

When and why is malnutrition a problem?

FACILITATOR GUIDANCE



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Learning objectives

- Understand food security and insecurity and the components.
- Understand the basic and underlying causes of malnutrition.
- Know the difference between nutrition-specific and nutrition-sensitive activities.

Time

This is designed as a 45-minute pre-recorded session appropriate for self-paced learning.

Facilitated learning in real-time

The session script and PowerPoint slide deck, or the pre-recorded session, can also be used as standardized content for use real-time (synchronous) facilitation.

When delivering this content in a facilitated, real-time mode—either remotely or in-person—plan to double the time (90 minutes) and design the learning session with experiential learning activities to make the session more interactive. You can find ideas for activities in the compendium guidance.

NOTE: When facilitating this session in-person, you may add slides with contextual food security or malnutrition statistics. Resources for open data can be found in the further reading section below.

Using the session talking points

REMINDER: The session notes / talking points are meant as a guide and should not be read verbatim. You can—and should—customize the talking points to suit your facilitation style. You will see notation throughout these notes, including directions to you, the facilitator, that are not meant to be shared with the learners. These are in square brackets [like this]. Key concepts are in **bold text**. Learning activities are in sections with grey background, and are in **blue text**.

Notes / talking points

Slide

Notes / talking points

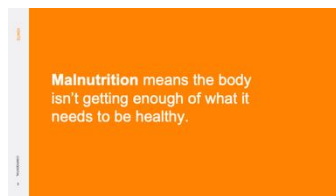


Nutrition is a key factor to our health and well-being, enabling us to grow, develop, heal, and maintain our bodies.

Not having good nutrition, then, limits our bodies' ability to do these things, and therefore our overall health.

In this session we discuss how and why malnutrition can be a serious problem in the communities where we work and live.

Some of this may be a review for you. We encourage you to deepen your understanding by listening for opportunities to link these fundamentals to your work. What new ideas do you have for sharing this information or designing programs based on it?

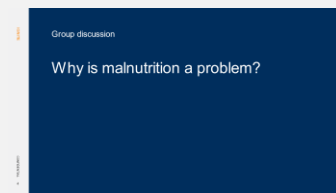


Malnutrition is the state of having inadequate absorption of the nutrients the body needs to sustain an active, productive life.

Malnutrition often refers to **deficiencies, excesses or imbalances** in a person's intake of energy and/or nutrients.

It can also be because of disease that makes it hard for the body to absorb nutrients.

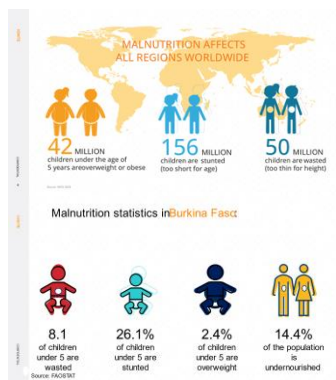
Malnutrition has immediate costs at the individual, family and social level, and is a barrier to potential.



This is a group activity

What kind of malnutrition do you see in your communities? What does malnutrition look like? What are the rates of malnutrition in the communities where you work?

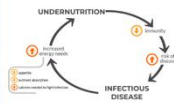
What do you think malnutrition costs to your country? What is malnutrition holding back?



- An estimated 1 out of every 3 people around the world has some form of malnutrition.
- Poor nutrition costs the global economy trillions of dollars a year in lost productivity and health care costs.
- Approximately 45% of all childhood deaths are a result of undernutrition.
- Every country in the world is affected by some form of malnutrition.

[NOTE: slides added on Burkina Faso, Ethiopia, Nigeria, Tanzania]

Malnutrition means more illness, and less energy.
 Untreated it often leads to a vicious cycle of disease.



For individuals and for households, malnutrition means life is more difficult.

It means **more illness**, medical expenses, and suffering, and **less energy** to earn income, enjoy hobbies and friendships, and for children, to play and learn.

[FACILITATOR NOTE: you can choose to present EITHER this slide, OR the next slide depending on the audience. If you feel a need to use BOTH the cycle of malnutrition (illness/disease and malnutrition), and also the cycle of stunting graphic in the next slide, be sure to talk about the difference. This slide is about how malnutrition makes life harder, including the cycle of disease and undernourishment and how that can become a cycle if a person's nutrition needs are not met. The next graphic talks about what happens from person to person generationally if nutrition needs are not met for mothers.]



Malnutrition is particularly harmful to mothers and young children.
 When untreated, malnourishment has lifelong, and even multi-generational effects.

Intergenerational cycle of malnutrition

Malnutrition particularly harmful for mothers and young children.

- Malnourished mothers and children are more likely to die.

