

REFUGEE RECEPTION: FOOD AND NUTRITION NEEDS IN EMERGENCIES



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RESUMO

A Europa é neste momento um dos principais destinos de um intenso fluxo migratório provocado por diferentes conflitos armados no Médio Oriente e em África, tendo a Comissão Europeia (CE) acordado na distribuição de uma parte destas pessoas em clara necessidade de proteção nacional, pelos diversos Estados Membros. As populações em trânsito e as características do seu acolhimento possuem especificidades que podem comprometer o acesso a uma alimentação adequada e a cuidados básicos de saúde, influenciando a morbilidade e a mortalidade nos grupos afetados.

Este manual pretende estabelecer um referencial para a intervenção alimentar e nutricional aos refugiados que chegam a Portugal. Destina-se a todos aqueles que prestam apoio, quer a nível individual, quer a nível institucional, e que sejam responsáveis por qualquer aspeto relacionado com a saúde e a alimentação dessas populações, facilitando a operacionalização da assistência e fornecendo ferramentas para a tomada de decisões.

O manual está organizado em 3 partes. Inicia-se com a avaliação do estado nutricional da população a acolher, apresenta depois diversas estratégias para o desenho da intervenção alimentar e nutricional tendo por base as necessidades nutricionais previstas para estes grupos populacionais e, na parte final, aborda a importância de garantir a higiene e segurança dos alimentos na prestação desta assistência alimentar. Este manual apresenta ainda algumas considerações relacionadas com os cuidados básicos na área da psicologia destinados às equipas que estão no terreno.

ABSTRACT

Europe is currently a major destination of an intense migratory flow caused by different armed conflicts in the Middle East and Africa. In this sense, the European Commission (EC) agreed on the distribution of some of these people in clear need of international protection throughout various Member States. The populations in transit and the characteristics of their reception have specificities that can compromise the access to adequate food and basic health care. They can also influence morbidity and mortality in the affected groups.

This manual aims to establish a framework of nutrition and food intervention to refugees arriving in Portugal. It is aimed at all those who provide support, either individually or institutionally, and at those responsible for any aspect related to the health and nutrition of these populations, thus more easily allowing the implementation of care and providing decision-making tools.

The manual is organised into three parts. It begins with the assessment of the nutritional status of the population received, and it goes on to present several strategies to support the design of food and nutrition interventions based on the estimated nutrition needs of these population groups. In the final section it addresses the importance of ensuring food safety and hygiene when providing this food assistance. This manual also addresses some considerations towards basic psychological intervention principles, intended to help the teams in the field.





INTRODUCTORY NOTE

Complex challenges demand integrated solutions and multidisciplinary teams capable of adapting the most recent evidence to the local reality.

With that in mind, and also with the notion of public service, nutritionists, dietitians, medical doctors, veterinarians, psychologists and specialists in international relations got together, so as to build a guiding manual for the reception of refugees from a food perspective, aimed at citizens and technicians who receive groups of people in emergencies, and to whom Directorate-General of Health (DGS) and the National Programme for the Promotion of a Healthy Diet (PNPAS) would like to express their acknowledgement.

We would also like to thank the teaching staff of the Faculty of Nutrition and Food Sciences of Porto University (FCNAUP), as well as the young technical team of PNPAS, for all the support provided for months in the construction of this example of interdisciplinary cooperation. We also thank Odivelas City Council, with which we have been working in other areas, and which, in a sense, initially inspired us with their remarkable effort to integrate the different minorities which are part of their community.

It is a basic support manual in permanent ongoing construction, which hopefully will benefit from the experience of the authors, but also, in the future, of all those who will participate in the reception of refugees in Portugal. We hope that it can also be useful in other emergencies.

Our country possesses a food culture which is common to that of many other peoples from the Mediterranean basin, as well as a long thinking scientific tradition in the domain of nutrition sciences which, alongside our traditional hosting skills, can set the trend in this area which craves qualified action.

We hope that this document will contribute to set off this discussion and that it will be useful to those who host and to the ones who get support themselves.

Pedro Graça

Director of the National Programme for the Promotion of Healthy Eating (PNPAS)

BASIC PRINCIPLES OF FOOD AND NUTRITION INTERVENTION IN EMERGENCIES

It is estimated that the armed conflicts in the Middle East have caused the displacement of over 3 million people, having most of them been harboured in neighbouring countries ⁽¹⁾. Within this context, Europe has been one of the main destinations of this migratory flux, which is already being regarded as one of the most significant ones since World War II.

In May 2015 the European Commission (EC) agreed on the distribution of 40.000 people in clear need of international protection by the several Member States. Due to the growing pressure that the increase of refugees¹ caused in Member States bordering the European Union, in September an additional distribution of 120.000 people was decided on. Portugal will probably receive a proportional part of those refugees ^(3,4).

This reality calls for a response from each of the Member States, in order to ensure reception in accordance with the high standards of international protection which Europe upholds for all refugees.

Ensuring access to food and maintenance of an adequate nutritional status are the core protection measures to be implemented within the scope of the populations affected by emergency situations. For the purpose of this manual, emergency is understood as any situation in connection with the migratory fluxes of people in clear need of international protection. By definition, these emergency situations can be observed when “the refugees’ life or wellbeing is threatened, unless immediate and adequate measures are taken, which demand an extraordinary response and the adoption of exceptional measures” ⁽⁵⁾.

Emergency situations pose a hazard to public health, compromising access to food and basic health care. In these situations, malnutrition is generally the most serious public health problem and one of the main causes of death. As such, food and nutrition play a key role in emergency situations, contributing decisively for the reduction of morbidity and mortality in the affected groups ⁽⁶⁾, being the treatment or prevention of malnutrition the central purpose of the nutrition intervention in emergencies.

¹ For this manual we used the definition for refugee proposed by the United Nations (UN) – “a person who owing to a well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality and is unable or, owing to such fear, is unwilling to avail himself of the protection of that country; or who, not having a nationality and being outside the country of his former habitual residence as a result of such events, is unable or, owing to such fear, is unwilling to return to it.”⁽²⁾

Several international institutions have been creating guidelines for food and nutrition intervention in emergencies, based on scientific evidence and experience in the field. The central references can be found in documents developed by the World Health Organisation (WHO), Food and Agriculture Organisation (FAO), United Nations High Commissioner for Refugees (UNHCR), World Food Programme (WFP) and Sphere Project. These reference documents, which propose several models of food and nutrition intervention, apply especially to conditions where, following a catastrophe or emergency, aid is placed in the field and a defined plan is put into action ⁽⁶⁻¹²⁾.

This set of recommendations can be applied to several conditions, and has therefore served as a basis for the construction of this manual. Nonetheless, some differences regarding the situations described in literature call for an effort of adjustment to the national reality and will be introduced accordingly. For example:

- The people who will receive aid in Portugal will not be in the place where the emergency occurred, nor at a refugee camp built to harbour them;
- The population who will be received will have gone through a number of different circumstances before reaching their final destination. The majority may have abandoned their places of origin months before and be in transit. The length of stay in each of the transit places, as well as the type of assistance they received, are also very variable;
- There is some known health data regarding the populations in refugee camps which **harbour** individuals coming from Syria, namely their malnutrition status and the prevalence of anaemia in women and children who sought refuge in Jordan. While acute malnutrition among these populations does not seem to pose a concern, the prevalence of anemia, however, configures a severe public health problem ⁽¹³⁾. The elderly also seem to be facing a situation of high nutritional risk, being estimated high proportions of non-communicable diseases among the refugee elderly in Lebanon, aggravated by inadequate eating habits and a weakened mental state ⁽¹⁴⁾. However, maybe due to the great mobility of the groups, and also to the fact that this is a relatively recent phenomenon, so far there are no consistent assessments on the health of the refugee populations in transit towards Europe which can allow us to establish a more specific pattern of nutrition needs for this situation.

The countries which harbour refugees in Europe may receive groups of people who have travelled for thousands of kilometres in very different situations. In some cases, they may have gone for long walking periods, under constant stress, with no access to a balanced and varied diet, presenting unknown health indicators and a set of situations regarding their nutritional

and health status which may diverge greatly from those described in the reference documents. The fact that transit and harbouring of the first groups takes place in colder months can actually contribute to a deterioration in the refugees' health condition.

Thus, food and nutrition intervention will have to be constantly adapted to the specific reality of each group seeking harbour. Yet, the conceptual base for that support should be anchored in international references and norms, given that only these allow the operationalization of the intervention in this area in a manner based on scientific evidence, from the assessment of the nutritional status, which will have to be valid and comparable with other emergency situations, to the outlining of food and nutrition intervention and its adaption to each group or, ultimately, to each individual.

An extremely important aspect to bear in mind in all intervention processes is resorting to cultural mediators, i.e., people who are able to obtain information amidst the affected population in a culturally acceptable manner. Their action in emergencies has huge advantages, from facilitating communication to assuring the adequacy of the aid and to cultural and religious aspects. Mediators may even belong to the group of people to be received, as long as there is communication possibility, like the existence of fluency in other languages, such as English.

The use of mediators may:

- Facilitate communication, allowing to overcome the language barrier;
- Clarify social and cultural aspects of the people to be received, not only on food aspects, but also regarding lifestyle;
- Prevent situations of refusal or discomfort in the reception process which may result from cultural shocks;
- Warn about health problems of specific individuals who might not be able to express themselves;
- Contribute for their own integration, through their work experience and contact with professionals and institutions.

Due to imperatives of cultural and religious order, there should be a careful choice of the professionals and mediators who will follow specific groups. As an example, there might be gender restrictions consubstantiated by the refusal of women to be observed or be cared for by male professionals. It is paramount that these limitations are clarified and respected, so that the support provided offers the best quality possible.

Thus, this manual aims to establish a referential for food and nutrition intervention for refugees arriving in Portugal. It is intended for all those who provide support, both at individual and institutional level, and for those who are responsible for any aspect related to health and food among those populations, thus facilitating the operationalization of the assistance and providing tools towards decision-making.

The manual is organised into three chapters:

- In the first part the importance of the assessment of the nutritional status of the population to be received is highlighted, so that it is possible to adjust food and nutrition intervention in emergencies to the specific identified needs;
- In the second part, strategies for the outlining of the food and nutrition intervention are presented, based on the nutrition needs estimated for these population groups;
- Lastly, in the third part, there is an approach to the importance of ensuring food hygiene and safety while providing this food assistance to displaced citizens, so as to ensure salubrity and quality of the food supply.

The manual also has a reference to basic care in the field of psychology, intended for the teams in the field, as well as a set of appendixes containing support materials towards decision-making.

1. ASSESSMENT OF NUTRITIONAL STATUS AND EATING HABITS

In this first chapter of the manual the procedures for the assessment of the nutritional status are described, namely anthropometric assessment, clinical criteria, clinical signs and symptoms of nutritional deficiency, biochemical assessment and assessment of habits, preferences and food tastes, as well as cultural and religious acceptability.

Assessment of nutritional status

In an initial phase of the reception a quick assessment of the nutritional status should be carried out, so as to obtain specific data towards an adequate intervention in the food area.

This assessment should be the starting point for this type of interventions, allowing to:

- **Identify the specific nutrition problems;**
- **Identify the groups affected the most, in order to prioritise interventions.**

That assessment is particularly important among the groups of the population who find themselves in circumstances which may make them more vulnerable and who are, therefore, at nutritional risk, as is the case of children, adolescents, pregnant women and elderly people. It is of the utmost importance that the assessment of the nutritional status is carried out by qualified personnel who have been properly trained for that purpose.

For ease of consultation of graphics and reference tables, it was agreed to use the English initials for the indicators of the nutritional status which are used.

A more detailed explanation on how to perform the assessment of the nutritional status and on the interpretation of its results can be found in Appendix 1.

Anthropometric Criteria

The use of anthropometric measuring such as weight, height, waist circumference and arm circumference, for example, are used in the diagnosis of the nutritional status and in the assessment of the risk of certain diseases.

According to WHO ⁽⁶⁾, in emergencies children between 0 and 5 years of age should be handled with priority as far as the assessment of their nutritional status is concerned. The indicators to be applied in this age group are the Weight-for-length (WFL) Z-score until 2 years of age, or 86

cm of length, and the Weight-for-height (WFH) Z-score from 2 years of age onwards, or 87 cm, according to WHO's 2006 growth standards ⁽¹⁵⁾.

Between 2 and 5 years of age the Body Mass Index (BMI) Z-score can also be used.

Mid Upper Arm Circumference (MUAC) can also be used in children between 3 months and 5 years of age ^(6, 8).

For children between 0 and 6 months there are no well-defined standards regarding the measurements and the record of anthropometric data specifically for emergencies ^(6, 8). Should it be necessary to intervene upon this age group, the same standards applicable to children who are born in Portugal can be used, and preference should be given to the WFL Z-score.

MUAC should also be measured in pregnant women, in order to establish their level of malnutrition ⁽⁸⁾.

Between the ages of 5 and 19 the Body Mass Index (BMI) Z-score should be used, according to WHO's 2007 standards ⁽¹⁶⁾.

In adults, the Body Mass Index is the indicator of the nutritional status which should be used ⁽⁸⁾.

TABLE 1 - Anthropometric measurements and nutritional indexes for each population group.

Population group	Anthropometric parameter or nutritional index	Cut-off point suggesting acute malnutrition
Children (0-2 years old)	WFL	≥ -3 < -2 Z score (moderate) < -3 Z score (severe)
Children (2-5 years old)	WFH ou BMI	≥ -3 < -2 Z score (moderate) < -3 Z score (severe)
Children (3 months-5 years old)	MUAC	≥ 11.5 < 12.5 cm (moderate) < 11.5 cm (severe)
Children and adolescents (5-19 years old)	BMI	≥ -3 < -2 Z score (moderate) < -3 Z score (severe)
Adults (including elderly people)	BMI	< 18.5 Kg/m ² (moderate) < 16 Kg/m ² (severe)
Pregnant women	MUAC	< 22 cm

WFL – Weight-for-length; WFH – Weight-for-height; MUAC - Mid Upper Arm Circumference; BMI – Body Mass Index.

Clinical criteria for the assessment of the nutritional status

Alongside with anthropometric assessment, the assessment of the clinical signs of nutritional status, as well as biochemical assessment, are also essential for a correct assessment of the nutritional status. Although it is important to assess the presence of specific communicable diseases and other infections, such as HIV/ AIDS, respiratory diseases, or chronic diseases, the focus of the assessment of the clinical signs and symptoms should rest essentially upon those which are related to malnutrition and nutritional deficiencies.

As such, we highlight the impairments and correspondent clinical signs and symptoms which result from the main deficiencies in energy and nutrients, and which typically have high prevalence amidst populations in emergencies.

It is important that this assessment of the clinical signs is performed by trained professionals, and it should be confirmed by complementary diagnosis exams.

Protein-energy malnutrition

Protein-energy malnutrition conditions affect mostly children from 6 months to 5 years of age, which clearly shows the priority that should be given to this age group in all nutrition interventions. The main impairments related to protein-energy malnutrition states in children are ⁽⁶⁾:

Marasmus – state of severe malnutrition, characterised by body fat and muscle depletion. Individuals display a “skin and bones” look. It is essentially the result of insufficient energy and protein intake.

Kwashiorkor – characterised by oedema, generally beginning in the legs and extending to the entire body; at times accompanied by hair discoloration and parched skin. It is mainly the result of food intake which may be sufficient in carbohydrates, but extremely poor in protein.

Marasmatic-Kwashiorkor – characterised by a combination of extreme thinness and oedema.

TABLE 2 - Main clinical signs and symptoms of protein-energy malnutrition in children and adults ¹.

Population group	Clinical signs and symptoms	
	Always present	Present at times
Children		
Marasmus	Depletion of muscle and adipose tissue (<i>wasting</i>)	Hunger Wrinkled appearance
Kwashiorkor	Oedema	Irritable behaviour Lack of appetite Skin alterations (dermatosis) Hair alterations (discoloured straight lax air)
Marasmatic - Kwashiorkor	Oedema + <i>Wasting</i>	Any of the above-mentioned
Adults	<i>Wasting</i> and Weakness	Oedema Mental alterations

¹ Adapted from: WHO. *The management of nutrition in major emergencies*. Geneva, 2000.

Micronutrient deficiency

Although they occur globally, micronutrient deficiencies can be particularly present in situations of emergency.

Prevalence of micronutrient deficiency in a given population is a good indicator of the lack of access to that micronutrient, either due to the reduced geographical availability, as is the case of iodine, or to a little varied poor diet, especially as far as the intake of fresh vegetables and whole cereals is concerned ⁽⁶⁾. Prevalence of moderate to high deficiencies pose risks to public health and justify intervention on the population. Therefore, it is important to define criteria which contemplate nutrient deficiency prevalence in populations, bearing in mind that the people who present them should be treated individually ⁽⁸⁾.

The following table summarises the main micronutrients' deficiencies and their indicators, the groups that should be assessed and, when applicable, the level of severity of their prevalence, towards its definition as a public health problem.

TABLE 3 - Classification of public health problems according to micronutrient deficiency using different indicators¹.

Micronutrient deficiency indicator	Recommended group for measurement of prevalence	Definition of a public health problem	
		Severity	Prevalence (%)
Vitamin A deficiency			
Night blindness (XN) ^{a (17)}	24-71 months	Low	> 0 - < 1
		Moderate	≥ 1 - < 5
		High	≥ 5
Bitot spots (X1B) ^{a (17)}	6-71 months	Non specified	> 0.5
Corneal sclerosis/ulcerations/keratomalacia (X2, X3A, X3B) ^a	6-71 months	Non specified	> 0.01
Corneal scarring (XS) ^{a (17)}	6-71 months	Non specified	> 0.05
		Low	≥ 2 - < 10
Serum retinol (≤ 0.7 μmol/L)	6-71 months	Moderate	≥ 10 - < 20
		High	≥ 20
Iodine deficiency			
Goiter (visible + palpable)	School-age children	Low	5.0 – 19.9
		Moderate	20.0 – 29.9
		High	≥ 30.0
Concentration of iodine urinary excretion (mcg/l)	School-age children	Excessive intake	> 300 ^b
		Adequate intake	100 – 199 ^b
		Mild deficiency	50 – 99 ^b
		Moderate deficiency	20 – 49 ^b
		Severe deficiency	< 20 ^b
Iron deficiency			
Anaemia (Haemoglobin levels: non-pregnant women <12.0 g/dl;	Women and children 6-59 months	Low	5 – 20
		Moderate	20 – 40
		High	≥ 40

children 6-59 months <11.0

g/dl)

Beriberi (B1 vitamin deficiency)

Clinical signs (weakness, weight loss, loss of sensation in extremities, loss of flexibility in limbs)	Entire population	Low	≥ 1 case and <1%
		Moderate	1 - 4
		High	≥ 5
Thiamine daily intake (B1) (<0.33 mg/1000 Kcal)	Entire population	Low	≥ 5
		Moderate	5 – 19
		High	20 – 49
Child mortality	Children 2 – 5 months	Low	No increase
		Moderate	Mild increase
		High	Marked peak

Pellagra (niacin deficiency)

Clinical signs (dermatitis, diarrhoea and dementia)	Entire population or women > 15 years old	Low	≥ 1 case and <1%
		Moderate	1 - 4
		High	≥ 5
Daily intake of niacin equivalents <5 mg	Entire population or women > 15 years old	Low	5 - 19
		Moderate	20 - 49
		High	≥ 50

Scurvy (vitamin C deficiency)

Clinical signs (oedema and gum bleeding, oedema and pain in articulations, especially knee, hip and elbow)	Entire population	Low	≥ 1 case and <1%
		Moderate	1 - 4
		High	≥ 5

¹ Adapted from: The Sphere Project. Humanitarian Charter and Minimum Standards in Humanitarian Response. Minimum standards in food security and nutrition. 139-238. Rugby, 2011.

^a Scores according to: WHO. Indicators for assessing Vitamin A Deficiency and their application in monitoring and evaluating intervention programmes. WHO/NUT/96.10. 1996.

^b Values of concentration of iodine urinary excretion in mcg/l.

^c Scores according to: WHO. Assessment of iodine deficiency disorders and monitoring their elimination: a guide for programme managers. 2007

Assessment of food habits and preferences

In the initial diagnosis phase there should also be an assessment of the food preferences and habits. In an emergency situation, providing food which is not culturally accepted or allowed, for religious reasons, may mean the refusal to eat, thus compromising the individuals' nutritional status.

Food preferences and tastes are also important, especially in cases of malnutrition, when a higher intake of energy and nutrients can be improved with the adequacy of the dietary plan to individual tastes.

People should be asked about the degree of acceptance and food preferences and the results should be used to decide on the food to supply. Therefore, it is important to ensure that the food made available:

- **Respects cultural and religious traditions of the populations which they are intended to;**
- **Are familiar to the populations;**
- **Have good digestibility and flavour** ⁽⁸⁾.

In order to turn assessing food adequacy and preferences into an easier task, it may be important to use images or iconography to allow food to be easily recognised by individuals.

Visual instruments such as the Portuguese Food Guide – *Roda dos Alimentos* (Food Wheel)² ⁽¹⁸⁾ can be used in this task, allowing to understand not only the preferences or restrictions, but also to estimate the level of proximity to consumptions established for the Portuguese population. To perform this assessment, it may be important to ask individuals to, for example, report their consumption comparing with the groups of this food guide, indicating whether they ingest food from all groups and, within each group, whether their intake is higher or lower than the recommended proportion.

