



## BACKGROUNDER 4

### What is the double burden of malnutrition?

There are 170 million underweight children globally, 3 million of whom will die each year as a result of being underweight. Additionally, WHO estimates worldwide at least 20 million children under five years of age are overweight, as well as more than a billion adults, and at least 300 million adults who are clinically obese.

These problems are often thought of as separate issues of rich and poor, but in reality both are increasingly rooted in poverty. This is the double burden of malnutrition.

#### Malnutrition, Under-nutrition, Over-nutrition:

*Malnutrition* refers to deficiencies, excesses or imbalances in intake of energy, protein and/or other nutrients. Contrary to common usage, the term '*malnutrition*' correctly includes both under-nutrition and over-nutrition.

*Under-nutrition* is the result of food intake that is continuously insufficient to meet dietary energy requirements, poor absorption and/or poor biological use of nutrients consumed. This usually results in loss of body weight.

*Over-nutrition* refers to a chronic condition where intake of food is in excess of dietary energy requirements, resulting in overweight and/or obesity.

### How does under-nutrition affect children?

A healthy start in life is important to every newborn baby. The first 28 days, the neonatal period, is critical. It is during this time that fundamental health and feeding practices are established (see also backgrounder 3: *WHO Child Growth Standards and Infant and Young Child Feeding*). It is also during this time that the child is at highest risk for death.

The 30 million low-birth-weight babies born annually (23.8% of all births) often face severe short- and long-term health consequences. Low birth weight is a major determinant of death: 53% of all newborn and infant deaths have under-nutrition as an underlying cause. It can also lead to long-term impact on health outcomes in later life. Furthermore, the consequences of poor nutritional status and inadequate nutritional intake for women during pregnancy not only directly affects women's health status, but may also have a negative impact on the child's birth weight and early development.

Low birth weight also results in substantial costs to the health sector and imposes a significant burden on society as a whole. Whereas the global prevalence of such births is slowly dropping, it is as high as 30% in many developing countries.

### What is the growing problem of over-nutrition?

A substantial disease burden, including chronic diseases such as heart disease, stroke, diabetes and cancer, is attributable to health risks related to over-nutrition or the over-consumption of certain food or food components. Chronic diseases were the cause of 35 million deaths globally in 2005, 80% of which were in low and middle income countries.

In many developing countries, especially in the urban populations, there is an increase in the consumption of energy-dense nutrient poor foods (high in fats and sugars and not enough nutrients) and a decrease in physical activity. Social and economic progress has led to the greater consumption of meats, oils and sugars as cheap processed foods. At the same time, the consumption of fruits, vegetables and grains has decreased.

Health problems associated with inadequate calorie consumption and insufficient micronutrients now coexist with the growing presence of diet related chronic diseases, such as heart disease, stroke, cancer and diabetes, among adults.

This double burden of malnutrition often manifests itself as a life-cycle problem. Inadequate infant growth leads to under-nutrition in children in many developing countries, which if followed later in life by an increased intake of calories e.g. carbohydrates, fats, etc., could result in overweight or obesity. It is not uncommon to see an under-nourished child in the same household as an overweight adult.

### **How can the WHO Child Growth Standards help counter malnutrition?**

The WHO Child Growth Standards will help monitor and assess the nutritional status of infants and young children. When used over an entire population, high levels of under- or over-weight will signal a risk of health and nutritional problems across that population. The standards will therefore work as a diagnostic tool to assess unhealthy trends.

Additionally, the WHO Child Growth Standards will help spot trends in children towards overweight or underweight by measuring the rate at which they lose or gain weight. The new standards will therefore help monitor and counter the growing global phenomena of under- and over-nutrition, also referred to as the double burden of malnutrition.

### **How do the WHO Child Growth Standards help achieve the Millennium Development Goals?**

As noted, the WHO Child Growth Standards will be tools to help monitor the nutritional status of communities and alert practitioners and policymakers to unhealthy trends in the population.

Several of the MDGs - eradication of extreme poverty and hunger (MDG 1), achievement of universal primary education (MDG 2), gender equality and empowerment of women (MDG 3) and those of reduction in child mortality (MDG 4) and maternal health (MDG 5) in particular - depend on ensuring proper growth and development of children. The standards will significantly contribute to implementation and to measuring progress.