

Inverting the trend towards obesity



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Spanish strategy for nutrition,  
physical activity and prevention of obesity

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The NAOS Strategy





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## Introduction

While millions of people are dying of hunger in the world, obesity, according to the World Health Organization, is reaching epidemic proportions.

Obesity and overweight are dangerous to health, as much in themselves as for being risk factors for other chronic diseases, and they reduce life expectancy. Furthermore, obese individuals may experience social rejection and discrimination in the workplace.

Changes in eating habits and new lifestyles are the principal causes of the increase in obesity.

Eradicating hunger and malnutrition in the world is top priority and every effort should be put into doing so. However, this is without forgetting the importance of dealing with the new phenomenon brought about by the increase in obesity and overweight.

In this context, the Ministry of Health and Consumer Affairs has drawn up the *Strategy for Nutrition, Physical Activity and Prevention of Obesity (NAOS)*, which aims to improve diet and to encourage the regular practice of some physical activity by all citizens, paying special attention to prevention during childhood. It has been demonstrated that there is a high probability that an obese child will, in the future, become an obese adult.

Given the multifactor nature of obesity, the challenge faced by the Strategy requires everyone's participation together with a set of actions maintained over time. Only in this way can positive results be obtained.

Various sectors of society have actively participated in the drafting of the Strategy: Public Administrations, independent experts, companies related to the food industry and the physical activity sector, associations, etc.

In order to put the strategy into practice the involvement of all the above is necessary, and of society as a whole, as only in this way can we invert the rising trend towards obesity.

In spite of the fact that current figures are alarming, we should not be worried, rather we should concern ourselves with being optimistic, creative and persistent in achieving our goal.

This Strategy is only the first step.

**Elena Salgado Méndez**  
Minister of Health and Consumer Affairs

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preventing  
obesity:  
a public health priority

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## Preventing obesity: a public health priority

According to the World Health Organization (WHO), obesity and overweight have reached epidemic proportions on a world scale. More than a thousand million adults are overweight and, of these, at least 300 million are obese.

Concern for the prevalence that obesity is acquiring on a global scale is due to its association with the principal chronic diseases of our time, including cardiovascular disease, *diabetes mellitus* type 2, high blood pressure and certain types of cancer. The higher the degree of obesity, the greater the figures of morbidity and mortality for these diseases.

57 million people die every year in the world. According to the *World Health Report, 2002*<sup>1</sup> the increase of chronic disease is responsible for two thirds of these deaths and for 46% of global morbidity. These percentages are rising, so if this trend is not inverted, in 2020 non-communicable diseases will be the cause of 73% of deaths and of 60% of world illnesses.

Of the ten risk factors identified by the WHO as key to the development of chronic diseases, five are closely related to diet and physical activity. In addition to the above-mentioned, obesity, sedentary lifestyles, high blood pressure, hypercholesterolemia and low fruit and vegetable intake are quoted.

As can be seen, an unhealthy diet and lack of regular physical activity are the main causes of the major chronic diseases, and both are susceptible to change.

In adults, obesity is also associated with other pathologies, including respiratory illnesses and arthritis. But it is in children and adolescents where the problem becomes more serious, as if measures concerning their habits are not taken in time, there is a high probability that the obese child will become an obese adult. In the youngest population diseases associated with obesity include high blood pressure, hyperinsulinemia, dyslipemia, *diabetes mellitus* type 2, aggravation of respiratory illnesses such as asthma, and psychosocial problems.

All the diseases described above are life-shortening. Obesity can reduce a person's life expectancy by up to ten years. In addition, they entail an increased economic burden on health systems. For example, in our country it has been calculated that the direct and indirect costs associated with obesity make up 7% of total health expenditure, representing some 2,500 million euros per year.

For these reasons, it can be said that the consequences of obesity make this disease one of the greatest challenges of public health for the 21<sup>st</sup> century.



<sup>1</sup> *The World Health Report 2002 - Reducing Risks, Promoting Healthy Life*, WHO, Geneva, 2002.

**“Unhealthy diet  
and lack of regular physical activity  
are the leading causes of the  
major chronic diseases”**

Growing concern for the problem has led member States of the WHO to request the drafting of a world strategy aimed at combating the obesity epidemic.

In response to this request, in May 2004, the 57<sup>th</sup> World Health Assembly approved the *Global Strategy on Diet, Physical Activity and Health*<sup>2</sup>. The overall goal of this strategy is to promote and protect health and guide towards the creation of a favourable environment for the adoption of sustainable measures on an individual, community, national and global scale, which, together, lead to a reduction in morbidity and mortality associated with an unhealthy diet and lack of physical activity.

From now on, the challenge for Member States is to adapt the WHO strategy to their social and cultural environments, upon which the success of the preventive measure will depend.

## Present situation and trends in Spain

The prevalence of obesity (especially in infancy, where it reaches alarming figures) and the rising trends over the last two decades have also led to the term “epidemic obesity” being consolidated in Spain.

In the Spanish adult population (25-60 years old) the obesity index is 14.5% while that of overweight reaches 38.5%<sup>3</sup>. That is, one in two adults weighs more than recommended. Obesity is more common in females (15.7%) than in males (13.4%). It has also been noted that the prevalence of obesity increases with age, reaching figures of 21.6% and 33.9% in males and females over 55, respectively.

Most worrying is the phenomenon of obesity in the infant and young population (2-24 years), already at 13.9%, and that of overweight at 26.3%<sup>4</sup>. In this age group the prevalence of obesity is higher among males (15.6%) than females (12%). The highest figures are detected in prepuberty and, more specifically in the 6 to 12 year age group, with a prevalence of 16.1%.

