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Today's issue Procedures Services Laws and Regulations Frequently Asked Questions



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DOF: 05/16/2014

AGREEMENT by which the general guidelines for the sale and distribution of food and beverages prepared and processed in the schools of the National Educational System are established.

In the margin a seal with the National Shield, which reads: United Mexican States.- Secretariat of Public Education.- Secretariat of Health.

EMILIO CHUAYFFET CHEMOR, Secretary of Public Education, and MARÍA DE LAS MERCEDES MARTHA JUAN LÓPEZ, Secretary of Health, based on articles 3. and 4th. of the Political Constitution of the United Mexican States; 7th., Sections I, IX and X, 24 Bis, 32 and 33, section XVII of the General Law of Education; 2nd., Fractions I and II, 3rd., Fractions XI, XII and XVI, 111, fractions I and II, 112, 113, 114, 115, fractions II, IV, VI and VII and 159, fractions I and V of the General law of health; 28, literal D of the Law for the Protection of the Rights of Girls, Boys and Adolescents; 1, 4 and 5, section XVI of the Internal Regulations of the Ministry of Public Education; 1, 6 and 7, section XVI of the Internal Regulations of the Ministry of Health, and

CONSIDERING

That the National Development Plan 2013-2018 (PND), in its National Goal II. " Inclusive Mexico " , Objective 2.2. " Moving towards an equitable and inclusive society " , Strategy 2.2.2. " Articulate policies that specifically address each stage of the population's life cycle, " indicates among its lines of action, that of promoting the integral development of boys and girls, particularly in matters of health, food and education, to through the implementation of coordinated actions between the three levels of government and civil society;

That the Sectorial Education Program 2013-2018, in its Chapter III. " Objectives, strategies and lines of action " , Objective 1. " To ensure the quality of learning in basic education and comprehensive training for all population groups " , Strategy 1.7. " Strengthening the relationship between the school and its environment to foster integral education " , he says among its lines of action on boosting the participation of state education authorities and schools in campaigns for healthy eating and against the obesity;

That the Sectorial Health Program 2013-2018 (PSS) points out in its " Introduction " section that health is an elementary condition for people's well-being; It is also part of the human capital to develop its full potential throughout life;

That the PSS, in its numeral III. " Objectives, strategies and lines of action " , Objective 1. " Consolidate actions for protection, health promotion and disease prevention " , Strategy 1.1. " Promoting healthy and co-responsible attitudes and behaviors in the personal, family and community spheres " , foresees among its lines of action that of promoting environments that favor health, in particular in schools of basic, upper secondary and higher education;

Likewise, the PSS in its Objective 3. " Reduce the risks that affect the health of the population in any activity of their life " , Strategy 3.7. " Implementing the National Strategy for the Prevention and Control of Overweight, Obesity and Diabetes " , has among its lines of action that of linking actions with the Ministry of Public Education for the regulation of school cooperatives;

That the " Decree amending articles 3 in sections III, VII and VIII; and 73, section XXV, and adding a third paragraph, a subsection d) to the second paragraph of section II and a section IX to Article 3 of the Political Constitution of the United Mexican States " , published in the Official Gazette of the Federation on February 26, 2013, states in its Fifth Transitory, section III, subsection c) that the Congress of the Union and the Competent authorities must provide, at least, among others, for adjustments to the legal framework , to prohibit foods that do not promote the health of students in all schools;

That under this context, the General Law of Education, in its article 7, sections I, IX and X, provides that the education provided by the State, its decentralized bodies and individuals with authorization or with recognition of official validity of studies will have, in addition to the purposes established in the second paragraph of article 3. of the Political Constitution of the United Mexican States, those related to contributing to the integral development of the individual, so that they can fully and responsibly exercise their human capacities; promote nutrition education, develop caring attitudes in individuals and raise awareness about the preservation of health;

That also, said legal order in its article 24 Bis, indicates that the Ministry of Education

Public, through general provisions that are published in the Official Gazette of the Federation and without prejudice to compliance with other provisions that may be applicable, will establish the guidelines to which the sale and distribution of prepared and processed food and beverages must be subject, within of every school, in whose preparation the nutritional criteria that the Ministry of Health determines for this purpose will be met . These general provisions will include regulations that prohibit foods that do not favor the health of students and promote those of a nutritional nature;

That the aforementioned Law in its article 33, sections I and XVII establishes that the educational authorities within the scope of their respective competences will attend in a special way the schools in which, because they are in isolated localities, marginalized urban areas or indigenous communities, it is considerably greater the possibility of delays or dropouts, through the allocation of better quality elements, to face the educational problems of these localities, and will promote efficient schemes for the supply of nutritious food for students, from local micro-enterprises, in those schools that need it , according to the indices of poverty, marginalization and food condition;

That the General Health Law, in its articles 112, section III and 113, establishes that the purpose of education for health is to guide and train the population preferably in nutrition, and that the Ministry of Health, in coordination with the Secretariat of Public Education and the governments of the federative entities , and with the collaboration of the dependencies and entities of the health sector, will formulate, propose and develop health education programs, trying to optimize resources and achieve total coverage of the population;

That said ordinance, in its article 115, sections II, IV and VII, provides that the Ministry of Health will be in charge of regulating the development of education programs and activities on nutrition, prevention, treatment and control of malnutrition and obesity, aimed at promoting adequate eating habits , preferably in the most vulnerable social groups; regulate the nutritional value and characteristics of food in collective service establishments and in food and non-alcoholic beverages, and establish the nutritional needs that must be satisfied by the basic food tables;

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That on August 23, 2010, the Agreement was published in the Official Gazette of the Federation by which the general guidelines for the sale or distribution of food and beverages in the establishments of school consumption of the schools of basic education, whose purpose is to promote the preparation and sale of food and beverages that facilitate a correct diet in the schools of consumption establishments of the schools of basic education ; direct efforts and actions so that the federal entities regulate, in a coordinated and unified manner, the operation of schools for consumption establishments; promote a culture of healthy eating habits and a food training that allows girls, boys and adolescents who attend basic education to develop learning towards a healthier life, and promote reflection and analysis among educational authorities, and other actors who participate in educational work to recognize health as a basic component in the integral formation of said population;

That the Official Mexican Standard NOM-043-SSA2-2012, " Basic health services. Promotion and education for health in food matters. Criteria to provide guidance " published in the Official Gazette of the Federation on January 22, 2013, states in point 4.2 that the food orientation should be carried out through health education actions, emphasizing the development of capacities and competences, social participation and educational communication;

That the Official Mexican Standard NOM-251-SSA1-2009, " Hygiene practices for the process of food, beverages or food supplements " published in the Official Gazette of the Federation on March 1, 2010, is intended, in accordance with provided in its point 1.1, establish the minimum requirements of good hygiene practices that must be observed in the process of food, beverages or food supplements and their raw materials in order to avoid their contamination throughout their process ;

That the health problems currently faced by the students of the schools of the National Educational System, are partly caused by the lack of consumption of food and beverages whose nutrients are adequate to generate an integral development, the achievement of better learning and the retention in schools;

That the schools of the National Educational System must promote correct school nutrition among female and male students, that it curbs their school lag and benefits them in their health, achievement and school performance, and that it achieves stable conditions in enrollment, increased attendance and continuity during the school day and in the educational segment in which they are enrolled;

That the preparation, sale and distribution of food and beverages prepared and processed within the schools of the National Educational System, must be consistent with a correct diet, with hygiene and safety, and with the necessary nutrients and caloric intake appropriate to the age and living conditions of male and female students, and

That due to the foregoing, in exercise of the powers conferred on us by the applicable legal provisions and within the scope of our respective competences, we have seen fit to issue the following:

AGREEMENT BY WHICH HE IS T ABLE CEN THE LINEAMIEN T OS GENERAL P ARA THE DISPENSING AND DISTRIBUTI

TITLE I
GENERAL DISPOSITION
SINGLE CHAPTER

Purpose, Scope of Application and Definitions

First .- The present Agreement has for object:

I. Establish the general guidelines to which the sale and distribution of food and beverages prepared and processed within the schools of the National Educational System shall be subject;

II. To publicize the nutritional criteria of the prepared and processed foods and beverages that must be sold and distributed in the schools of the National Educational System, in accordance with the Sole Annex of this Agreement, and

III. Highlight the types of prepared and processed foods and beverages that should be prohibited for their sale and distribution in the schools of the National Educational System because they do not favor the health of the students.