The presence of cultural mediators will play an important part in this process.

A set of considerations on cultural habits, religious implications and food adequacy may be found in section 2 of this manual.

² The Portuguese Food Wheel (*Roda dos Alimentos*) is a national food guide intended to promote healthy eating in a simple and understandable way. The guide adopted a circle format because it can be associated with the image of a plate and the serving dish is an important symbol of Portuguese culture, where eating around the table is still commonplace and very important. Seven food groups were established to be included after taking into account the following: similarities in nutritional composition of food items and common usage in Portuguese food habits. The whole circle represents the maximum possible food weight that could be achieved in accordance with the dietary plans and number of food portions established.

Main recommendations for the assessment of the nutritional status and adequacy of the food and nutrition intervention:

Setting up multidisciplinary teams including professionals with the necessary skills and training for a correct assessment of the nutritional status;

Integrating cultural mediators in this team;

Including the assessment of the following parameters in the assessment of the nutritional status: anthropometric assessment, clinical signs of nutritional status, biochemical assessment and assessment of the food habits and preferences;

Ensuring reliability and comparability of measurements and records with those of the international organisms through the use of the described patterns and standards;

Ensuring that assessment and diagnosis are performed according to the values which can adjust to the populations of that origin;

Creating alert systems for detection and forwarding of particular cases of high severity;

Maintaining all personnel's behaviour and attitudes within patterns of high tolerance and respect for human dignity.

2. FOOD AND NUTRITION RECOMMENDATIONS FOR POPULATION GROUPS IN EMERGENCIES

In the second chapter there is a description of how to promote food intervention in emergencies, based on these population groups' specific nutrition needs.

Initial phase of reception

In an initial phase of an emergency, and in order to respond to basic needs, it was agreed to use WHO's recommendations. Regarding energy, a minimum daily intake of 2100 Kcal per individual is considered to be the pattern to ensure basic nutrition needs, where 17% to 20% of that energy should come from lipids, and at least 10% to 12% should come from protein ^(6,9).

In the following table we present the recommendations for daily intake of energy, protein, lipids, and the several micronutrients for the populations who are in emergency situations. The evidence base for this table results from the 2004 WHO and FAO revised recommendations by Sphere Project ⁽¹⁹⁾. These recommendations should constitute the foundations for the planning of food intervention at a population level, bearing in mind that individual needs vary according to health condition, gender, age, pregnancy and breastfeeding context.

TABLE 4 - Average daily requirements of energy, protein, lipids, vitamins and minerals for populations in emergency situations¹.

Energy/Nutrients	Average population requirements
Energy	2100 Kcal
Protein	53 g (10 % of total energy)
Lipids	40 g (17 % of total energy)
Vitamin A	550 µg
Vitamin D	6.1 µg
Vitamin E	8.0 mg (alpha tocopherol equivalents)
Vitamin K	48.2 µg
Vitamin B1 (Thiamine)	1.1 mg
Vitamin B2 (Riboflavin)	1.1 mg
Vitamin B3 (Niacin)	13.8 mg (niacin equivalents)
Vitamin B5 (Pantothenic Acid)	4.6 mg
Vitamin B6 (Pyridoxine)	1.2 mg
Vitamin B9 (Folic Acid)	363 µg

Vitamin B12 (Cobalamin)	2.2 µg
Vitamin C	41.6 mg
Iron	32 mg
Iodine	138 µg
Zinc	12.4 mg
Copper	1.1 mg
Selenium	27.6 µg
Calcium	989 mg
Magnesium	201 mg

¹ Adapted from: The Sphere Project. Humanitarian Charter and Minimum Standards in Humanitarian Response. Minimum standards in food security and nutrition. 139-238. Rugby, 2011

The most prevalent micronutrient deficiencies in these population groups, namely in iron, iodine and vitamins A, B, C and D, are also described in literature.

On the one hand, these population groups might have recently gone through periods of food shortage and, consequently, insufficient micronutrient intake (vitamins and minerals), given that for displaced populations who travel long distances the access to fresh food, such as vegetables and fruit, may be limited, as may access to a varied diet. On the other hand, other factors, like endemic nutrient deficiency in the countries of origin, or high infection rates in children, may also contribute for a higher risk of micronutrient deficiency in these population groups.

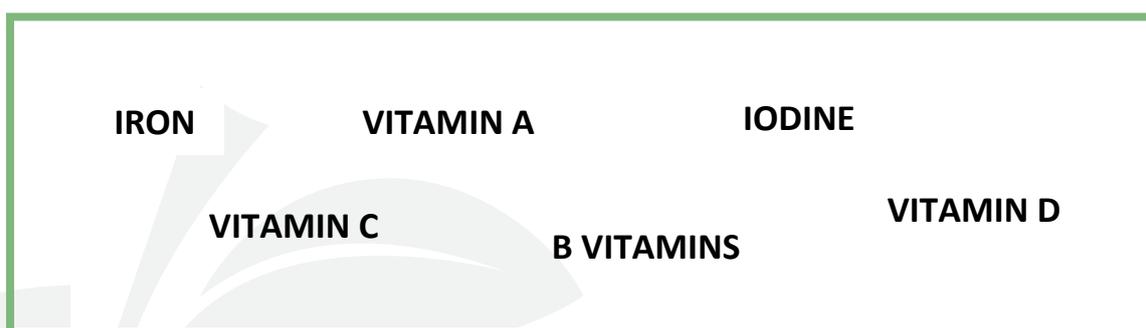


FIGURE 1 - Most prevalent micronutrient deficiencies in populations in emergencies.

Micronutrient deficiencies may put populations' health at risk, and their consequences may be globally serious. Severe vitamin A deficiency is a cause for blindness and it also compromises the immune system.

Iodine deficiency is associated with brain damage in children and with gestation problems, and may lead to miscarriage.

Anaemia caused by iron deficiency compromises cognitive development in children and it affects the immune system. During pregnancy, an insufficient iron intake increases the risk of haemorrhages, sepsis, maternal mortality, perinatal mortality and low birth weight ⁽⁸⁾. In fact, anaemia seems to be the greatest public health problem in displaced populations. A recent study, conducted at a Syrian refugee camp in Jordan ⁽¹³⁾, demonstrated an anaemia prevalence of 48.4% in children and 44.8% in women. Iron is presented in animal and plant origin food. However, it is better absorbed when it comes from animal products, and that absorption is boosted by the intake of food rich in vitamin C. On the other hand, the presence of certain substances in some vegetables, tea and coffee may limit iron absorption ⁽⁶⁾.

From the complex B vitamins, focus goes to folic acid (vitamin B9), given its importance in the promotion of an adequate neuronal development of the foetus, niacin (vitamin PP or B3), whose deficiency is a cause of pellagra, a clinical condition with symptoms which are commonly designated as the 3 Ds (Diarrhoea, Dementia and Dermatitis), and thiamine (vitamin B1), essential for glucose metabolism, and whose deficiency causes beriberi disease ^(6, 8).

Micronutrient deficiencies are difficult to identify in many contexts. Although the clinical signs of deficiency in some vitamins and minerals are, in many cases, facilitators of the diagnosis, the subclinical deficiencies are those which raise bigger concerns, because they are more prevalent, having a higher weight in the health and survival of the populations. Micronutrient deficiencies originally prevalent in a given population tend to increase in an emergency situation. It is, therefore, essential, to resort to population intervention and individual treatment to mitigate these deficiencies ⁽⁸⁾.

It is important to include in the initial food planning a group of fresh products which may ensure micronutrient intake or, alternatively, to use fortified food or supplements when there is no immediate availability of fresh products.

The variety of the food products included in a food plan can be an important strategy to ensure micronutrient diversity. The Food Wheel ⁽¹⁸⁾ can be used as a model to decide on the variety of the supply, namely by using different food products from each food group. For example, a selection of vegetables containing not only green leafy vegetables, but also other types of vegetables, such as carrot, pepper, tomato, cucumber or onion, will ensure a much more diversified micronutrient intake. Likewise, in the group of potatoes, cereals and cereal products, the inclusion of whole cereals may bring benefits in terms of some vitamins and minerals.

Bearing in mind the nutrient deficiencies which are more frequently observed in these groups, a set of food recommendations is proposed:

- Promoting daily consumption of food products from the 7 groups of the Food Wheel (vegetables, fruit, potatoes, cereals and cereal products, dairy products, meat, fish, seafood and eggs, pulses, fats and oils), and the food products within these groups should be varied;
- Promoting daily consumption of fresh products, such as vegetables and fruit, namely:
 - Promoting daily consumption of very colourful vegetables, such as green leafy vegetables (spinach, water cress, turnip greens, cabbage...) because, among other micronutrients, they are important sources of iron and folic acid, and orange and red vegetables (carrot, pumpkin, tomato...) because they are important sources of vitamin A;
 - Promoting daily consumption of 1 piece of fruit rich in vitamin C (orange, tangerine, kiwi, strawberries);
- Promoting daily consumption of protein-supplying food products, such as meat, fish, seafood and eggs, milk and dairy products and pulses. Eggs, pulses and dairy products may be important alternatives to meat and fish. In the case of dairy products and eggs, these are also important sources of vitamins (for example vitamin D) and minerals;
- Giving preference to consumption of whole cereals which supply vitamins that are usually deficient in this population group (B complex vitamins) and fiber;
- Encouraging the consumption of water and other beverages which contribute for an adequate hydration, namely tea and infusions. Soup and beverages like milk are also important sources of hydration.

Below, there is a practical example of a daily dietary plan and correspondent quantities of the food products to consume, based on the food recommendations presented in this manual. In order to provide support to technicians, there is a description of the representative portions of the seven groups of the Food Wheel. There is the presence of some comfort food, as is the case of sugar and other sugary products, such as quince marmalade, which were integrated bearing in mind the importance that this type of food products may have and the fact that, even with their occasional presence, it is possible to design a menu which hardly diverts from the needed balance.

TABLE 5 - Example of a daily dietary plan.

Meals	Food day	Portions of food groups
Breakfast	240ml of semi-skimmed milk	1 portion of dairy products (240 ml of milk)
	1 mixed cereal bread (50g)	1 portion of potatoes, cereals and cereal products (1 mixed cereal bread)
	10g of quince marmalade	
	7g of sugar	
Lunch	Cream of carrot soup with broccoli and chickpeas	1.5 portion of vegetables (soup)
	Red beans with poached egg (8 tablespoons of beans, on 55g egg)	2.5 portions of potatoes, cereals and cereal products (½ potato + ½ mixed cereal bread + 6 tablespoons of rice)
	Rice (6 tablespoons of cooked rice)	3 portions of pulses (8 tablespoons of beans + 1 tablespoons of chickpeas)
	1 orange (100g)	1 portion of meat, fish, seafood and eggs (1 egg)
	½ mixed cereal bread	1 portion of fats and oils (1 teaspoon of olive oil (5g))
		1 portion of fruit (orange)
After-lunch snack	240ml of semi-skimmed milk	1 portion of dairy products (240 ml of milk)
	1 mixed cereal bread (50g)	1 portion of potatoes, cereals and cereal products (1 mixed cereal bread)
	1 teaspoon of butter	
	7g of sugar	1 portion of fats and oils (1 teaspoon of butter)
Dinner	Cream of carrot soup with broccoli and chickpeas	2 portions of vegetables (soup + tomato, lettuce and carrot salad)
	Tuna pasta (6 tablespoons of cooked pasta and half a tin of tuna (60g))	2.5 portions of potatoes, cereals and cereal products (½ potato + ½ mixed

	Tomato, lettuce and carrot salad	cereal bread + 6 tablespoons of pasta)
	1 apple (100g)	
	½ mixed cereal bread	1/2 portion of pulses (1 tablespoon of chickpeas)
		1 portion of meat, fish, seafood and eggs (1/2 tin of tuna)
		1 portion of fats and oils (1 dessert spoon of olive oil (5g))
		1 portion of fruit (apple)
After-dinner snack	1 mixed cereal bread (50g)	1 portion of potatoes, cereals and cereal products (1 mixed cereal bread)
	1 teaspoon of butter	
	1 banana (50g)	1 portion of fats and oils (1 teaspoon of butter)
	Tea	1 portion of fruit (banana)
Nutritional information		2033 kcal
		13% protein (66g)
		18% lipids (39.7g)

Considering the dietary plan described above, the adequacy percentages for some micronutrients were calculated, bearing in mind the nutrition needs presented in table 4^(8, 19). According to table 6, it is possible to observe that, in the majority of cases, the values obtained for this food day are according to the recommendations regarding vitamins and minerals established for these population groups.

TABLE 6 - Percentage of adequacy of the presented dietary plan, considering the average daily requirements of vitamins and minerals for populations in emergency situations.

	Value obtained (example of daily dietary plan)	Recommended daily value	Percentage of adequacy
Fiber	39.4 g	25g	158%
Vitamin A	1254 µg	550 µg	228%
Vitamin D	1.4 µg	6.1 µg	24%
Vitamin B1 (Thiamine)	1 mg	1.1 mg	99%
Vitamin B2 (Riboflavin)	1.7 mg	1.1 mg	157%
Vitamin B3 (Niacin)	17.6 mg	13.8 mg (niacin equivalents)	127%
Vitamin B6 (Pyridoxine)	1.65 mg	1.2 mg	137%
Vitamin B12 (Cobalamin)	2.3 µg	2.2 µg	107%
Vitamin C	92.9 mg	41.6 mg	223%
Iron	16.1 mg	32 mg	50%
Calcium	912 mg	989 mg	92%

Table 7, presented below, contains some selected food sources of vitamins and minerals.

TABLE 7 - Food sources sorted by vitamins and minerals content¹.

Micronutrient	Food Sources	Portion ¹	Quantity per portion ²
Vitamin A^b	Carrot, raw	1 medium unit (147g)	1372 µg
	Curly kale, boiled	½ plate (120g)	434.4 µg
	Cantaloupe	1 bowl (128g)	213.8 µg
	Broccoli, boiled	½ plate (133g)	151.6 µg
	Tomato	¼ plate (84g)	71.4 µg
Vitamin D	Salmon, grilled	1 fillet (173g)	15.9 µg
	Sole, grilled	1 fillet (90g)	9.9 µg

Vitamin D	Tinned sardine	Drained weight (85g)	6 µg
(cont.)	Egg, boiled	1 unit (56g)	0.95 µg
	Semi-skimmed milk	1 glass (200ml)	0.1 µg
	Black-eyed peas, boiled	3 tablespoons (60g)	126 µg
	Asparagus, boiled	5 asparagus (60g)	93 µg
Folic Acid	Lentils, boiled	3 tablespoons (114g)	28.5 µg
	Chickpeas, boiled	3 tablespoons (51g)	27.5 µg
	Butter beans, boiled	3 tablespoons (48g)	20.6 µg
	Pepper, raw	1 unit (169g)	152 mg
	Strawberries	10 medium strawberries (270g)	127 mg
Vitamin C	Orange	1 medium unit (161g)	91.7 mg
	Cauliflower, boiled	½ plate (141g)	63.5 mg
	Kiwi	1 medium unit (78g)	56.2 mg
	Beef, lean	100g	2mg
	Whole wheat bread	2 slices (46g)	1.38 mg
Iron	Butter beans, boiled	3 tablespoons (48g)	1.3 mg
	Egg, boiled	1 unit (56g)	1.2 mg
	Chicken boiled with skin	Breast portion (48g)	0.1 mg
	Iodised salt	1 tablespoon	400 µg
	Sardine/Mussel ^c	100g	95-100 µg
	Tuna/Mackerel ^c	One 100g fillet	50-60 µg
	Egg	1 unit	18-26 µg

Iodo³

¹Portions according to Goios, A., et al., Pesos e Porções de Alimentos. Faculdade de Ciências da Nutrição e Alimentação do Porto – FCNAUP. Porto, 2014.

²Instituto Nacional de Saúde Doutor Ricardo Jorge. Tabela da composição de alimentos. Lisboa: INSA; 2010

³Adapted from MAHAN, L.K.; ESCOTT-STUMP, S. Princípios nutricionais. Vitaminas. In: Krause – Alimentos, Nutrição e Dietoterapia. 10ed. Roca: São Paulo, 2003. cap. 4. p.76-77, except ^c Haldimann M, et al. (2005).

^bQuantities of vitamin A in µg, being that 1 µg = 1 Retinol equivalent (RE) = 12 µg de β-carotene = 3.33 UI of vitamin A.

first phase

1. Recommendations for the first phase of the food and nutrition intervention

Promoting a properly planned food supply which provides, per day and per individual:

- 2100 Kcal;
- 10-12% of energy value in protein;
- 17% of energy value in lipids;

- Including pulses, vegetables and fresh fruit in the supplied food at all times;
- Including dairy products and eggs in the supplied food whenever possible;
- Not forgetting meat and fish supply;
- Including whole cereals whenever possible;
- Overestimating food quantities, counting on eventual losses and increased needs;
- Supplying adapted quantities of food and nutrients to risk groups as soon as possible:

-Pregnant women and breastfeeding women;

-Children;

-Elderly people;

-Sick people;

Respecting cultural and religious origin of the recipients:

- Never forcing food acceptance;

- Trying to have food culturally identified by the recipients from the ensemble of food to be supplied;

- Avoiding food which is subjected to restrictions of religious nature.

Adjustment of the food and nutrition intervention

After reception and the assessments of the nutritional status of the population and individuals, the intervention should be adjusted in conformity with the assessment of the collected data.

The calculation of the nutritional and food needs of a population in the period following the initial response is extremely important, because it allows to meet that population's real needs, enabling a more adequate planning of food and nutrition intervention, thus contributing for an improvement of their health condition.

At this stage, adaption of food and nutrition intervention will depend on several criteria⁽⁶⁾:

- **Distribution of demographic groups in the population;**
- **Cases of malnutrition identified in the population or in individuals;**
- **Risks for public health, with high prevalence of micronutrient deficiencies, infectious diseases, among others;**
- **Physical activity of individuals;**
- **Daily average temperature at the reception site;**
- **Situation of dehydration and/or presence of diarrhoea.**

The duration of this phase of adequacy of the initial intervention is variable and it depends on the time needed to allow the integration of the individuals in society and in the communitarian mechanisms of support which are common to the population in general.

It is also in this phase that individuals or population groups considered to be at risk are properly assisted, through specific programmes of food and nutrition intervention.

In Appendix 2 we explain the criteria of adequacy of the diet with regard to the assessment performed to individuals and population groups, as well as the criteria of inclusion in a specific intervention.

2. Recommendations for the second phase of the food and nutrition intervention

Moving forward to this intervention phase as quickly as possible;

Constantly using the data of the assessment of the nutritional status and of the health condition to adjust the diet at the following levels:

- Individual – malnourished individuals, suffering from infections, with vitamin and minerals deficiencies, and malnourished pregnant women;
- Groups – all pregnant women, for example;
- Population – all individuals, according to criteria of temperature, physical activity, high prevalence of micronutrient deficiency and high prevalence of malnutrition cases;

Frequently monitoring the nutritional and health condition:

- Of the individuals at risk;
- Of the population, through samples from specific groups, giving priority to children from 6 months to 5 years of age;

Constantly improving food supply, especially with higher quantity, and diversity of fresh vegetables and fruit;

Constantly improving the cultural adequacy of the food supply, through communication with cultural mediators and recipients

Stabilisation Phase

The previous phases of a programme of food and nutrition intervention are meant to rapidly respond to the nutritional and health demands of the population in a context of emergency and to treat individuals and groups of individuals with specific deficiencies or impairments. In many locations where states of emergency prevail, the programmes are permanently maintained in the phase of adequacy to the initial food support, in which food intervention responds constantly to the variations in the environment and in the population's health condition.

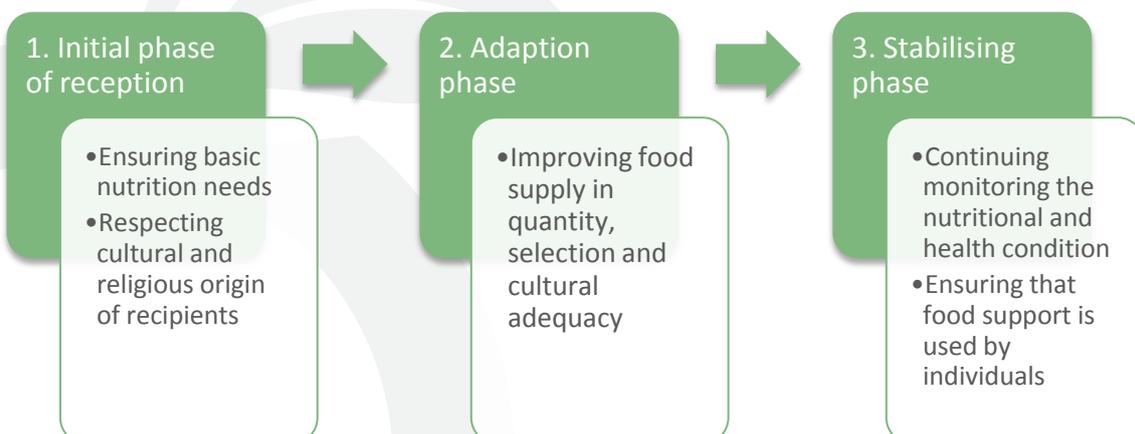
The situation concerning refugees' reception in Portugal is radically different. It is expected that individuals will reach a state of integration in the social and community tissue which will allow them to enjoy a certain degree of autonomy, including in food-related matters.