In comparison with other countries in Europe, Spain is in an intermediate position as far as adult obesity is concerned. However with respect to the infant population, our country has one of the highest figures, only comparable with that

<sup>2</sup> *World Strategy on Diet, Physical Activity and Health*. WHO. Geneva, 2004.

<sup>3</sup> *Prevalencia de obesidad en España: Estudio SEEDO 2000*. Med Clin (Barcelona) 2003; 120:608-12.

<sup>4</sup> *Estudio enKid (1998-2000)*. Barcelona. Masson, 2004.

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of other Mediterranean countries. Thus, for Spanish ten-year-olds, the prevalence of obesity is only greater in Europe among children in Italy, Malta and Greece.

When considered according to geographical areas, the North East of Spain has the lowest figures while the South, in particular, Murcia, Andalusia and the Canary Isles show the highest figures. In addition, the probability of being overweight or obese is greater in rural areas than in urban zones. It is also more common in populations with a lower socioeconomic and educational level.

To sum up, in our environment the risk of developing obesity is greater in females, elderly people and social groups with lower levels of income and education.

### Causes of obesity

As mentioned previously, the main causes of noncommunicable diseases are the increased consumption of high calorie food (with a high fat and sugar content) and a reduction in physical activity.

Our country has undergone huge changes in recent decades, having a drastic effect on the eating habits of our citizens. Spain has experienced what is traditionally known as a “nutritional transition”. This is a series of modifications, both quantitative and qualitative, to diet, related with economic, social, demographic changes and health factors.

Traditional diets have been rapidly replaced by others with a higher energy density, implying more fats, principally of animal origin, and more sugar added to foods, together with a decrease in the intake of complex carbohydrates and fibre. These dietary changes are combined with changes in behaviour leading to a reduction in physical activity at work and in leisure time.

**“The consequences of obesity make this disease one of the greatest challenges for public health in the 21<sup>st</sup> century”**



The human being is biologically better prepared to resist prolonged periods of fasting than to tolerate an abundance of calories and excess rest. Although we have physiological mechanisms of food and metabolic satiation, these are obviously not effective enough to prevent obesity. The end result is a chronically positive energy balance, which goes on accumulating year after year, in the form of fat.

The fast and quite obvious rise in the prevalence of overweight and obesity that has taken place over the last two or three decades can not be attributed to genetic causes. Although hereditary factors are important, the human genome has not changed so much in such a short time. Hence the conclusion that environmental factors play a primordial role in the

development of this world epidemic of obesity, creating the so-called "obesogenic atmosphere", characterized by excess food and a sedentary lifestyle.

**"It is worrying that 8% of Spanish children go to school without having had breakfast"**

Very often the act of eating acquires an emotional and gratification value independent of our calorific needs. Subliminally, we associate eating and drinking with positive states of mind and, therefore, when we do not feel well we compensate by eating or drinking, even though we are not hungry and although it goes against our reasoning and our health. Food is also used by parents to reward their children.

Correct diet and nutrition are important at all stages of life, but particularly so during childhood. The diet of Spanish children and adolescents is characterised by an excess of meat, cured meats, milk products and high energy foods, including manufactured cakes and fizzy drinks (rich in fats and refined sugars, respectively) and for a deficit in the intake of fruit, vegetables and cereals.

Furthermore, it is worrying that 8% of Spanish children go to school without having had breakfast. It has been proved that the prevalence of obesity is greater in those individuals who eat little or nothing at breakfast time.

The eating habits of the infant and young Spanish population are halfway between a typically Mediterranean pattern and that of the Anglo-Saxon countries. These habits begin at three or four years of age and are established from eleven years, with a tendency to reinforce themselves throughout life. Infancy is, therefore a crucial period for taking action concerning eating behaviour given that the habits acquired in this stage will be factors determining the health of the future adult.

Another cause of obesity is physical inactivity. Recognised as a more and more important determining health factor, this problem is the result of a change in patterns of behaviour leading to more sedentary lifestyles, the latest causes of which are living in cities, new technologies, passive leisure and increased access to transport.

In the infant and young populations these phenomena are heightened. The number of hours children and adolescents spend playing on computers or with videogames has increased considerably. Leisure time in childhood is becoming more and more sedentary.

Advances in technology and transport have reduced the need for physical exercise in everyday activities and it is difficult to imagine that this trend is not going to continue in the future. Added to this, is an urban environment not inductive to the practice of physical activity, which has caused, to give just one example, a drop in

## Preventing obesity: a public health priority

the number of children who walk to school, children who, at the same time, tend to be less active throughout the rest of the day. Current figures show that Spanish children spend an average 2 hours 30 minutes a day watching television and a further half an hour playing with video games or connected to the Internet <sup>5</sup>.