Second .- The present Agreement and its attached Annex shall apply to all public schools and individuals of the National Education System in which they dispense and distribute food and beverages prepared and processed.

Tercero.- For one effective dietary guidance in the Annex One of the present Agreement describes the nutritional characteristics of foods and beverages that provide proper nutrition and is recommended for its retailing and distribution in the schools.

The Sole Annex referred to in the preceding paragraph may be revised at any time, in order to strengthen the physical and mental well-being of students, as well as to promote the improvement of their quality of life. The modifications carried out to the aforementioned Annex will be published in the Official Gazette of the Federation.

Fourth .- For the purposes of the present Agreement will apply:

I. Agreement: to this Agreement by which the general guidelines for the sale and distribution of food and beverages prepared and processed in the schools of the National Educational System are established ;

II. Correct nutrition: the eating habits that, according to the accepted knowledge on the subject, meet the specific needs in the different stages of life, promote adequate growth and development in boys and girls, and allow adults to preserve or reach the expected weight for height and prevent the development of diseases;

III. Food: any substance or product, solid or semi-solid, natural or transformed, that provides the organism with elements for its nutrition;

IV. Natural foods and beverages: those grown, packaged and stored that do not contain chemical additives;

V. Prepared food and beverages: those that undergo a mechanical procedure such as chopping, mixing, among others; physical chemical such as wet or dry heat, from frying, cooling or freezing to its consumption;

SAW. Processed foods and beverages: to those that are subjected to a process of modification of their original state with respect to their components, easy to consume and to preserve in containers using preservatives;

VII. Simple drinking water: liquid that does not contain physical, chemical or biological contaminants; It is colorless, tasteless and odorless and does not cause harmful effects to humans. It is the most recommended liquid for adequate hydration because it has not been added; any nutrient or ingredient;

VIII. Educational Authorities : to the Secretariat of Public Education of the Federal Public Administration and to the corresponding ones in the states, the Federal District and municipalities;

IX. Health authorities: to the President of the Republic, the Council of General Health, the Ministry of Health and the governments of the states, including in the District Federal;

X. Snack or snack: the portion of food consumed between the main meals (breakfast, lunch and dinner), and serves to fulfill the characteristics of a correct diet;

XI. Committee for School Consumption Establishments: the group of people (especially mothers and fathers) who are committed to and take responsibility for the organization and development of actions around the sale and distribution of prepared and processed food and beverages, in accordance with the established in this Agreement;

XII. Educational community to the mothers and the parents of family or guardians, the representatives of their associations, and the directors of the school and , to the extent as possible, former students and other members of the community interested in the development of the school itself ;

XIII. Distribution: the set of strategies and actions aimed at supplying food and beverages prepared and processed to schools in accordance with the nutritional criteria defined in the Sole Annex of this Agreement;

XIV. Establishment of School Consumption: to the spaces assigned in schools, public and private of the National Educational System, to offer students food and beverages prepared and processed within their facilities. It includes all food and beverage outlets that operate within schools, whatever the name or legal nature that it adopts;

XV. Expenditure: to the activity of selling prepared and processed food and beverages in School Consumption Establishments;

XVI. Eating habits: the set of behaviors acquired by an individual, by the repetition of acts regarding the selection, preparation and consumption of food. Eating habits are mainly related to the social, economic and cultural characteristics of a given population or region. The general habits of a community are often called customs;

XVII. Food orientation : the set of actions that provide basic, scientifically validated and systematized information, aimed at developing skills, attitudes and practices related to food and nutrition to promote the adoption of a correct diet in the individual, family or collective environment, taking into account economic, geographical, cultural and social conditions;

XVIII. Personal qualified: to the nutritionists and dieticians current certification issued by a body legally constituted and / or recognized by the competent authority that has three years experience in the field of dietary guidance;

XIX. Trained personnel: who were trained by qualified personnel and who have the knowledge and skills for food orientation;

XX. Plato del Bien Comer: a graphic tool that represents and summarizes the general criteria that unify and give consistency to the food orientation aimed at providing the population with practical options, with scientific support, for the integration of a correct diet that can be adapted to their needs, needs and possibilities, indicated in the Official Mexican Standard NOM-043-SSA2-2012, " Basic services of Health. Promotion and education for health in food matters. Criteria to provide guidance ", and

XXI. Supplier: the natural person, microenterprise, public or private institution that caters to schools regularly, inputs for the preparation, expend io and distribution of food, with the basis of the provisions of this Agreement and attached Annex or provides services related to the

themselves.

TITLE II

OF THE SETTING THE FEEDER T ION CORREC T A STUDENT

FIRST CHAPTER

Principles of a correct diet

Fifth.- In the schools of the National Educational System, the consumption of foods and beverages that favor the health of the students will be encouraged, considering the following characteristics of a correct diet:

I. Complete: containing all the nutrients. It is recommended to include in each meal foods from the three groups expressed in El Plato del Bien Comer;

II. Balanced: that the nutrients keep the appropriate proportions to each other;

III. Safe: that its habitual consumption does not imply risks to health because it is free of pathogenic microorganisms, toxins, pollutants, that it is consumed in moderation and that it does not provide excessive amounts of any component or nutrient;

IV. Sufficient: that it covers the needs of all nutrients, in such a way that the adult subject has good nutrition and a healthy weight and, in the case of children, that they grow and develop correctly;

V. Varied: that from one meal to another, include different foods from each group, and

SAW. Adequate: that is consistent with the tastes and culture of those who consume it and adjusted to their economic resources, without this meaning that its other characteristics must be sacrificed.

Sixth.- In the school context, the principles of a correct diet will be applied from a comprehensive perspective, considering that the eating habits of students, their families and other members of the educational community are influenced by cultural, social, educational, economic and geographical factors. that determine the preferences and type of food they consume.

Seventh.- Based on the principles outlined in this chapter, schools:

I. They will promote, among the educational community, the adoption of healthy lifestyles through orientation related to health and good nutritional practice;

II. They will emphasize the consumption of vegetables, fruits and natural foods, of the season and of the region;

III. They will promote the importance of consuming plain drinking water as the first hydration option;

IV. They will verify that the spaces where food and beverages are prepared and sold have the conditions that guarantee the health and safety of the school community, and

V. They will offer a correct diet in terms of the nutritional technical criteria contained in the Sole Annex of this Agreement.

CHAPTER TWO

Hygienic conditions of the preparation places

Eighth .- The spaces used for the preparation of food and beverages will be subject to the provisions of the Official Mexican Standard NOM-251-SSA1-2009, " Hygiene practices for the process of food, beverages or food supplements " and other legal provisions that are applicable in the matter.

CHAPTER THREE

Cleanliness in the preparation of food and beverages

Ninth .- Those responsible for preparing food and drinks for vending in local school consumption shall be subject to the provisions of the Official Mexican Standards NOM - 251-SSA1-2009, " Hygienic Practice for food processing, beverages or food supplements " and NOM-043-SSA2-2012, " Services basic of health. Promotion and education for health in matters food. Criteria to provide guidance ", and other legal provisions that are applicable in the matter.

TITLE III

FROM THE SCHOOL ORGANIZATION FOR THE DISTRIBUTION AND DISTRIBUTION OF FOOD AND DRINKS

FIRST CHAPTER

Of the Committee of School Consumption Establishments

Tenth .- In basic type schools, the Committee for School Consumption Establishments will develop actions related to the preparation, sale and distribution of food and beverages at school, in accordance with the criteria of proper nutrition.

The directors, teachers and administrative and support staff of the educational services of the public schools of basic education will not participate in the actions referred to in the preceding paragraph.

