

PART 1: FACT SHEET

The fact sheet is the first of four parts contained in this module. It describes different types of *malnutrition*, as well as policy developments in the nutrition sector and the changing global context. Detailed technical information is covered in Part 2. For details of classification of *undernutrition* according to anthropometric criteria see Module 6. Words in italics are defined in the glossary.

What is malnutrition?

This module is about malnutrition, taken here to mean both **undernutrition** and *overnutrition*; however the latter will be covered in less detail, as it is less of an issue in emergency contexts. Undernutrition reduces Gross Domestic Product (GDP) by at least 3-6% per annum. Poor nutrition is a constraint to recovery and development in the medium- to long-term and perpetuates poverty. Undernutrition can result in *acute malnutrition* or *wasting*, *chronic malnutrition* or *stunting* and micronutrient deficiencies. The focus of this module will be on acute malnutrition, because it is the most immediate outcome in emergencies. Chronic malnutrition, *underweight* and *micronutrient malnutrition* are also covered.

Acute malnutrition or *wasting* and/or *oedema* occurs when an individual suffers from current, severe nutritional restrictions, a recent bout of illness, inappropriate childcare practices or a combination of these factors. It is characterised by extreme weight loss, resulting in low weight for height, and/or bilateral oedema and, in its severe form, can lead to death. Acute malnutrition reduces resistance to disease and impairs a whole range of bodily functions. It tends to be highest in children from 12 to 36 months of age. **Around 55 million children suffer from acute malnutrition, of which 19 million are affected by severe acute malnutrition (SAM).**

The nutritional requirements of individuals at different stages of life vary and depend on age, sex, health and physical status, including pregnancy and breastfeeding, environmental conditions such as temperature, and level of physical activity.

Chronic malnutrition or **Stunting** reflects the negative effects of nutritional deprivation on a child's potential growth over time. Stunting can occur when a child suffers from long-term nutrient deficiencies and/or chronic illness, so that not only weight but height is affected. It can also be an outcome of repeated episodes of acute infections, or acute malnutrition. Stunting is classified by low height-for-age, indicating a restriction of potential linear growth in children. Because it negatively and often irreversibly affects organ growth, stunting is strongly linked to cognitive impairment.

Chronic malnutrition is not only a long-term development concern, as in emergencies the most vulnerable are often also the poorest, and in many emergency contexts vulnerable children will already be chronically malnourished before they become acutely malnourished. This is especially the case in protracted and slow onset or recurring emergencies such as droughts, or conflict. **195 million children (1 in 3) under five years of age are stunted globally.**

Underweight is the effect of both wasting and stunting and is therefore a composite indicator, reflecting either past or present undernutrition. The index does not indicate whether the child has a low weight-for-age because of inadequate weight or because of small stature for his or her age, and therefore cannot distinguish between chronic and acute malnutrition. Often underweight is typified by less visible micronutrient deficiencies, e.g. iron deficiency anaemia. It is used as a measure of the Millennium Development Goals (MDGs). **An estimated 129 million children are underweight – nearly one in four, and 10% of children in the developing world are severely underweight.**

Overnutrition results in overweight and obesity, which are descriptions of a person's body mass index (weight/height) and indicate that they carry too much weight for their height. Being overweight or obese increases the risk of chronic diseases such as coronary heart disease, diabetes, and hypertension. Overweight people are not necessarily well-nourished, and may suffer from micronutrient deficiencies due to poorly balanced dietary intake.

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For a number of developing countries, high rates of under-nutrition can be accompanied by an increasing prevalence of overweight or obesity and associated non-communicable diseases (cardiovascular disease, diabetes and hypertension) resulting in a *'double burden'* of malnutrition.

Disease and malnutrition are interlinked. Undernutrition is the result of inadequate dietary intake, disease or both, and in turn, makes individuals more susceptible to disease.

Who is most vulnerable to malnutrition?

In emergencies population groups can be particularly vulnerable due to their:

- Physiological vulnerability (see below)
- Geographical vulnerability, which reflects their harsh or difficult living environment which may be exacerbated by distance, e.g. desert or mountain communities living in extremes of temperature.
- Political and economic vulnerability, which reflects the community status, lack of representation or isolation
- Being Internally Displaced People (IDPs) or refugees, temporarily or permanently unable to access services or support, increasing their vulnerability
- Previous vulnerability due to food insecurity, poverty, gender, race, religion, land rights etc.

In terms of physiological vulnerability, the most vulnerable are those with increased nutrient needs and those with reduced appetite. They include:

- Low birth weight babies (born <2500 grams or 5lb 8oz)
- 0-59 month-old children, with 0-24 months being particularly vulnerable
- Pregnant and lactating women
- Older people and people living with disability
- Adolescents
- People with chronic illness e.g. people living with HIV and AIDS or tuberculosis

There is an **inter-generational component of malnutrition**, which means that poor growth can be transmitted from one generation to the next. This is known as the cycle of malnutrition.

The **changing nutrition context** over the last 3 years has improved awareness of maternal undernutrition, micronutrient deficiency and the relationship between acute and chronic malnutrition in emergencies. There has been a renewed effort to address undernutrition through more integrated programming, guided by stronger research, policy and advocacy.

Key messages

1. Malnutrition encompasses both overnutrition and undernutrition. The latter is the main focus in emergencies and includes both acute and chronic malnutrition as well as micronutrient deficiencies.
2. Underweight, which is a composite indicator of acute and chronic malnutrition, is used to measure progress towards the target 1c of MDG1, "Halve, between 1990 and 2015, the proportion of people who suffer from hunger".
3. Undernutrition is caused by an inadequate diet and/or disease.
4. Undernutrition is closely associated with disease and death
5. Chronic malnutrition is the most common form of malnutrition and causes 'stunting' (short individuals). It is an irreversible condition after 2 years of age.
6. Acute malnutrition, or 'wasting' and/or oedema, is less common than chronic malnutrition but carries a higher risk of mortality. It can be reversed with appropriate management and is of particular concern during emergencies because it can quickly lead to death.
7. There are two clinical forms of acute malnutrition: marasmus, which may be moderate or severe; and kwashiorkor which is characterised by bilateral pitting oedema and is indicative of SAM. Marasmic-kwashiorkor is a condition which combines both manifestations. SAM is associated with higher mortality rates than moderate acute malnutrition (MAM).
8. Low birth weight babies, young children 0-59 months, adolescents, pregnant and breastfeeding mothers, older people, people with chronic illness and people living with disability are most vulnerable to undernutrition.
9. In general, children are more vulnerable than adults to undernutrition due to their exceptional needs during active growth, and their immature immune and digestive systems (infants 0-6 months).
10. The burden of undernutrition (total numbers of combined acute and chronic levels) is greatest in South Asia, whereas the highest rates of acute malnutrition are found in Africa
11. Global nutrition learning, research, policy and guidelines are constantly changing and it is important to stay updated.