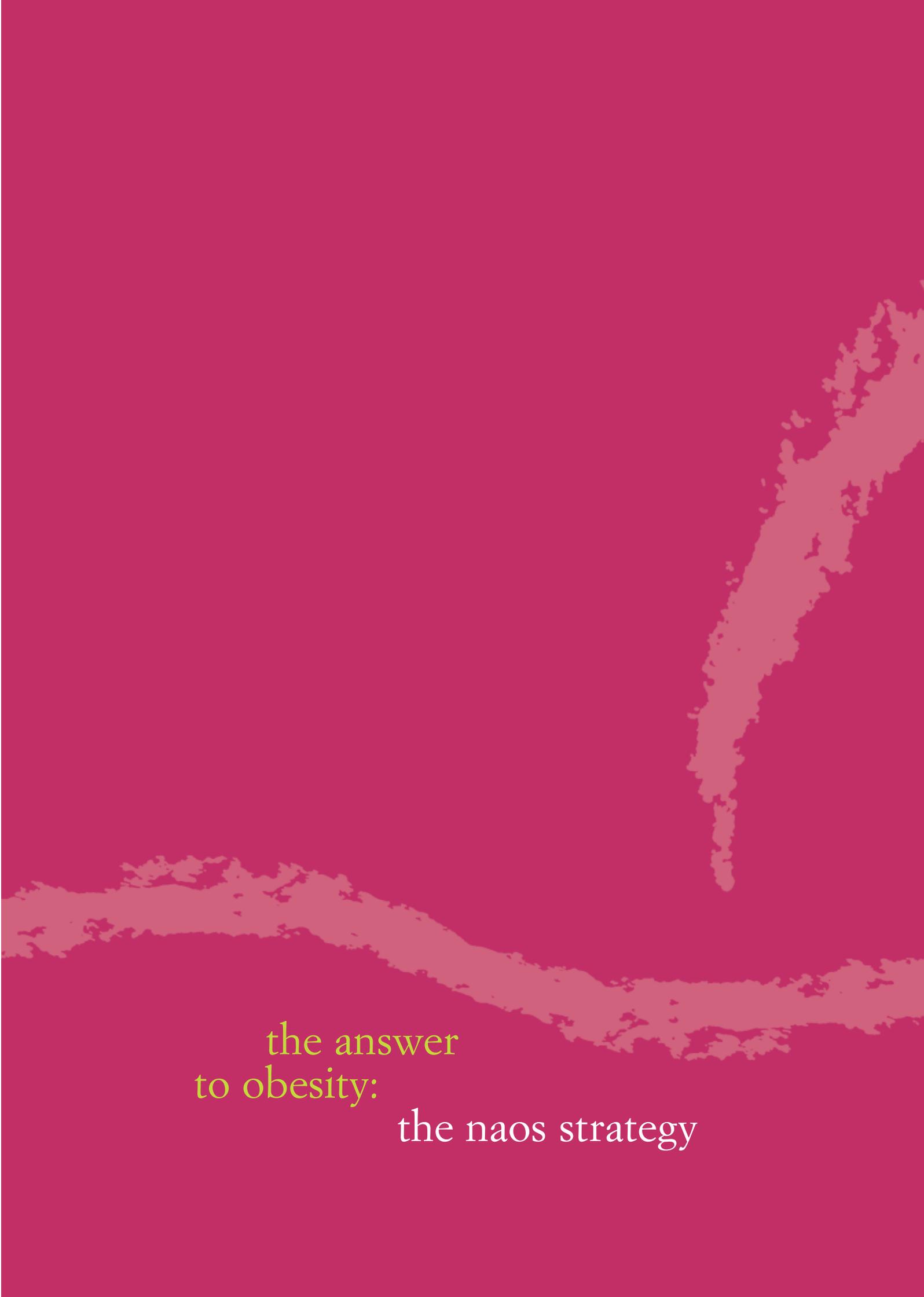
There are still major socioeconomic, cultural and demographic differences between Northern European and Mediterranean countries, a fact which could explain to a large extent the wide differences existing in sedentary life in Europe.

Portugal, Belgium, Spain, Germany and Greece have a higher prevalence of sedentary lifestyles.

**“Spanish children spend an average 2 hours and 30 minutes a day watching television and a further half an hour playing video games or connected to the Internet”**

Profound knowledge of the above-mentioned causes and of their multiple and complex interrelations is vital to changing the habits of the population and modifying obesity factors. A combination of regular physical activity, a variety of food in the diet and broad social interaction are probably adequate for tackling the problem we face, and should result in longer life and a healthy ageing population.

<sup>5</sup> *Estudio de Audiencia Infantil*. AIMC, 2004.

A photograph of a sunset over a body of water. The sky is a mix of orange, yellow, and blue. A white wake from a boat is visible in the foreground, curving across the water. The text is overlaid on the bottom left of the image.

the answer  
to obesity:  
the naos strategy

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# The answer to obesity: the NAOS Strategy

In the global context of this serious phenomenon described by the WHO, the Minister of Health and Consumer Affairs has believed it necessary to tackle and take control of the situation of obesity in our country.

To draw up this document, the Ministry of Health and Consumer Affairs has had the cooperation of a wide range of experts, coordinated by the Spanish Food Safety Agency (AESAs) and the General Directorate of Public Health, who have reviewed the scientific evidence available and analysed all the factors influencing obesity in order to determine the most efficient actions necessary to prevent it.

Representatives of the different Administrations have taken part in the broad consultancy process (the Ministry of Education and Science and the Ministry of Agriculture, Fisheries and Food, the Autonomous Communities and Town Councils); independent experts on diet, nutrition and physical activity; the private sector (food and drink companies, distribution companies, restaurant chains); consumer associations; teachers, town planners, publicists and many more.

Based on the conclusions of the study and assessment process, the Ministry of Health and Consumer Affairs has drawn up the *Strategy for Nutrition, Physical Activity and Prevention of Obesity (NAOS)*.

The NAOS Strategy should serve as a platform from which to encourage all those

initiatives which contribute to achieving the necessary social change in the promotion of a healthy diet and the prevention of a sedentary lifestyle. It has been created with the backing of over 80 organisations, including universities, university schools, professional colleges, scientific institutions, foundations and associations who have offered their support and co-operation in the development of this strategy.

The focus of the strategy is based on achieving an equilibrium point between calories consumed and calories burnt. The equation, although seemingly simple, becomes complex due to the high number of environmental and social variables.

