



GOVERNMENT OF ROMANIA

NATIONAL STRATEGY **on the Elimination of Iodine** **Deficiency Disorders**

ROMANIA
2004-2012

NATIONAL STRATEGY
on the elimination of iodine deficiency disorders
by universal iodization of salt intended
for direct human use and for bread baking

2004-2012



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National Strategy On the elimination of iodine deficiency disorders by universal iodization of salt intended for direct human use and for bread baking (2004-2012)

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Introduction

Iodine deficiency is the single most known cause of preventable mental retardation and neurological damage. Iodine deficiency causes goiter and diminished production of vital growth and development hormones. In children, it causes stunting, apathy, lassitude, diminished mental capacities, impaired movement capacity, speech and hearing impairments. In pregnant women, iodine deficiency is associated with gestosis, premature birth, miscarriage, or birth of mentally retarded or borderline intellect babies. Recent studies on large groups of people in Asia have shown that iodine deficiency in pregnant women is a cause of low-weight babies at birth.

Development of the National Strategy on the elimination of iodine deficiency disorders by universal iodization of salt intended for direct human use and for bread baking

Acknowledging the continuous incidence of iodine deficiency at national level, as well as its impact on the cognitive development and future school results of newborns, on the health of pregnant women, and, in fact, on the health status of the entire population, the Ministry of Health found it necessary to develop a national strategy aimed at eliminating iodine deficiency disorders, a major public health problem in Romania.

The National Strategy on the elimination of iodine deficiency disorders by universal iodization of salt intended for direct human use and for bread baking for 2004-2012 was developed and submitted for the government's approval by the Ministry of Health – the General Directorate of Public Health and the State Inspectorate of Hygiene.

In developing the strategy, the Ministry of Health benefited from technical and financial support from the United Nations Children's Fund – UNICEF. Other governmental bodies, non-governmental organizations, as well as international organisms were also involved in this process. Representatives of the above-mentioned institutions formed a multidisciplinary, technical work-group, which actively took part in developing the strategy.

The process of developing the strategy included several meetings of the work-group, consultations with the members of the National Committee for the Elimination of Iodine Deficiency Disorders, as well as an analysis of the results of the studies carried out at national level by the Mother and Child Care Institute "Alfred Rusescu", the Bucharest Institute of Public Health and the "C.I. Parhon" Institute of Endocrinology.

List of abbreviations

USI – universal salt iodization
NCIDDE – National Committee for the Elimination of Iodine Deficiency Disorders
WHO – World Health Organization
UNICEF – United Nations Children’s Fund
MOH – Ministry of Health
IOMC – Institute of Mother and Child Care
SALROM – Romanian Salt Production and Marketing Company
MER – Ministry of Education and Research
IDD – Iodine Deficiency Disorders
IEC – information, education, communication
PSI – Population Services International
UNDP – United Nations Development Program
ICCIDD – International Council for the Control of Iodine Deficiency Disorders

STRATEGY DEVELOPMENT BACKGROUND

Iodine deficiency disorders

World statistics show that:

- 1.6 billion people are at risk of being affected by the lack of iodine in their diet;
- iodine deficiency disorders affect 50 million children;
- every year 100,000 children are born with cretinism worldwide.

Iodine deficiency triggers different afflictions depending on the age of the affected person. In terms of iodine deficiency and/or of thyroid hormones deficiency there may appear:

- miscarriage or premature birth;
- increased peri-natal and child mortality rate;
- congenital defects;
- cretinism with neurological damage (intellectual deficit, deaf dumbness, strabismus) or mixedema damage;
- in children, juvenile hypothyroidism with diminished mental and physical development;
- in adults, goiter (with its complications) and fertility disorders.

Inadequate iodine intake during gestation reduces the density of the network of developing cells interconnections in the brain of the fetus, thus limiting for life the individual’s mental capacities. At population level, the consequence has proved to be a loss of 10 to 15% IQ points. An adequate iodine nutrition status during the first 16 – 18 weeks of pregnancy is crucial for the prevention of IDD. The susceptibility of the developing fetal brain to damage induced by the lack of iodine, and the fact that pregnant women come second (after lactating women) as regards iodine intake requirements, mean that, in order to provide optimal protection of the developing fetus against low iodine intake, monitoring efforts should focus on pregnant women.

In Romania, iodine deficiency disorders are no longer a regional characteristic of areas considered as endemic, but are a public health issue nationwide. According to available data, the prevalence of iodine deficiency disorders places Romania in the category of the countries with medium to moderate iodine deficiency, with the exception of 3 areas with severe deficiency.

