

**THE OBESITY EPIDEMIC: TO WHAT EXTENT IS THIS AN  
INDIVIDUAL BEHAVIORAL PROBLEM?**  
(In press)

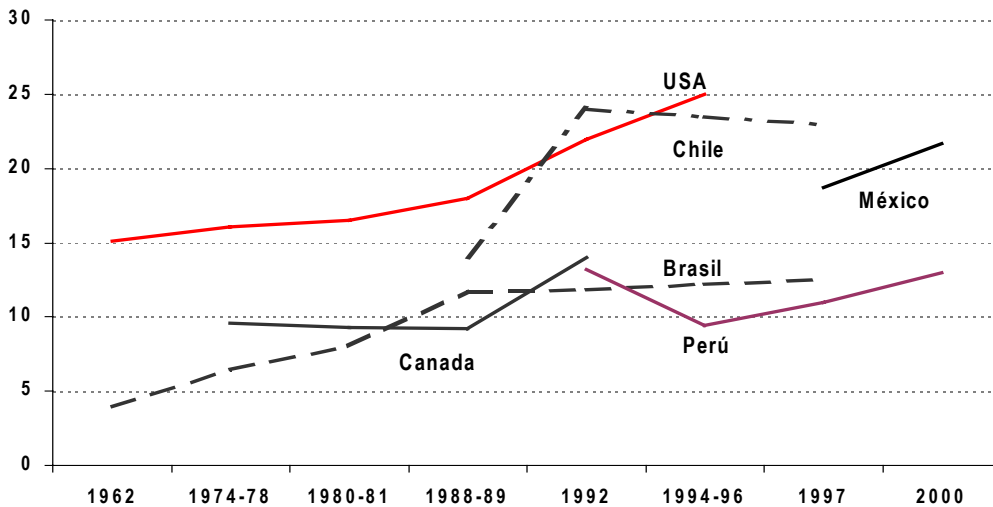
*International Conference Diabetes and Obesity, Ocho Rios, Jamaica, March 2002*

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**Introduction**

Obesity in the Americas is on the rise. As illustrated in Graph 1, in countries, where national representative data exists, in more than one point in time, the prevalence of obesity (BMI  $\geq 30$  kg/m<sup>2</sup>) describes an upward trend. In addition, during the last 10 years, this phenomenon, described as a by-product of affluence and economic development, has been increasingly observed among lower income groups of the population. The causes of this epidemic are clearly multifactorial. Recent information suggests that the epidemic is fueled by increased purchasing power by low/middle income groups, but countered by better education. Abundant access to food, particularly processed foods of high energy and fat content, have been pointed out, along with sedentary lifestyles, to be the main underlying mechanisms. However, by adopting good dietary practices and engaging in a more active life, the highly educated segments of middle-income

**Graph 1. Obesity (BMI  $\geq 30$ ) trends among women in The Americas**



SOURCE: Data from national representative surveys

societies have eluded the flip side of modernization and economic growth. Such behavioral changes explain in part the girth reduction observed especially among high-income women, as the Brazilian example shows. There, obesity rates decreased from 13 to 8 % over the last 30 years period.

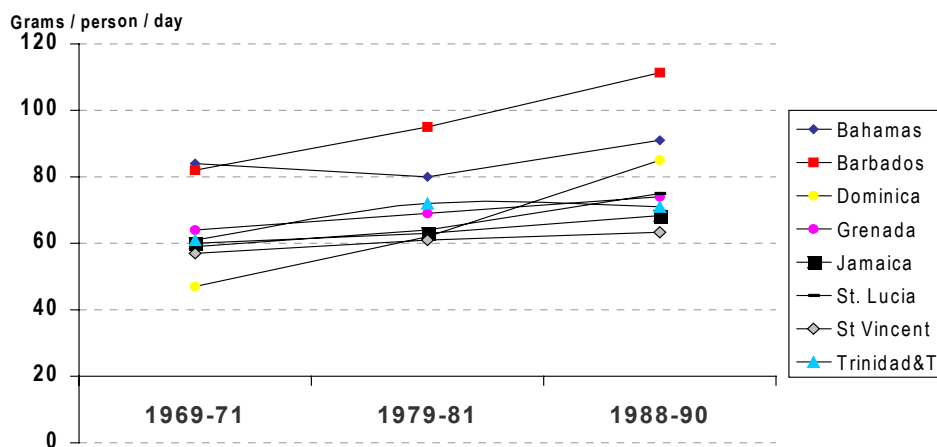
Although much can be achieved through better education and broader access to information on the benefits of better food choices and regular physical activity, this is unlikely, on its own, to stall the epidemic. The case of smoking control campaigns in the U.S. is a good example of the important role of the context and policies in curbing tobacco consumption. It was not until a critical mass of information and education met with taxation policies and strict indoor smoking bans, that a steadily reduction in population smoking rates started to be observed. These were environmental interventions that “paved” the way to information campaigns, making possible the behavioral change.