Eleventh.- In order to create healthy environments at school, the Committee for School Consumption Establishments will promote the following actions:

I. Summon mothers and fathers of the educational community to participate in actions related to the sale and distribution of food and beverages according to the nutritional criteria established in the Sole Annex of this Agreement;

II. Establish alliances between the school and the family to adopt a correct diet;

III. Manage training and food guidance aimed at people directly involved in the preparation, sale and distribution of food and beverages;

IV. Disseminate among the educational community the type of food and beverages that are sold and distributed in the school, based on the recommendations and prohibitions contained in the Sole Annex of this Agreement;

V. Permanently supervise and monitor the quality and type of products that can be sold and distributed, verifying that the food and beverages indicate the expiration date or preferential consumption, the nutritional information of the product and that they comply with the provisions established in the Sole Annex of this Agreement;

SAW. Verify compliance with the safety and hygiene measures for the preparation, sale and distribution of food and beverages at school, and

VII. The others entrusted to him by the School Council for Social Participation.

Twelfth.- The Committee for School Consumption Establishments will report to the School Council for Social Participation of the actions carried out and, where appropriate, of the irregularities detected in the preparation, sale and distribution of food and beverages at school.

Thirteenth.- The educational authorities of the schools of the middle superior and superior types will establish the mechanisms according to which the actions related to the preparation, sale and distribution of food and beverages will be developed.

CHAPTER TWO

Of aspiring vendors

Fourteenth.- Applicants to suppliers of food and beverages for their preparation, sale and distribution in schools must:

I. Know and fully comply with the provisions contained in this Agreement and its Sole Annex, as well as the other legal provisions applicable in the matter;

II. Have qualified and / or trained personnel, and

III. Receive guidance and advice on how to offer recommended foods and beverages and the type of

Hygienic measures that it is necessary to observe for their preparation, sale and distribution, for which they may rely on the state health services of their respective locality, when so agreed with the latter.

TITLE IV

OF THE ATTRIBUTIONS

FIRST CHAPTER

Of the educational authorities

Fifteenth.- It corresponds to the educational authorities, in their respective field of competence:

I. Disseminate in schools the content of this Agreement and its Sole Annex;

II. Review the terms of the instruments that they have entered into with suppliers and sign the legal acts that may be applicable, so that they are in accordance with the provisions of this Agreement and its Sole Annex ;

III. Guarantee that schools have drinking water, infrastructure and equipment necessary to provide hygiene and safety in the preparation, sale and distribution of food and beverages;

IV. Promote the provision of food and beverages according to the needs and possibilities of the context or region;

V. Work in coordination with the municipal authorities and with the political-administrative bodies of the territorial demarcations of the Federal District, and other competent bodies, to promote actions aimed at regulating itinerant commerce near schools, and

SAW. Monitor compliance with this Agreement and its Sole Annex.

CHAPTER TWO

Of the health authorities

Sixteenth .- The Ministry of Health, within the scope of its competence, will promote that the health authorities of the governments of the federative entities carry out actions aimed at aligning their regulations with the provisions contained in this Agreement and its Sole Annex.

CHAPTER THREE

Of the educational and health authorities

Seventeenth.- It corresponds to the educational and health authorities, in the respective field of their competence:

I. Agree on the modality of training aimed at the actors involved in the preparation, sale and distribution of food and beverages, according to the needs and characteristics of the target population ;

II. Provide information, advice and training on food guidance to members of the Committee for School Consumption Establishments, suppliers, aspiring suppliers and parents or guardians;

III. Make visits to supervise the hygiene and safety conditions in the preparation, sale and distribution of food and beverages, and

IV. Evaluate and monitor the activities of preparation, sale and distribution of food and beverages to identify the degree of compliance with the technical criteria on correct food, hygiene and safety, as well as the benefits that have been generated in the improvement of learning, the school retention and community involvement.

TITLE V

SINGLE CHAPTER

Of the prohibitions and sanctions

Eighteenth.- The preparation, sale and distribution of food and beverages in schools of the National Educational System, which, because they represent a source of simple sugars, refined flours , fats or sodium, do not meet the nutritional criteria of the Sole Annex of this document, is prohibited. Agreement and, consequently, they do not favor the health of the students and put it at risk.

Nineteenth .- The education providers that promote or incite the preparation, sale and distribution of food in violation of the stated in the previous guideline, incur infringements under Article 75, sections IX and XIII of the General Law of Education and they will be entitled to the sanctions established in article 76 of said legal order. The foregoing, without prejudice to the imposition of the corresponding administrative sanctions, in the case of public servants.

TRANSIT RIOS

FIRST.- This Agreement will enter into force on the day of its publication in the Official Gazette of the Federation.

SECOND.- The Agreement by means of which the general guidelines for the sale or distribution of food and beverages are established in the establishments of school consumption of the schools of basic education , published in the Official Gazette of the Federation on August 23, 2010, It will be without effect once the implementation of this ordinance begins.

Provisions that conflict with this Agreement are repealed.

THIRD.- The implementation of this Agreement and its Single Annex in basic type schools will take place from the 2014-2015 school year and in those of the upper and middle school types in the school year corresponding to the second semester of 2014 .

**SOLE ANNEX TO THE AGREEMENT BY WHICH THE
GENERAL GUIDELINES FOR THE DISTRIBUTION AND DISTRIBUTION OF PREPARED AND PROCESSED FOOD AND BEVI**

Technical criteria

Content

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2.5.1. Nutritional criteria for school meals.

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1. Objective.

Establish technical nutritional criteria to regulate the preparation, sale and distribution of prepared and processed foods and beverages that integrate a correct diet in public and private schools of the National Educational System.

1.1. Specific objectives.

- Establish technical nutritional criteria for the preparation and distribution of school breakfast .
- Establish technical nutritional criteria for the sale of food and beverages for school snacks .
- Establish the recommendations for the preparation of the school snack prepared from home .
- Establish technical nutritional criteria for the distribution and preparation of school meals .

2. Scientific and technical bases for the elaboration of nutritional criteria.

2.1. Recommendations for the integration of a correct diet in schoolchildren.

The nutritional characteristics that facilitate a correct diet in schoolchildren, applicable at any meal time, are based on the Official Mexican Standard NOM-043-SSA2-2012, Basic health services. Promotion and education for health in alimentary matters. Criteria to provide guidance, published in the Official Gazette of the Federation on January 22, 2013.

These nutritional criteria contribute to reducing the risk of overweight, obesity and its immediate complications in girls, boys and adolescents, as well as preventing the development of non-communicable diseases throughout life. The quality of food at school and in adolescence is one of the factors that most influences the health of individuals. Therefore, the diet is essential to improve the health and education of students.

Current scientific evidence indicates that a diet with excessive consumption of energy- dense foods , high in total fats, saturated fatty acids, trans-fatty acids and sugars, as well as sodium, increases the risk of being overweight, obesity and the development of non-communicable diseases such as type 2 diabetes mellitus, high blood pressure, and cardiovascular disease.

For these reasons, the recommendations for maximum limits of nutrients were established, considered as risk factors in the diet, when their consumption is excessive.

The distribution of macronutrients (fats, carbohydrates and proteins) was estimated based on the recommendations for daily total energy intake for the Mexican population by age group.

· Total fat 25-30% of total energy.

· Carbohydrates 55-60% of total energy.

· Proteins 10-15% of the total energy.

The recommended consumption of saturated fatty acids, trans fatty acids, added sugars and sodium is based on international recommendations for the prevention of obesity and chronic diseases by the World Health Organization (WHO) and the recommendations of nutrient intake for the Mexican population. Thus, the daily consumption of saturated fats should be equal to or less than 10%, that of trans fats equal to or less than 1% and of added sugars equal to or less than 10% of the total energy. Limits for sodium are based on the WHO's proposed intake guide to reduce salt intake to less than 5 g per day (less than 2,000 mg sodium).

The preparation of food must consider the hygiene and food handling recommendations described in the Agreement by which the general guidelines for the sale and distribution of food and beverages prepared and processed in the schools of the National Educational System (Agreement) are established, in the official Mexican standards NOM-251-SSA1-2009, Hygiene practices for the process of food, beverages or food supplements, published in the Official Gazette of the Federation on March 1, 2010 and NOM-043-SSA2-2012 mentioned above, and in the other applicable legal provisions.