## Goal and main objectives

The fundamental goal of the NAOS Strategy is:

**To promote a healthy diet and foster physical activity to invert the growing trend of the prevalence of obesity and thus to substantially reduce morbidity and mortality attributable to chronic diseases.**

The Strategy aims to stress the importance of adopting a lifelong perspective in the prevention and control of obesity. It consists of a set of actions directed at the entire population but, given the specific problem of our country, priority for the prevention of obesity will be focused on children and young people, whose habits of

eating and physical activity have not yet become set and may be changed, especially through education.

The specific objectives will be developed in more detail, defining the time required to achieve them, target population groups, in addition to follow-up and evaluation.

To achieve the proposed goal, the **main objectives** which are to be developed through the NAOS Strategy are as follows:

- To promote policies and plans of action aimed at improving eating habits and increasing physical activity in the population. These policies should be sustainable, integral and reach a wide section of the society.
- Population awareness and information campaigns about the positive impact on health of a balanced diet and regular physical activity.
- To promote nutritional education at home, at school and in the community.
- To stimulate the practice of regular physical activity in the population, with special emphasis on schools.
- To favour a framework of collaboration with companies in the food industry to promote the production and distribution of products which contribute to a healthier and more balanced diet.
- To make professionals in the National Health System more aware in order to foster the systematic detection of obesity and problems of overweight in the population.
- To monitor the proposed measures and evaluate the results obtained as a consequence of the Strategy.



areas  
of intervention

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## Areas of intervention

The implementation of the NAOS Strategy requires, as previously mentioned, the cooperation of all sections of society. Few public health activities have such a multisectorial, multidisciplinary and multifactor involvement as that required to implement and manage this Strategy. Moreover it requires the effort to be sustained over the short, medium and long term.

Therefore we are faced with:

- **A clear goal:** to reduce the prevalence of obesity and problems of overweight, and the consequences, as much in the area of public health as in that of its social repercussions.
- **Two fundamental pillars for achieving this:** applying the Strategy to create an environment favouring a decided and sustainable change towards a healthier diet and the practice of regular physical activity.

The NAOS Strategy must be supported by a positive image: it is not a case of good or bad food, rather of a well- or poorly-balanced diet. Nor should we forget that healthy eating is compatible with pleasure and the social role which food plays in our culture. The famous “Mediterranean diet” contains many of these elements and its promotion must be a priority in this Strategy.

The promotion of a healthy diet must not be tied to a repressive campaign, interpreted by the citizen as being prescriptive and

based on prohibitions, as this could result in rejection.

**“The NAOS Strategy must be supported by a positive image: it is not a case of good or bad food, rather of a well- or poorly-balanced diet”**

In accordance with this philosophy, the application of the NAOS Strategy will be formalised using recommendations, voluntary and self-regulating agreements, although in some areas these measures may be accompanied by regulatory initiatives.

However, the NAOS Strategy is created with a desire to be long-lasting, implying the need to review and adapt the actions undertaken now.

Available experience with respect to the best way of preventing obesity is limited. Therefore, it will be necessary to regularly evaluate the results obtained, identifying and prioritising those initiatives which have had a greater impact in the battle against this epidemic.

The World Health Organisation is prepared to back the Spanish “pilot” model. It is therefore important to encourage the participation of all those institutions, foundations and associations able to contribute to keeping the Strategy alive and to promoting the exchange of

experiences with surrounding countries and international organisations.

The following pages review the role required from the different sectors involved in the prevention of this epidemic of obesity. Included are recommendations for action,

to undertakings of specific measures in the following fields:

- **Family and community**
- **At school**
- **In business**
- **The health system**

## Family and community

### Family and community

#### Objective:

To inform and make the population aware of the positive impact on health of a balanced diet and regular physical activity, improving the information available concerning healthy habits in life.

#### Actors:

The Ministry of Health and Consumer Affairs, the Ministry of Education and Science, the Ministry of Agriculture, Fisheries and Food, the Autonomous Communities, Town Councils, foundations, professional, parent, and consumer associations, businesses, NGO's... and, in general the whole society.

### Training and dissemination

The NAOS Strategy has an important line of communication, the objective of the design being the creation of a flow of favourable opinion which encourages improved eating habits and the practice of regular physical activity.

The media, in addition to transmitting the institutional publicity issued by the Ministry of Health and Consumer Affairs to publicise the Strategy, can also contribute in sending clear, specific and positive messages so that citizens receive better nutritional information and are more aware of the impact on health of a correct diet, daily physical exercise and the detection "in time" of obesity. Within

these informative actions some will be directed at the entire population, with general recommendations, and others will be specifically directed at certain groups: children and adolescents, parents, teachers, health professionals, businesses, etc.

#### Actions in this area:

- From the Public Administrations, and with the collaboration of social agents, information campaigns will be organised to make the population aware and to promote regular physical activity and a varied and balanced diet.
- As a first step, the manual "Your children's diet", recently published by the Ministry of Health and Consumer Affairs, aimed at promoting improved eating habits in childhood and adolescence, will be distributed.
- On the Web site of the Ministry of Health and Consumer Affairs a page will be set up called "Embark on the NAOS", aimed at offering news about the different initiatives underway, notices of meetings, publications, recommendations concerning nutrition and physical activity, diet, a question and answer section, interactive applications for calculating the BMI, discussion forum, etc.

The discussion forum will enable the exchange of ideas between users, in an attempt to attract children and young people.

