STUNTED GROWTH AND DEVELOPMENT

Context, Causes and Consequences

WHO/NMH/NHD/17.7
Concurrent problems and short-term consequences

- **Health**: ↑ Mortality, ↑ Morbidities
- **Developmental**: ↓ Cognitive, motor, and language development
- **Economic**: ↑ Health expenditures, ↑ Opportunity costs for care of sick child

Long-term consequences

- **Health**: ↓ Adult stature, ↑ Obesity and associated co-morbidities, ↓ Reproductive health
- **Developmental**: ↓ School performance, ↓ Learning capacity, Unachieved potential
- **Economic**: ↓ Work capacity, ↓ Work productivity
The home
- Inadequate sanitation and water supply
- Low wealth and socioeconomic status
- Food insecurity
- Low status of women
- Low caregiver education
- Inappropriate intra-household food allocation

Poor quality foods
- Poor micronutrient quality
- Low dietary diversity and intake of animal-source foods
- Anti-nutrient content
- Low energy content of complementary foods

Food and water safety
- Contaminated food and water
- Poor hygiene practices
- Unsafe storage and preparation of foods

Infection
- Enteric infection: Diarrhoeal disease, environmental enteropathy, helminths
- Respiratory infections
- Malaria
- Reduced appetite due to infection
- Inflammation

The mother
- Poor nutrition during pre-conception, pregnancy and lactation
- Short maternal stature
- Infecion
- Adolescent pregnancy
- Short birth spacing
- IUGR and preterm birth
- Poor mental health
- Hypertension

Inadequate care
- Poor care practices
- Inadequate child stimulation and activity
- Non-responsive feeding

Inadequate breastfeeding
- Delayed initiation
- Non-exclusive breastfeeding
- Early cessation of breastfeeding

Inadequate complementary feeding
- Infrequent feeding
- Inadequate feeding during and after illness
- Thin food consistency
- Feeding insufficient quantities
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An interactive version of the conceptual framework in a ZIP file is available on request from nutrition@who.int.