Obesity in Caribbean Children: Its Magnitude and Current Control Efforts

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Over the past forty years the Caribbean countries have seen a significant decrease in mortality and morbidity due to childhood malnutrition and infectious diseases. But as these economies develop we observe a steady increase in the incidence of both obesity and the nutrition-related chronic non-communicable diseases (NCD) among adults.

In developed countries, higher body weights tend to be associated with wealth and high social standing and in developing countries higher body weights tend to be associated with poverty and low social standing. As countries emerge from poverty there is an increased trend in obesity, especially in urban areas. Dietary changes and increasing inactivity are considered the crucial contributory factors that explain this rise. The end result is a progressive rise in overweight and obesity, especially in low-income groups who improve their income and buy high fat/high carbohydrate energy-dense foods. Intake of these foods increases to the detriment of grains, fruits and vegetables.¹

In transition from one pattern to the other, the poor may suffer disproportionately from malnutrition and noncommunicable chronic diseases, such as diabetes and hypertension, associated with an unbalanced nutrition. Social inequities contribute to and exacerbate these inequities in health. In the Caribbean, malnutrition and overnutrition may coexist even within the same family.²

National surveys in different Caribbean countries found that 7–20% of males and 22–48% of females >15 years of age exceeded 120% of reference weight-for-height, or a BMI of 27kg/m². Serial data from Barbados showed increases in the prevalence of obesity from 7 to 16% in males and 33 to 38% in females between 1969 and 1981.³ Serdula et al⁴ have shown that the risk of adult obesity is 2–2.6 times

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greater in obese pre-school children than in non-obese pre-school children and among school-age children, later examined as adults, the corresponding range in risk ratios was 3.9–6.5. Young adult obesity is associated with child obesity (defined as >85th percentile) and this risk increases when the mother or father of the obese child was also obese.  

The global prevalence of overweight amongst preschool children is estimated at 3.3%. Within the Caribbean region we have one of the highest incidences for this age group with St. Lucia having 2.5% of the 0–5 yr. population, Barbados having 3.9%, Trinidad and Tobago having 3.0% and Jamaica having 6.0%. On average, in the Caribbean, 3–6% of preschool children are obese.

The Caribbean Food and Nutrition Institute (CFNI) has also compiled obesity data on children and adolescents in the region. These studies have shown an increased trend in obesity as the children got older. The CFNI Micronutrient studies in Guyana (1997) and Jamaica (1998) measured a total of 1985 children. Nine hundred and forty (940) children aged 0–19 years in Guyana and 1045 children aged 1–16 years old in Jamaica were measured. Overweight and obesity were defined in children 0–10 years as weight-for-height Z-score more than 2.0, and in children older than 10 years, as BMI greater than the 85th percentile. In both countries urban and rural areas were included in the study.

In the Guyanese children overweight and obesity were present in 1%
of the 0–4 years age group and 6.7% of the 15–19 age group, whilst in the Jamaican children 4.1–4.2% of the 1–9 year olds and 15.1% of the 10–16 year olds were overweight or obese. The high prevalence of respectively, whilst in St.Vincent data from 1998 showed a rate of 7.2%.

The trends over the past ten years (1990-99) show a systematic increase in Dominica, from 6.0% (1990) to 9.7% (1999), St.Kitts, from 7.1% (1990) to 10.6% (1999) and St.Vincent from 6.9% (1991) to 7.2% (1998). Alarmingly the percentage of obese 15–19 year olds in Guyana has

![Figure 2: Prevalence of Overweight Among Adolescents (10-19 years)](chart)

Compiled from CFNI data

overweight and obesity in children is evident in all the countries. While in Guyana and Jamaica the rate of overweight and obese children was 4.3%, in Grenada the latest figures show that 1.0% of the 0–5 year olds is overweight or obese. Data collected from Dominica and St. Kitts in 1999 show rates of 9.7% and 10.6% increased from 6.7% in 1996 to 12.9% in 2000.