A closer examination of the determinants of overweight indicates that economic, marketing and cultural forces play an important role, which cannot be ignored. Obesity –especially in its current epidemic expression–, is not primarily a *medical* problem, so better understanding the contextual forces that made possible its emergence, is an imperative if we are to stop and reverse current trends.

### Food consumption: Hidden forces behind individual choice

Food consumption patterns have undergone dramatic changes in the Region of Latin America and the Caribbean (LAC) in the last two decades. Graphs 2 and 3 exemplify how detrimental these changes have been in abandoning traditional foods such as roots and vegetables, which are high in complex carbohydrates, and giving way to an increased supply and demand for processed foods, refined grains, oils and meats. The low price of the latter products is due to large-scale economies and global markets, severely affecting local food production, farming and marketing practices. Often, this results in higher prices for traditional foods than for imported ones. Lower prices coupled with powerful marketing strategies are the key mechanisms in shaping food consumption behavior of middle and low social sectors in LAC (Aguirre, 2000; Monteiro, 2000) and in other parts of the world as well (Evans, 2001).

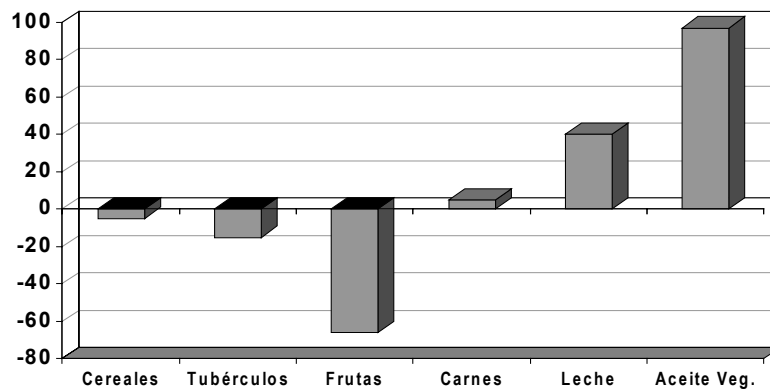
Graph 2. Fat consumption in the Caribbean from 1969 to 1990



FAO Sisvan Network, 1996

Compounding the above situation is the issue of diminishing biodiversity in the world. The growing dominance of industrial capital in agriculture, which has converted farmers into “industrial employees”, focuses only on a small number of highly profitable producers, curtailing the production of vegetables and some cereals. We are confronted by upstream factors, beyond income and education, which also affect food availability and consumption patterns. Europe after World War II is an illustration of how policy incentives, in the period 1950-1989, caused a 50% increase in the production of meat and dairy and a 25% decrease in the availability of vegetables and cereals. The availability of fruits is a serious problem now facing some European countries and has recently drawn the attention of the World Health Organization. Presently, several countries have a per capita daily fruit availability, which is three times lower than the recommended 400 grams/day, indicating a possible need to put important trade or production policies in place to remedy a potential nutritional problem (WHO/CINDI, 2000). Again, this is not only a matter of individual choice.