In this phase, when the situations of nutritional and health risk identified at the level of reception have already had a proper response, the recommendations should be directed towards those established for the Portuguese population: a health-promoting diet, based on the recommendations of the Portuguese Food Wheel.

3. Recommendations for the third phase of food and nutrition intervention

- Maintaining institutional contact with the individuals or families;
- Continuing the monitoring of the nutritional and health condition of the most vulnerable individuals;
- Ensuring that the support provided continues being nutritionally adequate to the group and family;
- Ensuring that the food support made available is effectively used by individuals;
- Promoting full integration of individuals in society, including at food level;
- Publicising food recommendations which are common to the population residing in Portugal;
- Promoting health habits which prevent non-communicable diseases.

SUMMARY OF SUPPORT PHASES AND OBJECTIVES



VULNERABLE POPULATION GROUPS AND SPECIFIC NUTRITION NEEDS: PREGNANT WOMEN AND BREASTFEEDING WOMEN, CHILDREN AND ELDERLY PEOPLE

Pregnant women and breastfeeding women

Although pregnant women and breastfeeding women are included in the population group who receive a basic initial daily provision of 2100 Kcal, this food intervention may not be enough to meet this group's requirements, namely in terms of micronutrients ⁽⁹⁾. It is important to identify the women in this situation as soon as possible and ensure that the initial food intervention is adequate, bearing in mind the increased requirements both in terms of energy and micronutrients.

Actually, during pregnancy and breastfeeding, energy, protein and micronutrients requirements increase significantly, varying according to the pregnancy trimester. Pregnant women need an additional intake of about 340 to 450 Kcal per day during the second and third trimesters of pregnancy, respectively, whereas breastfeeding women require an additional 300 to 400 Kcal per day (an additional 330 kcal until the first 6 months and an additional 400 kcal from 6 months onwards) ^(20, 21).

It may also be necessary to adjust protein intake values during pregnancy and breastfeeding ⁽²²⁾.

This adequacy in protein intake may be complemented through the increase of food supply in terms of dairy products (milk, yoghurt and cheese), a combination of cereals and pulses (beans, chickpeas, peas, lentils), meat, fish, seafood and eggs. It is important to bear in mind, however, that protein requirements should be met whenever possible with animal-origin products, including dairy products and eggs, given their high biological value.

An adequate intake of micronutrients such as iron, folic acid, vitamin A and iodine is particularly important for maternal and infant health. A poor nutritional status or inadequate intake in expectant mothers may have adverse consequences on the health of the new-born child, spanning from birth low weight to foetal malformations. As such, pregnant women should be given priority attention in emergencies.

The following table compares the main micronutrients requirements between women in fertile age, pregnant women and breastfeeding women.

TABLE 8 – Comparison of micronutrients requirements between women in fertile age, pregnant women and breastfeeding women¹.

Micronutrients	Women in fertile age ^a	Pregnant women ^a	Breastfeeding women ^a
Vitamin A (µg/day)	700	770	1300
Iron (mg/day)	18	27	9
Folic Acid (µg/day)	400	600	500
Iodine (µg/day)	150	220	290

¹ Adapted from: Dietary Reference Intakes for Thiamine, Riboflavin, Niacin, Vitamin B6, Folate, Vitamin B12, Pantothenic Acid, Biotin, and Choline (1998); Dietary Reference Intakes for Vitamin A, Vitamin K, Arsenic, Boron, Chromium, Copper, Iodine, Iron, Manganese, Molybdenum, Nickel, Silicon, Vanadium, and Zinc (2001). ^a Ages comprised between 19-50 years old.

Regarding folic acid, and in order to meet the increased requirements for this micronutrient during pregnancy and breastfeeding, consumption of fruit and vegetables rich in this vitamin is recommended (in particular green leafy vegetables), as well as the use of whole cereals (for example whole bread, rice and whole-grain pasta) and pulses (beans, chickpeas, broad beans, peas and lentils).

Also vitamin A, as many other vitamins and minerals, is found abundantly in vegetables (for example carrots, pumpkins, spinach, broccoli) and in fruit, which is why an increment of its use in the food supply of pregnant women and breastfeeding women is recommended.

In terms of iron, recommendations suggest a daily intake of 27 mg as the ideal quantity during pregnancy. To ensure adequate intake of this mineral, it is important to increase animal-origin food products (meat and fish), pulses such as beans and chickpeas, and dark green leafy vegetables.

During pregnancy and breastfeeding daily requirements of iodine are also increased, as can be seen in table 6, such much so that in Portugal there are recommendations towards daily supplementation of iodine during the preconception period, pregnancy and exclusively breastfeeding period. However, in order to ensure adequate intake of iodine, it is important to ensure a varied diet which includes food which is a source of iodine, such as iodised salt, fish, pulses, vegetables, milk and other dairy products.

At times, in order to ensure the increased requirements of these micronutrients, and in specific situations, it may be necessary to use, for example, supplements of iron, folic acid and iodine.



FIGURE 2 - Energy and nutrition needs in pregnancy (2nd and 3rd trimesters).

Generally speaking, to ensure energy and nutrition needs increased during pregnancy the following recommendations should be followed:

1st trimester of pregnancy (1-12 weeks):

- Increasing daily consumption to 1 bowl of milk (250ml) or equivalents;
- Ensuring adequate intake of vegetable and fruit products, giving preference to colourful and dark green vegetables (carrots, pumpkin, spinach, broccoli...) and to fruit rich in vitamin C (orange, tangerine, kiwi...).

2nd and 3rd trimesters of pregnancy (13-40 weeks):

- Recommendations described for 1st trimester should be maintained, as well as:
 - Increasing vegetable and/ or fruit consumption in about 100 to 150g;
 - Increasing food products from the group of potatoes, cereals and cereal products in about 50g (for example 1 mixed cereal bread);
 - Ensuring adequate meat or fish intake.

Lastly, it is worth mentioning that food hygiene and safety is determinant during pregnancy, in order to avoid contamination by pathogens such as *Toxoplasma gondii*, thus avoiding the consequences which contracting toxoplasmosis can have upon health and the correct development of the foetus. Issues regarding food hygiene and safety are described in section 3 of this manual.

Children

In emergency situations, child morbidity and mortality frequently suffer dramatic increases. Protein-energy malnutrition during the first years of life has a negative impact in the development of cognitive, motor, social and emotional functions. As such, specific interventions are advised in order to optimise good infant feeding practices.

The most important of these interventions concerns exclusive breastfeeding in the first 6 months of life. Breast milk is the ideal food to promote children's growth and development, providing not only all necessary nutrients in quantities and proportions which are unlikely to be found in replacement formulas, but also being an irreplaceable protection against infections, by providing maternal antibodies to the infant. In addition, breastfeeding boosts the creation of emotional and affective bonds between the mother and the baby.

In emergency situations, the importance of breastfeeding is higher, given that, besides the described factors, it ensures a secure, economical and sustainable food form.

Replacement of breastfeeding with formula-based food should only be used as a resource when other alternatives are not possible. Under these circumstances, formulas should only be prescribed, prepared and distributed based on the assessment of needs and by qualified professionals, in order to ensure the correct mixture of the formulas and the hygiene and safety of the process ^(7, 9).

Another important aspect is the capacitation of institutions which promote harbouring and integration of families towards the benefits of breastfeeding. All institutions which provide services and care to children being breastfed should implement the following measures ⁽²³⁾:

- 1. Having a breastfeeding policy which is regulatory publicized and communicated to all personnel in the health area;**
- 2. Training all personnel in the health area with the necessary skills in order to implement this policy;**
- 3. Informing all pregnant women on the benefits of breastfeeding;**
- 4. Helping mothers to begin breastfeeding in the first half hour following birth;**
- 5. Showing mothers how to breastfeed and maintain lactation, even if separated from their children;**
- 6. Not feeding new born babies with any other food or drink besides maternal milk, unless medically indicated;**
- 7. Promoting bonding between mother and baby, allowing their interaction 24 hours a day;**
- 8. Encouraging breastfeeding on baby's request;**
- 9. Not supplying pacifiers or teats during the first weeks;**
- 10. Stimulating and promoting the formation of breastfeeding support groups and refer mothers to those groups when they are given medical discharge.**

The preference for breastfeeding over other feeding forms does not apply to cases where the mother is infected with HIV, non-active untreated tuberculosis, among others, or if the mother is taking medication which may interfere with breastfeeding. In these cases, all mothers should receive information on the risks and benefits involved in each feeding option, as well as counselling on the choice of the most adequate option for their situation and support on the way they chose to feed their babies, helping them make it in a safe, efficient manner ⁽²⁴⁾.

At 6 months begins a period where new food products are introduced alongside breastfeeding. In this phase of life, the first non-dairy food products must be introduced in a gradual manner. Special attention should be given to the information transmitted to the mother and to the family, so as to maintain maternal breastfeeding habits essential to the child's health and simultaneously introduce new food products in a progressive and correct manner⁽²⁵⁾. More detailed information about food diversification can be consulted in the article "Infant's Food and Nutrition" by the Nutrition Committee of the Portuguese Society of Paediatrics ⁽²⁶⁾.

Elderly people

In emergency situations, elderly people may be at nutritional risk and it is therefore important to pay special attention to this age group and efforts should be made to ensure access to an adequate diet⁽⁹⁾. Elderly people constitute a risk group as far as malnutrition is concerned. On the one hand, malnutrition and micronutrient deficiency are situations which are often found in these groups of the population. On the other hand, it is also known that chronic diseases like hypertension, diabetes and cardiovascular diseases are very prevalent in elderly people, which may justify a more specific intervention from a nutrition and food perspective⁽¹⁴⁾.

Recent data about the health condition of elderly people coming from Syria who are currently harboured in Lebanon are worrying. As far as food habits are concerned, these elderly people usually present a very low frequency of meat, fish, seafood and eggs consumption (little more than once a week). Dairy products, vegetables and fruit are also consumed with reduced frequency. Skipping meals, reducing portions and not eating at all during the day is also frequent behaviour ⁽¹⁴⁾.

The elderly population is also quite prone to respiratory infections, and the fact that a significant part of their journey occurs during the European cold and rainy winter months may increase the risk of developing these diseases.

Considering this context, it is probable that many elderly people who arrive in Portugal have a poor nutritional status and do need special attention, both from a food perspective and from a medical perspective.

Energy requirements for elderly people (≥ 65 years old, according to WHO), are normally lower than those of a young adult, due to a decrease in physical activity and in Basal Metabolic Rate levels, given the natural loss of muscle mass.

As to protein intake, and although the recommendations for this age group are similar to those of younger adults, it is important to ensure an adequate protein intake, given that in elderly people there is usually a lower consumption of food containing high biological value protein. Thus, it is important to ensure adequate intake of food products rich in protein of high biological value. Good examples are meat, fish, seafood, eggs, milk and dairy products. In the box below we present some guidelines to ensure adequate protein intake.

How to increase protein intake in elderly people:

- Including a source of protein in the main meals whenever possible (ex: meat, fish, seafood, eggs or pulses) and in the intermediate meals (ex: dairy products);
- Including pulses in the daily diet. The combination of some pulses with cereals allows to obtain high biological value protein (for example, combining beans with rice or chickpeas with pasta);
- Including about 3 daily portions of dairy products (milk, yoghurt or cheese) in diet.

Likewise, micronutrients requirements do not diminish comparatively with the requirements of young adults. As such, an adequate diet for elderly people should ensure that the micronutrient intake is maintained despite the reduction of ingested food quantity, which is why it is advisable to supply nutritionally dense food products through the reinforcement of, for example, vegetables, fruit and pulses.

It is important to stress the importance of ensuring an adequate micronutrient intake in this age group, such as vitamin B12, iron, vitamin D and calcium. Although the requirements are constant, it is important to consider that at this stage of the cycle of life the absorption of some of these micronutrients is diminished.

As to vitamin B12, elderly people often have a deficit in this vitamin; on the one hand, due to low intake of animal-origin protein food products and, on the other hand, due to a diminished absorption, as a result of a reduced production of the intrinsic factor, a component that is produced in the stomach, which is essential for the absorption of this vitamin. Regarding iron, its deficiency may be common in elderly people, as a result of the reduced intake of food products rich in protein and from the impaired bioavailability caused by the absence or diminishing of gastric secretion production, quite common among the elderly. Thus, it is important to supply sources of vitamin B12 and also of iron, namely food products rich in animal origin protein (meat, fish, seafood, eggs and dairy products) (table 7).

In this age group it is also essential to ensure an adequate intake of vitamin D and calcium.

Vitamin D synthesis through the skin, as well as its conversion into the active form through the kidneys, have their efficiency reduced in this age group. These factors, conjugated with a low intake of this vitamin and an inadequate exposure to sun light, reduce calcium absorption in elderly people. For this reason, and due to the fact that there is a lower calcium bioavailability, the this mineral's requirements may be increased. As such, it is important to supply food products which are sources of vitamin D (table 7) and calcium, such as milk and dairy products and green leafy vegetables (table 9).

TABLE 9 - Food sources selected according to vitamins and minerals content (Vitamin B12 and calcium).

Micronutrient	Food sources	Portion ¹	Quantity per portion ²
Vitamin B12	Rabbit	Big leg (125g)	10.3 µg
	Beef, steak	100g	2 µg
	Boiled egg	1 unit (56g)	0.28 µg
	Horse mackerel, grilled	1 medium unit (47g)	3 µg
	Sea bream, grilled	1 small unit (180g)	7.6 µg
Calcium	Semi-skimmed milk	1 glass (200ml)	224 mg
	Semi-skimmed solid natural yoghurt	1 unit(125g)	147.5 mg
	Flemish cheese	1 slice (18g)	144 mg
	Tinned sardines	Drained weight (85g)	402 mg
	Curly kale, boiled	½ plate (120g)	316.8 mg
	Broccoli, boiled	½ plate (133g)	74.5 mg
	Tofu, steak	137g	178 mg
	Almonds, with skin	1 handful (30g)	79.8 mg

¹Portions taken from Goios, A., et al., Pesos e Porções de Alimentos. Faculdade de Ciências da Nutrição e Alimentação do Porto – FCNAUP. Porto, 2014

²Instituto Nacional de Saúde Doutor Ricardo Jorge. Tabela da composição de alimentos. Lisboa: INSA; 2010

Another important consideration is connected with the maintenance of high fluid intake, given the reduced capacity of thirst reflex in elderly people ⁽⁹⁾. In this case, the option for beverages like tea or fruit juices can serve as motivation for the increase of fluid ingestion.

Food recommendations presented in section 2 of this manual also apply to this age group.

ADJUSTMENT OF FOOD PATTERNS TO CULTURAL AND RELIGIOUS ASPECTS

For many populations, food is an important element of cultural identity and it plays a relevant social role. If the food provided in a programme of food and nutrition intervention is unknown to the target population, or if not acceptable on cultural or religious grounds, the energy and nutrient intake may be compromised. For this reason, efforts should be made to ensure that the aid provided is culturally acceptable and familiar to the displaced population. The introduction of new food products in an emergency situation is definitely not recommended ^(6, 8).

Restrictions

Most of the displaced citizens who are received in Portugal belong socio-culturally to countries of Islamic culture. Therefore, a number of food restrictions need to be safeguarded – whether for religious reasons, as far as some restrictions are concerned, or for cultural reasons, because those citizens who come from the same region and do not profess Islamic religion probably do not have easy access to food products upon which there are religious restrictions, which means that they are probably not part of their food habits anyway.

Regarding food restrictions on religious grounds, Muslims follow a set of rules which are implicit or explicit in the Koran and in other religious texts, which rule the forbidden food products – haram – and the permitted ones – halal.

The most common restriction is pork and related products. Food-supplying institutions should be extra careful not to include pork-origin products, namely: meat, ham, sausages, chorizo, smoked ham, baloney, paio, salpicão, bread sausage, black pudding, guts (tripe, liver, lung, etc.) or lard. Gelatine produced from animal protein should also be avoided.

For the manipulation of pork origin products in the institutions which supply and/ or prepare food for displaced citizens, the same processes of food safety should be applied, in order to avoid cross contamination, i.e., pieces of equipment, surfaces and utensils which get in contact with pork products must be properly washed and sanitised.

As for other types of meat, in some cultures and following some currents of Islam, there may be some reservations on the way the animal is slaughtered, and there are ritual specificities which will have to be respected.

Ingestion of meat from animals which die by accident or of natural causes, as well as all type of blood is also forbidden by Islam. In some groups, rabbit meat consumption is also banned.

For the same religious reasons, the ingestion of alcoholic drinks is restricted in most of the societies of Islamic influence. For this reason, its supply or use in the preparation of food or meals should be avoided. This restriction may spread to usage of alcoholic drinks as seasoning, in stocks, marinades and desserts. Some ingredients, such as vanilla extract, may also be forbidden, because they contain alcohol in their composition or in the production process ^(27, 28).

Another situation related to religion which is worth looking at is the period of food abstinence in Ramadan, during which all Muslims must fast between the sunrise and the sunset. According to the lunar calendar, the beginning of the next Ramadan will be in June 2016, so by then it is important that the means of food assistance are articulated in order to meet the needs of those who practise abstinence.

The complexity and variability of this set of food rules may easily be overcome by use of a social or cultural mediator⁽¹⁾ belonging to a Muslim community integrated in Portugal, who will be able to work together with institutions and nutritionists/dietitians.

Cultural adequacy of diet

Restriction to pork-origin products and, ultimately, to all types of meat (due to suspicion about the way animals are slaughtered), creates apparent difficulties about the variability of the main sources of animal-origin protein. On the other hand, all fish is allowed, as well as eggs and dairy products. Together with vegetable-origin proteins, whose nutritional balance, expressed in essential amino acids, can easily be reached through the combination of pulses and cereals, the range of supply of protein sources allows to easily reach a minimum of 10% of the total energy of the diet with origin in the protein from the first phases of the food aid, and adjusting intake according to WHO's recommendations of 0.83 g/kg/day⁽²²⁾ in a stabilising phase.

Still on the matter of meat, in the cases where there are no restrictions whatsoever, lamb is culturally the most well-accepted species in the places of origin of the displaced citizens, followed by chicken meat.

In the cases where individuals follow a vegetarian food pattern, either for cultural, personal or religious reasons, we recommend the reading of Guidelines for a Healthy Vegetarian Diet, of the National Programme for the Promotion of a Healthy Diet, by DGS (Directorate-General of Health) ⁽²⁹⁾.

Vegetable sources of protein are extremely useful in emergencies. Conveniently, most of the places of origin of the displaced citizens have a gastronomic history which is rich in these products. In the countries of the Eastern Mediterranean, pulses such as chickpeas and lentils are used in large scale.

A factor of great convenience is the prevalence of many aspects of the Mediterranean Diet in most countries of the Eastern Mediterranean, which helps to promote adequacy of food supply in Portugal to that of many citizens to be received.

The Mediterranean Diet is not a mere set of nutrition and food recommendations, it also fits into a lifestyle which promotes socialisation around meals, perceived as moments of enjoyment of life and the company of family and friends ⁽³⁰⁾. Thus, besides the natural cultural identification with some of the Portuguese food habits, there might be affective benefits in the reinforcement and implementation of the central aspects of the Mediterranean Diet in assistance programmes.

The main aspects of the Mediterranean Diet are⁽³⁰⁾:

- Olive oil as the main source of fat;
- Abundant vegetables, fruit, bread and other non-refined cereals and pulses;
- Little-processed food products, fresh, local and in season;
- Moderate consumption of red meat and higher consumption of fish and eggs;
- Daily intake of dairy products in low to moderate quantities;
- Water as preferred drink.

Although most of the refugees that will be received – if not all of them – come from countries whose food tradition is based on a Mediterranean type, some constraints of economic, geographic and edaphoclimatic nature, besides the already mentioned constraints of social, cultural or religious nature, may cause the availability of certain food product to vary:

- Fish is consumed the most in these countries' coastal areas. In Syria, for example, the consumption of fish, seafood and water molluscs is quite rare in the country's inland;
- Some sources of carbohydrates, such as the potato and pasta, do not have a very expressive consumption. On the other hand, rice seems to be the base of several dishes. Bulgur – a preparation of hard wheat – is rare in Portugal, but it is used in many confections;
- A wide variety of vegetables is available in Portugal, but eggplant, which is central in the gastronomy of the Eastern Mediterranean, is less frequent;

- The pulses which are more common in Portugal, namely beans and peas, are secondary to chickpeas and lentils in certain countries of Sub-Saharan Africa and the Middle East, where most of the refugees come from, and which, for practical purposes, we designate here as “Eastern Mediterranean”.

The following table summarises some food products which are present in the diet of Eastern Mediterranean countries, according ⁽³¹⁾ to how easily they can be found in Portugal.

TABLE 10 - Food products which are present in the diet of Eastern Mediterranean countries, according to how easily they can be found in Portugal.

