or low cost breast-milk substitutes.

All of the countries reported having a training program on lactation management, and 18 reported having a training program for baby friendly hospital evaluators. Educational programs to promote breast-feeding to the public have been implemented in 22 countries, and mass media is used to promote breast-feeding in 18.

A minimum of 12-week paid maternity leave has been legislated in all countries, and in 18 of them this legislation includes at least two half-hour breast-feeding breaks in an eight-hour workday to new mothers. In most countries, however, women working in the informal sector are not covered by these laws.

Data from national demographic and health surveys or other surveys show that breast-feeding initiation rates exceed 90% in all countries, ranging from 90% in Belize to 98% in Brazil. In contrast to the high rates of breast-feeding initiation, women breast-feed exclusively (defined as giving breast milk as the sole source of food or liquid) only for extremely short periods. The median duration of exclusive breast-feeding ranges from 0.3 months in Paraguay to 2 months in Ecuador. These short periods of exclusive breast-feeding are of particular concern, because exclusive breast-feeding offers the greatest protection against infant morbidity and mortality (118–120). Moreover, the greatest decline in the proportion of infants that are breast-fed exclusively is during the first 2 months of life, the very age when breast-feeding offers the greatest protection against diarrheal and respiratory infections.

For example, in Belize, Colombia, Costa Rica, Nicaragua, and Paraguay, the median duration of breast-feeding is about one year, and the period of peak diarrheal incidence is generally between 9 and 12 months of age. During diarrheal illness, infants decrease their intake of other foods, but continue to consume breast milk. Continued breast-feeding during this period, therefore, is critical to buffer the negative effects of diarrhea on nutritional status. Inasmuch as breast-feeding cessation tends to be permanent, the period between the first week and first month after deliver is the ideal time to try and extend the duration of the practice. Recent evidence shows that when constraints to breast-feeding are removed and women hospitalized for childbirth are given support and information, the duration of exclusive breast-feeding can be considerably lengthened (121). Hospital-based promotion of breast-feeding also is extremely cost-effective (122).