Malnutrition has life long and even generational effects.

- In children, untreated malnourishment has lifelong negative impacts on physical and mental health.
- Untreated malnourishment has generational effects. These ill effects can even be passed on to the children of women who were malnourished as children, or who were malnourished while their child was in the womb. This is called the cycle of stunting and why we focus so much effort on reducing malnutrition in children under 2 years of age and women of reproductive age.

THINK
 What long-term challenges or generational effects have you seen in your work?

How have you seen this in your work? In your communities?

What impacts might generational malnutrition have on agricultural productivity or resilience?

What opportunities do you see for agriculture to impact malnutrition?



If a child is very undernourished for a short period of time, such as a few months, they may start to suffer from *wasting*, which is being too thin for their height.

This can often be seen in areas where there is food insecurity or crop failure.

Severe, prolonged wasting leads to a condition called Severe Acute Malnutrition (SAM) which requires immediate medical treatment for the child to survive.

If undernutrition is chronic, going on for many months or more, the child will stop growing in height and begin to suffer from *stunting*, where their height is too short for their age. Stunted children may not look thin, since they may be able to gain weight. But, compared to healthy children their age, they will be noticeably shorter.

You may hear the term ‘underweight’ which is a measure of children who weigh too little for their age. Since short children weigh less, this measure groups both wasted and stunted children together.

While being underweight is a major indicator for child health programs, we do not recommend using weight to indicate nutrition since, as we have seen, the causes of the two types of undernutrition are different and require different solutions.

Undernutrition comes from *not consuming enough food, or illness that inhibits the absorption of nutrients.*

Undernutrition is the result of either:

- inadequate consumption of enough food to provide the *nutrients* or *energy (calories)* needed to grow and maintain a healthy weight,
- or an inability to absorb nutrients from food due to illness or gut damage from past illness.

Overnutrition comes from *consuming too much food.*
Overnutrition is also unhealthy and contributes to *disease.*

Overnutrition occurs when more calories are consumed than the body uses over an extended period of time.

Overnutrition can lead to weight gain, and increase the risk of circulatory, heart, and metabolic disorders.

It is important to note that these disorders and diseases can occur in people who are not overweight, and being overweight does not necessarily cause these disorders, only increases the risk.

Both undernutrition and overnutrition can involve nutrient deficiencies.

It may be the case that a person is consuming enough calories to maintain their weight, or more, but their diet or health status does not allow the absorption of micronutrients.

In this case, that person may suffer from micronutrient malnutrition, meaning that they are not getting enough of certain micronutrients (vitamins and minerals) that are essential for growth and health. Micronutrient malnutrition makes a person more susceptible to stunting, illness, slow mental development, and, if left untreated, can cause critical organ malfunctions.

Micronutrient malnutrition is sometimes called 'hidden hunger.'



None of these effects may be visible, which is why micronutrient malnutrition is sometimes called 'hidden hunger.'

Deficiencies of public health interest

- Iron
- Vitamin A
- Iodine deficiency

Globally, iron deficiency, Vitamin A deficiency, and iodine deficiency are types of micronutrient malnutrition of public health interest.

Many food fortification efforts have focused on these micronutrients, such as iodine in salt, vitamin A in oil, and iron in flour.

However, there are many rich food sources of these micronutrients, especially dark leafy green vegetables, orange flesh fruits and vegetables, and fish and dairy products.

THINK
What micronutrient rich foods do people in your region eat?

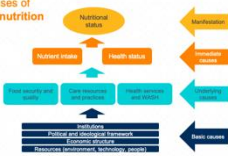
What micronutrients are missing from the regionally available foods?



What micronutrient-rich foods are grown and consumed in your region?
What foods provide iron, vitamin A and iodine in your community?
Do people like to eat foods high in these critical micronutrients?

How do agricultural practices support micronutrient availability? How can you support micronutrient use?

Causes of malnutrition



There are many factors and influences that contribute to a cycle of malnutrition in many communities around the globe.

UNICEF developed this model to understand the causes of malnutrition, the main factors that contribute to the manifestation and persistence of malnutrition.

The causes of malnutrition are grouped into three levels:

- Immediate
- Underlying

Systemic (basic)

Immediate causes of malnutrition

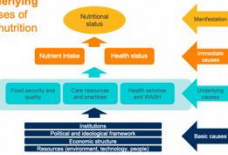


In individuals, malnutrition has two main immediate causes:

1) Inadequate intake of food: a person's diet does not contain the correct balance of nutrients for their age and activity levels, and

2) Disease: a person is unable to absorb or utilize the nutrients in food they consume due to illness or other physical conditions.

