



POINT-OF-USE FORTIFICATION

quick guide



What is point-of-use fortification?

Infants and children are particularly vulnerable to micronutrient deficiencies because of the high levels of vitamins and minerals they need to support their rapid growth and development. Often, though, interventions to boost micronutrient intake don't reach them. For instance, if staple foods are being fortified, infants still need additional micronutrients because they don't eat as much as older children and adults; if supplements are being provided, it is often hard to persuade children to take them.

Point-of-use fortification is the addition of vitamins and minerals to food that has been cooked and is ready to be eaten. Formerly known as 'home fortification', the World Health Organization adopted the term 'point-of-use' in 2012 to reflect the many settings where this type of intervention can take place – for example, in schools, nurseries or refugee camps.

Point-of-use fortification is an innovation, aimed at improving the dietary quality of infants and young children aged 6-23 months, and preschool aged and school aged children aged 2-12 years.



How is food fortified at point of use?

There are currently two products to fortify food at point of use:

- **Lipid-based nutrient supplement – small quantity (LNS-SQ)** is used to fortify complementary foods eaten by infants aged 6-23 months.
- **Micronutrient powders (MNPs)** are used to fortify food eaten by infants and children aged 6 months to 12 years.

LNS-SQ is a paste supplied in a single serving sachet. It can be added to complementary foods or eaten straight from the packet.

MNPs are a combination of vitamins and minerals in powder form that are sprinkled onto semi-solid or solid food just before it's eaten.

Both products are used to increase the micronutrient content of a child's diet without changing their usual dietary habits.

The **first 1,000 days** – from conception to a child's 2nd birthday – are considered a 'window of opportunity' during which poor nutrition causes the biggest problems, but optimum nutrition provides the biggest opportunity for impact. Many nutrition actors are providing **LNS-SQ** to children under 2 to **prevent stunting**. Stunting manifests as a child being too short for their height – but its less visible aspects are far more devastating. Stunted children are more likely to become ill, and have a higher risk of dying. They are more likely to drop out of school, and grow up to be less productive citizens with lower earning potential. Stunting leads to poor cognitive development, lower educational achievement and negative behavioural outcomes. As adults, stunted children are at increased risk of nutrition-related diseases, such as diabetes, hypertension and heart disease. **Stunting cannot be treated or reversed, but it can be prevented.**

LNS-SQ

LNS-SQ is made from peanuts or chickpeas, soy, milk powder and oil. Unlike MNPs which only contain vitamins and minerals, LNS-SQ contains energy, protein and essential fatty acids. LNS-SQ also contains micronutrients equivalent to the daily reference nutrient intake (RNI) of a child aged 6-23 months. LNS-SQ is intended to be eaten in addition to breastmilk and complementary foods, and not to replace them.

MNPs

Originally, MNPs were developed to address nutritional anaemia among young children. Now, MNPs contain many different vitamins and minerals – so one intervention has the potential to address numerous micronutrient deficiencies.

One sachet of MNPs for young children contains the daily RNI of all vitamins and minerals for children aged 6-59 months.

One sachet of MNPs for school aged children provides the daily RNI of 15 vitamins and minerals. However, this combination can be adjusted to accommodate for specific micronutrient deficiencies in the population, and to take into account other nutrition interventions being carried out in the country.

School meals given to preschool aged and school aged children usually contain sufficient macronutrients (carbohydrates, proteins, fats and oils), but **lack micronutrients**. So, **MNPs** are one solution to **improve the nutritional quality of school meals**.



The benefits of point-of-use fortification

Micronutrients are the essential building blocks of healthy brains, bones and bodies. Although they're only needed in tiny amounts, a deficiency of even one vitamin or mineral can have devastating effects. For example, vitamin A and zinc deficiency is associated with an estimated 1 million child deaths each year.

Point-of-use fortification is an effective intervention to boost children's intake of vitamins and minerals, where a diverse diet is either unavailable or too expensive for families to afford. By adding essential micronutrients to their diet, point-of-use fortification protects children against disease and death, and helps to break the intergenerational cycle of malnutrition.

"Strengthening national capacities in food fortification"