At the Congress of the Romanian Society of Endocrinology held in September 2000, it was reported that: “...urinary iodine concentrations are below the normal level recommended by WHO/UNICEF/ICCIDD in 21 out of the 27 counties included in the survey. In pregnant women urinary iodine levels were alarmingly low.”

Based on studies conducted by WHO, the “C.I. Parhon” Institute of Endocrinology, as well as studies conducted by the Institute for Mother and Child Care from Bucharest, one can state that:

- iodine deficiency is widely spread in Romania, much beyond the border of areas considered as endemic, practically the entire population of the country is at risk;
- approximately 20% of the children are iodine deficient, with a higher prevalence of iodine deficiency disorders in the rural areas;
- over 35% of the population exhibit visible signs of thyroid condition (goiter).

Low iodine intake in pregnant women in Romania means that every generation of newborns suffer to some extent from brain damage caused by iodine deficiency, which reduces their future learning ability and productivity, thus affecting the future socio-economic development of the country.

Diagnosis and treatment of iodine deficiency induced thyroid pathologies are also an unnecessary burden to national health care services.

The results of market researches on the use of iodized salt – 2002

The human body needs very small amounts of iodine (200 micrograms per day), but the intake should be continuous. At the entire population level this can be achieved by adding iodine to salt. Salt is the ideal vehicle for iodine intake, as it is one of the few foods that are consumed almost universally and in equal quantities by all the people, regardless of their economic status, and the iodization process is relatively simple from a technical point of view.

The nationwide surveys conducted in the year 2002 showed that non-iodized salt is still present in Romanian households: 31% of the households in urban areas and 37% of the households in rural areas use this type of salt exclusively. There are differences between the regions of the country, but even in places where iodized salt is largely used non-iodized salt is still used, sometimes in parallel with iodized salt. Households using exclusively iodized salt make up for 56% of the households in urban areas and 53% in rural areas. The highest percentage of households using exclusively iodized salt can be found in Bucharest – 71%.

The salt intended for animal use is mostly non-iodized.

The same study highlighted a number of aspects which were the basis for the development of the strategy on the promotion of iodized salt consumption campaign:

- There is no preference for a particular brand of iodized salt and there is no knowledge of the producer.
- The benefits of iodized salt use are not known, nor the correct usage of iodized salt (to be added after the food is cooked, in order to avoid exposure to high temperatures which cause iodine evaporation).
- No differences in taste are perceived between iodized and non-iodized salt.
- The price is only to little extent a barrier in the use of iodized salt (slightly more expensive).
- When purchasing, only 16% of the customers check whether the salt is iodized or non-iodized.
- Iodized salt is not available everywhere, in rural areas only 66% of the retail outlets carry iodized salt, while in urban areas only 78%.
- Most salt distributed to be sold to the population (97%) is produced indigenously.

Guiding principles

The principles underlying the development of IDD elimination strategy are the following:

1. IDD is a public health priority not only as a main cause of morbidity among children and adults, but also because of its long-term socio-economic consequences.
2. An exclusively medical approach does not prove to be effective, it is required an integrated and intersectoral approach of all institutions involved in IDD elimination using the method of universal salt iodization, a proven success in international experience.

3. Insufficient iodine intake in the diet during childhood generates disorders that in time become irreversible and will require treatment. Food fortification with the amount of iodine required for the normal development of the body is one of priorities of the Ministry of Health.
4. This strategy follows WHO's guidelines and recommendations and is in line with the Strategy of the Ministry of Health on public health, as well as with the actions taken in this field to date.
5. The Romanian State guarantees the right to health to all its citizens, as well as universal and equitable access to health care services. The services provided to persons affected by this type of disorders should be equitable and adapted to the needs of the population and cannot be provided without the effective support of the family physician. Particular attention should be given to children, as iodine supplements in the diet during childhood ensure a normal development of the future adult.

Strategy goal

The goal of this strategy is to ensure IDD elimination in Romania. Ensuring sustainable IDD elimination requires:

- constantly maintaining the demand to eliminate iodine deficiency induced risks;
- ensuring that iodized salt is of adequate quality, is available and affordable;
- complete and accurate information of all strata and segments of society about the importance of iodine in the diet for optimal mental development.

