

## EDITORIAL

## General guidelines for the sale and distribution of food and beverages consumed by students in basic education establishments

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In this number of *Boletín Médico del Hospital Infantil de México*, a critical analysis appears of the Acuerdo Nacional para la Salud Alimentaria (National Agreement for Healthy Eating).<sup>1</sup> This Agreement was published as a proposal of the Ministry of Health. We describe the main bases on which this Agreement has been elaborated.

Never before in the medical history of this country have we been given the task of promoting healthier environments to halt the growing epidemic of obesity through guidelines established for the sale and distribution of foods in schools. These guidelines include actions, technical criteria and procedures that are part of the commitments established under the Acuerdo Nacional para la Salud Alimentaria (ANSA), presented by President Calderón on January 25, 2010. The design and implementation show the commitment of two Secretaries who worked together and coordinated to meet the commitments set forth in the agreement mentioned. The following describes the health problem and the framework, which developed the guidelines as well as its objectives and principal characteristics.

### Overweight and Obesity: The Problem

Undoubtedly, the epidemic of overweight and obesity is currently one of the principal public health problems of the country. Currently, Mexico is the country experiencing the

fastest weight gain, which has ranked us in second place for obesity among the countries of the Organization for Economic Cooperation and Development (OECD), with values very close to first place (U.S.).<sup>2</sup> About 70% of the population >18 years of age are overweight or obese, a condition that, in turn, has led to an accelerated growth of diseases such as diabetes mellitus, which is attributable to excess weight in 90% of the cases. Other related, non-communicable chronic diseases are arterial hypertension, dyslipidemia, coronary heart disease, stroke, osteoarthritis, and cancers of the breast, esophagus, colon, endometrium and kidney, to name those most relevant.<sup>3</sup>

According to the Encuesta Nacional de Salud y Nutrición 2006 (ENSANUT), >4 million children between 5 and 11 years of age are at risk. The combined prevalence of overweight and obesity occurs in one in four children (26%), whereas one in three adolescents demonstrate this condition (31%). This represents >6 million adolescents, for which there will be 42.5 million adults >20 years of age with weight problems. ENSANUT itself estimates that if the trend does not change, in 10 years 90% of the population will be obese or overweight.<sup>4</sup>

### Consequences of Overweight and Obesity in Childhood

Overweight and obesity among children trigger the onset of several diseases that were previously only seen in an adult population. In a study conducted at the Hospital Infantil de México Federico Gómez in overweight and obese children 4 to 18 years of age, it was noted that of 100 children studied, 16% were hypertensive and 50% had the metabolic syndrome, including high levels of triglycerides and cholesterol and high blood pressure problems.<sup>5</sup>

Children who are overweight or obese have a higher risk of retaining the weight as adults. Persons who develop illnesses related to overweight and obesity are sick on

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average for 18.5 years of their lives. Obesity is responsible for 8 to 10% of premature deaths in Mexico, which has also led to the estimation that the current generation will have a shorter life expectancy.

With regard to direct and indirect costs of overweight and obesity, we have observed a rapid increase and an estimated cost for lost productivity, which in 2008 was 25,099 million pesos and will reach 72,951 million pesos in 2017. The direct cost for medical care of 42,246 million pesos in 2008 will increase to 77,909 million pesos in 2017 (figures under conservative scenarios), which would represent between 60.5 and 79.5% of public federal spending on health services for the 2008 budget. The economic burden of these costs for public health services is a real threat to the sustainability of the system and to individual households.

### **Meals in Schools**

In a recent study by the National Institute of Public Health,<sup>6</sup> it was reported that children, both girls and boys, as well as adolescents, during the school day of 4.5 h, on average consume 560 kcal, which represents 31% of their daily energy requirement.

There is a high consumption of sugar-containing beverages, chips and candy within the schools and 49.3% of the students eat tortas or tacos, 48.8% ingested *Frutisi*<sup>™</sup> or other sweetened beverages, 35% consumed candy, 28.4% consumed snack chips and only 8.2% of the students consumed fruits.<sup>7</sup> The most important characteristic is that these foods are high in fats and carbohydrates indicating that even moderate amounts represent an important energy input. Another important fact is that 87% of the children receive money to buy food in the school or outside of it. In addition to this, young boys and girls and adolescents participate in less physical activity and spend more time watching television or playing computer games. From an early age they are accustomed to physical inactivity. Another major factor is the saturation of messages in the mass media oriented towards foods with little or no nutritional value.

### **Interventions against Overweight and Obesity**

Under an ecological approach that identifies overweight closely associated with healthcare determinants related to obesigenic environments, there is a need to change the settings to make a more realistic objective to modify eating habits and facilitate the change in behavior.

