

WHAT IS HUNGER?

HUNGER AND MALNUTRITION ARE STILL THE NUMBER one risks to health worldwide. In the final quarter of the 20th century, humanity was winning the war on its oldest enemy. From 1970-1997, the number of hungry people dropped from 959 million to 791 million – mainly the result of dramatic progress in reducing the number of undernourished in China and India.

In the second half of the 1990s, however, the number of chronically hungry in developing countries started to increase at a rate of almost four million per year. By 2001-2003, the total number of undernourished people worldwide had risen to 854 million: 820 million in developing countries, 25 million in countries in transition and nine million in industrialised countries.

Today, one in nearly seven people do not get enough food to be healthy and lead an active life, making hunger and malnutrition the number one risk to health worldwide — greater than AIDS, malaria and tuberculosis combined.

HUMANITY'S OLDEST ENEMY

Acute hunger or starvation are often highlighted on TV screens: hungry mothers too weak to breastfeed their children in drought-hit Ethiopia, refugees in war-torn Darfur queuing for food rations, helicopters airlifting high energy biscuits to earthquake victims trapped in Pakistan or Indonesia.

Such dramatic images are the result of high profile crises like war or natural disasters, which starve a population of food. But emergencies account for less than eight percent of hunger's victims.

Daily undernourishment is a less visible form of hunger – but it affects many more people, from the shanty towns of Jakarta in Indonesia and the Cambodian capital Phnom Penh to the mountain villages of Bolivia and Nepal. In these places, hunger is much more than an empty stomach.

For weeks, even months, its victims must live on significantly less than the recommended 2,100 calories that the average person needs to lead a healthy life.

The body compensates for the lack of energy by slowing down its physical and mental activities. A hungry mind cannot concentrate, a hungry body does not take initiative, a hungry child loses all desire to play and study.

Hunger also weakens the immune system. Deprived of the right nutrition, hungry children are especially vulnerable and become too weak to fight off disease and may die from common infections like measles and diarrhoea. Each year, almost 11 million children die before reaching the age of five; malnutrition is associated with 53 percent of these deaths (source: Caulfield *et al.*, *The American Journal of Clinical Nutrition*, 2004 July), claiming one child's life every five seconds.

QUALITY NOT JUST QUANTITY

Labelled as the largest single contributor to disease by the UN's standing committee on nutrition, malnutrition is the result of inadequate dietary intake, infection, or both. It is more about quality than quantity of food. Even if people get enough to eat, they will become malnourished if the food does not provide the proper amounts of micronutrients – vitamins and minerals – to meet

daily nutritional requirements.

Each form of malnutrition depends on what nutrients are missing in the diet, for how long and at what age.

The most basic kind is called protein energy malnutrition. It results from a diet lacking in energy and protein because of a deficit in all major macronutrients, such as carbohydrates, fats and proteins.

Marasmus is caused by a lack of protein and energy with sufferers appearing skeletally thin. In extreme cases, it can lead to kwashiorkor, in which malnutrition causes swelling including a so-called 'moon face'.

Other forms of malnutrition are less visible – but no less deadly. They are usually the result of vitamin and mineral deficiencies (micronutrients), which can lead to anaemia, scurvy, pellagra, beriberi and xerophthalmia and, ultimately, death.

→ | ORVERVIEW

“ Only after the last tree has been cut down,
Only after the last river has been poisoned,
Only after the last fish has been caught,
Only then will you find that money cannot be eaten. ”

CREE INDIAN PROPHECY

Deficiencies of iron, vitamin A and zinc are ranked among the World Health Organization's (WHO) top ten leading causes of death through disease in developing countries:

~ Iron deficiency is the most prevalent form of malnutrition worldwide, affecting billions of people.

Iron forms the molecules that carry oxygen in the blood, so symptoms of a deficiency include tiredness and lethargy. Lack of iron in large segments of the population severely damages a country's productivity. Iron deficiency also impedes cognitive development, affecting 40-60 percent of children aged 6-24 months in developing countries (source: *Vitamin & Mineral Deficiency, a global damage assessment report*, Unicef).