Timeframe: 2004 – 2012

Strategic directions for action

Taking into account all these considerations, a number of priority strategic actions have been identified to prevent and control IDD:

1. Universal iodization of salt for human and animal consumption as the main long term action;
2. Short-term and special situations interventions (endemic areas with severe deficit, pregnant women, pathology);
3. Monitoring iodized salt quality all the way from producer to consumer;
4. Monitoring iodine deficiency in the population at large;
5. Develop a communication strategy to:
 - a. educate the public on the importance of iodized salt and its correct use;
 - b. raise awareness among professionals (teachers, physicians, nurses, community nurses, social workers, media and food industry professionals) to convey to the population key-messages about the importance of using iodized salt;
 - c. raise awareness among importers, distributors and retailers to market products made with iodized salt, according to the legislation in force.

Expected results

Structure indicators

1. Creation of National Committee on Iodine Deficit Disorders Elimination
2. NCIDDE members meet quarterly, at least
3. All health education curricula for 1st to 12th grades will include, in each module, a topic related to the importance of iodized salt for the body
4. Set up reference laboratories to determine urinary iodine levels
5. Set up a reference laboratory to monitor the quality of iodized salt
6. A monitoring system of iodized salt quality coordinated by the network of Public Health Institutes

Process indicators

1. Adopt a national seal for iodized salt
2. Iodine level in iodized salt for direct human use according to the provisions of the legislation in force

3. For the long term (by 2012), depending on the results of the assessment of iodine deficiency status in the population, iodization of salt for animal consumption

Result indicators

1. Rate of transitory hypothyroid cases in newborns
2. Incidence of goiter, especially among children
3. Number of pregnant women with urinary iodine excretion below WHO standards
4. Number of school-aged children with urinary iodine excretion below WHO standards
5. Supply of iodized salt for domestic use, direct human use, animal use and food industry
6. Dynamics of iodized salt consumption
7. Percentage of households using only iodized salt
8. Percentage of persons who recognize at least two health benefits of using iodized salt

GENERAL OBJECTIVES

Both the general objectives and the specific objectives constitute a very important part of the implementation of the strategy on IDD elimination.

Under general objectives there can be listed:

1. reduce IDD incidence and ensure normal development of the human body;
2. produce iodized salt in accordance with the provisions in effect, both for the use of human beings and for animals, as an essential vehicle for iodine intake;
3. ensure an adequate supply of iodized salt on the market;
4. develop and improve a national surveillance and monitoring system of iodized salt production and consumption;
5. provide health policies and a regulatory framework capable of sectoral and multi-sectoral responses in the area of IDD elimination.

SPECIFIC OBJECTIVES

One specific objective is the elimination of IDD prevalence by the year 2012.

To attain this specific objective a set of actions is required:

1. Identify and document in detail the roles and responsibilities of the partners, working schedules, deadlines for actions to be carried out, resources required and funds allocated;
2. Presentation and endorsement of the plan of action by decision-makers;
3. Establishment of the National Committee for the Elimination of Iodine Deficiency Disorders (NCIDDE);
4. Systematic development of sustained communication activities aimed at changing behaviors in the general population, using various channels (media, family physician, medical practice of the company, endocrinologist, school doctor, community nurses etc.). The campaigns will inform the public on the benefits of iodized salt, on the disorders caused by iodine deficiency in the human body, on how non-iodized salt can be procured by those persons who are allergic to iodine or who have medical conditions preventing them from consuming iodized salt. At the same time, these activities target producers and retailers of salt and food products containing salt;
5. Generalize the supply of iodized table salt and iodized salt for bread baking, as well as eliminate imports of table salt with inadequate quality parameters, according to the legislation in force;
6. Strengthen the health promotion network in order to develop specific activities at local level that cover the entire rural territory of the counties;
7. Develop and sustain activities to monitor the health status of the population from the point of view of iodine deficiency induced disorders, especially in traditionally goiter-prevalent regions;

8. Train family physicians in iodine intake supplementation for children, pregnant women and breastfeeding women;
9. Establish and certify two specialized reference laboratories;
10. Increase technical and professional capacity, both at government and non-governmental level, to conduct surveys of the general population, to show a periodic general picture of IDD status;
11. Develop the optimal communication mechanism between the parties involved in IDD elimination actions (Ministry of Health, Ministry of Industries and Resources, Ministry of Education and Research, National Authority for Consumer Protection, National Authority of Customs, UNICEF, Association of Family Physicians from Romania, Population Services International, World Vision, Kiwanis, Institute of Public Health-Bucharest, Institute of Food Chemistry, National Agency for Veterinary and Food Safety, Ministry of Agriculture, Forestry and Rural Development, National Salt Company, International Foundation for Child and Family, World Health Organization, Romanian Association of Employers in Milling, Bakeries and Flour Products Industry).