Group of food products	Very common in Portugal	Moderately common	Rare in Portugal
Vegetables	- Tomato	- Eggplant	- Vine leaves
	- Onion		- Okra
	- Garlic		
	- Peppers		
	- Cauliflower		
	- Cucumber		
	- Spinach		
	- Courgette		
Fruit	- Pointed cabbage		
	- Lemon	- Lime	
	- Orange		
	- Apple		
Potatoes, cereals and cereal products	- Pear		
	- Wheat flour		- Bulgur or bourghul
Meat, fish, seafood and eggs	- Rice		
	- Chicken	- Lamb	- Some types of fish
	- Eggs		(halibut, haddock)
Pulses	- Beef		
	- Chickpeas	- Lentils	
Fats and oils	- Broad beans		
	- Olive oil		- Sesame oil
	- Butter		

Milk and dairy products	- Cow's milk	- Feta cheese	- Some types of cheese (Shanklish, Akkawi, Jibneh, Khadra, Shelal)
	- Yoghurt (natural, sugar-free)		
	- Butter		
Fatty fruits, dry nuts and seeds oils	- Pine nuts	- Pistachio	- Sesame
	- Almond	- Date	
	- Raisins	- Apricot	
Seasonings	- Paprika	- Cardamom	- Aleppo pepper (halaby pepper)
	- Pepper mint		
	- Parsley		
	- Pepper		
	- Thyme		
	- Cumin		
	- Cinnamon		
	- Coriander		

As can be observed, there is a good approximation in terms of the availability of most of the food products. Yet, the gastronomic formulations of the countries of the Eastern Mediterranean are quite different. It would be beneficial to find compromises between the mechanisms of food assistance, so as to supply some of these food products to individuals. Some suggestion on this matter can be found in the next section.

Recommendations for an adequate cultural adequacy of diet

- Assessing population's acceptability and adequacy of food included in the food intervention plan;
- Integrating a cultural mediator in all decision and communication processes;
- Understanding and respecting the importance of aspects of cultural, social and religious nature in diet, ensuring that the food provided does not conflict with religious or cultural traditions of the population;
- Understanding that a correct cultural adequacy of diet contributes for a more balanced diet;
- Avoiding food products which might be subjected to religious restrictions:
 - Pork products or sub-products;
 - Animal blood or products containing blood;
 - In some cases, poultry or mammals which have not been sacrificed according to specific rituals;
 - Alcoholic beverages or products containing alcohol in their formulation, preparation or confection;
- Adequately replacing restricted food products with others with approximate nutritional constitution;
- Promoting Mediterranean Diet as the foundation for a healthy, varied, balanced, economical and environmentally sustainable diet, one with cultural identifications with most of the refugees to be received.

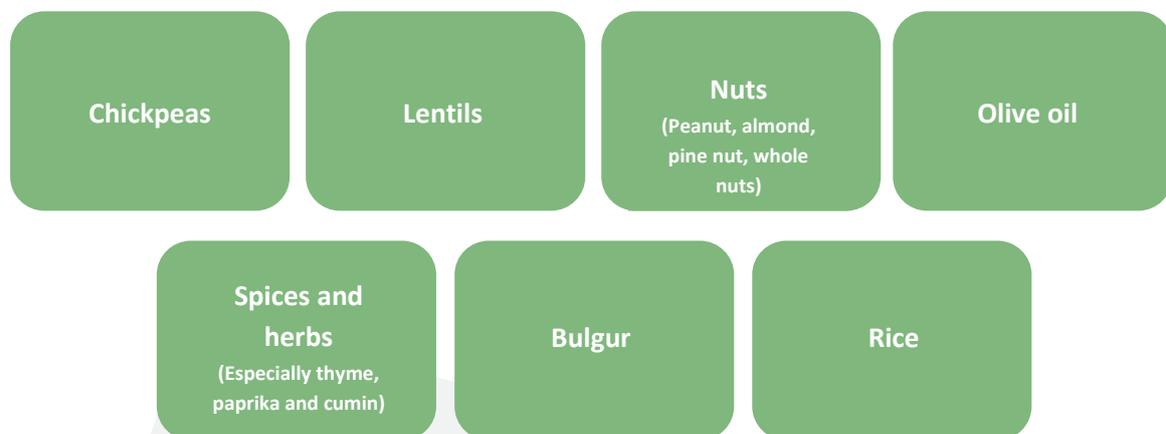
FOOD AID PROGRAMMES: WHICH NEEDS? WHICH FOOD TO PROMOTE AND WHICH TO DISCOURAGE?

Food aid programmes (food distribution) which exist in Portugal may be an important support to food and nutrition interventions in emergency needs and to the populations to be received.

The Portuguese Federation of Food Banks (www.bancoalimentar.pt), currently coordinates food supply to over 390.000 people in need in Portugal. This food is supplied by proximity institutions, in the form of prepared meals or food baskets.

Another important aspect is the increase in the variability of the products to be asked for in donation form. In an ideal situation, food products with higher cultural identification among refugees should be the ones donated. Yet, the low availability of some of those foodstuffs may cause economic constraints, especially on the side of the citizen or company who make the donation.

Food Banks donation campaigns are frequent, so there is the opportunity to raise awareness among those companies and in the general public to increment donation of non-perishable goods which best accommodate the recipients in cultural terms, from which the following are to be highlighted:



Regarding perishable goods, such as fresh vegetables and fruit, eggs and dairy products, that awareness raising can be directed mainly to producing and distributing companies as a measure which can also contribute for a reduction of food waste by those companies. From a gastronomic standpoint, it would be extremely interesting if there was an effort towards the adequacy of supply in vegetables such as eggplant, cucumber, courgette or peppers, and herbs such as peppermint and parsley.

As to dairy products, namely yoghurts, preference on natural sugar-free ones is very relevant, because it can also be used in several gastronomic formulations which are transversal to many countries of the Eastern Mediterranean. Flavoured, sugared or fruit-added yoghurts will compromise that type of use.

Below, we offer examples of a basic food basket which meets the requirements on average daily requirements in energy and nutrients in the first phase of food and nutrition intervention.

TABLE 11 - Basic food products to include in a basket in order to achieve average daily quantities of energy, protein and lipids established for the first phase of assistance.¹

Item	Quantify (g)
Cereals (e.g. rice, pasta, ...)	390
Pulses	50
Milk	240
Oils and other fats	30
Meat and fish	50
Sugar	22
Vegetables and fruit, fresh	100
Energy	2100 Kcal
Protein	63 g (12% of total energy)
Lipids	40 g (17% of total energy)

¹Adapted from WFP, UNHCR. Guidelines for estimating food and nutritional needs in emergencies, 1997.

This example may serve as the basis for the construction of a basic food basket by the support/receiving entities. It is important to bear in mind the minimum quantity and diversity, per individual and per day, to be supplied or included in the food of these populations.

These quantities may be exceeded in about 10-15%, so as to:

- Count on possible losses in storage, preparation, confection or distribution of food;

- Supply a higher quantity of food products to groups with increased nutritional requirements, namely pregnant women, breastfeeding women, individuals suffering from infections and other clinical conditions which justify it.

Besides the described food products, institutions should increase the daily provision of vegetables and fresh fruit, eggs and other sources of animal protein (e.g. canned tuna), dairy products and, if possible, nuts (almonds, walnuts, hazelnuts, etc.). This product availability will be important to supply adequate food to more vulnerable individuals in an immediate phase.

Main recommendations when articulating with food aid programmes

- Raising the awareness of those responsible within Non-Governmental Organisation (NGOs) regarding the specificities and needs of these emergency situations;
- Adjusting the need for donations to the cultural and gastronomic needs of the recipients:
 - Trying to obtain larger quantities of common food products available in Portugal, but rarely donated;
 - Trying to obtain some products that are less common in Portugal, but which are important in the gastronomy of the refugees' countries of origin;
 - Reinforcing the importance of obtaining fresh food products, namely vegetables, fruit, dairy products and eggs.

Ideally, packaged products intended for these populations should have some basic information about their composition written in the language of origin. However, as in most of the times that does not happen, mediators should be involved. The designation of the product, its production date, expiry date and details on the nutritional composition could, in these cases, be considered ⁽⁸⁾. It might also be necessary to specify some potentially allergenic ingredient or mention the presence or absence of ingredients under cultural and religious restrictions. In these tasks, resorting to cultural mediators beside the Nutritionist/Dietitian or other technician is essential.

3. FOOD HYGIENE AND SAFETY AT THE LEVEL OF RECEPTION INSTITUTIONS

How to ensure food hygiene and safety in the reception, manipulation, production, storage, distribution/ transport and conservation of meals/ food products.

Food hygiene and safety, extremely important in situations of normality, become even more relevant in emergency situations, where physical weakness of the displaced individuals may pose serious risks to their health, making them more exposed to infections.

Ensuring food safety means minimising risks. The European Union (EU) seriously assumes its responsibility in the management and control of the risks on food products in a global market in constant evolution. EU's decisions are based on solid scientific evidence which is transparent to everybody: scientists, farmers, producers from the food sector or consumers.

Although it is impossible to totally eliminate all risks, the establishment of strict norms, permanent risk evaluation and inclusion of the best scientific advice reflect a modern, advanced food safety policy, of which the European Union should be proud.

Demands on food hygiene and safety in Europe are ruled by the norms in Regulation (EC) No.178/2002 ⁽³²⁾ and the “Hygiene Package”, namely Regulation (EC) No 853/2004 ⁽³³⁾, which establishes the general rules intended for operators from the food sector companies as far as hygiene of foodstuffs is concerned and applies to all companies and operators of the food sector, being the correspondent operators responsible for non-compliance with food legislation norms. It applies to all phases of production, transformation and distribution of foodstuffs. The elaboration of the execution norms, compliance and inspection of this European Regulation for Portugal can be found in Decree-Law No 113/2006 ⁽³⁴⁾.

Institutions which receive displaced people, or institutions which provide food baskets or prepared meals for refugees operating in Portugal must abide by the law. Ideally, they should implement and maintain processes of food hygiene and safety along the entire applicable chain. This is mainly a matter of responsibility regarding third-party safety, which should be looked at with proper care. Training of staff in these institutions is also a key point.

For those institutions in charge of any of the processes of food aid in emergency which do not possess an implemented or adequate food safety system, the food aid programme for refugees which is carried out through those institutions can be regarded as an opportunity to implement such system. In fact, Decree-Law No 64/2007⁽³⁵⁾, which defines the legal framework of installation, operation and inspection of social care establishments states that “for purposes of

evaluation and inspection actions, *Instituto da Segurança Social, I. P.* (Institute for Social Security), may request the cooperation from experts and specialised entities, *Inspeção-Geral do Ministério do Trabalho e da Solidariedade Social* (General Inspection of the Ministry of Labour and Social Security), *Autoridade Nacional de Proteção Civil* (National Civil Protection Authority), public health authority and from other competent services, regarding namely salubrity and safety, storage of foodstuffs and hygiene-sanitary conditions.” As such, Private Institutions of Social Solidarity (IPSS) may count on the support of public official entities in the assistance and monitoring of the implementation of food safety systems, by request to the Institute for Social Security.

In case the institutions already have one or more integrated systems, an assessment should be carried out in order to check if those systems/ methodologies respond to the specificity of the food aid to be supplied.

Nutritionists and Dietitians, among other health professionals, play a key role in the organisation of food safety systems, given their integrated knowledge on hygiene, safety and food quality of the different processes, procedures and methodologies in that field, the design, implementation, maintenance/ monitoring and evaluation of the assurance of food quality that these systems should implement, thus promoting not only safe food, from a sanitary standpoint, but also nutritionally adequate and organoleptically pleasant food.

Regarding the referential for food hygiene and safety, focus should be put on Regulation (CE) No 852/2004, ⁽³³⁾, national or communitarian Codes of Good Practices of Hygiene and Manufacturing meant for this activity sector, and the Codex Alimentarius ⁽³⁶⁾, which consists of a set of both general and specific rules on hygiene of foodstuffs based on internationally accepted scientific evidence. This document served, and still does, as a model for the elaboration of communitarian and national legislation on food safety.

Regulation (CE) No 852/2004 ⁽³³⁾ stipulates that the operators of companies from the food sector must create, apply and maintain a permanent process/ permanent processes based on the principles of the food safety system - Hazard Analysis and Critical Control Point (HACCP) and the Codex Alimentarius recommends, whenever possible, a safety food system with an approach based on the HACCP's methodology and principles, in order to ensure and improve food safety. To make the implementation of this methodology possible, it is necessary that HACCP's requirements, hygiene requirements (Appendix II of Regulation (CE) No 852/2004) ⁽³³⁾ and traceability (Regulation (CE) No 178/2002) ⁽³²⁾ have been routinely implemented.

The HACCP system - Hazard Analysis Critical Control Point - is a systematic, proactive and preventative methodology aiming at ensuring food safety through the identification of the potential hazards, risk analysis (risk = likelihood of occurrence of hazard X severity of hazard), its meaning in the food chain, ways to detect, avoid, eliminate or reduce them to acceptable levels, besides correcting, monitoring and recording them.

Given its specificity and demand, be it in technical terms, time, labour force or resources, the applicability of an HACCP system may not be likely in institutions which are intended to provide food support to refugees. In these cases, however, it should still serve as an inspiration towards a systematic improvement of the processes which involve the institution's food chain. It is necessary to value and enforce basic personal and professional hygiene rules, hygiene of the place of work/ operation, premises, equipment and utensils and hygiene of foodstuffs, investing continuously in training and methodical organisation through processes, not forgetting the documental structure.

For the implementation/ execution of Good Practices of Hygiene and Manufacturing along the supplying system, there are methodologies which help in their fulfilment, as is the case of SAFE, the 4C's⁽³⁷⁾ and 5 Keys to Safer Food⁽³⁸⁾. In Appendix 3 a set of guidelines on good hygiene and manufacturing practices can be found and in Appendix 4 the 4C's methodology is summarily described.

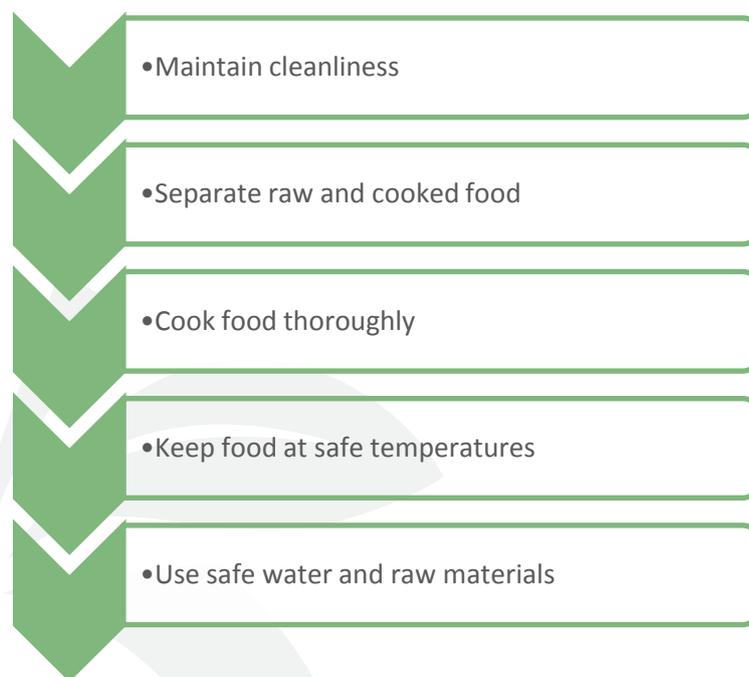


FIGURE 3 - Five keys to safer food

Many of the processes are simple to implement and may contribute to control a certain risk in an efficient manner and with very little resources. It is often, for example, something as simple

as controlling a given temperature during food preparation, sanitising a surface which was not given attention before, reorganising the position of a counter to avoid cross contamination, etc. These minor changes can, if conveniently systematised, mean a lot in terms of food safety. However, a high level of knowledge of the processes is necessary, in order to detect and assess hazards/ risks (likelihood of risk occurring).

The final recipients of the food chain should also play an important role in ensuring food safety. If they receive food baskets, they should have all necessary safety conditions to transport, store, prepare, cook and consume the food products included in it. These conditions are materialised in the premises, equipment and utensils made available to them, but also in a set of hygiene attitudes they should adopt. In this situation, the responsibility for food safety moves on to the side of the family or household from the moment they receive the basket, which means that the maintenance of safety rules demands a considerable effort of communication and training directed to the recipients. Here, too, the role of cultural mediators may prove essential.



Main recommendations in food hygiene and safety

- Verifying applicability of implemented systems to the new demands;
- Adjusting implemented processes when necessary (example: a food product which has not been distributed before may pose different demands at hygiene and safety levels, therefore requiring risk assessment and implementation of preventative measures throughout the whole of its course);
- Implementing a food hygiene and safety methodology, if there is none implemented in the institution;
- If organisational, time or human resources, budget conditions, etc., do not allow HACCP implementation, using methodologies which help and facilitate the routinely implementation of good practices of hygiene and manufacturing, so as to ensure food safety:
 - 4 C's;
 - 5 Keys to Safer Food;
- If necessary, request the cooperation of official entities so as to obtain support in the implementation or revision of a system or methodology;
- Responding to training needs of the different personnel involved in food aid, especially food handlers;
- Ensuring that the resources made available to families for storage, conservation, preparation and confection of food are adequate and safe;
- Educating and training families in matters related to food hygiene and safety, especially those which have more vulnerable individuals.

Below we explore the general guidelines for good food hygiene and safety practices, based on the 5 Keys to Safer Food ⁽³⁸⁾, which consist of a set of simple indications which are easy to memorise and to use, based on solid scientific grounds, and which may contribute for hygiene and safety of food. WHO's posters on the 5 Keys to Safer Food in Portuguese, English and Arabic are available in Appendix 5.

The manual **5 Keys to Safer Food** may be used as a training instrument for institutions. This publication is available on WHO's website:

Portuguese:

http://www.who.int/foodsafety/consumer/manual_keys_portuguese.pdf

English:

http://apps.who.int/iris/bitstream/10665/43546/1/9789241594639_eng.pdf?ua=1

Arabic:

http://www.who.int/foodsafety/publications/consumer/manual_keys_ar.pdf

The manual is accompanied by a poster with the summary of the 5 keys, which may be put up at the institution or provided to the families.

Five keys to safer food

1. Keep clean

- ✓ Wash your hands before handling food and often during food preparation;
- ✓ Wash your hands after going to the toilet;
- ✓ Wash and sanitize all surfaces and equipment used for food preparation;
- ✓ Protect kitchen areas and food from insects, pests and other animals.

Why?

While most microorganisms do not cause disease, dangerous microorganisms are widely found in soil, water, animals and people. These microorganisms are carried on hands, wiping cloths and utensils, especially cutting boards and the slightest contact can transfer them to food and cause foodborne diseases.

2. Separate raw and cooked food

- ✓ Separate raw meat, poultry and seafood from other foods;
- ✓ Use separate equipment and utensils such as knives and cutting boards for handling raw foods;
- ✓ Store food in containers to avoid contact between raw and prepared foods

Why?

Raw food, especially meat, poultry and seafood, and their juices, can contain dangerous microorganisms which may be transferred onto other foods during food preparation and storage.

3. Cook food thoroughly

- ✓ Cook food thoroughly, especially meat, poultry, eggs and seafood;
- ✓ Bring foods like soups and stews to boiling to make sure that they have reached 70°C. For meat and poultry, make sure that juices are clear, not pink. Ideally, use a thermometer;
- ✓ Reheat cooked food thoroughly.

Why?

Proper cooking kills almost all dangerous microorganisms. Studies have shown that cooking food to a temperature of 70°C can help ensure it is safe for consumption. Foods that require special attention include minced meats, rolled roasts, large joints of meat and whole poultry.

4. Keep food at safe temperatures

- ✓ Do not leave cooked food at room temperature for more than 2 hours;
- ✓ Refrigerate promptly all cooked and perishable food (preferably below 5°C);
- ✓ Keep cooked food piping hot (more than 60°C) prior to serving;

- ✓ Do not store food too long even in the refrigerator;
- ✓ Do not thaw frozen food at room temperature.

Why?

Microorganisms can multiply very quickly if food is stored at room temperature. By holding at temperatures below 5°C or above 60°C, the growth of microorganisms is slowed down or stopped. Some dangerous microorganisms still grow below 5°C.

5. Use safe water and raw materials

- ✓ Use safe water or treat it to make it safe;
- ✓ Select fresh and wholesome foods;
- ✓ Choose foods processed for safety, such as pasteurized milk;
- ✓ Wash fruits and vegetables, especially if eaten raw;
- ✓ Do not use food beyond its expiry date.

Why?

Raw materials, including water and ice, may be contaminated with dangerous microorganisms and chemicals. Toxic chemicals may be formed in damaged and mouldy foods. Care in selection of raw materials and simple measures such as washing and peeling may reduce the risk.

4. PSYCHOLOGICAL FIRST AID – INITIAL APPROACH

Although this manual focus on matters of food emergency and nutrition needs, those providing support to these populations should be made aware and have minimal knowledge on basic psychological care for the food support itself to be more effective.

To make the understanding of all these processes easier, from reception to refugees' adaption, in 2015 WHO published a manual in Portuguese language containing the basic guidelines for psychological first aid, which involve humanitarian assistance and practical help to support individuals in situations of crisis. The manual is intended for all individuals who are in the field and presents some model information which should be adapted to the local context and culture of the people who are waiting to receive support. This text is based on the above-mentioned guide and its international guidelines ⁽³⁹⁾.

