



## Nutrition

### Micronutrient deficiencies

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#### Vitamin A deficiency

##### The challenge

Vitamin A deficiency (VAD) is the leading cause of preventable blindness in children and increases the risk of disease and death from severe infections. In pregnant women VAD causes night blindness and may increase the risk of maternal mortality.

Vitamin A deficiency is a public health problem in more than half of all countries, especially in Africa and South-East Asia, hitting hardest young children and pregnant women in low-income countries.

##### A few salient facts

- An estimated 250 million preschool children are vitamin A deficient and it is likely that in vitamin A deficient areas a substantial proportion of pregnant women is vitamin A deficient.
- An estimated 250 000 to 500 000 vitamin A-deficient children become blind every year, half of them dying within 12 months of losing their sight.

Crucial for maternal and child survival, supplying adequate vitamin A in high-risk areas can significantly reduce mortality. Conversely, its absence causes a needlessly high risk of disease and death.

- For children, lack of vitamin A causes severe visual impairment and blindness, and significantly increases the risk of severe illness, and even death, from such common childhood infections as diarrhoeal disease and measles.
- For pregnant women in high-risk areas, vitamin A deficiency occurs especially during the last trimester when demand by both the unborn child and the mother is highest. The mother's deficiency is demonstrated by the high prevalence of night blindness during this period. The impact of VAD on mother-to-child HIV transmission needs further investigation.

##### The response: planting the seeds, cultivating the garden

WHO's goal is the worldwide elimination of vitamin A deficiency and its tragic consequences, including blindness, disease and premature death. To successfully combat VAD, short-term interventions and proper infant feeding must be backed up by long-term sustainable solutions. The arsenal of nutritional "well-being weapons" includes a combination of breastfeeding and vitamin A supplementation, coupled with enduring solutions, such as promotion of vitamin A-rich diets and food fortification.



WHO/NHD

The impact of this single

##### Planting the seeds

The basis for lifelong health begins in childhood. Vitamin A is a crucial component. Since breast milk is a natural source of vitamin A, promoting breastfeeding is the best way to protect babies from VAD.

For deficient children, the periodic supply of high-dose vitamin A in swift, simple, low-cost, high-benefit interventions has also produced

The impact of this single supplementation on childhood mortality is as great or greater than that of any one vaccine – and it costs only a couple of cents a dose.

remarkable results, reducing mortality by 23% overall and by up to 50% for acute measles sufferers.

Planting these “seeds” between 6 months and 6 years of age can reduce overall child mortality by a quarter in areas with significant VAD. However, because breastfeeding is time-limited and the effect of vitamin A supplementation capsules lasts only 4-6 months, they are only initial steps towards ensuring better overall nutrition and not long-term solutions.

Cultivating the garden, both literally and figuratively, is the next phase necessary to achieve long-term results.

Food fortification takes over where supplementation leaves off. Food fortification, for example sugar in Guatemala, maintains vitamin A status, especially for high-risk groups and needy families.

For vulnerable rural families, for instance in Africa and South-East Asia, growing fruits and vegetables in home gardens complements dietary diversification and fortification and contributes to better lifelong health.

#### Partnerships for progress

In 1998 WHO and its partners – UNICEF, the Canadian International Development Agency, the United States Agency for International Development and the Micronutrient Initiative – launched the Vitamin A Global Initiative. In addition, over the past few years, WHO, UNICEF and others have provided support to countries in delivering vitamin A supplements. Linked to sick-child visits and national poliomyelitis immunization days, these supplements have averted an estimated 1.25 million deaths since 1998 in 40 countries.

#### More information

- [WHO Global Database on Vitamin A Deficiency](#)
- [Vitamin A deficiency list of publications](#)
- [Contact information](#)