- Contact will be made with those responsible in the leading means of communication, with the aim of reaching agreements to spread the ideas of the Strategy and to guarantee its presence in the media, in order to keep it alive in the short, medium and long term.
- The participation of professional, parent, and consumer associations, etc., will be sought, in the search for a multiplier effect to help spread information about healthy nutrition and physical activity among children and adolescents.
- The collaboration of sports men and women and characters with influence on the child population will be sought to take part in entertainment programmes destined for this audience, thus supporting the diffusion of positive messages.
- At the same time, the Minister of Health and Consumer Affairs will seek agreements with the big leisure and entertainment industries for children and young people, so that using popular characters from cartoons or other sources, they promote a positive image of active lifestyles and a healthy diet.
- Well-known *chefs* will be invited so that, through their cookery programmes, they underline not only the gastronomic quality of the recipes offered but also the nutritional benefits, especially with reference to their calorie content.

It is about “teaching to eat”, demonstrating that eating well is perfectly compatible with healthy eating. To achieve this, the introduction of recipes and “menus of the day” at reasonable prices are proposed, which are nutritionally complete and healthy without losing their gastronomic value.

### Nutritional recommendations

One of the principal objectives of the NAOS Strategy is to offer food guides in which leading national experts in the material have taken part, and which serve as a reference point for the promotion of healthy eating. In this way the necessary homogeneity in objectives and nutritional recommendations reaching the population can be achieved.

Eating habits and sedentary behaviour are developed in childhood and adolescence, becoming very difficult to change at a later date. The influence of the family in the development of these habits is decisive: children watch how we eat, we decide on what there is to eat at home, we stimulate active or sedentary behaviour in our children, the money which children have for sweets, buns, soft drinks, ice-creams, etc.

The family, as the first transmitter of these messages, should have basic knowledge about healthy eating which enables the preparation of varied and balanced menus. The following **ten points** have proven their positive impact on the development of healthy eating habits:

## Family and community

- 1 The greater the variety of food in the diet, the greater the guarantee that the diet is balanced and contains all the necessary nutrients.
- 2 Cereals (bread, pasta, rice, etc.), potatoes and pulses should be the base of any diet, with the result that carbohydrates represent between 50% and 60% of the calories in the diet.
- 3 Fats should not exceed 30% of the daily intake, the consumption of saturated fats and *trans*- fatty acids should be reduced.
- 4 Proteins should provide between 10% and 15% of the total calories, combining proteins of animal origin with those of vegetable origin.
- 5 The daily intake of fruit and vegetables should be increased to reach at least 400 g/day, that is, at least 5 portions a day of these foods.
- 6 The consumption of products rich in free sugars, such as sweets, cakes and soft drinks, should be moderated.
- 7 The consumption of salt, from all sources, should be reduced to below 5 g/day, and the use of iodised salt promoted.
- 8 Drink between one and two litres of water a day.
- 9 Never go without a full breakfast, consisting of dairy products, cereals (bread, biscuits, breakfast cereals...) and fruit, giving between 15 and 20 minutes to the meal. In this way, the need to consume less nutritious food at mid-morning is avoided or lessened, and physical and mental performance at school is improved.
- 10 Involve all members of the family in activities related to eating: shopping, planning the weekly menu, preparing and cooking the food, etc.

## Promotion of physical activity

Together with diet, the other factor causing obesity is a sedentary lifestyle.

**“It is never too late to start physical activity. It is vital to choose the activity type which best adapts to the preferences and abilities of each individual, and to each stage of life”**

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According to a study recently carried out in 15 European countries, Spain is one of the countries where the least amount of physical activity is taken. It is also stressed that the number of hours children and adolescents spend playing on the computer or with video games has increased dramatically.

Leisure, in childhood, is becoming more and more sedentary. It has been shown that children who watch more than five hours a day of television have five times as many chances of becoming obese than those who watch for less than two hours a day. We recommend limiting the time children give to watching television or playing games which do not require exercise to a maximum of two hours.

The objective, therefore, is to encourage the practice of sport and physical activity, especially in childhood and youth.

The WHO recommends taking physical activity on a regular basis, independent of the age of the person and the type of exercise carried out. The current recommendation is 30 minutes of moderate intensity exercise, such as fast walking, every day of the week.

It is never too late to start physical activity. It is essential to choose an activity that fits the preferences and abilities of the individual, at each stage of life.

Children should get used to doing physical exercise on a daily basis: walk or bike to school or to a friend's house, practice a sport on a regular basis, etc. It is also important to ensure that everyone has access to open spaces and sports zones near their homes.

This is where town planning can have a notable influence on the battle against obesity.

The creation of new parks, gardens and sports areas depends upon town planning, which is the party responsible for setting aside ground for this purpose. It is therefore vital to have the collaboration of the Autonomous Communities and the town councils, orchestrated through their national association, the Spanish Federation of Towns and Provinces (FEMP), in order that they promote the construction of green areas and sports facilities in the neighbourhoods, using the instruments offered by legislation in this respect.

## Family and community

In this respect policies already exist with space for increasing the objective of making frequent sport and physical activity easily available. Examples of these policies include the green corridors set up along former railway lines or obsolete livestock migration paths where it is possible to walk, go jogging, cycle, skate, etc.; the closure to traffic of public roads to facilitate physical activity on holidays or the use by the public of sports facilities in state or government approved colleges.

In short, alliances should be sought with the Autonomous, Local and Public Health Authorities to increase these actions and to favour the creation of environments which allow individuals to choose healthy lifestyles.

In this respect, the Minister of Health and Consumer Affairs will promote collaboration with the different appropriate Administrations to set up this block of actions. Furthermore, the possible actions coordinated with the Higher Council for

Sports of the Ministry of Education and Science will be of particular relevance.