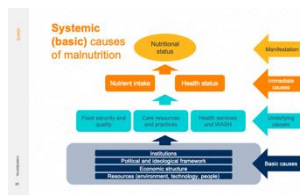
Underlying causes of malnutrition



Behind these direct causes, there are three main underlying causes of malnutrition:

Household food insecurity, which we will talk about more, means that people do not have regular access to safe, nutritious food. Inadequate care and feeding practices. This includes lack of exclusive breastfeeding and poor Infant and young child feeding practices.

Poor access to health services and unhealthy household environment, including poor hygiene and sanitation in food storage and preparation.



And beneath those underlying causes, permeating throughout society, are the many institutions and structures that lead to some people having insufficient resources.

This could be differences in land, education, technology, capital, and the political, socio-cultural, and economic conditions that largely determine individual and communities' access to those things. This can include gender roles, as we discussed in Modules 2 and 3.

Food Security & Insecurity

Food security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life

There are four main components that must be met to achieve food security:

1. **Availability:** Food must be physically produced or procured in order to be consumed
2. **Economic and physical accessibility:** Food must be transported to where it will be purchased and must be affordable relative to incomes and other non-food items.
3. **Food utilization:** Once food is purchased, it must be prepared in a way that preserves the quality of the food, consumed by all individuals in the household in amounts appropriate to their needs, and properly digested and absorbed by their bodies.
4. **Stability over time:** When we say diet, it implies a pattern of regular consumption. This means there cannot be seasons or periods of time where availability, accessibility, and utilization are inadequate.

Food insecurity means *not* having access to sufficient safe and nutritious food

Of these causes, agricultural interventions often work to address the first underlying cause, food insecurity.

Food insecurity is the term used to describe the condition of an individual, household, community, or region in which, at any time, people **do not have regular physical and economic access to sufficient safe and nutritious food** that meets their dietary needs and food preferences for an active and healthy life.

IN TANZANIA, 32.7 MILLION INDIVIDUALS WERE MODERATELY OR SEVERELY FOOD INSECURE IN 2019

Source: FAO/IFPRI

5. [FACILITATOR NOTE: Contextualizing this with the percentage of communities or households that are food insecure in the various countries]

THINK

How does agriculture contribute to food security in communities?

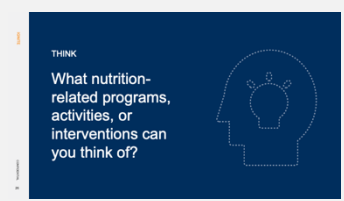
How does your work in agriculture support the production and stability of healthy food? What are examples you have seen of people working to increase access and proper utilization of food?



Some examples include...

- Production
- Food trade and marketing
- Food processing
- Food retailing
- Consumer demand
- Enabling environments

This has been adapted from the NSIS tool



Thinking about the causes of malnutrition, what programs, activities or interventions can you think of? What role do you see agriculture playing? What are the causal areas that agriculture can impact the most? Where might there be secondary impacts?



Some examples include...

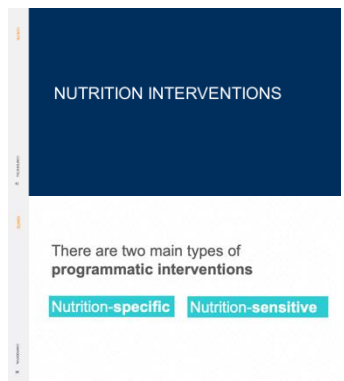
Lets look at food production from the NSIS tool as an example and focus of your work in agriculture/livestock production is the first component

We can examine the first component-Agro-Input Supply and Service Delivery

The activity you are undertaking is Increasing Equitable Access to Inputs/Services

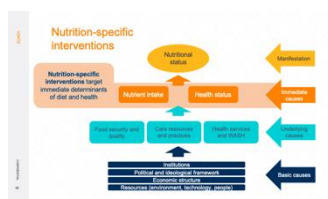
Some of the potential nutrition interventions

- **Increase access to seeds of nutrient-rich and biofortified crops so that nutrient-rich foods can be produced**
- **Increase access to safe storage containers and bags to decrease the risk of spoilage of production**
- **Increase access to inputs that will increase yield of nutrient-rich commodities**



There are two main types of programmatic interventions:

1. Nutrition specific
2. Nutrition sensitive



The first address the immediate causes of malnutrition and are called **nutrition-specific**.

Nutrition-specific activities are those that address the **immediate causes of malnutrition: diet and disease**.