This base information, made available by WHO to all those who provide assistance, does not exempt the support of teams of Specialised Psychological Care Services. According to Borges and Pocreau (2012), Specialised Psychological Care Services to refugees should reflect the importance of cultural codification in the expression and structuring of the psychological suffering of a great number of migrants and refugees ⁽⁴⁰⁾. Refugees are a vulnerable group of migrants, bearing in mind that they come from zones of conflict or refugee camps where they may have stayed for varied periods of time. It is necessary to take into consideration that they may have gone through a war process and violent disruptions which have surely left a mark on their personal and family history. In addition, for these people a return to the homeland is normally compromised, due to the situation of war or conflict. From this perspective, the adjustment to the country where they are currently is vital, as is adjustment to the changes of the social context⁽⁴⁰⁾.

The European Federation of Psychologists' Associations (EFPA) has been urging all psychologists in Europe to make themselves available for direct or indirect aid in this refugee international crisis. According to EFPA's president, a psychologist has the responsibility to apply their knowledge and skills in order to allow refugees to overcome their traumas and their more than expectable difficulties of adjustment to their new living conditions, so as to alleviate the effects of this human catastrophe as much as possible ^(41,42).

This type of extreme situations causes suffering, given that individuals may have lost their houses and their jobs, and they risk losing contact with their family or community, besides the

fact that they may have witnessed situations of violence, destruction and death throughout their journey. Nonetheless, there is a wide variety of reactions and feelings by each person in situations of crisis. In these cases, the presence of relatives may have a therapeutic effect upon people who survived from traumatic experiences and it plays a key role in providing emotional and physical support ⁽⁴³⁾.

Some people react more light heartedly, while others do so in a more intense, impulsive manner. Some examples of psychological reactions to a crisis are physical symptoms (for example: tremors, headaches, intense fatigue, loss of appetite, pains), crying, sadness, depressive mood, sorrow, anxiety, fear, agitation, overly defensive attitudes, preoccupation, the perception that something very bad might happen, insomnia, nightmares, irritability, anger, guilt, shame (for instance for having survived or for not having helped other people), confusion, a feeling that the situation is unreal or that they are delirious, a feeling of “emotional anaesthesia”, apathy, not answering to people, remaining quiet, disorientation (for instance not knowing their own name, where they are from or what has happened), not being able to take care of themselves, or their own children (for instance not eating or drinking, not being able to make simple decisions) ^(39, 44).

Diverse factors, such as the nature and intensity of the events to which a person has been exposed, the life prior to the situation of crisis, the support received from other people during their lifetime, their physical health condition, the personal and family history regarding mental health problems, personal culture and traditions and age (for instance children, depending on the age group, react in different manners) ⁽³⁹⁾. Bearing these factors in mind, there are some situations of greater risk, such as people who need additional support, given their age (children and elderly people), due to physical or mental problems, or because they belong to groups who may be marginalised or subject to violence. Special attention should be given to the people who need immediate specialised support, such as people suffering from serious injuries, who risk death, who need emergency medical care, who are in a state of frailty to the point where they cannot take care of themselves or their own children, or people who might hurt themselves or others ^(39, 44).

According to Sphere Project ⁽⁸⁾ and Inter-Agency Standing Committee (IASC) ⁽⁴⁵⁾, the first psychological care consists in a response to people in suffering and those who need immediate help. When providing this care, people should not be pressed to talk about feelings or reactions they have had in a specific situation, and people should not be asked to analyse what has happened to them or to describe or report events occurred in a chronological order. First aid

providing may not necessarily involve a detailed discussion on the events which have caused suffering. In the long run, this care should provide security, calmness and hope, social and emotional care, and the ability of individuals to help themselves and each other ⁽³⁹⁾.

How to respect Safety, Dignity and Rights?

What should be respected:	
Safety	<ul style="list-style-type: none"> - Avoid taking actions which put people in situations of higher risk or damage; - Make sure that adults and children who receive your assistance are safe, and protect them from physical and psychological damage
Dignity	<ul style="list-style-type: none"> - Treat people with respect and according to their social and cultural norms.
Rights	<ul style="list-style-type: none"> - Make sure that people can have access to assistance offered in a fair, non-discriminating manner; - Help people seek and have access to the support available; - Try to take action only in benefit of the interests of the people you find.

Adapted from: “*Primeiros cuidados psicológicos: guia para trabalhadores de campo*” ⁽³⁹⁾.

Ethical issues

Within the ethical context, below we present a guide on “What to do and what not to do” in order to offer the best care possible and also to act only to the benefit of the refugees’ interest ⁽³⁹⁾.

What to do?	What not to do?
<ul style="list-style-type: none"> ✓ Be honest and inspire confidence; ✓ Respect the person’s right to make their own decisions; ✓ Be alter about your own prejudice and preferences and put them aside; ✓ Explain to people that, even if they do not wish to get help now, they can obtain it later; ✓ Respect the person’s privacy and keep secrecy about their story, if it is appropriate; ✓ Behave appropriately, considering the person’s culture, age and gender. 	<ul style="list-style-type: none"> × Do not take advantage of your relationship carer; × Do not ask for money or favours to help people; × Do not make false promises or provide false information; × Do not go over your competences; × Do not force people to get help and do not be invasive or aggressive; × Do not press people to tell you their own story; × Respect confidentiality; do not tell people’s stories to other people; × Do not judge people for their actions or feelings.

Adapted freely from: *“Primeiros cuidados psicológicos: guia para trabalhadores de campo”* ⁽³⁹⁾.

Adjustment of actions taking culture into account

In situations of crisis there are often people who belong to varied cultures among the affected population and these cultures are frequently different from the culture in the country of reception. This group of people can also include minorities at risk of marginalisation. That considered, it is extremely important that a previous adjustment to the cultural context occurs, because this will help understand what can or cannot be done or said.

You should also be alert in terms of the available services and support, so that you can share that information with the people who receive your help and inform them on “how” and “when” they can have access to practical help ⁽³⁹⁾.

To provide some help in this area, there is a set of questions which you should ask yourself, in a process of contextualisation:

Questions:	
Clothing	- Should I dress in a specific manner to be considered respectful of the culture or religion?
	- Do the people I am helping need specific clothes in order to maintain their specific dignity and customs?
Idiom	- What is the usual way of greeting people within this culture?
	- Which idiom is spoken?
Gender, age and power	- Should affected women be approached by female professionals only?
	- Who should I approach? (e.g.: the family leader or the community leader?)
Touch and behaviour	- What are the customs regarding touching people?
	- Is it convenient to hold a person’s hand or touch their shoulder?
	- Is there special care to take into consideration when dealing with elderly people, children, women or others?
Religion and beliefs	- Who are the different ethnical and religious groups who exist among the affected people?
	- Which beliefs or practices are important for the affected people and how can they influence their perception on what is happening to them?

Adapted from: *“Primeiros cuidados psicológicos: guia para trabalhadores de campo”* ⁽³⁹⁾.

Response in situations of crisis: how to act?

Whenever possible:

- Follow the instructions by the competent authorities in charge of managing the crisis;
- If they exist, be informed about the emergency responses which are organised and about which resources are available to help people;
- Do not interfere with the work of search and rescue or medical professionals;
- Know about your role and the boundaries of your action.

Adapted from: “*Primeiros cuidados psicológicos: guia para trabalhadores de campo*”⁽³⁹⁾.

Helping with responsibility

There is the real possibility that carers will be affected by all of the situations experienced and the involving situation of crisis. Thus, it is vital that they are careful about their own physical and psychological wellbeing, in order to be able to help others. By taking care of themselves, they will be taking better care of other people. They should also pay attention to their team mates⁽³⁹⁾.

How to perform adequate communication

In the table below we present some suggestions about what should be said and/ or done. It is important to be genuine, authentic and sincere when offering help and care⁽³⁹⁾.

What to say and do:	What not to say and do
✓ Try to find a quiet place to talk and limit external distractions;	× Do not press people to tell you their personal stories;
✓ Respect privacy and confidentiality of the person’s story;	× Do not interrupt or rush someone’s story (e.g., do not look at your watch or speak very quickly);
✓ Be attentive, but maintain appropriate distance according to person’s age, gender and culture;	× Do not touch the person unless you are sure it is appropriate to do so;
✓ Show that you are listening: e.g. nod your head or say “hmmm...”;	× Do not judge what people did or did not do or the way they are feeling. Avoid saying: “You should not feel like that”, or “You should feel lucky for having survived”;
✓ Be patient and calm;	
✓ Provide information, if you have it. Be honest about what you know or do not know: e.g. say “I do not know, but I am	× Do not make up facts you do not

- | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><i>going to get information on that”;</i></p> <ul style="list-style-type: none"> ✓ Provide information in a way the person understands: speak in a simple manner; ✓ Acknowledge how others are feeling and any losses or important events they tell you about, such as losing their house or the death of a loved one: <i>“I am sorry... I can imagine how sad that is for you”;</i> ✓ Recognise the effort of the person and how that has contributed to help them; ✓ Allow silence. | <p>know about;</p> <ul style="list-style-type: none"> × Do not use very technical terms; × Do not tell another person’s story; × Do not talk about your own problems; × Do not make false promises or give false expectations; × Do not think or act like it is your obligation to solve all the affected person’s problem; × Do not undervalue people’s effort and capability of taking care of themselves; × Do not talk about people using negative terms (e.g., do not use the terms “mad” or “crazy”). |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Do not forget that you should prepare yourself before you act, getting information about the situation of crisis, which services and support are available and about safety and protection.

Psychological first aid has basic action principles, namely observing, listening and approaching. As such, you should:

Observe: check the safety condition, if there are people with evident and urgent basic needs or displaying serious reactions showing psychological stress;

Listen: approach people who might need help, ask about their concerns and needs, listen to them and help them feel calmer;

Approach: help people achieve their basic needs and get access to services, help them deal with the problems they encounter, provide information and allow people to approach their loved ones, as well as social care ⁽³⁹⁾.

Frequent needs

Migrants often have the following needs: shelter, food, water and sewage, health services for wounded people or for people suffering from chronic diseases, accurate information on the event and available services, possibility to contact their loved ones and friends, access to specific support related to their own culture or religion, about being consulted and being involved in important decisions. People may feel vulnerable, isolated or powerless after they have gone through a critical event. Help them help themselves, recuperate control of their situation, attend

to their basic needs, have access to available services and deal with their problems ⁽³⁹⁾.

ONLINE SUPPORT

In this section you can find some free electronic addresses in the area of support to complementary education activities or information on healthy food.

"Daily Recommended Portions according to the new Food Wheel" poster

This is a poster which explains, in a pedagogical way, how to reach the daily recommended portions within the 7 represented food groups. Available at:

<http://www.alimentacaosaudavel.dgs.pt/cartazes-e-manuais-de-referencia/>

Food Products Capitations Manual for Meals in a School Environment

This is a manual which allows to identify the adequate food quantities for the construction of one or several menus for school-age children. Available at:

<http://www.alimentacaosaudavel.dgs.pt/cartazes-e-manuais-de-referencia/>

PNPAS's website and "Nutrimento" blog

In these spaces, which you can consult at www.alimentacaosaudavel.dgs.pt and www.nutrimento.pt, respectively, you can find information and quality materials on the topic of food and nutrition, which can be used as support tools.

Manual "Alimentação Inteligente – coma melhor, poupe mais" ("Smart Eating – eat better, save more")

This is a manual which provides useful information regarding planning, purchase, confection and conservation of food products, allowing better nutritional choices at better price. The manual is available on an online version at: www.alimentacaointeligente.dgs.pt.

REFERENCES

1. Pottie K, Martin JP, Cornish S, Biorklund LM, Gayton I, Doerner F, et al. Access to healthcare for the most vulnerable migrants: a humanitarian crisis. *Conflict and Health* 2015; 9:16.
2. United Nations. Convention relating to the Status of Refugees. 1951. Available at (Portuguese): http://www.acnur.org/t3/fileadmin/Documentos/portugues/BDL/Convencao_relativa_ao_Estato_dos_Refugiados.pdf?view=1.
3. European Commission. European Commission makes progress on Agenda on Migration. Press Release. Brussels; 2015. Available at: http://europa.eu/rapid/press-release_IP-15-5039_en.htm.
4. European Commission. Refugee Crisis: European Commission takes decisive action. Press Release. Strasbourg; 2015. Available at: http://europa.eu/rapid/press-release_IP-15-5596_en.htm
5. United Nations High Commissioner for Refugees. Handbook for Emergencies. Geneva; 2007. Available at: <http://www.unhcr.org/472af2972.pdf>.
6. WHO. The management of nutrition in major emergencies. Geneva; 2000.
7. WHO. Guiding principles for feeding infants and young children during emergencies. Geneva; 2004.
8. The Sphere Project. Humanitarian Charter and Minimum Standards in Humanitarian Response. Minimum standards in food security and nutrition. Rugby; 2011. 139-238.
9. UNHCR, UNICEF, WFP, WHO. Food and Nutrition Needs in Emergencies. 2002
10. UNHCR, WFP. Acute Malnutrition in Protracted Refugee Situations: A Global Strategy. UNHCR/WFP; 2006.
11. WFP, UNHCR. Guidelines for estimating food and nutritional needs in emergencies. 1997
12. UNHCR, WFP. Guidelines for Selective Feeding Programmes in Emergencies. 1999
13. Bilukha OO, Jayasekaran D, Burton A, Faender G, King'ori J, Amiri M, et al. Nutritional Status of Women and Child Refugees from Syria — Jordan, April–May 2014. *Morbidity and Mortality Weekly Report (MMWR)*. 2014; 63(29):638-9.
14. Strong J, Varady C, Chahda N, Doocy S, Burnham GG. Health status and health needs of older refugees from Syria in Lebanon. *Conflict and Health* 2015; 9:12.

15. WHO, UNICEF. WHO child growth standards and the identification of severe acute malnutrition in infants and children A Joint Statement by the World Health Organization and the United Nations Children's Fund. 2009
16. WHO. Growth reference data for 5-19 years. 2007. Available at: <http://www.who.int/growthref/en/>
17. WHO. Indicators for assessing Vitamin A Deficiency and their application in monitoring and evaluating intervention programmes. WHO/NUT/96.10. 1996
18. Franchini B, Rodrigues S, Graça P, de Almeida M. A nova roda dos alimentos: um guia para a escolha alimentar diária. *Nutricias*. 2004; 4:55-56.
19. Seal A, Thurstans S. Derivation of nutrient requirements for disaster-affected populations: Sphere Project 2011. *Food Nutr Bull*. 2013; 34(1):45-51.
20. Teixeira D, Pestana D, Calhau Cao, Vicente L, Graça P. Alimentação e nutrição na gravidez. Lisboa: Direção-Geral da Saúde; 2015. Available at: <http://nutrimento.pt/activeapp/wp-content/uploads/2015/04/Alimentacao-e-nutricao-na-gravidez.pdf>.
21. World Health Organization Regional Office for Europe. Healthy Eating during Pregnancy and Breastfeeding. 2001
22. WHO, FAO, UNU. Protein and amino acid requirements in human nutrition. Report of a joint FAO/WHO/UNU expert consultation (WHO Technical Report Series 935). 2007
23. WHO, UNICEF. Protecting, promoting and supporting breastfeeding: the special role of maternity services. A joint WHO/UNICEF statement. . Geneva: World Health Organization; 1989.
24. WHO, UNICEF. HIV and infant feeding counselling tools: reference guide. World Health Organization; 2005.
25. WHO. Infant and young child feeding : model chapter for textbooks for medical students and allied health professionals. 2009
26. Guerra A, Rêgo C, Silva D, Ferreira GC, Mansilha H, Antunes H, et al. Alimentação e Nutrição do lactente. *Acta Ped Port*. 2012; 43(Supl II):S17-S40.
27. Toronto Public Health. Guide to Understanding Halal Foods. 2004. Available at: <https://http://www.utoronto.ca/~facilities/documents/GuidetoHalalFoods.pdf>.
28. Islamic Food and Nutrition Council of America (IFANCA). Halal Foodservice Kit. 2010. Available at: http://www.ifanca.org/Assets/PopularLinks/Halal_Foodservice_Kit.pdf
29. Silva SCG, Pinho JP, Borges C, Santos CT, Santos A, Graça P. Linhas de Orientação para uma Alimentação Vegetariana Saudável. Lisboa: Plano Nacional para a Promoção da Alimentação Saudável, Direção Geral da Saúde; 2015.

30. Gregório MJ, Santos MCT, Ferreira S, Graça P. Alimentação Inteligente - coma melhor, poupe mais. Lisboa: Direção-Geral da Saúde; 2012.
31. WHO. Promoting a healthy diet for the WHO Eastern Mediterranean Region: user-friendly guide. World Health Organization; 2012.
32. Regulamento (CE) N.º 178/2002 do Parlamento Europeu e do Conselho, de 28 de Janeiro de 2002, que determina os princípios e normas gerais da legislação alimentar, cria a Autoridade Europeia para a Segurança dos Alimentos e estabelece procedimentos em matéria de segurança dos géneros alimentícios. 2002
33. Regulamento (CE) N.º 852/2004 do Parlamento Europeu e do Conselho de 29 de Abril de 2004, relativo à higiene dos géneros alimentícios. 2004
34. Ministério da Agricultura do Desenvolvimento Rural e das Pescas. Decreto-Lei nº 113/2006 de 12 de Junho de 2006, Estabelece as regras de execução, na ordem jurídica nacional, dos Regulamentos (CE) n.ºs 852/2004 e 853/2004, do Parlamento Europeu e do Conselho, de 29 de Abril, relativos à higiene dos géneros alimentícios e à higiene dos géneros alimentícios de origem animal, respectivamente. Dr 113 - Série I - A .
35. Ministério do Trabalho e da Solidariedade Social. Decreto-Lei nº 64/2007 de 14 de Março de 2007, Define o regime jurídico de instalação, funcionamento e fiscalização dos estabelecimentos de apoio social geridos por entidades privadas. DR 52 - Série I.
36. FAO, WHO. Codex Alimentarius Commission CAC/RCP 1 - 1969, Rev 4. Recommended International Code of Practice - General Principles of Food Hygiene. 2003
37. Food Standards Agency. Food hygiene – a guide for businesses. 2013. Available at: <http://www.food.gov.uk/sites/default/files/multimedia/pdfs/publication/hygienebooklet.pdf>
38. OMS, INSA. Cinco Chaves para uma Alimentação mais Segura: manual. 2006
39. WHO. Mental health - Mental Health Publications: Psychological first aid: Guide for field workers. 2015
40. Borges L, Pocreau JB. Serviço de atendimento psicológico especializado aos imigrantes e refugiados: interface entre o social, a saúde e a clínica. Estudos de Psicologia (Campinas). 2012; 29(4)
41. Federação das Associações Europeias de Psicologia (EFPA). Refugees crisis: European Psychologists offering their expertise. 2015. Available at: <http://www.efpa.eu/news/refugees-crisiseuropean-psychologists-offering-their-expertise>.
42. Ordem dos Psicólogos. Crise dos Refugiados na Europa "Psicólogos europeus têm o dever de ajudar". 2015. Available at: <https://http://www.ordemdospsicologos.pt/pt/noticia/1527>

-
43. Australian Psychological Society. Refugees and asylum seekers. Available at: <http://www.psychology.org.au/community/public-interest/refugees/>.
44. Foundation House - The Victorian Foundation for Survivors of Torture. Promoting Refugee Health: A guide for doctors, nurses and other health care providers caring for people from refugee backgrounds. 2012. Available at: http://refugeehealthnetwork.org.au/wp-content/uploads/PRH-online-edition_July2012.pdf.
45. Inter-Agency Standing Committee (IASC). IASC Guidelines on Mental Health and Psychosocial Support in Emergency Settings. Geneva: IASC; 2007. Available at: http://www.who.int/mental_health_psychosocial_june_2007.pdf.

