

# Habits of nutrition in México

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There are many habits and attitudes that play roles in the nutrition and alimentation of the world's population, and the population of Mexico in specific. These food habits are of major influence on obesity and overweight. But they do not develop in a vacuum. It's human nature and grows from many things:

*Personal:* everyday living, family relationships, cultural values, habits, attitudes, practices.

*Cultural:* rites and ceremonies, beliefs, personal food meaning, availability.

*Economics:* (family) income, recession.

*Social;* different groups in society with different values, backgrounds, habits etc...

*Psychologic influences:* Diet patterns, food as power for children. sweets-theory, personal meaning and relationship to personal needs.

In last 30 years Mexico has been a leading example of these factors of influence on nutrition and the problems with nutrition. Many changes in food habits and an increase of malnutrition has occurred in these last 30 years.

The most important change has been, under influence of switching economic models, the change of a traditional rural diet of maize and beans to a highly commercialized and industrialized diet. And also the change of a homogenous diet to a diet with some dominant aliments. An investigation conducted by the Instituto Nacional de Ciencias Medicas y Nutricion Salvador Zubiran (INCMNSZ) approves this statement. The INCMNSZ investigated in urban area's the changes in nutrition and found that Mexican diets has changed from a homogenous diet with mainly vegetable products (e.g. tortillas) to a diet with dominant aliments, and more animal-originated products. These being some of the major causes of obesity in general and childhood obesity in specific. In the rural area's of Mexico. the availability of more products has been the cause of changes in nutritional status. Especially the introduction of industrialized products had a major influence on the nutrition, as well as the big increase of soft drinks consumption. (In 1999: Mexico was the number 1 consumer of soft drinks in the world with 160 liters per person annually). Especially in the region of central Mexico. The tendency of decreased fruits and vegetable consumption has been a concern in south Mexico, though also central and north Mexico shows decreases in fruits and vegetable consumption. Also the consumption of lactated products has shown

a decrease in central and south Mexico according to Las Encuestas Nacionales de Ingresos y Gastos de los Hogares (ENIGH). It has also been found in investigations by the Centro de Investigación en Nutrición y Salud (CINyS) del Instituto Nacional de Salud Pública (INSP) that this decreased consumption of milk and other lactated products has occurred in children and adolescents. This probably being of influence on the malnutrition status of children and adolescents in Mexico.

Other factors that play roles in the change of nutritional status in Mexico are the availability of products in markets and the influences and exchange of culture and alimentation with other countries. The United States of America with the introduction of fast food in specific.

Furthermore it is good to notice that these changes in alimentation and nutrition, and the prevalence and incidence of obesity and childhood obesity has not only been part of changes in Mexico, but has been a change all over the world. As well as developed as developing countries. Showing that this change is not only a problem of developed countries, or persons with a good income, but also affects developing countries and its inhabitants.

An other change in nutritional habits has been the moments a day of eating and the amounts of between-meals a day. In the beginning of the 20<sup>th</sup> century, times of dining were more fixed moments in a day. In the flexible and changing society of nowadays, dining times are not as fixed as before and the amount of between-meals increased drastically. The influence of these factors on childhood obesity has not been investigated, but it is generally accepted that these irregular moments of eating and the increase of between meals have negative effects on overweight and obesity. Also because these habits and between-meals include more snacks and fast food consumption, which influences on overweight and obesity has been proved in various researches.

It is for physicians and other medical professions to take these backgrounds and changes into account while making policies or treating patients. With the understanding of these changes and the habits in nutrition and alimentation, one can make proper management to decrease the problems with malnutrition and the prevalence and incidence of (childhood) obesity.

## Management and recommendations

The major aspects of treatment of overweight and obesity in children and adolescents is energy reduced diet and increased physical activity. But the first step before this all is recognition of the patient of his behavior and individual lifestyle regarding eating practices and physical activity. In this, environment plays an important role, and a behavioral approach is necessary.

As explained in the 'habits of nutrition' part, changes in society and culture have influenced the nutritional status of children and adolescents in the world, and Mexicans in specific a lot past decades. Because of this, management of the malnutrition problem starts with these aspects. Understanding them and implementing them in the daily treatment of patients and policy making will be the first step in dealing and treating with this problem. The increase in industrialized food consumption, the increase in fat and animal-originated foods, a decrease in fruits and vegetable consumption, a less homogenous diet, high soft drink consumption and a decrease of healthy products consumption such as lactated products in children and adolescents are major environmental and habitual factors of influence on the nutritional status of children and adolescents in the world, and Mexicans in specific. Dealing with these factors is the start of managing the malnutrition (overweight and obesity) problem in the Mexico and the other countries in the world.

