

Facts About Micronutrient Deficiency and Malnutrition During Disasters



In response to the recent 7.8 magnitude earthquake that has devastated Nepal, Helen Keller International is working on a rapid assessment of critical nutrition needs in collaboration with Nepal's District Disaster Response teams, leveraging our wealth of knowledge and experience as a leading nonprofit organization working in Nepal for nearly 30 years.

***Pregnant and lactating women and young children are particularly vulnerable in emergency situations** and at-risk of micronutrient deficiencies which can lead to malnutrition and other health problems.*

Based on our assessments and in coordination with Government of Nepal, our response is likely to include distribution of supplementary food, micronutrient powders (single-dose packets of vitamins and minerals) and vitamin A supplements, as well as other efforts to prevent malnutrition for the hundreds of thousands made homeless through this disaster.

- **What are micronutrients?**

Micronutrients are essential vitamins and minerals that are essential for healthy growth, immunity, improved cognitive development, and improved productivity. They must be ingested through the diet, in a supplement or through fortified foods.

Yet vitamin A, iron, iodine, folate and zinc are micronutrients commonly lacking in the diets of women and young children in high poverty countries. Deficiency in one or more of these micronutrients can jeopardize the health and future of children.

- **Why are micronutrients essential for good health?**

Micronutrients enable the body to produce enzymes, hormones and other substances essential for proper growth and development. Even though the body needs only a small amount of micronutrients, the consequences of their absence or low level in the body are severe.

Individuals who suffer from micronutrient deficiencies are at far greater risk of infections, impaired physical and mental development, lower labor productivity, and premature death.

Deficiencies of vitamin A or zinc continue to be important causes of preventable deaths in children. Zinc deficiency increases a child's risk of diarrhea and respiratory infection, all of which are more common during times of disaster. Iron deficiency in pregnancy leads to birth complications, smaller and more fragile babies.

- **Who is most at risk for micronutrient deficiency during a disaster and why?**

Many people in high poverty countries are often deficient in one or more micronutrients because they do not have regular access to nutrient-dense foods such as fruits, vegetables, animal products and fortified foods, usually because they are too expensive to buy or are not locally available throughout the year.

The groups who are at most risk for micronutrient deficiency are pregnant and lactating women, infants and young children because their requirements are highest due to growth needs.

Micronutrient deficiencies can easily develop or be made more severe during and immediately following disasters in high poverty countries. During an earthquake people often have to relocate to safer grounds and road access is impaired – all of which disrupt the flow of food to markets and communities and decrease the availability and variety of foods, and/or increase their cost.

In addition, during times of disaster, when sanitation conditions are often poor, diarrheal diseases often break out, resulting in malabsorption and nutrient losses. The spread of infectious diseases suppress the appetite whilst increasing the need for micronutrients to help fight illness.

- **What are Micronutrient Powers?**

“MNPs” or Micro-Nutrient Powders are single-dose packets of vitamins and minerals that can be sprinkled onto any ready to eat, semi-solid food.

- **How and when are Micronutrient Powers distributed and why are they essential during times of disaster?**

In addition to ensuring shelter, clean drinking water, health care and sanitary facilities, providing food aid is an essential component of the immediate response to disasters.

The quality and the quantity of food provided during emergencies is vital to minimize the risk and severity of infections and related mortality. The choice and availability of food that contain adequate levels of micronutrients can be limited during times of disaster, putting some groups, especially pregnant and lactating women and young children, at a high risk of micronutrient deficiencies.

In disaster situations, MNPs are easy to use as they are light weight, easy to store and transport.

Providing additional vitamins and minerals in the form of MNPs can ensure that the needs of the most vulnerable groups are met. For this reason, UNICEF and the World Health Organization recommend providing micronutrients to pregnant and lactating women and young children until an emergency is over and access to nutrient rich foods is restored.

- **Are Micronutrient Powers safe?**

With any intervention providing nutrients, safety is an important concern. When used as intended, MNPs are considered to be safe. In most cases less than 1% of caregivers report an increase in symptoms such as diarrhea, vomiting, harder stools or stomach upset. In areas where malaria is common, MNPs should only be distributed where malaria prevention and treatment services are adequate.

Learn more about Helen Keller International in Nepal at www.hki.org/Nepal