

Nutrition in emergencies

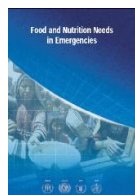
Publications and Tools



Hunger and malnutrition are rampant among refugees and displaced populations, representing currently over 40 million people worldwide, many of whom – infants, children, adolescents, adults and the elderly – suffer from one or more of the multiple forms of malnutrition.

Besides wasting, deficiencies of iodine, vitamin A and iron are common in emergency-affected populations. In addition, scurvy, pellagra and beriberi frequently occur in populations entirely dependent on food aid. The levels of risk of malnutrition – deficiencies of vitamin C, niacin and thiamin (vitamin B1), respectively – in emergencies depends on factors such as the degree of civil security, food availability and accessibility, access to health services, and adequacy of assistance delivery

Food and nutrition needs in emergencies



UNHCR, UNICEF, WFP and WHO have jointly developed these guidelines as a practical tool for assessing, estimating and monitoring the food and nutrition needs of populations in emergencies.

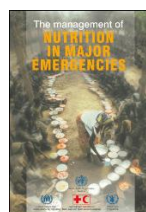
Major food shortages can be a primary feature of an emergency, as in drought or floods that lead to famine, or they may be a consequence of war, economic disaster, or population displacement. The often serious protein-energy malnutrition and micronutrient deficiencies that inevitably follow such shortage add greatly to the burden of disease and mortality, slow - or even impede altogether - socioeconomic recovery, and make intense additional demands on scarce resources.

The guidelines are aimed at field staff involved in planning and delivering a basic general food ration for emergency-affected populations. Their overall aim is to promote timely, coordinated and effective action through improved understanding of food and nutrition needs during emergencies.

Available in: English
<http://www.who.int/nutrition/publications/emergencies/a83743/en/index.html>

The management of nutrition in major emergencies

Recent years have seen a significant rise in the incidence of both natural and man made emergencies and a concomitant increase in the numbers of stricken communities, refugees, and



displaced persons. While sickness and homelessness are perhaps the most visible problems for affected populations, malnutrition and micronutrient deficiencies are both common and frequently serious. Food shortages may be the primary feature of an emergency, as in

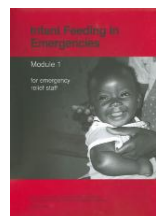
droughts or floods that lead to famine, or may be consequence of war, economic disaster, or mass displacement. The nutritional problems that inevitably follow such shortages add greatly to the burden of disease and mortality, slow the process of socioeconomic recovery, and make intense demands on scarce resources.

This manual aims to improve understanding of the nutritional implications of an emergency situation and of the need to include nutrition in plans for emergency preparedness. It defines the nutritional needs of the individuals in emergency situations and offers a comprehensive overview of the major nutritional deficiency diseases and micronutrient deficiencies likely to be encountered in such circumstances. Methods for assessment and surveillance of the nutritional status of the population are provided, including analysis and interpretation of data and reporting of results. The indicators for, and organization and monitoring of, both general and selective feeding programmes for nutritional relief are described in detail, and the book also contains a chapter on the prevention, treatment, and control of the communicable diseases that are common in emergencies.

It is beyond the scope of the book to provide a detailed treatment of food security, emergency preparedness, or rehabilitation. Its intention is rather to promote effective, coordinated action among professionals in health and related sectors who are concerned with the management of any emergency with a nutritional component.

Available in: English
<http://www.who.int/nutrition/publications/emergencies/9241545208/en/index.html>

Infant Feeding in Emergencies Module 1



The title "Infant Feeding in Emergencies" has been chosen as the Modules cover breastfeeding and artificial feeding in natural disasters, complex emergencies, and large-scale population displacements. Major problems are often experienced with infant feeding, increasing the risk of malnutrition and death in this vulnerable age group. Module 1 provides an overall introduction to infant feeding in emergencies, and explains why it is an important concern. It discusses the many challenges, describes relevant aspects of the International Code of Marketing of Breast-milk Substitutes, gives agreed Operational Guidance for emergency relief staff and policy makers, and suggests how to establish conditions that support breastfeeding and reduce dangers of artificial feeding. It can be used by itself, or as preparation for Module 2, according to the audience. For Module 1, the target is all emergency relief workers, including those involved in site management, or responsible for technical tasks such as water, sanitation, and supplies. These people are important in establishing conditions for adequate infant feeding, but may be only indirectly concerned with the care of mothers/caregivers and infants.