2.2. Recommendations of energy and macronutrients for schoolchildren.

In the first instance, the amount of energy and average macronutrients required by schoolchildren to meet their daily needs and achieve a correct diet was determined, as well as the percentage distribution for each meal time to promote and maintain a healthy weight.

The calculation of the recommended energy intake to be covered by breakfast, snack and school lunch is based on:

- The total energy intake recommendations for the Mexican population.
- The proportion of energy provided according to three meal times and two snacks or snacks; each one with the following energy contribution: breakfast, lunch and dinner, 25%, 30% and 15%, respectively; the two snacks provide the remaining 30% of energy and nutrients to schoolchildren. (Table 1).

Table 1. Energy contribution of each meal time for Preschool, Primary, Secondary, Upper Middle and Higher students ^a.

Types and levels ^b	Energy requirement per day (Kcal)	Energy intake per meal time (kcal +/- 5%) ^c		
		Breakfast ^c	Snack ^c	Food ^c
Preschool	1300	325 (309-341)	195 (185-205)	390 (370-409)
Primary	1579	395 (375-415)	237 (225-249)	474 (450-498)
High school	2183	545 (518-572)	327 (311-343)	656 (623-689)
Upper and upper average	2312	578 (549-607)	347 (330-364)	694 (659-729)

to. Source: Bourges H, Casanueva E, Rosado J. Nutrient intake recommendations for the Mexican population. Physiological bases. Volume 2. Energy, proteins, lipids, carbohydrates and fiber. Editorial Médica Panamericana. Mexico, 2008.

b. Preschool: 3 to 5 years, primary: 6 to 11 years, secondary: 12 to 14 years, upper and upper secondary: 15 to 22 years.

c. Estimated energy intake for breakfast 25% (+/- 5%), snack 15% (+/- 5%), lunch 30% (+/- 5%), according to age group.

23. Criteria used for school breakfast.

Breakfast is the first meal of the day and is part of a correct diet. In the school stage, its aim is to provide girls, boys and adolescents with the energy and nutrients necessary for the development of

the skills, cognitive performance, concentration and attention necessary for their school activities during the day, in addition to contributing to the formation of correct eating habits. Breakfast, like the other meals of the day, must comply with the characteristics of a correct diet, integrating the three food groups in the amounts and proportions appropriate for the age group in question, in accordance with these criteria.

2.3.1. Nutritional and food integration of the school breakfast.

Table 2. Average daily total energy and macronutrients for breakfast.

Group population	kcal / day	Energy for breakfast (25% of total kcal) +/- 5%	Hydrates of carbon (% of kcal)	Protein (% kcal)	Total fat (% kcal)	Saturated fat (% kcal)	Added sugars (g)	Fiber * (g)	Sodium * (mg)
Preschool	1300	325 (309-341)	49 g (60%)	12 g (fifteen%)	9 g (25%)	≤3.6 g (10%)	≤5	5.4	≤360
School	1579	395 (375 -415)	59 g (60%)	15 g (fifteen%)	11 g (25%)	≤4.3 g (10%)	≤5	5.4	≤360

* 30% of the IDR

Source: Bourges H, Casanueva E, Rosado J. Nutrient intake recommendations for the Mexican population. Physiological bases. Volume 2. Energy, proteins, lipids, carbohydrates and fiber. Editorial Médica Panamericana. Mexico, 2008.

2.3.2. Formation of the hot mode school breakfast (DEC).

The hot school breakfast consists of:

- A main dish that includes vegetables, a whole grain, a legume or a food of animal origin;
- Fruit;
- Skim milk or consider the inclusion of whole milk for preschool-age children living in areas with a high prevalence of child malnutrition; and
- Simple drinking water.

2.3.2.1. Specific nutritional quality criteria for DEC.

- Include a maximum of two different cereals per menu, preferably whole grain and / or whole grains (tortilla, oatmeal, rice, whole wheat tortilla, whole wheat pasta, whole wheat crackers, etc.). Prefer the corn tortilla, due to its high content of calcium and fiber. In case of including rice or pasta, it should be accompanied without exception of vegetables, since its fiber contribution is little.
- Give priority to dishes that do not require fat in their preparation or that require it in very small quantities, such as stewed in sauce, roasted, baked, toasted, steamed; avoiding fried, battered or breaded dishes. If required, always use vegetable oils for its preparation.
- If atole is included in a menu, it must be prepared with whole grain cereals (oats, amaranth, barley, rice) and with a maximum of 20 grams (2 tablespoons) of sugar per liter of milk. In case of including a smoothie, it must be prepared with natural fruit and a maximum of 20 grams of sugar per liter.
- If milk is not included as a drink at breakfast, a dairy derivative (except cream or butter) or another source of calcium should be included in the menu.

- The portion of milk will be 250 ml (1 cup or 1 glass).
- Consider the inclusion of whole milk for preschool-age children living in areas with a high prevalence of child malnutrition.
- Avoid offering foods of animal origin together with legumes, as well as a legume with another legume (for example, lentil soup and bean tacos), and promote the combination of a cereal and a legume.
- Integrate preparations that include vegetables and fruit available in the region and in season, to facilitate their acquisition and distribution.
- Vegetables or fruit should preferably be fresh.
- Offer simple drinking water.

2.3.3. Formation of the cold mode school breakfast (DEF).

The school breakfast in its cold mode consists of:

- Skim or low-fat milk;
- Cereal comprehensive and
- Fresh or dehydrated fruit, which can be accompanied by oilseeds.

2.3.3.1. Specific nutritional quality criteria for DEF.

For the conformation of the cold breakfast it will be necessary:

- If milk is not included as a drink at breakfast, include a dairy derivative (except cream or butter) or another source of calcium.
- Consider the inclusion of whole milk for preschool-age children living in areas with a high prevalence of child malnutrition.
- Provide a minimum portion of 30 grams of whole grain cereal, which can be in the form of cookies, bars, box cereals, etc., made with whole grains or from whole wheat flours. The portion must consider the following characteristics (Table 3):

Table 3. Nutrient content that whole grains should have (cookies, bars, box cereals , etc.) per serving of food in school breakfasts.

Portion	30 g
Fiber	Minimum 1.8 g (> 10% of the RDI a)
Sugars	Maximum 20% of total calories from input ^b
Total fat	Maximum 35% of total calories from input ^b
Saturated fats	Maximum 15% of total calories from input ^b
Trans fatty acids	Maximum 0.5 g ^b
Sodium	Maximum 180 mg ^b

Source: National System for the Integral Development of the Family. Guidelines of the comprehensive strategy for social food assistance 2013.

/ a Bourges H, Casanueva E, Rosado J. Nutrient intake recommendations for the Mexican population. Physiological Bases. Mexico, 2005.

/ b Adapted from Table 4, category " Cookies, cupcakes, candies and desserts " of this Annex.

- Include a serving of preferably fresh fruit available in the region and in season or dehydrated fruit without the addition of sugars, fat or salt. In the case of providing dehydrated fruit, the portion must contain a minimum of 20 grams (g).

The dehydrated fruit may be combined with oilseeds not added with salt or sugar (peanuts, seeds, dried peas, sunflower seeds, almonds, walnuts, etc.), as long as the fruit is the main ingredient, contained in at least 20 g , and a maximum of 20 g of these seeds are added.

2.4. Criteria used for the snack or school snack offered in the public and private schools of the National Educational System.

Snacks or snacks, as part of the diet of schoolchildren, should provide them with the necessary nutrients and energy between meals, to avoid fasting periods of more than four hours, as well as to maintain satiety in their appetite.

It is recommended that the school snack cover 15% of the daily recommendations regarding the energy and nutrients.

The school snack must be made up of:

- Vegetables and fruits;
- Whole grain cereal;
- Oilseeds and legumes; and
- Simple drinking water on demand.

2.4.1. Vegetables and fruits.

It is recommended to permanently promote the consumption of fresh vegetables and fruits, available in the region and in season, preferably, since most contribute to achieving satiety without large contributions of energy, so the amounts to be consumed may be greater than those of others food. In general, the consumption of vegetables should not be limited.

In the case of fruits, a piece or its equivalent in slices or cups is recommended. In the case of dehydrated fruits , without added sugar (dried apricots, peaches, apples and pear), no more than 4 pieces (25 g). It is better to consume whole fruits or in pieces, and not in the form of juices, for reasons of satiety and energy balance, and to avoid losses in nutrients and other dietary components derived from the blending process and subsequent oxidation.