It is generally accepted that obese persons consume too much energy *in* relation to their energy expenditure. Because of this, dietary modification is a 'conditio sine qua non' in obesity. Whether it's the goal to loose weight or maintenance of weight.

But as explained, also behavioral modification is of major importance, so, in this treatment of the obese we have to make a distinction between behavioral modification treatment and dietary treatment.

The dietary interventions include:

1. Stabilization or decrease of total calorie intake.
2. Fat intake
3. Modification of the composition of macronutrients intake

A hypo caloric diet, with a reduction of 30% to maximum 40% of the caloric requirements in children and adolescents with obesity can result in efficient weight reduction. A hypo caloric diet according to 'el plato de bien comer' with only 25% fats, 50%-55% of preferentially complex carbohydrates, 15%-20% proteins and sufficient water intake is being prescribed nowadays as the dietary treatment for children and adolescents with obesity, and could lead to a weight loss of approxi-

mately 0,5kg each week, and can be achieved over a longer period of time.

More rapid and drastic alternatives to this diet are the Very LowCaloric Diets (VLCD) and/or Protein-Sparing Modified Fast (PSMF) treatments. Though these are only recommended in children and adolescents with severe obesity. These treatments exist of only 600 to 900 kilocalories per day. These treatments are designed to maximize rapid weight loss, preserve mineral balance and achieve positive nitrogen balance within only 1 or 2 weeks. These treatments are only with a strict indication and should not be used without close medical supervision. But more important is to emphasize the weight maintenance after this treatment and behavioral training following these treatments. Lifestyle modification should be started even before or during these treatments to maintain a long-term weight loss.

Behavioral modification treatment:

1. Avoiding between-meals
2. Uncontrolled caloric intake
3. Preference for energy dense nutrients

The behavioral aspect of the treatment in children and adolescents with overweight or obesity starts with basic knowledge and lessons on healthy eating, dietary principles and calories. After this, programs with nutritional aspects, e.g. recording what individuals eat, calorie and fat content of food, specific situations where they eat and how many times (between-meals) the person eats are being started. This teaching and self-reflection are major aspects of the behavioral treatment of children and adolescents with an overweight or obesity problem. Interventions after these phases aim at increasing intake of complex carbohydrates and dietary fiber and decreasing energy-dense foods with a high fat content. Depending on age, sex and the degree of overweight and obesity, different dietary interventions are necessary; ranging from minor modifications to profound change of dietary habits.

Not only the child itself is subject to the behavioral aspects of the treatment. The whole social and individual situation of the family must be taken into account in order to evaluate the suitable approach regarding optimal time and intervention as well, Especially because obesity in children is not seldom only a problem of the child in question but often of more family members, and thus sometimes in need of a more broad approach of the obesity problem.

Also surgical treatment and treatment with medicaments are available, but the general opinion among experts is that advice about food and lifestyle, and the dietary and behavioral approach is of more importance than medical treatment.

Is we apply this on the clinical case of the

10-year old boy with obesity it is, as explained before, important to start with a behavioral approach. Changing lifestyle and habits which are partially responsible for the obesity of this young boy. Reflection, education and motivation with a behavioral therapy are very important in managing the boy's obesity problem. Also the family situation, with grandparents, father and brother with obesity should be taken into the management of this problem. At the same time, a dietary change and more physical activity must be achieved. Dietary changes are for example a diet as explained before in 'management and recommendations'. Furthermore is a habit of 6 meals a day not of good influence on obesity. More fixed times of eating and prevention of between-meals should be achieved. Also the diet of this-boy should be better balanced. Including more milk-products, less soft drinks, less meat consumption and more vegetable products. This according to 'el plato de bien comer'. These aspects, as explained in the previous parts should be sufficient in dealing and treating the obesity problem of this young boy. An example of many cases of childhood and adolescents overweight and obesity.

Concluding, nutrition and alimentation is a complex, but very important part of the problem of obesity in children and adolescents. With many factors of influence like personal, cultural, economic, social and psychological factors. It is important to understand all of these parts and to understand what alimentation and nutrition is about, to be able to manage and treat via dietary and behavioral means this multicausal problem of overweight and obesity in children and adolescents

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