Operational objectives and activities

- Behavior change communication campaigns
- Monitoring, evaluation and research (further development or strengthening of and better existing laboratory facilities to test iodine levels in salt, as well as urinary iodine levels etc., and establish two national reference laboratories to monitor urinary iodine and one laboratory to monitor the quality of iodized salt)
- Developing an effective monitoring and evaluation system is a key element in the elimination of iodine deficiency. Such a system allows identifying the groups at risk and monitoring the progress in time. In order to develop an effective nutritional surveillance system there should be defined target groups, indicators showing the status of iodine deficiency and strategies by which surveillance is organized and coordinated.

There are two categories of parameters to be monitored:

- Parameters that measure the logistic effort of the program:
 - a. iodized salt production (qualitative and quantitative);
 - b. salt imports;
 - c. universal distribution of iodized salt;
 - d. losses of iodine due to climatic factors;
 - e. salt cooking and storage practices in the household;
 - f. consumers' preference for iodized salt;
 - g. prohibition from marketing of non-iodized table salt and for bread baking, according to the legislation in force.
- Parameters that measure the impact on health:
 - a. visible reduction of goiter in known cases;
 - b. reduced goiter prevalence rate as compared to the national reference study;
 - c. improved urinary iodine excretion rates in school-age children and pregnant women;
 - d. improved levels of blood hormones;
 - e. increased public awareness and changes in attitude and behavior of consumers, importers, producers and retailers;
 - f. improved health status reported by researchers and perceived by the population.

The target groups for surveillance include babies, pre-school children, schoolchildren (middle school) and women of childbearing age. The definition of target groups takes into account both the need and the relative ability of the population to respond to the intervention. The selection of target groups will be made on the following principles:

- Level of risk or vulnerability
- Accessibility for evaluation and monitoring

- Degree to which groups are representative (possibility to extend evaluation findings in target groups to the population at large)
- Potential to include the respective groups into a complex nutritional surveillance program (for instance, pregnant women and children can be included in the National Nutritional Surveillance Program)

Regarding this last aspect, the National Committee on Iodine Deficiency Disorders Elimination will recommend to the Ministry of Health to develop a coordinated collection system of data on the nutritional status and micronutrients deficiency. One of the reasons is that target groups overlap in many cases and, this way, surveillance can be directed in an integrated manner to the same groups. Furthermore, developing a surveillance system which utilizes one time financial and human resources investment to collect data on several micronutrients is much more cost-effective as compared to initiating separate activities for each micronutrient.

To develop an effective nutritional surveillance system may take a few years and that is why several complementary lines of action are required:

- Establish an IDD surveillance methodology;
- Develop a modular surveillance system, to be consequently easily included in the united nutritional surveillance system;
- Cooperate with interested institutions to develop the united nutritional surveillance system.

The development of an integrated nutritional surveillance system, efficient in developing and adjusting national programs, requires the support of applied research including the establishment of new indicators that could supply specific information about micronutrients status, field tests of research methods to evaluate their performance, refining techniques to determine biochemical indicators and evaluate multiple micronutrients deficiencies.

- Institutional capacity building by improving human resources (staff training), intersectoral cooperation, development and management of programs for the health care sector, producers, importers, retailers and food industry workers.
- Institutional capacity building will make the object of national action plans.
- Development and Implementation of:
 - strategies and intervention plans;
 - monitoring and evaluation;
 - research;
 - intersectoral cooperation.

The role of NCIDDE

The Ministry of Health, in partnership with UNICEF, assumes responsibility to initiate, coordinate and monitor the implementation of this strategy. IDD elimination is a multisectoral effort requiring the involvement and commitment of many institutions and individuals. MOH has supported the establishment of NCIDDE and endorses its activity. The Committee will cooperate with the following institutions, whose support is requested, in order to fulfill the various functions required in the implementation of this strategy.