Vegetables and fruits may be combined with dry or oilseed legumes not added with salt or sugar that meet the nutritional criteria described in Table 4.

2.4.2. Integral cereal.

Whole grains are an important source of carbohydrates, proteins and fiber that provide important health benefits. It is recommended to consume a serving of whole grain cereal such as amaranth, oatmeal or granola without added sugar, which can be added to the fruit of the snack.

2.4.3. Oilseeds and legumes.

The consumption of legumes and oilseeds is an important source of fiber and protein. Legumes are also rich in calcium and iron. Its moderate consumption has been associated with positive health effects, as long as they do not have added fats, salt or sugars.

Some recommendations for dried legumes include chickpeas or dried beans without salt, and oilseed peanuts, seeds, dried peas, sunflower seeds, almonds, walnuts, etc. that meet the nutritional criteria described in Table 4.

2.4.4. Drinks.

The main objective in relation to beverages is to promote the consumption of plain drinking water, so its availability must be ensured before that of any other beverage.

It is important to exclusively promote the consumption of water and avoid promoting the consumption of other types of beverages.

2.4.5. Processed foods and beverages.

Processed foods and beverages that meet the nutritional criteria established in Table 4 can be sold in public and private schools of the National Educational System only on Fridays, replacing cereals, oilseeds and legumes.

2.4.5.1. Drinks for secondary, upper and upper secondary.

- Portion: 250 ml.
- Calories per serving: 10 kcal maximum.
- Sodium: 55 mg per serving.
- Non-caloric sweeteners: 40 mg / 100 ml or 100 mg / 250 ml.
- No caffeine and no taurine.

2.4.5.2. Milk.

Milk is considered a liquid food and its promotion and inclusion in the diet of the child is recommended.

school for the calcium content that will help better development. For greater health benefits, in terms of prevention of obesity problems and associated chronic diseases, the milk should preferably be semi-skimmed or skimmed.

- Energy: less than 50 kcal per 100 ml.
- Total fat content: less than or equal to 1.6% or 1.6 g of fat per 100 g of milk.
- The size of the container will be less than or equal to 250 ml.
- It should not have added sugars.
- The use of non-caloric sweeteners may be allowed as long as they are approved for consumption by children in the Codex Alimentarius.
- In the case of milk, its consumption is allowed up to twice a week to replace oilseeds and legumes.

2.4.5.3. Yogurt and fermented dairy foods.

Solid yogurt:

- Container size: less than 150 g.
- Energy: maximum 80 kcal per serving.
- Total Fat: 2.5 g / 100g (3.75 g / 150 g)
- The use of non-caloric sweeteners may be allowed, as long as they are approved for consumption by children in the Codex Alimentarius.

Drinkable yogurt and fermented dairy foods:

- Serving size: less than 200 ml.
- Energy: maximum 100 kcal per serving.
- Total Fat: 1.4 g / 100 ml (2.8 g / 200 ml)
- The use of non-caloric sweeteners may be allowed, as long as they are approved for the consumption of children in the Codex Alimentarius.

2.4.5.4. Fruit juices, vegetable juices and nectars.

Vegetable and fruit juices:

- 100% natural fruit juices with no added sugar will be allowed.
- In case of natural fruit juices industrialized origin, the amount of total sugar (grams per serving) will be according to Mexican Official Standard NOM-173-SCFI-2009 Fruit juices Prepackaged-Denominations, physicochemical specifications, commercial information and methods of test, published in the Official Journal of the Federation on August 28, 2009.
- The energy per serving will be less than 70 kcal.
- The portion must be less than or equal to 125 ml.

Nectars:

- Energy per serving: less than 70 kcal.
- The portion must be less than or equal to 125 ml.
- The use of non-caloric sweeteners may be allowed as long as they are approved for consumption by children in the Codex Alimentarius.

2.4.5.5. Liquid soy foods.

Liquid soy foods:

- Energy per serving: less than 100 kcal.
 - The portion must be less than or equal to 125 ml.

 - Total fat must be less than or equal to 2.5 g per 100 ml. Saturated fat should not exceed 21% of total fat.
 - The sodium content (mg per 100 ml) will be less than or equal to 110 mg / 100 ml.
 - The use of non-caloric sweeteners may be allowed, as long as they are approved for consumption by children in the Codex Alimentarius.
- Liquid soy foods with juice:
- Energy per serving: less than 60 kcal.
 - The portion must be less than or equal to 125 ml.
 - The sodium content (mg per 100 ml) will be less than or equal to 50 mg / 100 ml.
 - The use of non-caloric sweeteners may be allowed, as long as they are approved for consumption by children in the Codex Alimentarius.

2.4.5.6. Snack.

- Energy: less than 130 kcal.
- Added sugars: less than or equal to 10% of the total energy / portion.
- Total fat: less than or equal to 35%.
- Saturated fat: less than or equal to 15%.
- Trans fatty acids: less than or equal to 0.5 g / serving.
- Sodium: less than or equal to 180 mg per serving.
- En alimentos empacados, las presentaciones deben contener una porción o menos.

2.4.5.7. Galletas, pastelitos, confites y postres.

- Energía: menor a 130 kcal.
- Azúcares añadidos: menor o igual a 20% del total de energía.
- Grasas totales: menor o igual a 35%.
- Grasas saturadas: menor o igual a 15%.
- Ácidos grasos trans: menor o igual a 0.5 g por porción.
- Sodio: menor o igual a 180 mg por porción.
- En alimentos empacados, las presentaciones deben contener una porción o menos.
- Podría permitirse el uso de edulcorantes no calóricos, siempre y cuando estén aprobados para el consumo de niños en el Codex Alimentarius.

2.4.5.8. Oleaginosas y leguminosas secas.

- Energía: menor a 130 kcal.
- Grasas saturadas: menor o igual a 15%.
- Ácidos grasos trans: menor o igual a 0.5 g por porción.
- Azúcares añadidos: menor o igual a 10% del total de energía.
- Sodio: menor o igual a 180 mg por porción.

2.4.5.9. Quesos para refrigerio.

- Energía: menor a 80 kcal por porción.
- Tamaño de la porción: menor o igual a 30 g.
- Grasas totales: menor o igual a 68% de las kcal totales.
- Grasas saturadas: menor o igual a 39% de las kcal totales.
- Sodio: menor o igual a 180 mg por porción.

2.4.6. Recomendaciones para la preparación del refrigerio escolar desde casa.

El refrigerio debe ser preparado preferentemente en casa, con el fin de que la calidad e higiene de los alimentos sea mayor.

Para la preparación del refrigerio en casa, se recomienda a las madres y padres de familia lo siguiente:

- Identificar las verduras y frutas de temporada y de la región.
- Seleccionar preparaciones sencillas que contengan alimentos de los tres grupos del Plato del Bien Comer para cumplir con las características de una alimentación correcta.
- Planear los menús y elegir los alimentos que se van a consumir en el refrigerio con la participación de los estudiantes, para que sean mejor aceptados.
- Preparar con anticipación aquellos alimentos que no se descompongan o puedan refrigerarse.
- En caso de incluir alimentos procesados, se sugiere que sean aquellos que cumplan con los criterios nutrimentales, a que se refiere este Anexo e incluirlos únicamente una vez por semana (viernes). Los criterios nutrimentales se describen en la Tabla 4.