Available in: English
http://www.who.int/nutrition/publications/emergencies/ife_module1/en/index.html

Infant Feeding in Emergencies Module 2 Version 1.1



The title "Infant Feeding in Emergencies" has been chosen as the Modules cover breastfeeding and artificial feeding in natural disasters, complex emergencies, and large-scale population displacements. Major problems are often experienced with infant feeding, increasing the risk of malnutrition and death in this vulnerable age group. Module 2 aims to provide health and nutrition workers with the basic knowledge and skills to help both breastfeeding and artificially feeding women. The first task is to support breastfeeding women, so that they do not lose confidence and introduce artificial feeds unnecessarily. The next task is to identify and help women who have feeding difficulties. The aim is to restore the feeding that is most appropriate for their infant or young child. Those caregivers from whom artificial feeding is the only option also need help.

For Module 2, the target is health and nutrition workers who are directly concerned with the care of mothers/caregivers and infants. It provides specific practical knowledge about how to help individual mothers and other caregivers with infant feeding. Module 2 should be used after trainees have studied Module 1. Module 2 does not repeat the content of Module 1.

Available in: English, French
http://www.who.int/nutrition/publications/emergencies/ife_module2/en/index.html

Infant and young child feeding in emergencies (Version 2.1)

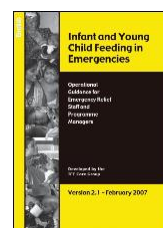
The aim of this document is to provide concise, practical (but non technical) guidance on how to ensure appropriate infant and young child feeding in emergencies. A number of elements are also applicable in non-emergency settings.

The Operational Guidance focuses especially on infants and young children under 2 years of age and their caregivers, recognizing their particular vulnerability in emergencies.

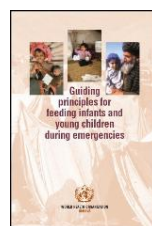
It is intended for emergency relief staff and programme managers of all agencies working in emergency programmes, including national governments, United Nations (UN)

agencies, national and international non-government organizations (NGOs), and donors. It applies in emergency situations in all countries, and extends to non-emergency situations, particularly in the interest of emergency preparedness.

Available in: Arabic, Bahasa (Indonesia), Chinese, English, French, Japanese, Portuguese, Russian, Spanish
http://www.who.int/nutrition/publications/emergencies/operational_guidance/en/index.html



Guiding principles for feeding infants and young children during emergencies



Natural disasters, war, civil unrest and other catastrophes continue to disrupt, and often seriously endanger, the lives of millions of people around the world. Whatever their cause, emergencies pose a particularly grave threat to the health, nutritional status and very survival of infants and young

children. Fortunately, much of the disability and death typical among this age group in such circumstances can be averted - provided proper feeding and care can be ensured.

The guiding principles presented here are intended to serve as a starting point for organizing sustained pragmatic field interventions that will ensure appropriate feeding and care for infants and young children at all stages of an organized emergency response. They should be applied flexibly in conjunction with suitable manuals, guidelines, training curricula and other practical field-oriented documentation that treat in detail a variety of interrelated topics.

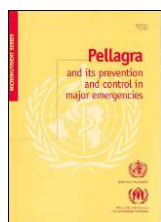
Responsible national authorities and concerned international and nongovernment organizations are

invited to use these guiding principles as a basis for training personnel responsible for emergency preparedness and response, and for reacting directly on behalf of needy populations during emergencies.

Meeting the specific nutritional requirements of infants and young children, including promoting and supporting optimal feeding practices, should be a routine part of any emergency relief response. Indeed, it should be at the centre of efforts to protect the right of affected children to food, life and a productive future.