Nevertheless, modification of the determinants is not a task for the public health sector. To really promote health and address the causes, the actions of the Ministry of Health are found to be overrun in tools and power because the determinants depend on all the orders from government at federal, state and municipal levels as well as other government sectors, particularly economics, agriculture, finance, education, social development, sports, water, food industry and, of course, the social sector.

Since 2004, the WHO World Health Assembly, of which Mexico is a member, approved the “Global Strategy on Diet, Physical Activity and Health” where we pledged to follow its recommendations, including the inclusion of health in public policy for healthy eating and physical activity, in an approach of environments and conditions that favor them.<sup>8</sup>

With this background, during the previous year we integrated the national and international evidence in intersectorial working groups with national and international experts, contribution of WHO, and with industrial organizations to agree on immediate and mediate actions that help drive the actions. The result was the Acuerdo Nacional para la Salud Alimentaria (ANSA), a strategy against overweight and obesity presented on January 25, 2010.<sup>9</sup> ANSA represents a Mexican government policy that fully endorses the Federal Executive that promotes and ensures the participation of 15 governmental agencies, academia, professional groups, society and industry, to jointly assume shared responsibility of more than 100 shares with a common goal: to halt the epidemic of overweight and obesity. The goals are to reverse rates of overweight in children 2 to 5 years of age, to halt the growth of this epidemic in children 5 to 19 years of age, and to delay the growth of the epidemic in adults.

ANSA includes the following ten strategic objectives and addresses the problem in an integral manner, aware that with individual actions we would have little impact:<sup>10</sup>

- 1) Promoting physical activity of our population in school, work, community and recreation environments with the collaboration of public, private and social sectors
- 2) Increase the availability, accessibility and consumption of plain drinking water
- 3) Reduce the consumption of fats and sugar in beverages

- 4) Increase daily intake of fruits and vegetables, legumes, whole grains cereal and fiber in the diet, increasing their availability, accessibility and promoting their consumption
- 5) Improve the public's ability to make informed decisions about a proper diet through useful, easy to understand labeling and to promote nutrition and health literacy
- 6) Promote and protect exclusive breastfeeding in the newborn for the first 6 months and to promote complementary adequate feeding after this age
- 7) Reduce consumption of sugars and other caloric sweeteners added to foods, increasing food availability and accessibility of low- or no- added caloric sweeteners
- 8) Decrease daily consumption of saturated fats in the diet and minimize consumption of trans fats from commercial sources
- 9) Inform the public about controlling recommended portion sizes in the home preparation of foods, being accessible in permitted processed foods and include restaurants and food outlets in offering small portion sizes
- 10) Reduce daily sodium intake, reducing the amount of added sodium and increasing the availability and accessibility of low- or no-sodium products

### **The School Environment and Opportunity in Early Stages of Life**

The school is where young girls and boys and adolescents acquire the skills to build their own development and participate actively and responsibly in their community. It is, therefore, one of the most influential places to achieve the adoption of healthy lifestyles. Children's habits start at home with everyday learning with the help of their parents. However, social, economic and cultural factors intervene that are strengthened in the schools and in the environment in which they develop.

In the case of ANSA, under integral actions and in collaboration with other government agencies, this agreement was developed together with the Ministry of Public Education and the Program of Action in an Educational Context,<sup>11</sup> with three basic components listed below:

- Promotion and health education (nutrition literacy)—To achieve this, we work in the enrich-

ment of the content of free textbooks with food-themed guidance, health care and physical activity, which will be supported with audio-visual educational materials, flyers and technology. Actions will also be directed towards parents, teachers, school administrators and the entire school community.

- Promotion of regular physical activity—Interagency cooperative actions for promoting activity plans in the schools with a focus on gender equality and the development of games and interactive materials to promote popular games. The activity must incorporate at least 30 min of moderate physical activity in the beginning, within the classroom and during recess activities. It is worth mentioning that the plan also offers extracurricular activities involving sports, social and cultural activities, within and outside the school context.
- Access and availability of healthy foods and drinks that provide proper nutrition—The strategic plan, established from the beginning, identified the need to issue a regulation that defined the characteristics of foods and beverages that could be distributed in the schools. This component resulted in the Guidelines.

### **Guidelines**

These guidelines have the objective that the schools prepare and dispense food to help achieve a proper nutrition, to unify the efforts and actions in the federal entities, to promote a culture of healthy eating habits and to encourage a reflection to recognize health as a basic component in the development of children and adolescents.<sup>12</sup>

These guidelines are part of an educational strategy, which seeks to train children to make appropriate decisions about their health. Likewise, they should guide those persons who are responsible for the preparation of food in schools as well as teachers and parents to offer foods that are within the recommended energy intake of school nutrition.