Tabla 4. Criterios Nutrimentales para alimentos y bebidas procesados permitidos únicamente los días viernes.1, 2

CATEGORÍAS	CRITERIOS NUTRIMENTALES	Valor límite
Bebidas para secundaria, media superior y superior 1-3	Porción (ml)	250 ml
	Calorías por porción (kcal. máximo)	10 kcal
	Sodio (mg por porción)	55 mg
	Edulcorantes no calóricos(mg / 100 ml)	40 mg /100 ml (100 mg/250 ml)
Leche 1-4-5-6 (incluye fórmulas lácteas y productos lácteos combinados - No considera alimentos lácteos)*	Porción (ml)	250 ml
	Calorías por 100 g (kcal)	50/100 g (125 kcal/ 250 ml)
	Grasas totales (en 100 g)	1.6/100 g (4/250 ml)
Yogurt y alimentos lácteos fermentados 1-4-5	Porción (g o ml)	Sólido = 150 g
		Bebible = 200 ml
	Calorías por porción (máximo)	Sólido = 80 kcal
		Bebible = 100 kcal
	Grasas totales (100 g o ml)	Sólido = 2.5g/100 g (3.75 g/150 g)
		Bebible = 1.4g/100 ml (2.8 g/200 ml)
Azúcares (% de calorías totales respecto a azúcares añadidos)	30%	

Jugos de frutas y verduras 1.4 *	Porción (ml)	125 ml
Azúcares totales (g por porción)	Según la Norma Oficial Mexicana NOM-173-SCFI-2009, Jugos de frutas preenvasados-Denominaciones, especificaciones fisicoquímicas, información comercial y métodos de prueba.	
Calorías por porción (máximo)	70 kcal	

Néctares 1.4 *	Porción (ml)	125 ml
	Calorías por porción (máximo)	70 kcal
Alimentos líquidos de soya 1.4 *	Porción (ml)	125 ml
	Sodio (mg por 100ml)	110 mg/100 ml
	Grasas totales (g por 100ml) Las grasas saturadas no deben rebasar 21% de grasas totales	2.5g /100 ml (3.12 g /125 ml)
	Calorías por porción (kcal, máximo)	100 kcal
	Proteína (g por porción) Mínimo	3.8 g
Alimentos líquidos de soya con jugo *	Porción (ml)	125 ml
	Sodio (mg por 100ml)	50 mg/100 ml (62.5 mg/125 ml)
	Calorías por porción (kcal, máximo)	60 kcal
	Proteína (g por porción, mínimo)	0.75 g
Botanas 1.7	Porción (kcal)	130 kcal
	Grasas totales (% de calorías totales)	35%
	Grasas saturadas (% de calorías totales)	15%
	Ácido grasos trans (g por porción)	0.5 g
	Azúcares añadidos (% de calorías totales)	10%
	Sodio (mg por porción)	180 mg
Galletas, pastelillos, confites y postres 1.8-9	Porción (kcal)	130 kcal
	Grasas totales (% de calorías totales)	35%
	Grasas saturadas (% de calorías totales)	15%
	Ácido grasos trans (g por porción)	0.5 g
	Azúcares añadidos (% de calorías totales)	20%
	Sodio (mg/porción)	180 mg
Oleaginosas (por ejemplo: cacahuates, nueces, almendras, pistaches, etc.) y leguminosas secas (por ejemplo: habas secas) 10	Porción (kcal)	130 kcal
	Grasas saturadas (% de calorías totales)	15%
	Ácido grasos trans (g por porción)	0.5 g
	Azúcares añadidos (% de calorías totales)	10%
Sodio (mg por porción)	180 mg	

- 1 Todos los productos deberán contener sólo una porción.
- 2 Los parámetros se refieren a menor o igual que.
- 3 Las bebidas para secundaria, media superior y superior serán sin cafeína y sin taurina.
- 4 Podría permitirse el uso de edulcorantes no calóricos en leche, néctares, yogurt y bebidas de soya, siempre y cuando estén aprobados para el consumo de niños en el Codex Alimentarius.
- 5 Ácidos grasos trans no aplica cuando son de origen natural como en lácteos.
- 6 En caso de la leche se permite su consumo hasta dos veces por semana en sustitución de las oleaginosas y las leguminosas.
- 7 Dentro de la categoría de botanas, se podrán registrar el grupo de alimentos denominado "Quesos para lunch", debiendo cumplir con los siguientes criterios nutrimentales:

Quesos para refrigerio	Porción (g)	30 g
	Energía total (kcal)	<= 80 kcal
	Grasas totales (g)	<= 6 g
	Grasas saturadas	<= 3.5 g
	Grasas totales (% de kcal totales)	68%
	Grasas saturadas (% de kcal totales)	39%
	Sodio (mg/porción)	<= 180 mg

8 Podría permitirse el uso de edulcorantes no calóricos en galletas, pastelillos y postres, siempre y cuando estén aprobados para el consumo de niños en el Codex Alimentarius.

9En el caso de chocolates, éstos deberán apegarse a lo marcado en la **NORMA OFICIAL MEXICANA NOM-186-SSA1/SCFI-2002, PRODUCTOS Y SERVICIOS. CACAO, PRODUCTOS Y DERIVADOS. I CACAO. II CHOCOLATE. III DERIVADOS. ESPECIFICACIONES SANITARIAS. DENOMINACIÓN COMERCIAL** (Diario Oficial de la Federación 8 de noviembre de 2002) o la que la sustituya, y únicamente podrán expenderse de forma eventual (durante festividades, tales como: día de reyes, día del niño o eventos escolares).

10El grupo de las oleaginosas (por ejemplo: cacahuates, nueces, almendras, pistaches, etc.) y leguminosas secas (por ejemplo: habas secas) no se encuentra sujeto al criterio de grasas totales por su alto valor nutrimental ya que, a pesar de su alto contenido de grasas, su consumo moderado ha sido asociado con efectos positivos para la salud, siempre y cuando no tengan grasas, sal o azúcares añadidos. Por lo anterior, estos productos se podrán consumir todos los días de la semana.

* El uso de edulcorantes no calóricos en leche, yogurts, jugos de fritas/verduras y néctares dependerá si están aprobados para el consumo de niños en el Codex Alimentarius.

Nota: Para niños y niñas de preescolar y primaria sólo se permitirá el consumo de agua simple potable para todos los días de la semana.

2.5. Criterios utilizados para la comida escolar en Escuelas de Tiempo Completo.

Los alimentos y bebidas que se sirvan en las escuelas deberán observar los siguientes criterios nutrimentales:

- Se deben consumir diferentes verduras y frutas preferentemente frescas, locales y de temporada; en lo posible crudas y con cáscara, atendiendo las condiciones de higiene descritas en el Acuerdo, en las normas oficiales mexicanas NOM-251-SSA1-2009 y NOM-043-SSA2-2012 antes mencionadas, y en las demás disposiciones jurídicas aplicables.

- La ingesta de grasas debe limitarse, y la mayoría de las grasas saturadas deben reemplazarse por grasas de origen vegetal. Deben evitarse los ácidos grasos trans.

- Se deben consumir cereales de grano entero y sus derivados integrales.

- Se deben consumir leguminosas como lentejas, habas, garbanzos y otras disponibles en la región, en combinación de los cereales integrales.

- Debe servirse preferentemente pescados y carnes con bajo contenido de grasas.

- Debe limitarse el consumo de azúcar y sal, así como aderezos a base de grasa. Toda la sal que se utilice debe ser yodada.

- Se debe promover el consumo de agua simple potable.

- Se podrán proporcionar bebidas a base de fruta natural sin azúcar añadido de forma esporádica, y no se permitirá el consumo de cualquier otra bebida.

- Se debe dar preferencia, en la preparación de alimentos, a técnicas culinarias como asado, hervido, cocimiento a vapor o al horno para reducir la cantidad de grasa agregada.

2.5.1. Criterios nutrimentales para la comida escolar.

Los criterios nutrimentales para las comidas en las escuelas se basan en un porcentaje del 30% del total de energía requerida y la distribución de macronutrientes para el equilibrio de una dieta correcta: 10 a 15% de proteína, 25 a 30% de lípidos y 55 a 60% de hidratos de carbono.

La comida escolar deberá estar conformada por los tres grupos de alimentos (1. Verduras y frutas, 2. Cereales, 3. Leguminosas y alimentos de origen animal), integrándose de la siguiente manera:

a. Entrada (sopa, ensalada o verduras).

b. Platillo fuerte que tenga verduras, cereal integral y una leguminosa o alimento de origen animal.

c. Fruta fresca.

d. Agua simple potable.

Los menús deberán tener las siguientes características para comida escolar:

a) Incluir agua simple potable o bien agua de fruta natural sin azúcar máximo dos veces por semana.