Available in: English
<http://www.who.int/nutrition/publications/emergencies/9241546069/en/index.html>

Pellagra and its prevention and control in major emergencies



Pellagra is due to a lack of the vitamin niacin and/or its precursor tryptophan, an essential amino acid.

The disease is classically associated with a diet based on non-alkali-treated maize.

Since 1988 outbreaks of pellagra have been reported among

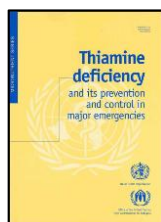
refugees and internally displaced people in Angola, Ethiopia, Malawi, Nepal, Swaziland, Zimbabwe and the former Zaire. In Angola and Malawi, this deficiency disease was considered to be just as prevalent in the communities surrounding refugee camps as in the camps themselves.

This document discusses the causes of such outbreaks and the risk factors involved, describes pellagra's signs and symptoms and their devastating impact, and proposes a number of preventive interventions. Also included are a review of the literature on the epidemiology of pellagra and the functions and properties of niacin and tryptophan, and a description of the food sources and availability of this vitamin.

This is the third volume in an occasional WHO series on the prevention and control of micronutrient deficiencies during emergencies. Reviews concerning scurvy and thiamine deficiency are also available.

Available in: English
http://www.who.int/nutrition/publications/emergencies/WHO_NHD_00_10/en/index.html

Thiamine deficiency and its prevention and control in major emergencies



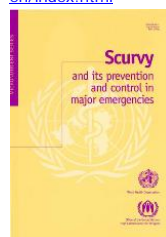
Severe thiamine deficiency causes, beriberi, which is a disorder typically associated with a diet consisting largely of polished rice. It may also occur when refined wheat flour forms a major part of the diet and among alcoholics and food faddists. Thiamine deficiency can develop within 2-3 months of

inadequate consumption; it is characterized either by cardiac involvement with oedema or by peripheral neuropathy, with intermediate forms between these two extremes also occurring. Left untreated, thiamine deficiency leads to disability and death. In the past decade, several refugee populations that were wholly dependent on food aid have developed thiamine deficiency.

This document is intended primarily as a basis for ensuring adequate thiamine intake among populations in emergency settings. It reviews strategies for preventing thiamine deficiency among refugees and analyzes factors influencing success and failure. Also included are a review of the literature on the epidemiology of thiamine deficiency and its signs and symptoms; thiamine's properties and functions and the recommended daily allowance; and a discussion of food sources of this vitamin and its stability.

Thiamine deficiency and its prevention and control in major emergencies is the second in an occasional WHO series on the prevention and control of micronutrient deficiencies during emergencies. Reviews concerning scurvy and pellagra are also available.

Available in: English
http://www.who.int/nutrition/publications/emergencies/WHO_NHD_99_13/en/index.html



Scurvy and its prevention and control in major emergencies

Severe vitamin C deficiency causes scurvy, a disease that is mainly associated with long sea

voyages and naval expeditions until the 19th century. Scurvy manifests itself 2-3 months after consuming a diet lacking of vitamin C; it is characterized by multiple haemorrhages and, left untreated, is fatal. In the past decade, several refugee populations that were wholly dependent on food aid have developed scurvy.

This document is intended primarily as a basis for ensuring adequate vitamin C intake in emergency settings.

It reviews past experience with the strategies used to prevent scurvy among refugees and it analyses factors influencing their success or failure. Also included are a literature review of the epidemiology of scurvy and its signs and symptoms, the properties and functions of vitamin C and recommended daily allowances, and a discussion of food sources of this vitamin and its stability. Scurvy and its prevention and control in major emergencies is the first in an occasional WHO series on the prevention and control of micronutrient deficiencies during emergencies. Similar reviews concerning thiamine deficiency and pellagra are also available.

Available in: English
http://www.who.int/nutrition/publications/emergencies/WHO_NHD_99_11/en/index.html

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