**Graph 3. Changes (%) in food groups consumption in seven Brazilian cities: 1962 a 1988**



Elaboration: E. Jacoby based on data from Monteiro C, 2000

The above facts suggest that if we are to make the difference in terms of food consumption patterns, much needs to be done in areas, which are not traditionally seen in the realm of public health. Thus, public policies may be needed to defend and foster local production and markets for healthy foods. By the same token, regulation and taxation are essential tools to prevent unhealthy products from reaching the public. However, the latter raises concerns related to trade liberalization and health. For instance, according to GATT, commodities can be classified into different categories: legal and beneficial, legal and of doubtful benefit, legal and harmful, or illegal and harmful. Tobacco is an example in which regulation and taxation have been instrumental in cutting back smoking rates. Nevertheless, a product with high content of saturated fat would fall in the category of *legal and of doubtful benefit* since it is not the product itself that is harmful but the amount in which the product is consumed. Thus, according to current trade regulations only contaminated foods can be classified as hazardous commodities (Evans, 2001).

At this point several questions arise: Can tariffs and taxes be used to regulate the influx of food products at the national level when the product is regarded as a threat to people’s health? And in doing so, can countries safely defy established world trade rules without affecting other economic and social interests of their own? And lastly, although not less important: Is this a matter of

concern to public health practitioners or to politicians? There seems to be no clear-cut response to those questions. However, if we believe they are of public health interest, it will certainly be necessary to place nutrition at a higher level in both regional and national political agendas. In this vein, one serious obstacle that most of us face is not that politicians are indifferent to the ill consequences of poor nutrition, but that they want the problem solved in a 4-year period.

### **Inactivity: “If we build it they will come...”**

Physical inactivity is another important contributor to the region’s obesity epidemic. Available data from four national representative surveys on recreational physical activity (data still unpublished) indicate that the prevalence of physical inactivity is rampant. Nearly three-fourths of the Region’s population leads sedentary lifestyle. Some of the physical inactivity patterns that emerge from those surveys are the following:

- Three-fourths of adults do not engage in regular physical activity (Graph 4)
- People of all ages lead inactive lifestyles
- Physical activity decreases with age
- Women tend to be more inactive than men
- Low-income populations are more physically inactive than affluent sectors (Graph 5).

However, sedentary lifestyles are not only a matter of individual choice and education or information –this, certainly, does not deny the fact that we still can do considerably more and better in terms of counseling and information. Customarily, studies on determinants of inactivity have emphasized individually assessed variables (e.g. gender, cultural factors, age, perceived barriers etc). However, as it has become increasingly evident, those variables explain just a small portion of the variance of physical inactivity (Sallis J, 2002). New research shows that environmental variables as accessibility to recreational space, opportunities to physical activity, aesthetic factors, weather and safety; help into better explaining inactivity patterns (Humpel N, 2002).

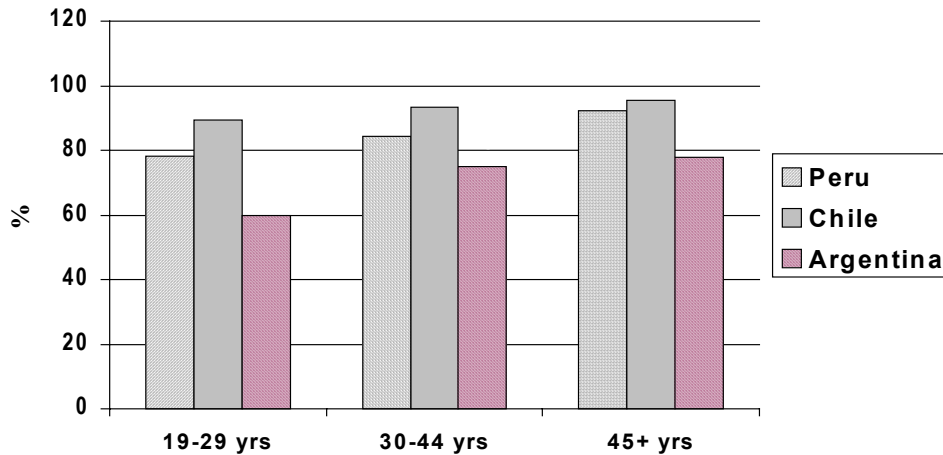
A clearer picture of the problem seems to be emerging. Behind the individually assessed inactivity lay diverse environmental factors. Contemporary cities are designed for motorized transportation and avidly introduce new labor-saving devices, both resulting in people walking or biking less often than in the past. In addition –or as a result of the aforementioned drive--, across urban areas in the Americas, most neighborhoods lack supportive environments for public recreation and physical activity, which represents a major constraint for engaging in outdoor activities on a regular basis. The lack of sidewalks, parks, places to exercise, limited access to recreational areas, heavy traffic, air pollution and safety concerns, are only some of the environmental barriers that prevent people from living a physically active lifestyle.