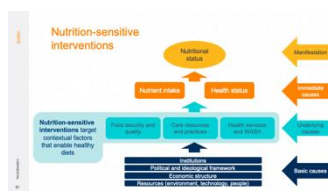


Programs that aim to address these immediate causes often focus on providing food, supplements, and healthcare directly to individuals. These include interventions such as breastfeeding support, supplementation with vitamins/minerals, and treatment of severely malnourished children, among others.



However, a 2013 study by notable nutrition experts estimated that even if we can scale up these nutrition-specific interventions to cover 90 percent of people at-risk for malnutrition, it would only address about 20 percent of chronic malnutrition.

What else then must be done?



To make real progress against malnutrition we must address its underlying causes, we do that with interventions that are **nutrition-sensitive**.

We must also address the **underlying causes of malnutrition – the four dimensions of food security, household behaviors around meals (eating habits), hygiene, and sanitation to prevent illness**.



Nutrition-sensitive interventions address these underlying causes of malnutrition.

Nutrition-sensitive interventions can include interventions in WASH, education, healthcare, and of course agriculture, as these can address the underlying and basic determinants of malnutrition.

THINK

Does the agriculture in the areas you work support local people in having sufficient quantity and nutrients in their food?

Does the agricultural production in the areas you work provide enough quantity and quality of food into the local market so that local people have sufficient food? How might this be strengthened?

You play a key role in making agriculture nutrition sensitive.

As a planner and implementer in agriculture development, you have a vital role to play in advocating for nutrition-sensitive agriculture.

Thinking beyond food security, in what ways have you seen agriculture programs address water, sanitation and hygiene? How do people use agriculture to impact eating behavior?

You can design and implement agriculture activities in a way that ultimately improves nutrition, even if it is not an immediate outcome, by positively impacting these underlying factors.

Module 6 provides an overview of the food system.

[NOTE: IGNITE deep dive modules on food systems look in more depth at these interrelated areas and discuss possibilities for strengthening the food system from production to consumption.]



This has been a lot of information. Let's review some key things.

Malnutrition is the state of having inadequate absorption of the nutrients the body needs to sustain an active, productive life.

There are different types of malnutrition.

- **Undernutrition**, from not consuming/absorbing enough food.
- **Overnutrition**, from consuming more than enough calories.
- **Micronutrient malnutrition**, from not getting enough of certain micronutrients. Most common with iron, vitamin A, and iodine.

Malnutrition has significant negative impacts on individuals, communities, and countries.

Causes of malnutrition

- **Immediate** causes of malnutrition are inadequate food intake and disease.
- **Underlying** causes of malnutrition are food insecurity, inadequate care and feeding practices, and poor healthcare, sanitation and hygiene.
- Even more **basic**, malnutrition is caused by **systems** that create unequal and limited access to food and other resources.

Food insecurity

Is a major underlying cause of malnutrition, and one which agriculture often plays a role in addressing.

Four components are needed to address food insecurity, making people and communities food secure. They are making sure that food is **available, accessible, usable, and stable** over time.

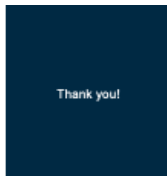
Nutrition-specific interventions address the immediate causes of malnutrition: diet and disease. **These alone are not enough to solve malnutrition.**

Nutrition-sensitive interventions address underlying and systemic causes of malnutrition. Nutrition-sensitive interventions can be implemented in almost any sector/industry, including agriculture!

What are examples of malnutrition in my own community? What impact does malnutrition have on my community (or in the areas where I work)?

What is my role as a designer and implementer of agricultural development projects in improving nutrition?

Where does my work intersect with the immediate, underlying, and systemic causes of malnutrition?



Thank you.

[Add contact info here if desired. Wrap up and set up for what's next]

Module references and further reading

World Health Organization. 2021. *Malnutrition Fact Sheet*.
<https://www.who.int/news-room/fact-sheets/detail/malnutrition>

Development Initiatives. 2020. *Global Nutrition Report*.
<https://globalnutritionreport.org/resources/about-malnutrition/>

Zulfiqar A. Bhutta et al., “Evidence-Based Interventions for Improvement of Maternal and Child Nutrition: What Can Be Done and at What Cost?,” *The Lancet* 382, no. 9890 (2013): 452–77,
[https://doi.org/10.1016/S0140-6736\(13\)60996-4](https://doi.org/10.1016/S0140-6736(13)60996-4).

To find out the statistics for malnutrition in your communities, there are a number of online data banks and mapping tools. Here are two that offer country-level data:

- Our World in Data, compiled statistics on Hunger and Undernourishment
<https://ourworldindata.org/hunger-and-undernourishment>
- UNICEF global and country level open data sets on malnutrition
<https://data.unicef.org/topic/nutrition/malnutrition/>