En caso de integrar agua de fruta natural, ésta deberá cumplir con las siguientes características:

- Ser preparada con fruta fresca, disponible en la región y de temporada.

- No añadir azúcar.

- Respetar la frecuencia permitida a máximo dos veces por semana.

b) Incluir un platillo fuerte que tenga verduras, cereal integral y una leguminosa o alimento de origen animal.

- Dar prioridad a los platillos que no requieran grasa en su preparación o que la requiera en muy pequeñas cantidades, como los guisados en salsa, asados, horneados, tostados, cocidos al vapor, evitando los platillos fritos, capeados o empanizados. En caso de requerirse, usar siempre aceites vegetales.

- Incluir como máximo dos cereales diferentes por menú (tortilla, avena, arroz, papa con cáscara, tortilla de harina integral, pasta integral, galletas integrales, etc.).

- Preferir la tortilla de maíz por su alto aporte de calcio y fibra.

- En caso de incluir arroz, éste deberá acompañarse de verduras, para compensar su poco aporte de fibra dietética. Cuando la papa no sea un ingrediente principal, agregarlo en una pequeña cantidad.

c) Incluir una porción de fruta fresca sin adición de azúcares, grasa o sal.

2.5.2. Recomendaciones para la combinación y preparación de alimentos y bebidas en las comidas de las escuelas.

Se recomienda combinar los alimentos para conformar una comida escolar que contribuya al logro de una dieta correcta, con fundamento en la NOM-043-SSA2-2012 antes señalada; asimismo, se recomienda que la preparación de las comidas incluya los tres grupos del Plato del Bien Comer:

1. Verduras y frutas.

2. Cereales.

3. Leguminosas y alimentos de origen animal.

Dar prioridad a los platillos que no requieran grasa en su preparación o que la requieran en muy pequeñas cantidades, como los guisados en salsa, asados, horneados, tostados, cocidos al vapor, evitando los platillos fritos, capeados o empanizados. En caso de requerirse, usar siempre aceites vegetales para su preparación.

La preparación de alimentos debe considerar las recomendaciones de higiene y manejo de alimentos descritas en el Acuerdo y en las normas oficiales mexicanas NOM-251-SSA1-2009 y NOM-043-SSA2-2012 antes referidas, y en las demás disposiciones jurídicas aplicables.

Bebidas

- Se debe promover el consumo de agua simple potable a libre demanda, antes que de cualquier otra bebida.

3. Glosario.

Ácidos grasos:

Biomoléculas orgánicas de naturaleza lipídica formadas por una larga cadena hidrocarbonada lineal, de número par de átomos de carbono, en cuyo extremo hay un grupo carboxilo.

Ácidos grasos trans:

Isómeros geométricos de ácidos grasos monoinsaturados y poliinsaturados que poseen en la configuración tipo trans enlaces dobles carbono-carbono no conjugados [interrumpidos al menos por un grupo metileno (-CH₂-CH₂-)], producidos por hidrogenación de aceites vegetales. Amplia evidencia científica vincula el consumo de ácidos grasos trans con alteraciones del metabolismo de lípidos en la sangre, inflamación vascular y desarrollo de enfermedades cardio y cerebrovasculares.

Ácidos grasos saturados:

Ácidos grasos que en su estructura química poseen enlaces sencillos, es decir, que no tienen ni dobles ni triples enlaces.

Alimentos permitidos:

Alimentos y preparaciones (combinaciones de alimentos) que cumplen con los criterios nutrimentales establecidos en este documento para su expendio, distribución o suministro en las escuelas públicas y privadas del Sistema Educativo Nacional.

Azúcares:

Todos los edulcorantes calóricos con aporte energético, incluyendo monosacáridos (glucosa, fructosa, etc.) y disacáridos (sacarosa, lactosa, maltosa, etc.).

Botanas saladas:

Alimentos de sabor salado, elaborados a partir de procesos industrializados o artesanales, generalmente fritos, tostados u horneados.

Bebidas permitidas:

Bebidas y alimentos líquidos (leche, atoles, etc.) que cumplen con los criterios nutrimentales establecidos en este documento para su expendio, distribución o suministro en las escuelas públicas y privadas del Sistema Educativo Nacional. La bebida preferida y la que debe promoverse es el agua simple potable.

Calorías y kilocalorías:

Los términos calorías o kilocalorías expresan el contenido energético de los alimentos. Una caloría se define como la cantidad de energía calorífica necesaria para elevar un grado centígrado la temperatura de un gramo de agua pura. Una kilocaloría (kcal) es igual a 1000 calorías. El contenido energético de los alimentos se expresa en kilocalorías en este documento.

Cereales de grano entero:

Son aquellos que contienen la cáscara, el germen y el endospermo. En comparación con los granos refinados, que únicamente conservan el endospermo.

Contenido energético de los alimentos:

Es la cantidad de kilocalorías que contienen los alimentos y bebidas por unidad de masa o volumen.

Galletas, pastelitos, confites y postres:

Alimentos dulces elaborados a partir de procesos industrializados o artesanales y distribuidos para su consumo a gran escala.

Grasas:

Las grasas, junto con los hidratos de carbono y las proteínas, constituyen los macronutrientes. Químicamente se refieren a componentes en los que uno, dos o tres ácidos grasos están unidos a una molécula de glicerina formando monoglicéridos, diglicéridos o triglicéridos. El tipo más común de grasa son los triglicéridos. Su principal función es la de ser fuente de energía, aportando 9 kcal por gramo, además de que favorecen la absorción de vitaminas liposolubles y carotenos; forman bicapas lipídicas de las membranas celulares; recubren órganos; regulan la temperatura corporal; sirven para la comunicación celular; especialmente como receptores nucleares; y forman parte de la estructura de hormonas esteroideas. Los triglicéridos sólidos a temperatura ambiente son denominados grasas, mientras que los líquidos son conocidos como aceites. Existen grasas de origen animal y de origen vegetal.

Grasas saturadas:

Formadas mayoritariamente por ácidos grasos saturados. Son generalmente sólidas a temperatura ambiente. La mayoría de las grasas saturadas provienen de productos de origen animal, como los lácteos y las carnes, pero algunos aceites vegetales, como el de palma y coco, también las contienen en concentraciones altas. Consumir grasas saturadas en exceso aumenta la concentración de colesterol total y LDL en la sangre, así como el riesgo de contraer enfermedades cardiovasculares.

Harinas integrales:

Producto obtenido de la molienda que incluye el salvado (cáscara), que es la parte externa y es rica en fibra; el germen, que es la parte interna del grano y es rica en micronutrientes; y la fécula o almidón, conocido como el endospermo. Se considera la harina de grano entero si al menos 51% del peso del producto proviene de dichos granos. En México, la Norma Oficial Mexicana NOM-247-SSA1-2008, Productos y servicios. Cereales y sus productos. Cereales, harinas de cereales, sémolas o semolinas. Alimentos a base de: cereales, semillas comestibles, de harinas, sémolas o semolinas o sus mezclas. Productos de panificación. Disposiciones y especificaciones sanitarias y nutrimentales. Métodos de prueba, publicada en el Diario Oficial de la Federación el 27 de julio de 2009, especifica como harina integral al producto obtenido de la molienda del grano de cereal que conserva su cáscara y sus otros constituyentes.

Hidratos de carbono:

Uno de los tres macronutrientes. Son compuestos orgánicos que contienen carbono, hidrógeno y oxígeno. Son solubles en agua y se clasifican de acuerdo con la cantidad de carbonos o por el grupo funcional que tienen adherido. Son la forma biológica primaria de almacenamiento y consumo de energía, aportando aproximadamente 4 kcal por gramo. Los hidratos de carbono en la dieta humana se encuentran sobre todo en forma de almidones y diversos azúcares.

Macronutrientes:

Término general para los hidratos de carbono, proteínas y grasas que son compuestos de los alimentos que utiliza el cuerpo para generar energía o construir células. Se denominan macronutrientes porque el organismo los requiere en grandes cantidades, en comparación con las vitaminas y los minerales (micronutrientes), que se requieren en menor proporción.

Porción:

Cantidad de alimento o bebida recomendada para consumo.