It is worth noting, at this point, that many local governments are already addressing many of the previously mentioned limitations to physical activity in urban settings, although not necessarily inspired by health principles. Take for example the words of Mr Enrique Peñalosa, the mayor of Bogota, Colombia, in April this year:

*“We had to build a city not for businesses or automobiles, but for children and thus for people. Instead of building highways, we restricted car use...we invested in high-quality sidewalks, pedestrian streets, parks, bicycle paths, libraries; we got rid of thousands of cluttering commercial signs and planted trees...All our everyday efforts have one objective: Happiness”* Grist Magazine 04 April 2002

**Graph 4: Physical inactivity in Peru, Chile and Argentina by age**

Inactivity defined as not practicing walking, jogging or sports



**SOURCES** Peru: Cortez and Jacoby, Encuesta Nacional en Niveles de Vida en Perú, 2000; Chile: Campos M et.al, Encuesta Nacional de Caracterización Socioeconómica (CASEN), 2000; Argentina: Erdociain L. et.al., Encuesta Permanente de Hogares en Buenos Aires, 2000. Graph elaboration: E. Jacoby

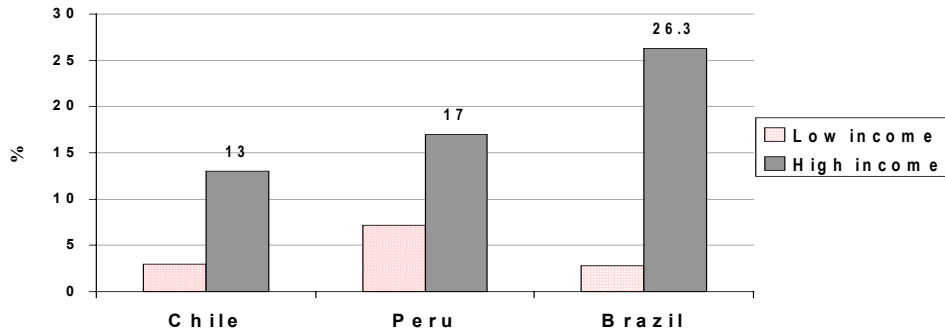
Urban planners, environmentalist, transit and sport authorities are, in many cases, converging also in the need for a “better place to life” thus offering a good opportunity for the development of broad and inclusive public coalitions (O’Meara M, 2002).

An approach to physical activity interventions stressing more walking and biking at the population level, is in good sync with evidence from epidemiological and clinical studies. The physical and mental health benefits of a lifestyle approach to moderate physical activity –e.g. walking and biking— are similar to those described for a structured approach e.g. aerobics or practicing sports (Dunn et.al, 1999; Andersen et.al., 1999). Also, lifestyle interventions, as brisk walking, biking and taking the stairs can be easily integrated into our daily life (especially for adults) and also help people to adopt and adhere to physical activity more firmly than to any form of vigorous exercise (Laitakari et.al. 1996).

There is some information that suggests that lifestyle interventions at the population level might result in positive health outcomes. For example, an interesting association between obesity rates with non-motorized transportation can be observed in Graph 6. In the Netherlands and Sweden, with the highest pedestrian and biking rates, obesity is less of a problem than in the other car-bound societies.

In the era of behavioral change approach, public health need to draw inspiration from its original societal approach to health and look beyond individual behavior and lifestyle modification strategies. Mounting evidence suggests that environmental and policy approaches aimed at increasing population's physical activity levels are a much needed strategy.