THEMED REFERENCES

References about food support in emergencies:

1. WHO. The management of nutrition in major emergencies. Geneva, 2000.
2. WHO. Guiding principles for feeding infants and young children during emergencies. Geneva, 2004.
3. The Sphere Project. Humanitarian Charter and Minimum Standards in Humanitarian Response. Minimum standards in food security and nutrition. 139-238. Rugby, 2011.
4. UNHCR, UNICEF, WFP, WHO. Food and Nutrition Needs in Emergencies. 2002.
5. WHO, UNICEF. WHO child growth standards and the identification of severe acute malnutrition in infants and children A Joint Statement by the World Health Organization and the United Nations Children's Fund. 2009.
6. Seal A, Thurstans S. Derivation of nutrient requirements for disaster-affected populations: Sphere Project 2011. Food Nutr Bull. 2013 Mar; 34(1):45-51.
7. UNHCR, WFP. Acute Malnutrition in Protracted Refugee Situations: A Global Strategy. UNHCR/WFP, 2006.
8. WFP, UNHCR. Guidelines for estimating food and nutritional needs in emergencies, 1997.
9. UNHCR, WFP. Guidelines for Selective Feeding Programmes in Emergencies, 1999.
10. Pottie K, Martin JP, Cornish S, Biorlund LM, Gayton I, Doerner F, Schneider F. Access to healthcare for the most vulnerable migrants: a humanitarian crisis. Conflict and Health 9:16. 2015.
11. Gerdin M, Clarke M, Allen C, Kayabu B, Summerskill W, et al. (2014) Optimal Evidence in Difficult Settings: Improving Health Interventions and Decision Making in Disasters. PLoS Med 11(4): e1001632. 2014.
12. Strong J, Varady C, Chahda N, Doocy S, Gilbert Burnham G. Health status and health needs of older refugees from Syria in Lebanon. Conflict and Health 9:12. 2015.
13. Bilukha OO, Jayasekaran, D, Burton A, Faender G, King'ori J, Amiri M, Jessen D, Leidman E. Nutritional Status of Women and Child Refugees from Syria — Jordan, April–May 2014. Morbidity and Mortality Weekly Report (MMWR). **2014. 63(29); 638-9.**

14. European Commission. European Commission makes progress on Agenda on Migration. Press Release. Brussels, 27 May. 2015. In http://europa.eu/rapid/press-release_IP-15-5039_en.htm

15. European Commission. Refugee Crisis: European Commission takes decisive action. Press Release. Strasbourg, 9 September. 2015. In http://europa.eu/rapid/press-release_IP-15-5596_en.htm

References about assessment of nutrition status:

1. Marfell-Jones, M, Olds, T, Stewart, A, Carter, JE. International Standards for Anthropometrical Assessment. 2006.
2. WHO, UNICEF. WHO child growth standards and the identification of severe acute malnutrition in infants and children A Joint Statement by the World Health Organization and the United Nations Children's Fund. 2009.
3. WHO. Growth reference data for 5-19 years. 2007. in <http://www.who.int/growthref/en/>
4. WHO. WHO Multicentre Growth Reference Study (MGRS). 2004. Available at: <http://www.who.int/childgrowth/mgrs/en/>.

References about nutrition and food recommendations:

1. WHO, UNICEF. Protecting, promoting and supporting breastfeeding: the special role of maternity services. A joint WHO/UNICEF statement. Geneva, World Health Organization, 1989.
2. WHO, FAO, UNU. Protein and amino acid requirements in human nutrition. Report of a joint FAO/WHO/UNU expert consultation (WHO Technical Report Series 935). 2007.
3. WHO, UNICEF, USAID. HIV and infant feeding counselling tools: reference guide. World Health Organization, 2005.
4. Gregório, MJ, Santos, MCT, Ferreira, S, Graça, P. *Alimentação Inteligente - coma melhor, poupe mais*. Direção-Geral da Saúde. 2012.
5. Haldimann M, Alt A, Blanc A, Blondeau K. Iodine content of food groups. J Food Comp Anal, 2005; 18:461-471.
6. Institute of Medicine (IOM), Food and Nutrition Board (FNB). Dietary Reference Intakes for Thiamin, Riboflavin, Niacin, Vitamin B6, Folate, Vitamin B12, Pantothenic Acid, Biotin, and Choline, 1998.

7. Institute of Medicine (IOM), Food and Nutrition Board (FNB). Dietary Reference Intakes for Vitamin A, Vitamin K, Arsenic, Boron, Chromium, Copper, Iodine, Iron, Manganese, Molybdenum, Nickel, Silicon, Vanadium, and Zinc. 2001.
8. MAHAN, L.K.; ESCOTT-STUMP, S. Princípios nutricionais. Vitaminas. In: **Krause – Alimentos, Nutrição e Dietoterapia**. 10ed. Roca: São Paulo, 2003.
9. Silva SCG, Pinho JP, Borges C, Santos CT, Santos A, Graça P. Linhas de Orientação para uma Alimentação Vegetariana Saudável. Plano Nacional para a Promoção da Alimentação Saudável, Direção Geral da Saúde. Lisboa, 2015.
10. Franchini B, Rodrigues S, Graça P, de Almeida M. A nova roda dos alimentos: um guia para a escolha alimentar diária. *Nutricias*. 2004; 4:55-56.
11. WHO. Indicators for assessing Vitamin A Deficiency and their application in monitoring and evaluating intervention programmes. WHO/NUT/96.10. 1996.

References about food cultural adequacy:

1. WHO. Promoting a healthy diet for the WHO Eastern Mediterranean Region: user-friendly guide. WHO, 2012.
2. Toronto Public Health. Guide to Understanding Halal Foods. 2004. *in* <https://www.utoronto.ca/~facilities/documents/GuidetoHalalFoods.pdf>
3. Islamic Food and Nutrition Council of America (IFANCA). *Halal Foodservice Kit*. 2010. *in* <http://www.ifanca.org/Assets/PopularLinks/Halal%20Foodservice%20Kit.pdf>

References about food hygiene and safety:

1. FAO, WHO. Codex Alimentarius Commission CAC/RCP 1 - 1969, Rev 4. Recommended International Code of Practice - General Principles of Food Hygiene, 2003.
2. OMS, INSA. Cinco Chaves para uma Alimentação mais Segura: manual. 2006.
3. Food Standards Agency. Food hygiene – a guide for businesses. Crown. 2013. *In* <http://www.food.gov.uk/sites/default/files/multimedia/pdfs/publication/hygienebooklet.pdf>

References about psychological first aid:

1. Federação das Associações Europeias de Psicologia (EFPA) [Internet]. Refugees crisis: European Psychologists offering their expertise. [Acedido em 2012 Novembro].
<http://www.efpa.eu/news/refugees-crisiseuropean-psychologists-offering-their-expertise>
2. Ordem dos Psicólogos [Internet]. Crise dos Refugiados na Europa "Psicólogos europeus têm o dever de ajudar". [Acedido em 2015 Novembro].
<https://www.ordemdospsicologos.pt/pt/noticia/1527>
3. Borges, L., & Pocreau, JB. (2012). Serviço de atendimento psicológico especializado aos imigrantes e refugiados: interface entre o social, a saúde e a clínica. vol.29 no.4
4. Australian Psychological Society [Internet]. Refugees and asylum seekers. [Acedido em 2015 Novembro]. <http://www.psychology.org.au/community/public-interest/refugees/>
5. OMS. Mental health - Mental Health Publications: Psychological first aid: Guide for field workers. 2011
6. Promoting Refugee Health [Internet]. A guide for doctors, nurses and other health care providers caring for people from refugee backgrounds. 2012. [Acedido em 2015 Novembro].
http://refugeehealthnetwork.org.au/wp-content/uploads/PRH-online-edition_July2012.pdf
7. The Sphere Project (2011) Humanitarian Charter and Minimum Standards in Disaster Response. Geneva: The Sphere Project. <http://www.sphereproject.org>.
8. Inter-Agency Standing Committee (IASC) (2007). IASC Guidelines on Mental Health and Psychosocial Support in Emergency Settings. Geneva: IASC.
http://www.who.int/mental_health_psychosocial_june_2007.pdf

APPENDIX 1

Assessment of Nutritional Status and Adequacy of Food Aid

Anthropometric Criteria

Assessment of nutritional status in children from 0 to 5 years of age follows the 2006 growth standards stipulated by WHO, where the preferential measurements to be used are the Z-score Weight-for-length (WFL) and Weight-for-height (WFH).

The Z-score expresses the number of pattern deviations above or below the value of the reference median, considering a normal distribution, or the deviation of an individual value of the median value of the population of reference, divided by the pattern deviation of the population of reference ^(8, 15).

WFL is determined in children aged below 24 months. Children should be measured for length, i.e., they are measured supine. WFH should be determined only in children aged above 24 months, with individuals standing. For simplification purposes, length should be measured in children less than 86 cm tall and height in children with 87 cm or above ⁽¹⁵⁾. Therefore, an infantometer should be used in former case and a stadiometer in the latter.

Mid Upper Arm Circumference (MUAC) can be an alternative indicator for an initial assessment of the nutritional status, both in children and in adults ^(6, 8). To measure this perimeter, the individual should remain relaxed in a standing position, with the upper limbs pending along the torso. The tape measure should be placed horizontally in the arm circumference at the acromial-radial mid-point level ⁽⁴⁶⁾.

MUAC is also used as a monitoring tool to measure the malnutrition condition in pregnant women and decide about their entry in a programme of selective food. MUAC reflects the risk of low development of the foetus, being severe when below 20.7 cm and moderate if below 23 cm. In this manual, a cut-off point of 22 cm is suggested ⁽⁸⁾.

Body Mass Index (BMI), defined as the division of weight in kg by the squared height in m, is used in adults.

BMI is also used for children and adolescents from 5 to 19 years of age, using WHO's 2007 growth standards ⁽¹⁶⁾.

The following table summarises the recommended selection of the anthropometric measures in each group.

TABLE A12.1 - Summary of the Anthropometric measures to be selected for each population group.

Population group	Anthropometric parameter or nutritional index	Cut-off point suggesting acute malnutrition
Children (0-2 years old)	WFL	≥ -3 < -2 Z score (moderate) < -3 Z score (severe)
Children (2-5 years old)	WFH or BMI	≥ -3 < -2 Z score (moderate) < -3 Z score (severe)
Children (3 months-5 years old)	MUAC	≥ 11.5 < 12.5 cm (moderate) < 11.5 cm (severe)
Children and adolescents (5–19 years old)	BMI	≥ -3 < -2 Z score (moderate) < -3 Z score (severe)
Adults (including elderly people)	BMI	< 18.5 Kg/m ² (moderate) < 16 Kg/m ² (severe)
Pregnant women	MUAC	< 22 cm

WFL – Weight-for-length; WFH – Weight-for-height; MUAC - Mid Upper Arm Circumference; BMI - Body Mass Index.

List of material needed for the collection of anthropometric data:

- Infantometer (until 2 years of age);
- Freestanding or wall stadiometer;
- Paediatric scales (until 2 years of age);
- Floor scales;
- Tape measure for perimeters;
- Records form;
- Calculator;
- Reference tables;
- Ethyl alcohol at 70% for material cleaning.

Reference tables:

-Z-score and percentile values of WFL and WFH (2-5 years old) ⁽⁴⁷⁾:

http://www.who.int/childgrowth/standards/weight_for_length_height/en/

- Z-scores and percentile values of BMI (2-5 years old) ⁽⁴⁸⁾:

http://www.who.int/childgrowth/standards/bmi_for_age/en/

- Z-score and percentile values of BMI (5-19 years old) ⁽¹⁶⁾:

http://www.who.int/growthref/who2007_bmi_for_age/en/

- Z-score and percentile values of MUAC (3 months-5 years old) ⁽⁴⁹⁾:

http://www.who.int/childgrowth/standards/ac_for_age/en/

Clinical Criteria

Protein-energy malnutrition

Protein-energy malnutrition conditions affect mostly children from 6 months to 5 years of age, which shows well the priority that should be given to this group in all nutrition interventions.

The main impairments related to protein-energy malnutrition conditions in children are ⁽⁶⁾:

Marasmus – state of severe malnutrition, characterised by body fat and muscle depletion. Individuals display a “skin and bones” look. It is essentially the result of insufficient energy and protein intake.

Kwashiorkor – characterised by oedema, generally beginning in the legs and extending to the entire body; at times accompanied by hair discoloration and parched skin. It is mainly the result of food intake which may be sufficient in carbohydrates, but extremely poor in protein.

Marasmatic-Kwashiorkor – characterised by a combination of extreme thinness and oedema.

TABLE A13.2 - Main clinical signs and symptoms of protein-energy malnutrition in children and adults¹
(15)

Population group	Clinical signs and symptoms	
	Always present	Present at times
Children		
Marasmus	Depletion of muscle and adipose tissue (<i>wasting</i>)	Hunger Wrinkled appearance
Kwashiorkor	Oedema	Irritable behaviour Lack of appetite Skin alterations (dermatosis) Hair alterations (discoloured straight lax air)
Marasmatic - Kwashiorkor	Oedema + <i>Wasting</i>	Any of the above-mentioned
Adults	<i>Wasting</i> and Weakness	Oedema Mental alterations

¹ Adapted from: WHO. *The management of nutrition in major emergencies*. Geneva, 2000.

Micronutrient deficiency

The following table summarizes the main micronutrient deficiencies and their indicators, the groups which should be assessed and, when applicable, the degree of severity of their prevalence for the definition of problems of public health.

TABLE A14 - Classification of public health problems according to micronutrient deficiency using different indicators¹.

Micronutrient deficiency indicator	Recommended group for measurement of prevalence	Definition of a public health problem	
		Severity	Prevalence (%)
Vitamin A deficiency			
Night blindness (XN) ^{a (17)}	24-71 months	Low	> 0 - < 1
		Moderate	≥ 1 - < 5
		High	≥ 5
Bitot spots (X1B) ^{a (17)}	6-71 months	Non specified	> 0.5
Corneal sclerosis/ulcerations/keratomalacia (X2, X3A, X3B) ^a	6-71 months	Non specified	> 0.01
Corneal scarring (XS) ^{a (17)}	6-71 months	Non specified	> 0.05
Serum retinol (≤ 0.7 μmol/L)	6-71 months	Low	≥ 2 - < 10
		Moderate	≥ 10 - < 20
		High	≥ 20
Iodine deficiency			
Goiter (visible + palpable)	School-age children	Low	5.0 – 19.9
		Moderate	20.0 – 29.9
		High	≥ 30.0
Concentration of iodine urinary excretion (mcg/l)	School-age children	Excessive intake	> 300 ^b
		Adequate intake	100 – 199 ^b
		Mild deficiency	50 – 99 ^b
		Moderate deficiency	20 – 49 ^b
		Severe deficiency	< 20 ^b
Iron deficiency			
Anaemia (Haemoglobin levels: non-pregnant women <12.0 g/dl; children 6-59 months <11.0 g/dl)	Women and children 6-59 months	Low	5 – 20
		Moderate	20 – 40
		High	≥ 40

Beriberi (B1 vitamin deficiency)

Clinical signs (weakness, weight loss, loss of sensation in extremities, loss of flexibility in limbs)	Entire population	Low	≥ 1 case and <1%
		Moderate	1 - 4
		High	≥ 5
Thiamine daily intake (B1) (<0.33 mg/1000 Kcal)	Entire population	Low	≥ 5
		Moderate	5 – 19
		High	20 – 49
Child mortality	Children 2 – 5 months	Low	No increase
		Moderate	Mild increase
		High	Marked peak

Pellagra (niacin deficiency)

Clinical signs (dermatitis, diarrhoea and dementia)	Entire population or women > 15 years old	Low	≥ 1 case and <1%
		Moderate	1 - 4
		High	≥ 5
Daily intake of niacin equivalents <5 mg	Entire population or women > 15 years old	Low	5 - 19
		Moderate	20 - 49
		High	≥ 50

Scurvy (vitamin C deficiency)

Clinical signs (oedema and gum bleeding, oedema and pain in articulations, especially knee, hip and elbow)	Entire population	Low	≥ 1 case and <1%
		Moderate	1 - 4
		High	≥ 5

¹ Adapted from: The Sphere Project. Humanitarian Charter and Minimum Standards in Humanitarian Response. Minimum standards in food security and nutrition. 139-238. Rugby, 2011.

^a Scores according to: WHO. Indicators for assessing Vitamin A Deficiency and their application in monitoring and evaluating intervention programmes. WHO/NUT/96.10. 1996.

^b Values of concentration of iodine urinary excretion in mcg/l.

^c Scores according to: WHO. Assessment of iodine deficiency disorders and monitoring their elimination: a guide for programme managers. 2007

Malnutrition assessment criteria

Children have absolute priority in the assessment of the nutritional status and screening of malnutrition conditions. Even children presenting mild malnutrition face 2 to 8 times more risk of mortality caused by common childhood diseases than well-nourished children ⁽¹⁰⁾.

There are three degrees of malnutrition, defined according to the Z-scores Weight-for-length (WFL) and Weight-for-height (WFH), Mid Upper Arm Circumference (MUAC) and the existence or not of nutritional oedema:

- **GAM**, Global Acute Malnutrition;
- **MAM**, Moderate Acute Malnutrition;
- **SAM**, Severe Acute Malnutrition.

The following table contains the criteria for the definition of the degrees of malnutrition in children from 6 months to 5 years of age, the age group which is commonly used for the assessment of malnutrition severity in a given population ^(6, 8, 10).

TABLE A1.4: Definition of the levels of malnutrition in children from 6 months to 5 years old⁽¹⁵⁾.

	GAM	MAM	SAM
Children from 6 months to 5 years old	WFL,WFH <-2 Z score And/or	WFL,WFH -3 ≤ -2 Z score And/or	WFL,WFH <-3 Z score And/or
	MUAC <12.5cm And/or	MUAC And/or	MUAC <11.5cm And/or
	Nutritional oedema	11.5 ≤ 12.5cm	Nutritional oedema

¹Adapted from: *The Sphere Project. Humanitarian Charter and Minimum Standards in Humanitarian Response. Minimum standards in food security and nutrition. 139-238. Rugby, 2011*

The relationship between malnutrition in children from 6 months to 5 years old and the state of nutritional emergency of a population depends on the percentage of children who are in a situation of malnutrition. Thus ⁽¹⁰⁾:

- The condition is acceptable if less than 5% of the children suffer from GAM;
- Between 5% and 9.9%, the nutritional status is bad;
- There is serious nutritional emergency if over 10% of the children have GAM;
- Above 15% of GAM, the condition is considered critical.

APPENDIX 2

Food and nutrition intervention for specific situations

According to the results of nutritional assessment, individuals or groups at risk of malnutrition should be signalled to individual nutrition intervention, whose specificity goes beyond the rest of the population, be it in food and nutrition terms or in clinical terms.

According to WFP/ UNHCR ⁽¹²⁾, nutritional and food interventions for specific situations are classified into:

- **Therapeutic programmes** – intended to rehabilitate individuals suffering from severe malnutrition.

Admission criteria: children below 5 years of age, in severe malnutrition (< -3 Z-score of WFL or WFH); other individuals suffering from severe malnutrition confirmed through anthropometry and/ or presence of oedema; babies with low birth weight; orphan children below one year of age with no access to natural breastfeeding; women with children below one year of age and with incapability of breastfeeding or with irregular breastfeeding capacity.

- **Covering Programmes** – they aim at preventing the deterioration of the population's nutritional status, through supplementation in food products and micronutrients to groups at risk of malnutrition.

Admission criteria: all children below 3 or 5 years of age and with length/ height lower than 90 cm or 110 cm, respectively; all pregnant or breastfeeding women; other risk groups, such as elderly or sick people.

- **Target programmes** – they are intended for selected individuals at risk of malnutrition, or suffering from moderate malnutrition. They are intended for individuals who have been rehabilitated through therapeutic programmes.

Admission criteria: children below 5 years of age suffering from moderate malnutrition (-3 to -2 Z-score of WFL or WFH); malnourished individuals above 5 years of age; individuals who have been discharged from a Therapeutic Programme; pregnant women or women breastfeeding with MUAC < 22 cm.

Value adjustment of initial food and nutrition intervention

The calculation of food and nutrition needs of a population in the period following the initial response is extremely important, because it makes it possible to meet that population's real needs, thus enabling the planning of a more adequate intervention, and so contributing for an improvement of their health condition.

Assessment should be performed by experienced professionals in the Nutrition field and should also be triggered as soon as possible, taking into consideration the different factors which influence daily nutrition needs ⁽⁹⁾.

Demographic characteristics

The composition of the population in terms of age and gender affects the calculation of nutrition needs. For example, a population made up exclusively of women and children will have as a reference an energy need about 6% lower than that of a population with a standard distribution. Total energy requirements are determined by adding each population group's energy requirements according to the proportion of the group in the population, as presented in the table below.

TABLE A2.1: Energy requirements per gender and age groups¹

Gender	Men ^a		Women ^a		Men and women ^a	
	Age (years old)	% of total population	Energy requirements (Kcal/person/day)	% of total population	Energy requirements (Kcal/person/day)	% of total population
0	1.31	850	1.27	780	2.59	820
1	1.26	1250	1.20	1190	2.46	1220
2	1.25	1430	1.20	1330	2.45	1380
3	1.25	1560	1.19	1440	2.44	1500
4	1.24	1690	1.18	1540	2.43	1620
0-4			6.05	1250	12.37	1290
5-9	6.32	1320	5.69	1730	11.69	1860
10-14	6.00	1980	5.13	2040	10.53	2210
15-19	5.39	2370	4.64	2120	9.54	2420
20-59	4.89	2700	23.82	1990	48.63	2230
60+	24.80	2460	3.82	1780	7.24	1890
Pregnant women	3.42	2010	2.4	285 (extra)	2.4	
Breastfeeding			2.6	500 (extra)	2.6	
Entire population	50.84	2250	49.16	2010		2070

¹Adapted from: WFP, UNHCR. Guidelines for estimating food and nutritional needs in emergencies, 1997 ⁽¹¹⁾.

Level of Physical Activity

The initial value of 2100 Kcal per day is calculated considering a light Physical Activity Level (PAL). Consequently, the adjustment of this value should take into consideration the Physical Activity Level of individuals according to gender. The following table presents the energy increment at 2100 Kcal of ration according to the Physical Activity Level by gender, in adults, and for the average of the entire population, including children.

TABLE A2.2: Energy increment, in Kcal, at 2100 Kcal/ day, according to physical activity level, in adult women and men and for the average of the population, including children.