It is conceived as a micro-environment, not seeking the sale of this food to the public, but only to establish the stage for the type of processed food and beverages and preparations for their nutritional value that are recommended for consumption and sale in commercial establishments for school consumption.

For this, the guidelines have chapters with topics such as principles of proper nutrition, promoting a culture of

proper feedings, forming a committee for the establishment of school food and beverage consumption, hygienic conditions of the preparation sites (cleanliness in the food and beverage preparation area, the role that should be given to the suppliers or food providers, educational authorities and teachers), rights and obligations of parents, healthcare authorities, and planning, evaluating and monitoring.

As a complement to the guidelines, a technical annex is also published with the criteria to be met by the nutritious foods to be available to the children. This places Mexico among the top 16 countries with specific criteria in the school environment. Mexico is, without doubt, one of the most advanced in Latin America. The guidelines provide the following benefits:

- Actively promote the consumption of plain and safe drinking water, low fat and fat-free milk, and fruits and vegetables in a manner that they are consumed in preference to any other foods
  - Establish nutrient criteria and maximum values of micronutrients in accordance with international recommendations
  - Propose a decrease in the average caloric intake in primary schools, from 433 to 276 kcal, which represents 36% fewer calories
  - Establish hygienic and management characteristics of food prepared in schools, representing 80% of the food consumed by school-age children
  - Only allow the sale of foods with reduced-fat (total, saturated and trans fats), sugars and sodium. In the first stage, the main focus is a reduction in fat consumption, which has been shown to have a direct link to obesity. This will then continue with the reduction of fat along with reduction in sugar and salt
  - With the criteria established, we did not allow the sale of 91% of the snacks and 51% of the pastries and cookies in the first school year and gradually, beginning in 2012, 98% of the snacks and 82% of pastries and cookies would be eliminated, which are part of the current supply in the market
  - Elementary schools establish the commitment to not sell sugar-sweetened beverages
  - When considering the school meal, it should be a combination of foods that are ideally comprised of one serving of fruit or vegetables, a prepared food (sandwich, baked quesadilla) and plain drinking water.
- Elimination of packages with multiple servings
    - To guarantee proper implementation of the guidelines, we have developed the following actions:
      - Two national workshops with the participation of authorities and operational staff of the Ministry of Public Education (SEP), Ministry of Agriculture, Livestock, Rural Development, Fisheries and Food (SAGARPA)
      - Workshops and meetings in states with the participants at a local level, including responsible municipal officials to support control of the sale of foods near school locations
      - We developed, in coordination with SEP, various manuals and educational materials with their highlights being the following:
        - Manual for the preparation of food and beverages on the premises for consumption—Guidance for those responsible for the establishment for school consumption for the proper implementation and compliance of the General Guidelines and the Single Annex.
        - Guide for principals and teachers—Provides information of the key factors that facilitate the implementation of actions for better health, and also to recognize the challenges of generating a new culture of health and promote the analysis and discussion by the educational community to take actions, as well as to ensure and evaluate their results.
        - Manual for parents and the entire family—Provides guidance for parents to identify the best way to care for and protect the health of the family through proper nutrition and the practice of daily exercise.
        - Audiovisual Series: School and Health Food
          1. Action Program for the School Context
          2. Overweight and Obesity
          3. Food Guidance for Elementary Schools
          4. Promotion Physical Activities in the School
          5. Preschool Health Education
          6. Primary Health Education
          7. Secondary Health Education

- Web site construction will be implemented for the registration of food and industrial validation of those products that meet the criteria for sale in schools.<sup>12</sup>

Follow-up actions for the implementation of the guidelines are as follows:

- Design and implementation of an educational campaign aimed at children and teenagers about the importance of having a healthy lifestyle (Proper Food + Physical Activity = Healthy Living)
- Maintenance and updating of the Portal website<sup>13</sup>
- Monitoring program in the schools
- Development of research to evaluate the implementation and impact of the guidelines
- Monitoring of food science for permitted products and their consistency with the information contained on the labels
- Preparation and distribution of educational materials for different population groups such as recipes, practical recommendations for preparation of snacks, coloring books for children and other printed materials.

Of course, these first steps require a process of improvement in which we will identify and strengthen the successes and modify or eliminate the less effective aspects. Likewise, the guidelines should be placed as the answer to one of the three strategic lines of the program in the school context of ANSA. A great effort resulted from a strong conviction and political will of the educational authorities, which in our opinion should be recognized and supported by the academic community and healthcare professionals.