~ Vitamin A deficiency weakens the immune systems of a large proportion of under-fives in poor countries, increasing their vulnerability to disease. A deficiency in vitamin A, for example, increases the risk of dying from diarrhoea, measles and malaria by 20-24 percent.

Affecting 140 million preschool children in 118 countries and more than seven million pregnant women, it is also a leading cause of child blindness across developing countries (source: *UN Standing Committee on Nutrition's 5th Report on the World Nutrition Situation*, 2005)

~ Iodine deficiency affects 780 million people worldwide. The clearest symptom is a swelling of the thyroid gland called a goitre. But the most serious impact is on the brain, which cannot develop properly without iodine.

According to UN research, some 20 million children (source: *Vitamin & Mineral Deficiency, a global damage assessment report*, Unicef) are born mentally impaired because their mothers did not consume enough iodine. The worst-hit suffer cretinism, associated with severe mental retardation and physical stunting.

~ Zinc deficiency contributes to growth failure and weakened immunity in young children. It is linked to a higher risk of diarrhoea and pneumonia, resulting in nearly 800,000 deaths per year.

GLOBAL COST OF HUNGER

Hunger not only weighs heavily on the individual. It imposes a crushing economic burden on the developing world.

Economists estimate that every child whose physical and mental development is stunted by hunger and malnutrition stands to lose five to 10% in lifetime earnings.

Disability-adjusted years or DALYs measure the number of years lost as a result both of premature death and of disabilities, adjusted for severity.

According to the 2004 FAO Food Insecurity Report, childhood and maternal undernutrition cost an estimated 220 million DALYs in developing countries. When other nutrition-related risk factors are taken into account, the toll rises to 340 million DALYs – equivalent to having a disaster kill or disable the entire population of a country larger than the United States.

HUNGER GLOSSARY

NUTRITION-RELATED TERMS AND DEFINITIONS

HUNGER is the body's way of signaling that it is running short of food and needs to eat something. Hunger can lead to malnutrition

UNDERNOURISHMENT: describes the status of people whose food intake does not include enough calories (energy) to meet minimum physiological needs.

The term is a measure of a country's ability to gain access to food and is normally derived from Food Balance Sheets prepared by the UN Food and Agriculture Organization (FAO).

MALNUTRITION/UNDERNUTRITION: defined as a state in which the physical function of an individual is impaired to the point where he or she can no longer maintain natural bodily capacities such as growth, pregnancy, lactation, learning abilities, physical work and resisting and recovering from disease.

The term covers a range of problems from being dangerously thin (see **UNDERWEIGHT**) or too short (see **STUNTING**) for one's age to being deficient in vitamins and minerals or being too fat (obese).

Protein energy malnutrition is measured not by how much food is eaten but by physical measurements of the body – weight or height – and age (see **STUNTING**, **WASTING**, **UNDERWEIGHT**).

STUNTING: reflects shortness-for-age; an indicator of chronic malnutrition and calculated by comparing the height-for-age of a child with a reference population of well nourished and healthy children.

According to the UN Standing Committee on Nutrition's 5th Report on the World Nutrition Situation (2005) almost one third of all children are stunted.

WASTING: reflects a recent and severe process that has led to substantial weight loss, usually associated with starvation and/or disease.

Calculated by comparing weight-for-height of a child with a reference population of well nourished and healthy children. Often used to assess the severity of emergencies because it is strongly related to mortality.

UNDERWEIGHT: measured by comparing the weight-for-age of a child with a reference population of well nourished and healthy children.

The World Health Organization (source: *Comparative Quantification of Health Risks*, 2004) estimates that the deaths of 3.7 million children aged less than five are associated with maternal or child underweight.

HUNGER: HOW MUCH FOOD FOR A HEALTHY LIFE?

The total amount of energy and protein needed by different individuals varies greatly according to age, sex, body size, the amount of physical activity and, to some extent, climate.

Extra energy is needed during pregnancy and lactation. On average, the body needs more than 2,100 kilocalories per day per person to allow a normal, healthy life ■

 **INFO** SOURCE: World Food Programme www.wfp.org/aboutwfp