	Level of Physical Activity	
	Moderate	High
Adult men	+ 360	+ 850
Adult women	+ 100	+ 330
Population average (adults and children)	+ 140	+ 350

¹Adapted from: WHO. *The Management of Nutrition in Major Emergencies*. Geneva, 2009.

Daily average temperature

To calculate the daily 2100 Kcal value, a Basal Metabolic Rate (BMR) was used at an average temperature of 20°C. Temperatures below 20°C increase BMR, which causes energy requirements to increase. An additional 100 Kcal intake is estimated to be necessary for each decrease of 5°C in the daily average temperature.

Health condition

Some clinical conditions influence the individuals' nutrition needs and, ultimately, of the entire population. High prevalence of infectious diseases, for example, demand higher intake of energy and micronutrients. Individuals infected with HIV/ AIDS may present a low intestinal absorption rate, due to the complications caused by the disease, or have low appetite, thus affecting their nutritional intake. Once identified upon reception, these situations would be directed to specific food and nutrition intervention.

The checklist in the following table may be used to favour the alteration of the initial energy and nutritional intake values.

TABLE A2.3: Checklist for adjustment of initial value of 2100Kcal/day⁽¹⁵⁾.

Conditions		Check	Adjustments
1	Is most of the population involved in strenuous physical activities, such as carrying heavy loads for long distances?		Increase 140 Kcal in case of moderate physical activity or 350 Kcal for heavy physical activity ² .
2	Is daily average temperature significantly lower than 20°C?		Increase 100 Kcal for each decrease of 5°C in daily average temperature.
3	What is the prevalence of malnutrition in the population?		For prevalence of child malnutrition above 15% (<2 Z-score of WFL or WFH), increase energy in about 100-200 Kcal.
4	Are there significant public health risks in the population?		Assess risks as a multidisciplinary team and discuss possible alterations in total energy or in the composition of the food.
5	Is the population's demographic profile very different from the average profile for a developing country?		Adjust energy requirements according to the proportion of each group in the population.
6	Does the population receive regular food assistance from other unaccounted sources?		Consider regular assistance provided by other sources or the capacity to produce food regularly.
7	Does protein contribute with less than 10-12% of the total energy percentage?		Adjust protein fraction to achieve at least minimum values. If necessary, reinforce, for example with pulses.
8	Is energy obtained from lipids inferior to 17% of the total energy?		Adjust lipid fraction to achieve minimum values.

¹Adapted from *UNHCR, UNICEF, WFP, WHO. Food and Nutrition Needs in Emergencies. 2002.*

²Average values for entire population, including men, women and children. For each group, values can be consulted in Table A1.6.

The scheme presented below summarises the course of actions to perform in the planning of food and nutrition intervention according to the nutritional status of the individuals and populations during the phases prior to reception, at the beginning of reception, and in the phase of initial intervention adequacy.



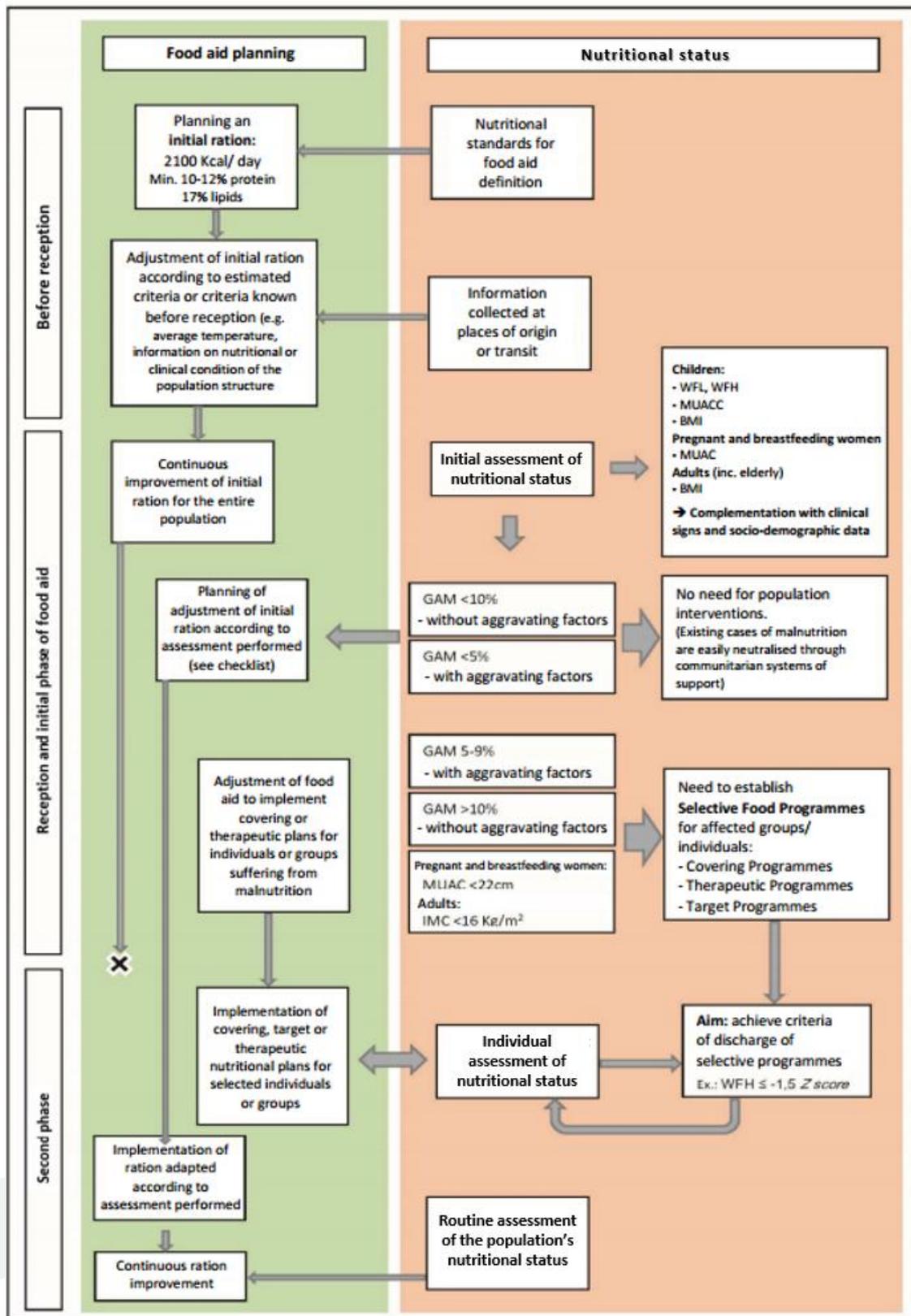


FIGURE A2.1: Summary-scheme of articulation of food aid with nutritional status of individuals, during the different phases of food support.

APPENDIX 3

Good Practices of Hygiene and Manufacturing

This appendix aims at describing a set of rules which may be taken into account in the process of food production. On the whole, this set of guidelines was made for meal-producing institutions. However, most of these good hygiene practices apply to a domestic kitchen.

1. Phases of production process

In all phases of the productive process (Reception of raw materials; Storage/ Conservation; Preparation; Confection; Food distribution; Waste disposal) there should be effective control, bearing in mind the ultimate aim, which is that of producing safe, harmless food.

1.1 Reception of raw materials

Reception of raw material is the first phase of the productive process, but it should not be undervalued regarding any other remaining phases, because quality and harmlessness of food products/ produced meals depend on its correct control. Upon reception of raw materials, it is important to ensure that all food products have been transported and preserved in conditions limiting their deterioration. Hence, all those in need of refrigerating or freezing conditions for their preservation should maintain the same temperature (cold chain) along the distribution circuit.

Ideally, there should be a specific place to do so (unloading dock) and also someone who is in charge of this operation. All received products should be documented, not forgetting that the day and time of reception should be previously arranged with the suppliers.

In case there is no exclusive place for the reception of products, the operation should be carried out in a way that does not interfere with the good functioning of the unit. Therefore, deliveries should take place at scheduled times, so that this stage is given proper attention and is free of interruptions. The objective while doing so is that foodstuffs are controlled in a more efficient manner.

The control of this stage should ensure that no foodstuff in non-conformity or with bad organoleptic characteristics is accepted and used and, on the other hand, that the quality of the food is assured through correct manipulation and adequate transport, conservation and storage.

TO VERIFY UPON RECEPTION:

- Hygiene conditions of vehicle and staff in charge of transport and unload;
- Separation between food products with different characteristics and also between food and non-food products;
- Product packaging;
- Adequacy of transportation vehicles to the demands of the transported products, namely concerning freezing and refrigeration temperatures;
- Request of vehicle's temperature records;
- Check that product quantities match those in purchase orders;
- Assessment of products' organoleptic characteristics (colour, smell, size, consistency...);
- Package integrity.
- Product labelling and expiry dates.

Upon reception, refrigerated and frozen food products should be rapidly stored at the correspondent temperature, so that the cold chain is not broken. All external packaging should preferably be removed (box removal).

1.2 Storage/ Conservation

Bad storage conditions of food products contribute for their possible contamination.

Storage at room temperature

As far as storage at room temperature is concerned, the zones where food products are stored (storeroom, pantry), should allow optimal food conservation. These zones should be cool and dry, and well-ventilated. It is therefore important to establish a periodic control of temperature and humidity. In these zones, all foodstuffs should be stored according to families, with careful separation between food and non-food products. Cleaning products should be stored in a dedicated, exclusive place existing for that purpose, and should be identified and sealed, since they pose a potential chemical hazard to foodstuffs. There should also be special care regarding

the correct distance from the ceiling, from the pavement, from the walls and between shelves. In addition, foodstuffs should not be piled up. When they are not stored in shelves, food products should never be in direct contact with the ground, and, under such conditions, they should be stored on platforms made from resistant, easily washable material.

The equipment present in these areas should comply with the technical-functional legal requirements.

Product storage should easily enable their location, use and correct rotation, and all food products should be correctly packaged. When packages are opened and their content is not used completely, the remaining portion should be stored in closed containers, keeping the original label close by, and the date of operation should be included. Identification and labels of all products should be maintained.

Expiry dates should be frequently checked in all stored products, and it should be ensured that a correct stock rotation is taking place. It is imperative that the products with the earlier expiry date are the first to be used.

As in any other place, the sanitation plan of the storeroom/ pantry must be followed, so as to avoid accumulation of dust and dirt, and all food handlers should be attentive to signs showing the existence of plagues, complying in full with the plague control plan.

Storage at controlled temperatures:

This storage includes refrigeration (positive cold) and freezing (negative cold). If possible, temperatures should be controlled and recorded at least twice a day; therefore, all cold rooms should have visible thermometers. It is also important that the doors to the cold rooms are kept open as little time as possible. Accordingly, there should also exist an equipment maintenance plan (rubbers and thermometers).

Once again, the equipment sanitation plan must be followed (as well as the plague control plan).

Refrigeration and freezing equipment should be located in well-ventilated areas and temperatures should be kept stable and uniform. They should never be too full, so as to allow free air circulation between products.

All care mentioned about storage at room temperature regarding stowage, packaging, labelling, identification and rotation of stocks should be taken into account.

In case of malfunction, technical support should be contacted as soon as possible; foodstuffs should rapidly be put in alternative pieces of equipment and, when these are not available,

refrigerated food products should be used as quickly as possible or rejected, if that is the case, and frozen food products should be used within a maximum time frame of 24 hours.

Food products stored under refrigeration

Food products stored under refrigeration should be kept at a temperature between 0°C and 5°C.

In refrigerators, confectioned food should be separated from raw food. Equipment overload should be avoided, with food products being stowed in a way that allows correct air circulation.

Food should not be put in refrigerating rooms while still hot.

Storage of food products in the fridge:

- When storing food products in the fridge, you should be aware that its inner temperature is not homogeneous.
- Upper zone (cooler zone) – yoghurt, cheese, jams and cooked food products (these food products should be kept in adequate, sealed containers; do not place them in the refrigerator while still hot).
- Intermediate zone – meat and fish, ham and other charcuterie products, open preserves and pastry products.
- Lower shelf – products undergoing a thawing process (these food products should be kept in containers, preventing dripping of liquids resulting from thaw process).
- Lower drawers – vegetables, fruit and fresh pulses.
- Refrigerator door – butter, margarine, milk, water...

Regarding the period of conservation of some food products in the refrigerator, meat is preserved in the refrigerator for 3 days, exception made to minced meat, which should be cooked within 24 hours, and the adequate period of conservation for fresh fish in the refrigerator is 24h.

The refrigerator should not be too full, given that excess of food products prevents cold air circulation, thus impeding an adequate conservation of food products.

Regarding the thawing process, it should be done at refrigeration temperatures, outer packaging should be removed, and food products should be put in proper, completely sealed containers which allow the separation of the liquids released.

Frozen food storage

Food products stored frozen should be kept at a conservation temperature $<-18^{\circ}\text{C}$.

Preferably do not freeze foodstuffs unless you have a quick cooling cell or blast chiller, or if the freezer has capacity for such. Food products should be preserved in dedicated packaging, in order to prevent alterations such as “freezer burns” (which reduce quality). After having been thawed, food products should not be refrozen.

Pieces of equipment should not be overloaded, so as to allow free circulation of air, and they should be thawed regularly so as to avoid ice formation.

Unlike the refrigerator, in the freezer it is irrelevant where food products are placed, because temperature should be even. However, before “freezing” food products, the following procedures should be followed:

- 1. Vegetables** – they should be washed, have inedible parts removed and they may be chopped. In order to destroy enzymes, reduce microorganisms and maintain colour, it is advisable to scald them for 2 minutes and then rinse with cold water, remove humidity and store correctly in the necessary portions.
- 2. Meat** – whenever possible remove skin, visible fat and bones.
- 3. Fish** – it should be scaled, gutted, cleaned and washed.

Food products stored in the freezer should ideally be kept in portions, i.e., in the quantity to be used in a meal. Frozen food products should be kept in proper packages, clearly identified and dated.

Depending on the characteristics of food products, its frozen lifetime will be different.

Recommended conservation times for food products frozen at -18°C:

Seafood	3 months
Oily fish	3 months
White fish	3 months
Bread	3 months
Cakes	3 months
Chicken and game	10 months
Beef	12 months
Vegetables	12 months

TABLE A3.1 Recommended conservation times for food products frozen at -18°C

Thawing of freezer should be a regular procedure, because it prevents ice formation inside, which, on its side, increases energy costs and the risk of contamination of food products.

1.3 Food preparation and confection

In these two stages, and in order to avoid food contamination, the following aspects should be taken into account:

- Food products should remain in the hazard zone (5°C to 65°C) as little time as possible;
- All operations should be performed rapidly and without interruptions;
- Food thermic centre should reach temperatures higher than 75°C or 70°C for 2 minutes.

At the end of these two phases of the production process, food should not pose a risk for consumers.

PREPARATION

Some examples of preparation operations are washing, eviscerating, cutting, peeling and thawing.

In the preparation zones:

- Activities should be organised in space and time;
- “Straight-ahead” system should be followed;
- All handlers should maintain good personal hygiene and proper conduct in accordance with their posts;
- All utensils, equipment and surfaces should be carefully sanitised;
- There should be utensils and equipment in sufficient quantity to cope with the activity of the production unit;
- Utensils should be used for one task, then washed and sanitised after its conclusion;
- Ideally there should exist three/ four different and isolated areas for food preparation: fish, meat, vegetables/ fruit and desserts;
- The use of a “colour system” is recommended;
- Garbage bins located in these zones should be pedal-operated and their surrounding area should be, within possible, always sanitised (cleaned and disinfected);
- There should be a physical or spatial separation between raw and cooked food;
- Likewise, food should not be manipulated near soiled areas;
- It is very important that thawing is done in optimal conditions, otherwise there is a high probability of food contamination;
- The previous step should be taken in advance, so that at the moment of their confection food products are completely thawed: if food is not completely thawed, their core may not achieve the ideal temperatures during the confection process.

Ensuring an adequate thawing process is essential for food safety. In this process, adequate utensils should be used. For example, the containers used should prevent contact between thawing juices and the food. All pieces of equipment and utensils used in the thawing process should be properly sanitised. The different families of food products should be thawed separately.

No food product should be thawed at room temperature, and thawing should ideally be done at refrigerating temperatures. In case of emergency or need the microwave may be used, or, alternatively, running potable cold water, with food products inside a well-sealed plastic bag.

Once completely thawed, all foodstuffs should be confectioned and consumed within 24 hours and, if not immediately used, they should be stored at refrigerating temperatures. Once thawed, no food product should be refrozen.

CONFECTION

Examples of confection operations are roasting, boiling, frying, grilling and use of microwave. When correctly executed, all forms or methods of confection ensure a correct destruction of microorganisms present in food.

All parts of the food item should be completely cooked. The so-called “cooked rare” (underdone) food, such as meat and eggs, may cause food poisoning.

Cooked and ready-to-eat foods should be served as quickly as possible and their manipulation should be correct and as reduced as possible.

During confection, food should never be tasted using one’s fingers, but rather with proper utensils, with single use, i.e., they should be used only once and sanitised afterwards.

When cooked in advance, food should be refrigerated or frozen in appropriate equipment prepared for the technique/ method of cold conservation.

It is important to monitor the frying stage, given that it may chemically contaminate food during its operation.

Tests can be used frequently to check the quantity of polar compounds present in oil (defined frequency and registration).

1.4 Food distribution

Food distribution is the last phase of the productive process which food goes through before being presented to the final consumer. As food will be exposed for immediate consumption, it is important that there is effective control of time and temperature, so as to reduce microbial activity and growth.

As in all other phases, it is important that food handlers have proper personal and professional hygiene, and that sanitation and plague control plans for equipment and distribution are followed.

It is also important to take into account that final consumers also constitute a source of contamination of food and therefore it should be protected/ covered, so as to avoid the contact between food and consumer.

Both for distribution at hot and cold temperatures, you should never place new food portions on top of those which were already being exposed.

DISTRIBUTION AT HOT TEMPERATURES

Temperature control is key, because food will not be submitted to any further type of confection, being ready to be served to consumers.

It is important to ensure that food is maintained at temperatures outside the “hazard zone” until the moment of consumption.

In these ready-to-eat food products several types of equipment can be used, such as warming cabinets, convector heaters or bain-marie.

One of the aspects to control is the time of exposure of food products, which should not be longer than 2 hours and up to a maximum of 3 hours, and it is important to monitor the temperature of food and of the water in the bain-marie.

In any type of food conservation at hot temperatures, the correct storage of foodstuffs is essential to prevent their contamination.



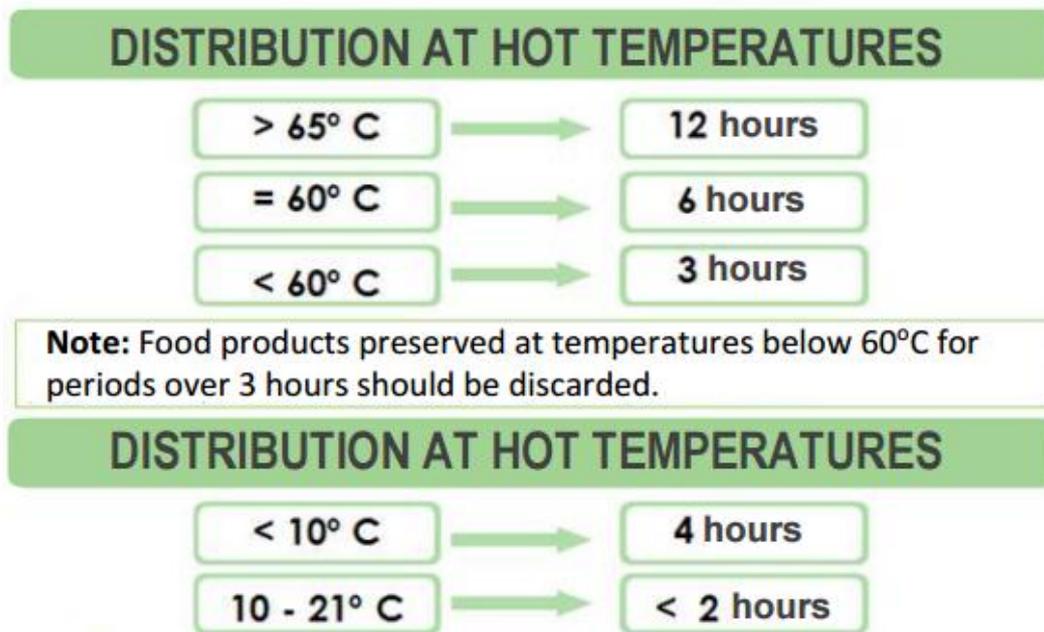


FIGURE A3.1: Distribution at hot temperatures.

DISTRIBUTION AT COLD TEMPERATURES

It is important to maintain the cold chain, so as to reduce the probability of food contamination. As in distribution at hot temperatures, it is essential that food is preserved at temperatures outside the “hazard zone”.

Food products like dairy, salads, cold desserts and sauces should be kept at temperatures at or below 5°C ($> 0^{\circ}\text{C} \leq 5^{\circ}\text{C}$).

1.5. Waste disposal

Waste collection containers should be made of easily-washable material, be equipped with pedal-operated lids and be padded with plastic bags adjusted to their size.

Waste collection containers should not be put in places which may interfere with the operations, although they should be close to preparation and confection zones.