**Graph 5: Recreational physical activity by income level in women**



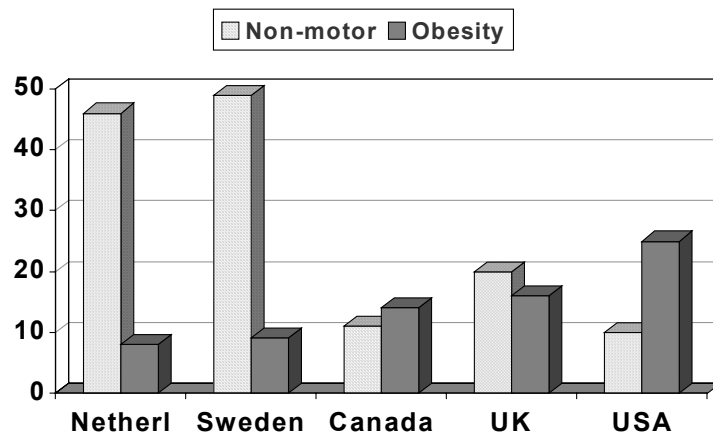
SOURCES: Brazil: Monteiro C, 2000; Chile: CASEN, 2000; Peru: Instituto de Estadística, 1997

### Children and adolescents

Kids and youth, however, need to be exposed to physical activity in a more intense and systematic way. Given the high levels of inactivity and the prevailing culture that supports it, it is worrisome the decreasing attention paid to physical education in schools. In many Latin American countries, physical education is continuously being erased from the curriculum or reduced to one hour a week of a poorly structured activity. Being active for life can be greatly stimulated by early adoption of the habit of exercising; therefore, the role of the school to foster physical activity is of utmost importance and constitutes a cost effective environmental intervention.

A recent evaluation of preventive interventions by the CDC, concludes that physical education interventions are “strongly recommended” in so far as they increase both, the amount of time devoted to PE classes as well as the amount of time children are active during PE classes. On

**Graph 6. Percentage Non-motorized travel (walking and biking) and obesity rates in selected countries**



Victoria Transport Institute, 2002 and WHO,2000. Elaboration: E.Jacoby

the other hand, health education, that is, providing information to children, was rated as an “Insufficient evidence” type of intervention (CDC,2001).

Unlike the modification of food consumption patterns, the promotion of environments that promote physical activity is in a certain manner less influenced by economic and commercial forces, beyond the control and influence of public health professionals. However, the multi sectoral approach seems a indispensable ingredient.

Moreover, several social sectors such as the educational sector, city councils, urban planners, transportation and sport authorities and public health professionals, to name a few, are interested in promoting converging activities such as active living, public recreational spaces, safer streets, exercise and sports facilities. This is of great importance and a crucial element in the effort to advance in the active living initiative in LAC.

### **What are the challenges?**

The following are some of the issues that we deem important in the near future, although the list may not be a comprehensive one. For example, some critical aspects related to food and nutrition are somehow left behind. However, it may help us to estimate the magnitude of the tasks ahead from a preventive and promotional viewpoint. The tasks need leadership from a public health sector with a coherent and persuasive vision of the problem.

1. *Visibility.* Gain visibility of current problems and the need to tackle them. This requires more and better data on behavioral trends on physical activity, smoking, dietary patterns, as well as on obesity and non-communicable diseases;
2. *Need for partnership.* International and governmental agencies, the academic sector, NGOs and donors, need to recognize the new problems brought about by the nutrition and health transition process. The establishment of a common vision on those problems is desirable.
3. *Environmental and policy approach* to behavioral change. New policies and regulations at the global, national and local levels are necessary if we are to expect significant and important population changes. The key is to promote active living on every day life, complemented by sports and other recreational activities.
4. *Health systems redesign.* Inclusion of primary and secondary preventive programs as part of HS routine activities. Decentralization of HS and partnership with local governments are crucial in so far as they are concerned with population problems and intervention impact. Also important will be the establishment of economic incentives for behavioral change and health maintenance in health insurance policies.
5. *Five interventions worth undertaking.* These interventions include intense use of the media for health promotion purposes and the creation of physically active supportive environments at the workplace, in schools and communities/cities. In addition, public health sector and health professionals can make an important contribution by adhering to the promotion of physical activity and healthy diet.
6. *Upstream factors related to a healthy and diverse diet.* Nutritionists and public health practitioners need to expand current focus on individual counseling to include a more comprehensive vision of nutritional problems. Including, issues of production, trade and marketing that also affect people choices. We are still in the early stages in this regard.

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