Preparaciones de alimentos:

Combinaciones de dos o más alimentos, compuestos generalmente de cereales de grano entero o de harina integral, combinados con alimentos de origen animal o leguminosas, con nulas o muy pequeñas

cantidades de aceites vegetales (por ejemplo, tortas, sándwiches, quesadillas o tacos). Constituyen la principal fuente de energía y macronutrientes del refrigerio escolar. Suelen ser de elaboración casera o artesanal, aunque también pueden producirse de manera industrial.

Proteínas:

Uno de los tres macronutrientes. Compuestas de cadenas lineales de aminoácidos que el cuerpo necesita para funcionar en forma adecuada. Desempeñan funciones esenciales para el organismo: estructural, reguladora, transportadora, de respuesta inmune, enzimática y contráctil.

Necesidades energéticas:

Es la cantidad de energía (kilocalorías) proveniente de alimentos y bebidas que requiere un individuo para el mantenimiento de una vida saludable.

Recomendaciones de energía:

La cantidad de energía (kilocalorías) promedio que, con base en evidencia científica, se recomienda que consuman los individuos a partir de los alimentos y bebidas, de acuerdo con las necesidades energéticas para distintos grupos de edad, para cada sexo y por nivel de actividad física.

Refrigerio escolar:

Alimento ligero que se consume entre las comidas principales y se expende en las tiendas o cooperativas escolares, o es preparado en casa y proporcionado por la familia para su ingesta en la escuela durante el horario de recreo o receso.

Verduras y frutas:

Las verduras se definen como plantas cultivables que generalmente producen hojas, tallos, bulbos, raíces y flores utilizadas como alimentos. Las hojas verdes incluyen verduras como la espinaca, acelga, col y lechuga. Los tallos incluyen el apio y el espárrago. La zanahoria y el nabo, entre otros, constituyen las raíces y bulbos. El brócoli, la calabaza, el jitomate, el chayote y la coliflor, entre otros, son flores. Finalmente, la cebolla y el ajo son ejemplos de bulbos. Los champiñones, setas y otros hongos también se clasificarían dentro del grupo de las verduras. A pesar de que las raíces y bulbos son considerados como verduras, desde el punto de vista botánico y para los fines de este Anexo Único, sólo se consideran las verduras con bajo contenido de almidón; es decir, se excluyen tubérculos y bulbos con alto contenido de almidón como la papa, el camote y la yuca, debido a que las verduras con bajo contenido de almidón son las que tienen menor contenido de energía y se han asociado con importantes beneficios para la salud. Igualmente, se excluye de este grupo a los plátanos machos, por su alto contenido de almidón.

Las frutas se definen como el conjunto de frutos comestibles que se obtienen de plantas cultivadas o silvestres. Las frutas son los tejidos pulposos asociados a las semillas de las plantas o flores adecuadas para el consumo humano. En botánica es el ovario de la planta, por lo tanto el jitomate, el pepino y la calabaza, entre otras, pertenecerían a este grupo. Sin embargo, se prefiere definir a las frutas como alimentos obtenidos de las plantas que, generalmente, se consumen como postre, como colación entre comidas, o que acompañan el desayuno, en lugar de ser el platillo principal de una comida. Son una buena fuente de vitaminas y minerales, además de agua, ya que su composición es de entre 80 y 95% agua.

4. Bibliografía.

Bourges H, Casanueva E, Rosaldo J. Recomendaciones de ingestión de nutrientes para población mexicana. Bases fisiológicas. Tomo 2. Energía, proteínas, lípidos, hidratos de carbono y fibra. México: Editorial Panamericana, 2008.

Secretaría de Salud. Bases técnicas del Acuerdo Nacional para la Salud Alimentaria. Estrategia contra el sobrepeso y la obesidad. México: Secretaría de Salud, 2010.

Bender AE. "Fruits and vegetables". En: Caballero B, Allen L, Prentice A, eds. Encyclopedia of human nutrition. Oxford: Elsevier, 2005;vol II:356-360.

Ronzio R, ed. The encyclopedia of nutrition and good health. Nueva York: Facts on File, 2003.

Rivera JA, Muñoz-Hernández O, Rosas-Peralta M, Aguilar-Salinas CA, Popkin BM, Willett WC. Consumo de bebidas para una vida saludable: recomendaciones para la población mexicana. Salud Pública Mex 2008; 50:172-194.

Sistema Nacional para el Desarrollo Integral de la Familia. Lineamientos de la estrategia integral de asistencia social alimentaria. 2013

Encuentro Nacional de Alimentación y Desarrollo Comunitario. Adecuaciones a los lineamientos de la estrategia integral de asistencia social alimentaria (EIASA). Septiembre 2012.

Barquera S, Hernández-Barrera L, Campos I, and Flores M. [en prensa]. Nutrición y salud pública: el principio de la prevención. Competencias en Salud Pública. México: Secretaría de Salud, 2008a.

Barquera S, Campos-Nonato I, Hernández B, Flores M, Durazo AR. [en prensa]. Obesity and central adiposity in Mexican adults: results from the Mexican National Health and Nutrition Survey 2006. Salud Pública Mex 2009;51 suppl 4:S595-S603.

Barquera S, Hernández-Barrera L, Tolentino ML, Espinosa J, Ng SW, Rivera J, Popkin BM. Energy intake from beverages is increasing among Mexican adolescents and adults. Journal of Nutrition 2008; 138(12):2454-2461.

Barquera S, Hotz C, Rivera-Dommarco J, Tolentino L, Espinosa J, Campos-Nonato I. The double burden of malnutrition. Case studies from six developing countries. Geneva: FAO, Food and Nutrition, 2006:164-198.

González CD, González-Cossío T, Barquera S, Rivera-Dommarco J. Alimentos industrializados en la dieta de los preescolares mexicanos. Salud Pública Mex 2007;49:345-356.

Key TJ, Schatzkin A, Willett WC, Allen NE, Spencer EA, Travis RC. Diet, nutrition and the prevention of cancer. Public Health Nutr 2004;7(1A):187-200.

Steyn NP, Mann J, Bennett PH, Temple N, Zimmet P, Tuomilehto J, Lindström J, Louheranta A. Diet, nutrition and the prevention of type 2 diabetes. Public Health Nutr 2004;7(1A):147-165.

Casanueva E, et al. Nutriología médica. 3ª. Edición. Fundación Mexicana para la Salud: Editorial Médica Panamericana, 2008.

World Cancer Research Fund/American Institute for Cancer Research. Food, Nutrition, Physical Activity and the prevention of Cancer: a Global Perspective. Washington DC: AICR; 2007

Willett WC. Dietary fat plays a major role in obesity: no. Obesity Reviews. 2002; 3(2): 59-68.

Nissinen K, Mikkilä V, Mannisto S, Lahti-Koski M, Rasanen L, Viikari J, Raitakari OT. Sweets and sugar-sweetened soft drink intake in childhood in relation to adult BMI and overweight: The Cardiovascular Risk in Young Finns Study. Public Health Nutr. 2009; 12 (11): 2018-2026. 1-9.

World Health Organization. The Joint WHO/FAO Expert Consultation on diet, nutrition and the prevention of chronic diseases: process, product and policy implications. Public Health Nutr 2004; 7(1A), 245-250.

Thomas D, Elliott EJ, Baur L. Low glycaemic index or low glycaemic load diets for overweight and obesity. Cochrane Database of Systematic Reviews. 2007, Issue 3. Art. No.: CD005105

Vartanian LR, Schwartz MB, Brownell KD. Effects of soft drink consumption on nutrition and health: a systematic review and meta-analysis. Am J Public Health. 2007; 97:667-675.

Kromhout D, Menotti A, Bloembergen B. Dietary saturated and trans fatty acids and cholesterol and 25-year mortality from coronary heart disease: the Seven Countries Study. *Prevention Medicine*. 1995; 24: 308-3015.

World Food Programme. *State of school feeding worldwide 2013*. Rome, 2013.

World Health Organization. *School Policy Framework. Implementation of the WHO Global Strategy on Diet, Physical Activity and Health*. WHO. Canada, 2008.

World Health Organization. *Guideline: Sodium intake for adults and children*. Geneva, World Health Organization (WHO), 2012.

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