### Actions in this area:

- Information campaigns will be carried out to make the public more aware of the importance of physical activity and to promote regular activity as an alternative to sedentary leisure.
- Entertainment businesses, toy manufacturers and advertisers will be asked to collaborate, in the search for common initiatives aimed at promoting games requiring physical activity.
- Work groups will be set up, in the autonomous and municipal areas, responsible for designing initiatives to improve spaces for practising exercise and physical activity, safe bicycle lanes, skating rinks, pedestrian lanes. These groups should include the participation of management representatives from the town council, town planning department, leisure and sports activities, teachers, etc.

## At school

### Objective:

The school, as much for the activities carried out in the classroom as for the extra curriculum activities, for its educational nature and for the amount of time that students spend at school, offers numerous opportunities for teaching children about healthy eating habits and for promoting regular physical activity and sport. It is, therefore, one of the most efficient places for altering the lifestyles of children and adolescents.

### Actors:

Educational Administrations, with respect to the design of curricula and training activities for the teachers.

The educational centres themselves, within the framework of their autonomy.

The teachers.

The Parents' Associations.

## Educating schoolchildren

In this area, actions are proposed to be developed jointly by the Ministry of Health and Consumer Affairs and the Ministry of Education and Science, through the General Secretary of Education. Other aspects will be proposed at the Sectorial Education Conferences, with the aim of obtaining the commitment of the Autonomous Communities to jointly carry out activities designed to meet the Strategy objectives.

### Actions in this area:

- The inclusion in the academic curriculum of knowledge and skills related to diet and nutrition. Not only can these notions be included in the specific subjects (natural and social sciences and physical education) but they can also form part of other content (education for the citizen, etc.). This measure requires regulatory action proposed by the Ministry of Education and Science and the Autonomous Communities.
- To reinforce through workshops or extracurricular activities pupil initiation into the world of cooking and gastronomy, learning to buy, prepare and cook food. In this way positive habits are promoted favouring the acceptance and development of healthy eating habits, within a perspective of class equality.
- The inclusion in teacher training courses of teaching material and guides about diet and nutrition, and their effect on health, in addition to the importance of regular physical activity.
- To promote educational activities in collaboration with other sectors such as parent associations, the catering industry, foundations, etc.
- To promote frequent physical activity and sport at school, expanding the timetable for the use of school facilities for sporting activities at weekends, encouraging children to go to school on

## At school

foot or by bike, contacting sportsmen and women to participate in sports workshops, etc.

### The school dining room

When talking about school, the dining room deserves a special mention apart, as it should represent the practical fulfilment of the objectives laid out in the nutritional education plan of the centre.

The school dining room plays a primordial role given that 20% of children take their main meal at the education centre five days a week. This percentage rises to 32% in the 2-5 year old age group.

This circumstance not only influences the establishment of eating habits in the child, but also influences the nutritional condition.

#### Actions in this area:

- A standard will be drawn up with respect to school dining rooms. The standard, promoted by the Ministry of Health and Consumer Affairs with the collaboration of the Ministry of Education and Science and the Autonomous Communities, will cover the requirements to which school dining room menus must comply.
- Parents will be better informed of the content of menus, to enable them to thus complement at home the food that children have eaten at the educational centre.

To favour improvements in school food, an agreement has been drawn up with leading businesses from the catering industry, belonging to the Spanish Federation of Associations Given to Social Catering (FEADRS). These businesses undertake to:

- Not use oils rich in saturated fats (palm oil, saw palmetto and coconut) or *trans*-fatty acids when frying, replacing these oils with other healthier oils.
- Use iodized salt in those areas known to have an iodine deficiency, as indicated by the Health Authorities.
- Carry out children's workshops to foster the educational measures aimed at the promotion of a varied and balanced diet.

### Food and drink vending machines

At schools the supply of food is often complemented with products that can be purchased from vending machines. As this a self-service system, there is a risk of children consuming too many foods with a high energy content but a low nutritional value, thus unbalancing their diet.

#### Actions in this area:

In order that the supply to pupils through vending machines offers a healthier choice, an agreement has been drawn up with the Spanish National Association of Automatic Distributors (ANEDA), in which they undertake the following:

- Vending machines will not be located in those areas easily accessible to pupils from Infant and Primary Education.
- Advertising will be removed from the machines in order to avoid encouraging the consumption of certain products. This will be replaced by stickers containing messages promoting a healthy diet.
- Products which encourage a balanced diet should be included (mineral water, drinks with a low sugar content, fruit, biscuits, etc.), in favour of those with a high content in salt, sugar or fats.
- A guide to good practices will be published, aimed at professionals in the automatic distribution industry, defining products which should not be included in school machines together with those products which should replace them.
- A "Guide to correct nutrition in centres of education, using vending machines" will be drawn up and distributed in schools and colleges through the parents' associations.

## In business

### In business

#### Objectives:

The prevention of obesity and overweight both from within the food industry, and from within the hotel and catering trade, by developing and promoting healthier products which contribute to a healthy and balanced diet.

The reduction of salt in bakery products to reduce the population's daily intake of salt.

#### Actors:

The General Administration of the State (the Ministry of Health and Consumer Affairs, the Ministry of Agriculture, Fisheries and Food, the Ministry of Industry).

The Autonomous Communities.

The Food industry.

Hotel and Catering businesses.

Bakeries organizations.

### The food and drink industry

The food industry is aware of the problem that obesity and overweight present for public health, and of the role that it can and should play in their prevention.

A number of ways of collaborating have been explored with the food industry to give rise to changes in the information contained on labels and in the composition of some foods, particularly, those products aimed at the infant population. The aim is to develop and promote products which contribute to a healthier choice.