Currently we continue to work in coordination with other agencies and with the private sector to modify external environmental factors that have influence over children and students, especially those who have to oversee the participation of the food industry, labeling and advertising.

## REFERENCES

1. Flores HS, Klünder K M, Medina BP. Análisis crítico del ACUERDO mediante el cual se establecen los lineamientos generales para el expendio o distribución de alimentos y bebidas en los establecimientos de consumo escolar en los planteles de educación básica. *Bol Med Hosp Infant Mex* 2011;68:69-78.
2. Sasso F. Obesity and the Economics of Prevention: Fit not Fat. Organization for the Economic Cooperation and Development (OECD Publishing); 2010.
3. Stevens G, Dias RH, Thomas KJ, Rivera JA, Carvalho N, Barquera S, et al. Characterizing the epidemiological transition in Mexico: national and subnational burden of diseases, injuries and risk factors. *PLoS Med* 2008;5:e125.
4. Olaiz-Fernández G, Rivera-Dommarco J, Shamah-Levy T, Rojas R, Villalpando-Hernández S, Hernández-Avila M, Sepúlveda-Amor J. Encuesta Nacional de Salud y Nutrición 2006. Cuernavaca, México: Instituto Nacional de Salud Pública; 2006.
5. García Morales L. Primera etapa del estudio sobre obesidad infantil. Servicio de Endocrinología Pediátrica, Hospital Infantil de México Federico Gómez. Secretaría de Salud. Comunicado de Prensa 044/25 January 2006.
6. Documento técnico de recomendaciones para guías de alimentación en escuelas primarias públicas: caracterización del ambiente escolar en escuelas primarias de estados de la República Mexicana y recomendaciones para un "refrigerio escolar saludable." Instituto Nacional de Salud Pública/Secretaría de Salud; 2010.
7. Shamah-Levy T, Morales-Ruan MC, Cuevas-Nasu L. Contribución del Programa de Desayunos Escolares del Sistema de Desarrollo Integral de la Familia DIF Estado de México en el estado de nutrición de los niños escolares. México: Instituto Nacional de Salud Pública; 2007.
8. World Health Organization. Global Strategy on Diet, Physical Activity and Health. Resolution of the Fifty-seventh World Health Assembly. WHA57.17. Geneva: World Health Organization; 2004. pp. 15-21. Available at: [http://www.who.int/dietphysicalactivity/strategy/eb11344/strategy\\_english\\_web.pdf](http://www.who.int/dietphysicalactivity/strategy/eb11344/strategy_english_web.pdf)
9. Secretaría de Salud. Bases técnicas del Acuerdo Nacional para la Salud Alimentaria. Estrategia contra el sobrepeso y la obesidad. México: Secretaría de Salud; 2010. Available at: [http://portal.salud.gob.mx/sites/salud/descargas/pdf/ANSA\\_bases\\_tecnicas.pdf](http://portal.salud.gob.mx/sites/salud/descargas/pdf/ANSA_bases_tecnicas.pdf)
10. Secretaría de Salud. Acuerdo Nacional para la Salud Alimentaria. Estrategia contra el sobrepeso y la obesidad. México: Secretaría de Salud; 2010. Available at: [http://portal.salud.gob.mx/sites/salud/descargas/pdf/ANSA\\_acuerdo\\_original.pdf](http://portal.salud.gob.mx/sites/salud/descargas/pdf/ANSA_acuerdo_original.pdf)
11. Secretaría de Salud. Acuerdo Nacional para la Salud Alimentaria. Estrategia contra el sobrepeso y la obesidad. Programa de Acción en el Contexto Escolar. México: Secretaría de Salud; 2010. Available at: [http://www.sep.gob.mx/work/models/sep1/Resource/635/1/images/programa-deaccion\\_sept.pdf](http://www.sep.gob.mx/work/models/sep1/Resource/635/1/images/programa-deaccion_sept.pdf)
12. Secretaría de Salud. ACUERDO mediante el cual se establecen los lineamientos generales para el expendio o distribución de alimentos y bebidas en los establecimientos de consumo escolar de los planteles de educación básica. México: Diario Oficial de la Federación; 2010. Available at: [http://www.sep.gob.mx/work/models/sep1/Resource/635/1/images/acuerdo-lineamientos\\_sept.pdf](http://www.sep.gob.mx/work/models/sep1/Resource/635/1/images/acuerdo-lineamientos_sept.pdf)
13. Instituto Nacional de Salud Pública. Lineamientos para el Expendio o Distribución de Alimentos y Bebidas en Establecimientos de Consumo Escolar de los Planteles de Educación Básica. Available at: <http://www.insp.mx/alimentosescolares/>