It is necessary to investigate the existence of plagues in the vicinities of the places where waste collection containers are positioned, and it is extremely important that the descriptions contained in the sanitation plan about this type of containers is followed, as well as the plague control plan.

Waste collection containers present in production units should never be too full. As such, units should either have garbage containers in the exterior vicinity of the building, or a room for waste collection and conservation. Ideally, there should be a refrigerated zone inside the unit, where waste can be deposited.

2. Use of leftovers

Leftovers correspond to food which has been confectioned in excess and has not been served.

In some cases, leftovers may be reused. However, this operation should always be well pondered, because it poses a high risk of food contamination. Thus, it is essential that, if the operation is carried out, all necessary care is taken.

Generally speaking, attention should be given to the cold chain, which means that the food which will be reused should be placed as quickly as possible at refrigerating temperatures, and it can only be frozen if the unit has freezing equipment.

All leftovers should be stored conveniently and by doing so all products should be labelled with identification, production date and expiry date.

According to Codex Alimentarius, leftovers should not be stored for periods over 5 days.

Leftovers and products which have not been used should not be mixed.

Food can only be reused once. After being at room temperature, leftovers will have to be rejected if they are not regenerated and/ or consumed.

Some food products must not be reused: high risk food products such as raw eggs, minced meat, guts, food with mayonnaise or cake with cream.

Regarding cooling of leftovers, these should be cooled rapidly, so that their innocuousness and quality are maintained. Thus, they should reach a temperature of below 10°C in less than 2 hours.

As far as reheating of leftovers is concerned, it is important to ensure that a safety temperature is achieved in the thermal centre of the foodstuff/ preparation.

After being reheated once, leftovers must be rejected. For this reason, only the necessary food quantities should be reheated.

APPENDIX 4

4 C's Methodology

WHAT DOES IT MEAN?

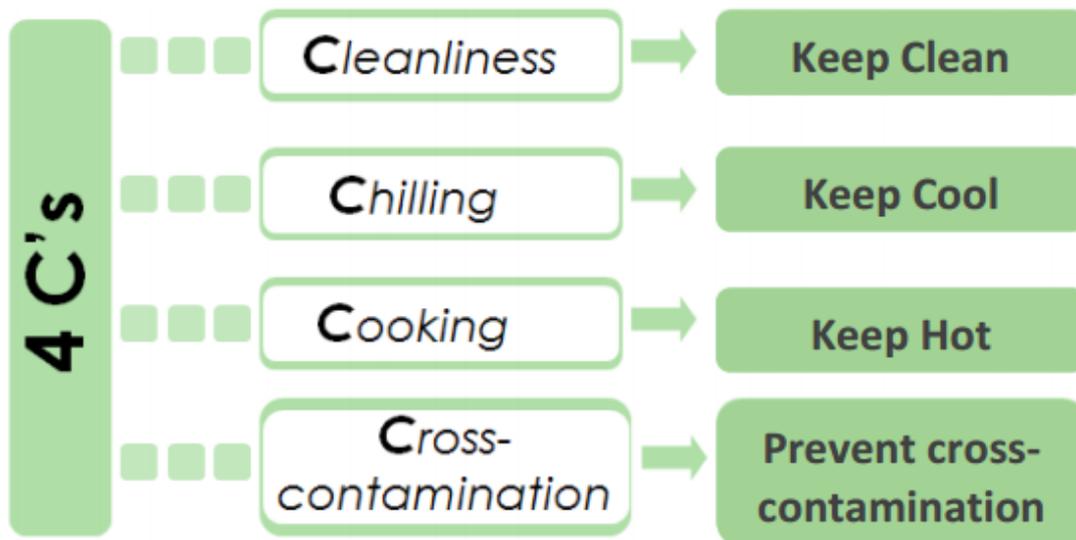


FIGURE A4.1 4C's Methodology.

- **Keep clean**

Food handlers should maintain a high level of personal hygiene; All surfaces, equipment and utensils should be kept clean.

- **Keep Cool**

Avoid interrupting the food chain;

Food products should be preserved at adequate temperatures.

- **Keep Hot**

Cook food at adequate temperatures;

Make sure the entire food product reaches a high temperature.

- **Prevent Cross-contamination**

Take all necessary precautions in order to prevent food contamination;

For example, raw food should be kept separate from confectioned food, not forgetting that utensils and equipment should not be the same either.

APPENDIX 5

Five keys to safer food

Keep clean



- ✓ Wash your hands before handling food and often during food preparation
- ✓ Wash your hands after going to the toilet
- ✓ Wash and sanitize all surfaces and equipment used for food preparation
- ✓ Protect kitchen areas and food from insects, pests and other animals

Why?

While most microorganisms do not cause disease, dangerous microorganisms are widely found in soil, water, animals and people. These microorganisms are carried on hands, wiping cloths and utensils, especially cutting boards and the slightest contact can transfer them to food and cause foodborne diseases.

Separate raw and cooked



- ✓ Separate raw meat, poultry and seafood from other foods
- ✓ Use separate equipment and utensils such as knives and cutting boards for handling raw foods
- ✓ Store food in containers to avoid contact between raw and prepared foods

Why?

Raw food, especially meat, poultry and seafood, and their juices, can contain dangerous microorganisms which may be transferred onto other foods during food preparation and storage.

Cook thoroughly

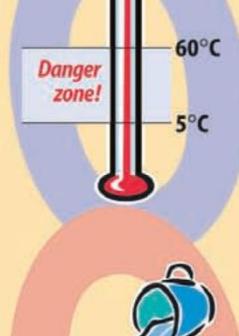


- ✓ Cook food thoroughly, especially meat, poultry, eggs and seafood
- ✓ Bring foods like soups and stews to boiling to make sure that they have reached 70°C. For meat and poultry, make sure that juices are clear, not pink. Ideally, use a thermometer
- ✓ Reheat cooked food thoroughly

Why?

Proper cooking kills almost all dangerous microorganisms. Studies have shown that cooking food to a temperature of 70°C can help ensure it is safe for consumption. Foods that require special attention include minced meats, rolled roasts, large joints of meat and whole poultry.

Keep food at safe temperatures



- ✓ Do not leave cooked food at room temperature for more than 2 hours
- ✓ Refrigerate promptly all cooked and perishable food (preferably below 5°C)
- ✓ Keep cooked food piping hot (more than 60°C) prior to serving
- ✓ Do not store food too long even in the refrigerator
- ✓ Do not thaw frozen food at room temperature

Why?

Microorganisms can multiply very quickly if food is stored at room temperature. By holding at temperatures below 5°C or above 60°C, the growth of microorganisms is slowed down or stopped. Some dangerous microorganisms still grow below 5°C.

Use safe water and raw materials



- ✓ Use safe water or treat it to make it safe
- ✓ Select fresh and wholesome foods
- ✓ Choose foods processed for safety, such as pasteurized milk
- ✓ Wash fruits and vegetables, especially if eaten raw
- ✓ Do not use food beyond its expiry date

Why?

Raw materials, including water and ice, may be contaminated with dangerous microorganisms and chemicals. Toxic chemicals may be formed in damaged and mouldy foods. Care in selection of raw materials and simple measures such as washing and peeling may reduce the risk.

Knowledge = Prevention

Food Safety
World Health Organization

WHO/SDE/PIH/FOS/06.1
Distribution: General
Original: English

FIGURE A5.1: Summary poster of five keys to safer food (English)

الوصايا الخمس لضمان مأمونية الغذاء

لماذا؟

لأنه على الرغم من أن معظم الجراثيم لا تسبب المرض، إلا أنه توجد جراثيم خطيرة تنتشر على نطاق واسع، في التربة، والماء، والحيوانات، والإنسان، وتكون هذه الجراثيم محمولة على الأيدي، والمساح والأواني، وخصوصاً ألواح التقطيع، ويمكن أن يؤدي أقل تماس إلى نقل هذه الجراثيم إلى الطعام وإصابة الإنسان بالأمراض المنقولة بالغذاء.

حافظ على نظافتك

- ✓ اغسل يديك قبل تناول الطعام، واغسلهما مراراً وتكراراً أثناء إعداده
- ✓ اغسل يديك بعد الذهاب إلى المراحيض
- ✓ اغسل وطهر جميع السطوح والمعدات المستخدمة لإعداد الطعام
- ✓ اضمن حماية الطعام وساحات المطبخ من الحشرات، والهوم، وسانت الحيوانات



لماذا؟

لأن الأطعمة النيئة، لا سيما اللحوم والدواجن، والأطعمة البحرية، وعصاراتها، وقد تكون محتوية على جراثيم خطيرة يمكن نقلها إلى الأطعمة الأخرى أثناء إعداد الطعام وتخزينه.

افصل بين الطعام النيء والطعام المطبوخ

- ✓ افصل بين النيء، من اللحوم والدواجن والأطعمة البحرية وبين الأطعمة الأخرى
- ✓ استعمل لتداول الأطعمة النيئة معدات وأواني وأدوات منفصلة (مثل السكاكين وألواح التقطيع)
- ✓ قم بتخزين الطعام في أوعية تفاديا للتماس بين الأطعمة النيئة والمطبوخة



لماذا؟

لأن الطبخ الجيد يقلل جميع الجراثيم الخطيرة تقريباً. وقد انتج من الدراسات أن طهر الطعام حتى درجة 70 مئوية يمكن أن يساعد على ضمان مأمونية تناوله. وتشمل قائمة الأطعمة التي تتطلب اهتماماً خاصاً اللحم المفروم، والشويات المنقولة (الكفتة)، وقطع اللحم الكبيرة، والدواجن التي تطهى كاملة.

اطبخ الطعام طبخاً جيداً

- ✓ اطبخ الطعام جيداً، لا سيما اللحوم، والدواجن، والبيض، والأطعمة البحرية
- ✓ اجعل الحساء والشربة وما إليها تغلي. للتأكد من وصولها إلى درجة 70 مئوية.
- ✓ وتأكد من أن لون عصارات اللحوم والدواجن لم يعد وردياً، والأفضل استخدام مقياس للحرارة (ترمومتر)
- ✓ قم بإعادة تسخين الطعام المطبوخ تسخيناً جيداً



لماذا؟

لأن الجراثيم تستطيع أن تتكاثر بسرعة فائقة في حالة تخزين الطعام في درجة حرارة الغرفة، وبقاء درجة حرارة الطعام تحت 5 أو فوق 60 درجة مئوية، يتباطأ نمو الجراثيم أو يتوقف تماماً. ومع ذلك فإن بعض الجراثيم الخطيرة قد تنمو تحت درجة 5 مئوية.

حافظ على إبقاء الطعام في درجة حرارة مأمونة

- ✓ لا تترك الطعام المطبوخ في درجة حرارة الغرفة أكثر من ساعتين
- ✓ ضع في الفلاجة (البراد)، فوراً جميع الأطعمة المطبوخة والقابلة للفساد والأفضل حفظها تحت درجة حرارة 5 مئوية
- ✓ حافظ على سخونة الطعام المطبوخ (أكثر من 60 مئوية) حتى موعد تقديمه
- ✓ لا تخزن الطعام مدة طويلة حتى في الفلاجة (البراد)
- ✓ لا تحاول إزالة تجميد الطعام المجمد، في درجة حرارة الغرفة



لماذا؟

لأن المواد الخام، بما فيها الماء والجليد، قد تكون ملوثة بجراثيم وكيمائيات خطيرة، وقد تكون بعض الكيمائيات السامة في الأطعمة الطازجة والمصنعة، ويمكن للمعرض في اختيار المواد النيئة، وبعض التوابل البسيطة، مثل الفلفل والقشيش أن تقلل من احتمالات التعرض للخطر.

استعمل المياه المأمونة والمواد الغضة المأمونة

- ✓ استعمل المياه الصالحة للشرب أو عالجها لتصبح صالحة للشرب
- ✓ اختر أطعمة طازجة وسليمة
- ✓ اختر الأطعمة التي عولجت لكي تكون مأمونة، مثل اللبن المبستر
- ✓ اغسل الفواكه والخضراوات، لا سيما إذا كانت ستؤكل غضة
- ✓ لا تستخدم الطعام بعد انتهاء تاريخ صلاحيته



المعرفة = الوقاية

FIGURE A5.2: Summary poster of five keys to safer food (Arabic)

REFERENCES FOR APPENDICES

1. Pottie K, Martin JP, Cornish S, Biorklund LM, Gayton I, Doerner F, et al. Access to healthcare for the most vulnerable migrants: a humanitarian crisis. *Conflict and Health* 2015; 9:16.
2. Organização das Nações Unidas. Convenção relativa ao estatuto dos refugiados. 1951. Available at: http://www.acnur.org/t3/fileadmin/Documentos/portugues/BDL/Convencao_relativa_ao_Estatuto_dos_Refugiados.pdf?view=1.
3. European Commission. European Commission makes progress on Agenda on Migration. Press Release. Brussels; 2015. Available at: http://europa.eu/rapid/press-release_IP-15-5039_en.htm.
4. European Commission. Refugee Crisis: European Commission takes decisive action. Press Release. Strasbourg; 2015. Available at: http://europa.eu/rapid/press-release_IP-15-5596_en.htm
5. United Nations High Commissioner for Refugees. Handbook for Emergencies. Geneva; 2007. Available at: <http://www.unhcr.org/472af2972.pdf>.
6. WHO. The management of nutrition in major emergencies. Geneva; 2000.
7. WHO. Guiding principles for feeding infants and young children during emergencies. Geneva; 2004.
8. The Sphere Project. Humanitarian Charter and Minimum Standards in Humanitarian Response. Minimum standards in food security and nutrition. Rugby; 2011. 139-238.
9. UNHCR, UNICEF, WFP, WHO. Food and Nutrition Needs in Emergencies. 2002
10. UNHCR, WFP. Acute Malnutrition in Protracted Refugee Situations: A Global Strategy. UNHCR/WFP; 2006.
11. WFP, UNHCR. Guidelines for estimating food and nutritional needs in emergencies. 1997
12. UNHCR, WFP. Guidelines for Selective Feeding Programmes in Emergencies. 1999
13. Bilukha OO, Jayasekaran D, Burton A, Faender G, King'ori J, Amiri M, et al. Nutritional Status of Women and Child Refugees from Syria — Jordan, April–May 2014. *Morbidity and Mortality Weekly Report (MMWR)*. 2014; 63(29):638-9.
14. Strong J, Varady C, Chahda N, Doocy S, Burnham GG. Health status and health needs of older refugees from Syria in Lebanon. *Conflict and Health* 2015; 9:12.

15. WHO, UNICEF. WHO child growth standards and the identification of severe acute malnutrition in infants and children A Joint Statement by the World Health Organization and the United Nations Children's Fund. 2009
16. WHO. Growth reference data for 5-19 years. 2007. Available at: <http://www.who.int/growthref/en/>
17. WHO. Indicators for assessing Vitamin A Deficiency and their application in monitoring and evaluating intervention programmes. WHO/NUT/96.10. 1996
18. Franchini B, Rodrigues S, Graça P, de Almeida M. A nova roda dos alimentos: um guia para a escolha alimentar diária. *Nutricias*. 2004; 4:55-56.
19. Seal A, Thurstans S. Derivation of nutrient requirements for disaster-affected populations: Sphere Project 2011. *Food Nutr Bull*. 2013; 34(1):45-51.
20. Teixeira D, Pestana D, Calhau Cao, Vicente L, Graça P. Alimentação e nutrição na gravidez. Lisboa: Direção-Geral da Saúde; 2015. Available at: <http://nutrimento.pt/activeapp/wp-content/uploads/2015/04/Alimentacao-e-nutricao-na-gravidez.pdf>.
21. World Health Organization Regional Office for Europe. Healthy Eating during Pregnancy and Breastfeeding. 2001
22. WHO, FAO, UNU. Protein and amino acid requirements in human nutrition. Report of a joint FAO/WHO/UNU expert consultation (WHO Technical Report Series 935). 2007
23. WHO, UNICEF. Protecting, promoting and supporting breastfeeding: the special role of maternity services. A joint WHO/UNICEF statement. . Geneva: World Health Organization; 1989.
24. WHO, UNICEF. HIV and infant feeding counselling tools: reference guide. World Health Organization; 2005.
25. WHO. Infant and young child feeding : model chapter for textbooks for medical students and allied health professionals. 2009
26. Guerra A, Rêgo C, Silva D, Ferreira GC, Mansilha H, Antunes H, et al. Alimentação e Nutrição do lactente. *Acta Ped Port*. 2012; 43(Supl II):S17-S40.
27. Toronto Public Health. Guide to Understanding Halal Foods. 2004. Available at: <http://www.utoronto.ca/~facilities/documents/GuidetoHalalFoods.pdf>.
28. Islamic Food and Nutrition Council of America (IFANCA). Halal Foodservice Kit. 2010. Available at: [http://www.ifanca.org/Assets/PopularLinks/Halal Foodservice Kit.pdf](http://www.ifanca.org/Assets/PopularLinks/Halal%20Foodservice%20Kit.pdf)
29. Silva SCG, Pinho JP, Borges C, Santos CT, Santos A, Graça P. Linhas de Orientação para uma Alimentação Vegetariana Saudável. Lisboa: Plano Nacional para a Promoção da Alimentação Saudável, Direção Geral da Saúde; 2015.

30. Gregório MJ, Santos MCT, Ferreira S, Graça P. Alimentação Inteligente - coma melhor, poupe mais. Lisboa: Direção-Geral da Saúde; 2012.
31. WHO. Promoting a healthy diet for the WHO Eastern Mediterranean Region: user-friendly guide. World Health Organization; 2012.
32. Regulamento (CE) N.º 178/2002 do Parlamento Europeu e do Conselho, de 28 de Janeiro de 2002, que determina os princípios e normas gerais da legislação alimentar, cria a Autoridade Europeia para a Segurança dos Alimentos e estabelece procedimentos em matéria de segurança dos géneros alimentícios. 2002
33. Regulamento (CE) N.º 852/2004 do Parlamento Europeu e do Conselho de 29 de Abril de 2004, relativo à higiene dos géneros alimentícios. 2004
34. Ministério da Agricultura do Desenvolvimento Rural e das Pescas. Decreto-Lei nº 113/2006 de 12 de Junho de 2006, Estabelece as regras de execução, na ordem jurídica nacional, dos Regulamentos (CE) n.ºs 852/2004 e 853/2004, do Parlamento Europeu e do Conselho, de 29 de Abril, relativos à higiene dos géneros alimentícios e à higiene dos géneros alimentícios de origem animal, respectivamente. Dr 113 - Série I - A .
35. Ministério do Trabalho e da Solidariedade Social. Decreto-Lei nº 64/2007 de 14 de Março de 2007, Define o regime jurídico de instalação, funcionamento e fiscalização dos estabelecimentos de apoio social geridos por entidades privadas. DR 52 - Série I.
36. FAO, WHO. Codex Alimentarius Commission CAC/RCP 1 - 1969, Rev 4. Recommended International Code of Practice - General Principles of Food Hygiene. 2003
37. Food Standards Agency. Food hygiene – a guide for businesses. 2013. Available at: <http://www.food.gov.uk/sites/default/files/multimedia/pdfs/publication/hygienebooklet.pdf>
38. OMS, INSA. Cinco Chaves para uma Alimentação mais Segura: manual. 2006
39. WHO. Mental health - Mental Health Publications: Psychological first aid: Guide for field workers. 2015
40. Borges L, Pocreau JB. Serviço de atendimento psicológico especializado aos imigrantes e refugiados: interface entre o social, a saúde e a clínica. Estudos de Psicologia (Campinas). 2012; 29(4)
41. Federação das Associações Europeias de Psicologia (EFPA). Refugees crisis: European Psychologists offering their expertise. 2015. Available at: <http://www.efpa.eu/news/refugees-crisiseuropean-psychologists-offering-their-expertise>.
42. Ordem dos Psicólogos. Crise dos Refugiados na Europa "Psicólogos europeus têm o dever de ajudar". 2015. Available at: <https://http://www.ordemdospsicologos.pt/pt/noticia/1527>

43. Australian Psychological Society. Refugees and asylum seekers. Available at: <http://www.psychology.org.au/community/public-interest/refugees/>.
44. Foundation House - The Victorian Foundation for Survivors of Torture. Promoting Refugee Health: A guide for doctors, nurses and other health care providers caring for people from refugee backgrounds. 2012. Available at: http://refugeehealthnetwork.org.au/wp-content/uploads/PRH-online-edition_July2012.pdf.
45. Inter-Agency Standing Committee (IASC). IASC Guidelines on Mental Health and Psychosocial Support in Emergency Settings. Geneva: IASC; 2007. Available at: http://www.who.int/mental_health Psychosocial_june_2007.pdf.
46. Stewart A, Marfell-Jones M, Olds T, de Ridder H. International standards for anthropometric assessment. Lower Hutt, New Zealand: SAK; 2011.
47. WHO. Child growth standards. Weight for length/height. 2006. Available at: http://www.who.int/childgrowth/standards/weight_for_length_height/en/
48. WHO. Child growth standards. BMI-for-age. 2006. Available at: http://www.who.int/childgrowth/standards/bmi_for_age/en/
49. WHO. Child growth standards. Arm circumference-for-age. 2006. Available at: http://www.who.int/childgrowth/standards/ac_for_age/en/
50. WHO. Assessment of iodine deficiency disorders and monitoring their elimination: a guide for programme managers. 2007





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