Although there is not enough scientific evidence to prove that the advertising of food and drink for children is chiefly responsible for its selection, the prescriptive effect that advertising can take on influencing which elements are chosen to make up the diet should not be forgotten.

It is estimated that Spanish children watch TV an average 2 hours and 30 minutes a day, which implies that during this time, a child aged between four and twelve years sees an average of 54 advertisements. Therefore, it is clear that certain restrictions are necessary in promoting products aimed at children together with a strict application of a code of good practice in children's advertising.

Success in this area will depend upon not only forbidding certain messages, but of finding positive alternatives which transmit healthy eating habits and promote regular physical activity.

#### Actions in this area:

To develop this collaboration, an agreement has been signed with the Spanish Federation of Food and Drink Industries (FIAB), the only business organisation in this sector in a national scale. The following undertakings have been agreed:

- **Support for the Strategy and sponsors:** the food industry will actively contribute to the efficient empowerment of the NAOS Strategy, placing all its scientific and technical knowledge at the disposition of the pursued objectives,

together with its experience in understanding consumer demands and its communication capacity.

- It undertakes to promote, diffuse and support all those activities and publicity campaigns concerning lifestyles, nutrition, physical activity and health carried out by the Ministry of Health and Consumer Affairs.
- It will sponsor sporting events, promote sport, provide material and encourage physical activity, especially for children and young people.
- The food industry also undertakes to participate in the Observatory of Obesity, created by the Ministry of Health and Consumer Affairs, of a scientific and independent nature, from where the actions of the NAOS Strategy will be evaluated.
- **Nutritional information:** the food industry undertakes to include nutritional information (energy, proteins, carbohydrates, fats) in an accessible form on its sales units.
- From July 2005 all new labelling orders must contain this information. If this is not technically possible, the nutritional information will be stored on the Internet in their own sites and/or on the IAB Foundation web site.
- In 2005, the food and drink industry will design, execute and distribute, in collaboration with the "Consumer Information Association", a guide to help citizens to understand nutritional labelling.
- **Food composition:** as far as is technologically possible, the industry will try to ensure that, in products destined for consumption by children under twelve, the fat which is added contains a high proportion of unsaturated fatty acids and a low proportion of trans-fatty acids. In the medium and long term, the saturated fats will be replaced by unsaturated fats.
- The bringing onto the market of product ranges with a low salt, fat and sugar content will be promoted.
- The food industry undertakes to aim to obtain the gradual reduction of the calorie content of food products on the market and to investigate technological solutions enabling this.
- The food industry will study the use of portions, to discourage excessive calorie consumption.
- Work groups will be set up consisting of technicians in order to understand, investigate and apply the technological possibilities of replacing fat components or of reducing them.
- With respect to sodium, the industry will draw up, for presentation at the end of the first quarter of 2005, a plan to

reduce the sodium content in those foods with a high intake when consumed by the population. For some products, a reduction to 10% in five years will be sought, and where technologically possible this percentage may be exceeded.

- The food industry will draw up and distribute recommendations aimed at SMEs and the R+D Departments of leading companies in the sector, warning of the scale of the obesity problem.
- **Marketing and publicity of food:** the food industry will develop a self-regulating code in the first quarter of 2005, immediately applicable.
- This code will regulate the publicity and marketing of food and drink aimed at children under twelve, the hours when it can be emitted, the presentation mode of the products and the promotion, information and nutritional education that can be made.
- The Ministry of Health and Consumer Affairs will set up a mechanism that enables the evaluation of the potential impact of these self-regulating mechanisms, and which can be completed with the development of the necessary regulatory measures.

### Commercial distribution firms

Commercial distribution firms (large department stores, hypermarkets, super-

markets and self-services), given their proximity to consumers, are a key sector which can contribute to making the population aware of the importance of a varied and balanced diet.

At the same time, they supply the products known as "private brand" or "for distribution", the characteristics of which must be compatible with the objectives of the NAOS Strategy, in order to achieve greater impact of the measures presented.

#### Actions in this area:

The two leading national commercial distribution associations, the National Association of Large Distribution Companies (ANGED) and the Spanish Association of Distributors, Self-services and Supermarkets (ASEDAS), represent the leading chains of the large department stores, hypermarkets, supermarkets and self-services in our country. With the aim of capturing their participation in the NAOS Strategy, a collaboration agreement has been signed with these associations, in which the following undertakings have been established:

- The support for the design and carrying out of diffusion actions of the Strategy, especially in the messages which need to be sent to citizens concerning correct eating habits and daily physical exercise.
- Promotion of commercial policies in "private brand" products, which takes into account the aims and objectives of

the NAOS Strategy, in such a way as to be compatible with the same and to favour compliance.

- Collaboration in the development of publicity and promotion of foods, in agreement with the NAOS Strategy, in collaboration with suppliers.

### Hotel and catering trade

The growing trend of eating out, which represents almost 30% of present food expenditure, enables hotel and catering companies to participate decisively in the promotion of a correct nutritional pattern. The path is to provide a varied and nutritionally balanced diet, enabling the selection of healthy options.

#### Actions in this area:

An agreement has been drawn up with leading restaurant chains in our country, represented through the Spanish Federation of Hotel and Catering (FEHR) and the Association of Modern Restaurant Chains (FEHRCAREM), which includes the following undertakings:

- **Collaboration in diffusing the NAOS Strategy:** restaurants will actively collaborate in the diffusion of the NAOS Strategy, through communication actions in their establishments.
- **Consumption of fruit, salad and vegetables:** the consumption of fruit, salad and

vegetables will be promoted, facilitating the availability of these products in the establishments.