Various studies carried out by CFNI have also shown that the problem of overweight and obesity is prevalent in the 10–19 year old cohort, with females showing a bigger problem than males in Jamaica (18.9%
Studies carried out among overweight children aged 5–15, in the USA, have shown that 61% already have one or more cardiovascular risk factors and 27% have two or more such factors. Moreover, Type 2 Diabetes Mellitus – so rare in youth that it used to be known as Adult Onset Diabetes Mellitus, has risen dramatically in adolescents. Mortality and morbidity data from the region suggest that the prevalence of Chronic Nutrition-Related Diseases is increasing in all the countries of the region. Studies done in Barbados, St. Lucia and Jamaica all confirm a high prevalence of NCD within the region.

Within this scenario CFNI has initiated strategies to combat obesity in childhood:

1. "Project Lifestyle": Epstein et al. say that the most successful weight reduction programmes are those that combine diet and exercise within a framework of behaviour modification. Three key settings for implementing childhood obesity management support programmes have been identified: the family, the school, and primary care. The provision of education on eating and lifestyle behaviour to parents has been shown significantly to reduce the prevalence of obesity in children of participating families. With this in mind, CFNI has developed a programme “Project Lifestyle” which was piloted in Antigua and Jamaica. The revised programme has been introduced in Trinidad and Tobago, the British Virgin Islands and Antigua. This project aims at introducing the concepts of weight control, healthy eating, physical exercise and behavioural modification, into the school curriculum. Gortmaker et al. state that holding classroom lessons on nutrition and physical health is accompanied by improvements in indices of fitness and body fat level. These are key to Project Lifestyle as well as the incorporation of the Health Promotion strategy of creating supportive environments. Parents, cafeteria staff, vendors and restaurants in close proximity to the school are also targeted. In
addition, by directing preventative efforts to the family of susceptible children there is the added bonus that all members of the family are likely to benefit.

2. Training Programmes

- For health care professionals: The delivery of programmes through primary care has received little formal assessment, and its potential role seems to be undervalued and underused. According to Fruhbeck frequent contact with health professionals from an early age has been identified as an important strategy for effective management of obese children through the provision of advice, encouragement and support for adopting healthy household eating and exercise patterns at an early stage in life. However, in the region only six countries consider it easy to get access to weight management programmes through the country's healthcare system (Anguilla, Belize, Cayman Islands, Dominica, St.Kitts and Turks and Caicos Islands). Another important factor to consider is the perception of caregivers on the potential health problems associated with obesity. Young-Hyman et al state that in a study of African American families, despite the fact that a substantial number of children were obese (57%) and super-obese (12%) only 44% of the caregivers perceived the child's weight to be a potential health problem. CFNI consistently carries out training programmes aimed at various health care professionals on the management and prevention of non-communicable diseases, with special emphasis on the problem of obesity. These have been instituted all over the region with hundreds of professionals being trained with the aim of them disseminating this knowledge to the wider audience at a community or clinical level.

- For caregivers in the field of infant feeding: Baughcum et al found that nearly all obese mothers regarded themselves as overweight. However, the majority of mothers did not view their overweight children as overweight, and this misperception was more common in mothers with less education. Childhood obesity prevention efforts are unlikely to be successful without a better understanding of how mothers perceive the problem of overweight in their pre-school children. CFNI has instituted training programmes on infant feeding in 12 countries. The
aim of this programme is to give caregivers the most updated scientific knowledge so that they in turn can educate mothers and mothers-to-be, on how to feed children in a healthy way. As part of this strategy CFNI has also deve-
loped Guidelines on Young Child Feeding in the Caribbean as it considers this aspect of behavioral modification to be very important in the prevention of obesity.

The measures being taken by CFNI are an important contribution to the prevention of obesity. This in turn is a cost-effective way of decreasing the mortality and morbidity from nutrition-related non-communicable diseases. However, much more has to be invested in the solution of this problem and a multi-sectoral approach must be coordinated to ensure that all the human, financial and managerial resources are utilized at their utmost potential. This coordinated effort should aim at changing the behavioural patterns of the peoples of the Caribbean to direct them towards a healthier lifestyle which not only benefits the individual, at a personal level, but also benefits society at large.

A healthier Caribbean people is a more productive and more efficient people which will be reflected as a more productive and efficient region, which in-turn would have a beneficial effect on the global scenario.

References


"The aim is not to use nutrition education as a habit forming mechanism and as an end in itself. Rather, it is a means for people to internalize nutrition knowledge, making it a part of their own models of the world and intuitively applicable to other nutritional problems and dietary issues".

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