Function	Institution
Planning	NCIDDE, MOH
Management and coordination	MOH
Salt iodization, packaging and distribution	Salt producers, retailers, importers, customs
Quality control	Reference laboratories, MOH, Institutes of Public Health
Information, education, communication (IEC)	MOH, health promotion and health education county services under county Directorates of Public Health
Legislation	MOH
Monitoring and evaluation	NCIDDE, MOH, reference laboratory

Technical and financial support	National Health Insurance Fund, MOH. These institutions have the responsibility to ensure funding from internal sources and to request assistance from international agencies: UNICEF, UNDP etc., for the implementation of this strategy and of national plans which will derive from it.
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After it has been established, NCIDDE will have the following tasks, to be reviewed periodically:

1. Eliminate from the market non-iodized salt for human direct consumption and for bread baking, in accordance with the legislation in force;
2. Attain the optimal iodine level in the diet by iodizing salt for human direct consumption by and for bread backing;
3. Develop standards and procedures to ensure sustained adequate iodine nutrition at national level;
4. Supervise the capacity to accomplish the objectives of national plans, document the results and disseminate them nationwide;
5. Maintain a continuous education system, both in school and of the general public, to provide adequate knowledge and understanding of iodine requirements in the diet and its benefits;
6. Maintain contact with the International Iodine Nutrition Network.

To carry out these tasks, NCIDDE will take action in three directions:

1. Ensure product quality;
2. Ensure the quality of the national process in view of consistent USI efforts and adequate iodine nutrition;
3. Ensure progress in human nutrition.

Product quality

Product quality will be ensured by the compliance of all producers with the regulations on product quality, in accordance with the legislation in force. These regulations have been selected in such a way as to meet public health criteria and compliance of all producers to be possible. Currently, in Romania, the recommendations made are according with the Codex Alimentarius. The regulations may be amended depending on the outcome of constant monitoring of iodine levels in salt intended for direct human consumption and for bread baking, as well as of iodine nutritional status of the population.

In order to ensure the adequate iodized salt intake in households it is required to involve the participation of food industry representatives.

Process quality

Indicators will be developed to assess the political efforts, economic efforts, efforts in the field of infrastructure, human resources development, communication, technical assistance needs, public responsibility and public nutrition elements. A global assessment of the process quality to ensure universal salt iodization (USI) may be achieved by analyzing all the above-mentioned elements, the adequacy and consistence of their presence nationwide.

These tasks will be carried out through the following activities:

1. An initial survey and follow up evaluations of iodine deficiency disorders;
2. Situation analysis of iodized salt production, imports and distribution;
3. Implementation of the program on the iodization of salt for direct human use and for bread baking, program supervision and monitoring;
4. Development and implementation of alternative strategies (distribution of iodine tablets, produce iodized oil);
5. Contract and approve information, education, communication materials to promote the program at all levels;

6. Assign and supply equipment to three national reference laboratories and to other infrastructure elements needed for the surveillance program;
7. Train health care providers, salt industry workers and health education teachers, as well as educating distributors;
8. Periodic assessment of the present strategy and updating the national program deriving from it, following the changes that may occur and to increase efficiency;
9. Document and disseminate information on strategy implementation progress.

The committee shall convene quarterly, or as often as necessary, to review the components of this strategy and of the national action plan, and to make recommendations regarding the implementation. The Committee shall have an executive secretary, appointed by the General Directorate of Public Health and the State Inspectorate of Hygiene, which shall supervise the enforcement of activities recommended by the Committee relating to:

- Development of human resources – training;
- Intersectoral cooperation (national advisory mechanisms);
- Program development and management.

FINANCIAL RESOURCES

The financial resources are provided by the MOH through national public health programs.

A substantial financial contribution is made by United Nations bodies in Romania, mainly UNICEF, through assistance granted to programs in this sphere, developed both by government as well as non-governmental organizations.

AUTHORITIES, INSTITUTIONS AND ORGANIZATIONS

whose representatives are members of the National Committee for the Elimination of Iodine Deficiency Disorders

1. The Presidential Administration
2. The General Secretariat of the Government
3. The Ministry of Health (the General Directorate of Public Health and State Inspectorate of Hygiene, the General Directorate of Health Care, the General Directorate of European Integration and International Relations, the Institute of Mother and Child Care, the Institute of Public Health-Bucharest, the "C.I. Parhon" Institute of Endocrinology)
4. The Ministry of Economy and Trade
5. The Ministry of Education and Research
6. The Ministry of Agriculture, Forestry and Rural Development
7. The National Agency for Veterinary and Food Safety
8. The National Control Authority
9. The National Authority for Consumer Protection
10. The Institute of Food Chemistry
11. The National Salt Company
12. The International Foundation for Child and Family
13. The National Society of Family Medicine
14. "Population Services International" Foundation (PSI) – Romania
15. United Nations Children's Fund – UNICEF
16. World Health Organization
17. "Kiwanis" Foundation – Romania
18. "World Vision" Foundation – Romania
19. The Association of Consumer Protection from Romania
20. The Romanian Association of Employers in Milling, Bakery and Flour Products



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