At the same time they undertake to offer vegetable products (fruit, salads, vegetables), to allow the customer a choice of products providing a healthy and varied diet. This action will take place throughout 2005.

- **Nutritional information:** together with the nutritional pyramid, customers will be offered information about the calorie and nutritional content of products offered. In this way, the consumer is able to select a balanced menu. This initiative will take place throughout 2005.
  - **Reduction in saturated fats:** the restaurants undertake to gradually reduce, as supplies allow, the content of saturated fats in food. At the same time, animal fats will be replaced by vegetable fats in those products where this is possible.
- With respect to the oil used for frying certain products, they undertake to gradually reduce, before the end of 2006, levels of *trans*-fatty acids and saturated fatty acids of vegetable oils used for frying.
- **Large portions:** the restaurants undertake not to encourage the consumption of huge individual portions.

### Bakeries organisations

Numerous studies have proved the adverse effect of an excessive intake of salt on blood pressure. The association becomes more evident with the age and weight of the individual, and the initial values of blood pressure.

For this reason the WHO recommends limiting the daily intake of sodium (<2g sodium/day), by keeping salt intake below 5 grams per day.

In Spain the main source of sodium in the adult population is in bread, which provides 19% of the total intake, followed by cured ham, and cold meats. In children the same foods are chiefly responsible for the intake of sodium, although bread takes second place.

#### Actions in this area:

- An agreement has been signed with the industry of Spanish Baker's, represented

by the Spanish Confederation of Bakeries (CEOPAN), for the progressive reduction of the percentage of salt used in the making of bread, going from the current 2.2% to 1.8% (18 g of NaCl/Kg of flour). This reduction will take place over a period of four years, at an annual rate of 0.1%.

- The progressive reduction in the salt content will allow the gradual adaptation of consumer taste to a less salted bread.
- This will make Spanish bread one of the least salted in Europe and will contribute to the objective of limiting the daily intake of salt to 5 g/day.
- This intervention will be accompanied by other information initiatives aimed at promoting the reduction of salt content in other food and of moderating the practice of adding salt to food when cooking or on the table.

## The health system

Professionals from the National Health System have a leading role to play in the prevention of obesity.

Therefore, it is of vital importance to ensure those working in Primary Health Care are aware of the importance of overweight and, in particular of obesity as a chronic disease which should be given the same attention as other diseases, such as diabetes or high blood pressure.

The systematic detection of overweight and obesity should be an inexcusable part of the general check-up of any patient, as is controlling blood pressure or heart beat. This detection should take place from the surgery of any doctor, whether in Primary Health care, Specialised Care, labour, sports, etc.

At the same time, the offices of the chemist, dietician, nurses or health personnel in contact with these patients may be of help in detecting possible patients requiring medical care.

Prevention of obesity should start in infancy, through the promotion of healthy habits in Primary Care. To achieve this basic objective the Associations of Doctors and of Pharmacists, Primary Health Care doctors, associations of nurses paediatricians, dieticians and nutritionists, etc. will be called upon. These associations have expressed an interest in joining the Strategy.

### Actions in this area:

- To encourage doctors working in Primary Health Care to ask patients the necessary questions for detecting the risk of obesity in time, and to provide these patients with basic advice on food and physical exercise.
- To carry out regular campaigns for the early detection of overweight and obesity. The calculation of the body mass index (BMI), by measuring weight and height, is the most accepted indicator in the scientific community for recognising whether the subject is overweight.
- To carry out strategies of information and assistance to prevent obesity in those groups which are more susceptible to rapid weight gain: individuals giving up a nicotine addiction; users of drugs which increase appetite, pregnant, breastfeeding or menopausal women; immigrant populations and marginalised groups.
- To promote breastfeeding in Primary Health Care Centres.
- To identify and monitor children potentially at risk: obesity in parents; overweight or underweight at birth; children of diabetic mothers or mothers who smoked during pregnancy; who have taken medication such as glucocorticoids, antiepileptics, antidepressants, and antipsychotics; etc.



evaluation  
and monitoring

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## Evaluation and monitoring

The Administration proposes the creation of an **Obesity Observatory** which regularly quantifies and analyses the prevalence of obesity in the Spanish population, especially in the infant and young population, and measures the progress obtained in the prevention of this disease.

This Observatory will ensure the necessary methodological homogeneity among the different epidemiological studies which are initiated, enabling comparison with other national and international studies and the obtaining of valid information concerning the evolution, trend and factors influencing and determining obesity.

### Actors:

The Ministry of Health and Consumer Affairs.  
Autonomous Communities.

Town Councils.

Scientific societies, foundations and associations.

The food industry.

Consumer organisations.

### Functions of the Observatory:

- To carry out epidemiological surveillance and monitoring of the obesity trend on a national scale, through the Autonomous Communities.
- To define the indicators that will be used to measure the impact of the interventions carried out.

In this respect, it is collaborating with the WHO in the design and development

of scientific indicators which enable the evaluation of the progressive execution of the NAOS Strategy on a national level.

- To develop specific objectives to be reached in each group of recommendations and to define the time required to achieve these.
- To collect together the different initiatives put into motion offering coordination and facilitating the exchange of experiences among the different groups. To also carry out the role of disseminator in all the initiatives and actions related with the Strategy.
- To demand a rigorous and permanent evaluation to identify the successful initiatives and to compare results, rejecting those interventions without impact and prioritising successful ones.
- To permit the identification of priorities in research.
- To establish relations with international bodies (WHO, European Commission, EFSA...) who enable the exchange of knowledge and experience concerning the prevention of obesity and the participation of different forums set up.
- To monitor the adherence to and application of the different self-regulation agreements