



**The Wasting and Stunting
Technical Interest Group:
Generating Evidence to
Challenge the Divide in
Nutrition**

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Despite improvements in children's nutrition over the past few decades, undernutrition remains a huge threat to the health and life of infants and young children worldwide. Health and nutrition actors have usually approached the problems of children being wasted, (thinner than they should be) and children who are stunted (shorter than they should be) as different outcomes of undernutrition with different causes and different interventions. Facilitated by the Emergency Nutrition Network (ENN), since 2014 the Wasting and Stunting Technical Interest Group (WaSt TIG) has challenged this view, and has begun to work to provide evidence for a unified approach to tackling these two outcomes of undernutrition.

Undernutrition: A Global Problem

Undernutrition occurs when a child consumes insufficient energy and nutrients to meet its needs for growth and to maintain good health. Insufficient intake may be due to a lack of food, a lack of appetite as a result of infection, increased nutritional needs due to infection or a combination of these factors. Undernourished children are found most often in places where hunger and disease are common. According to recent estimates by the United Nations Children's Fund (UNICEF), the World Health Organization (WHO) and the World Bank, [47 million children under 5 years of age are wasted and 144 million children are stunted](#). Undernutrition can have life-threatening consequences. According to the WHO, an [estimated 45% of the deaths of children below five years old are associated with undernutrition](#).

The World Health Assembly Global Nutrition Target and the United Nations' Sustainable Development Goal (SDG) 2.2 is to reach internationally agreed goals on the number of stunted or wasted children under 5 years of age by 2025, and to end all forms of malnutrition by 2030. Efforts to meet these goals require a clear understanding of undernutrition, including the relationship between wasting and stunting.

Examining Wasting and Stunting More Closely

Wasting and stunting are often viewed as different conditions. This has led to different policies, programmes, research and [financing mechanisms](#) to tackle them separately. During emergencies, the focus of programmes has tended to be short-term, to treat wasted children and prevent deaths, while in longer-



*Credit: United Nations Children's Emergency Fund.
Photographer: Mehedi Rahman.*

term development programmes the focus has been on [preventing stunting and micronutrient deficits caused by long-term undernutrition](#). This is despite the fact that there are stunted children in countries experiencing a humanitarian crisis and there are wasted children in non-emergency contexts and in countries in which long-term development is the priority.

‘The narrative around wasting and stunting ... has generated a lot of discussion and reflection on how we are addressing wasting currently.’ (UN representative)



Credit: United Nations Children's Emergency Fund. Photographer: Jacob Maentz.

This separation is despite the fact that as far back as 1973, the physiologist and child malnutrition expert [John Waterlow reported on the links between the two](#), writing that ‘in practice, in a great many undernourished children, both processes will be at work’. Children can become wasted in weeks or even days because body weight can be lost quickly, while it often takes months for children to become stunted because a failure to grow in height is a slower process and in contrast to weight, height cannot be lost. Being wasted or stunted are the effects of undernutrition on children’s physical growth and provide measurable evidence that children’s growth/height and/or weight gain has faltered in comparison with well-nourished children. Children’s growth is impaired by these two types of undernutrition, which usually have the same causes – disease and poor diet.

To challenge this separation, in 2014 ENN established a [WaSt TIG](#) made up of volunteer expert researchers, and health and nutrition programmers and donors. The WaSt TIG began by examining the existing evidence on the relationship between these two outcomes of undernutrition, identifying

and prioritising gaps in evidence, and then set about to fill some of those knowledge gaps.

Providing Evidence for the Connection Between Wasting and Stunting

One of the main achievements of the WaSt TIG has been the contribution made to strengthening the understanding of the relationship between wasting and stunting.

The work of the WaSt TIG has highlighted the [growing evidence](#) that a wasted child is at higher risk of becoming stunted while a stunted child is at higher risk of becoming wasted than a normal child. During the process of becoming wasted, a child’s growth in height slows until their weight has recovered, which identifies the role that [preventing or treating wasting may play in preventing stunting](#).

Evidence collected by the WaSt TIG and other researchers indicates that [20–30% of children are born either stunted or wasted](#), a condition that already starts to develop in the mother’s uterus. Common [risk factors](#) for becoming

stunted or wasted during infancy and early childhood have been identified but timing, intensity and combination of risk factors may lead to different outcomes in terms of weight and height. Some severely affected children will become [both wasted and stunted](#).

Concurrent Wasting and Stunting: Who is Affected and What Are the Implications?

The WaSt TIG undertook an analysis to understand the prevalence, burden and outcomes for children wasted and stunted at the same time as this had never been reported previously. The analysis of data on children aged 6–59 months from 84 countries estimated that six million were concurrently wasted and stunted. Such children were found to be about 12 times more likely to die than non-wasted or stunted children, and were [as likely to die as severely wasted children](#). Furthermore, the WaSt TIG found that once recovered from being wasted, these children appeared to be at greater risk for having subsequent periods of being classified as wasted.

Another important finding was that [boys are significantly more likely than girls](#) to be concurrently wasted and stunted, which is consistent with the higher prevalence of these conditions in boys when each outcome of undernutrition is examined separately. This greater vulnerability of boys to undernutrition, although previously acknowledged, has not been stated in nutrition policies and the implications typically have not been addressed by programmes.

Given this high risk of death for children who are concurrently wasted and stunted, the WaSt TIG has begun to identify ways of identifying and treating these children within current treatment programmes. It was found that two commonly used ways of measuring child growth – measuring either weight-for-age or mid upper-arm circumference – [can identify these high-risk children](#). An urgent focus is now needed to define what type of care and treatment these



Credit: World Food Programme. Photographer: Mohamed Awadh.

children need to reduce their risk of death or of becoming even more undernourished.

Preventing Wasting and Stunting

Given the evidence that wasting and stunting share common risk factors, and that experiencing one of these forms of malnutrition leaves a child more likely to experience the other, the WaSt TIG has argued that having different and separate approaches to prevent children from becoming wasted and stunted is not rational. Instead, coherent and comprehensive measures to tackle the underlying causes of undernutrition are needed, including approaches that support mothers as well as children. Evidence suggests that the focus needs to shift from supporting children who are already wasted or stunted to children at risk of experiencing wasting and stunting, thereby interrupting as early in life as possible the processes that lead to a child becoming wasted or stunted. To do so, mechanisms to best identify and measure risk of undernutrition are needed in order to successfully prevent children from becoming wasted and/or stunted.

The Wasting and Stunting (WaSt) TIG

The WaSt TIG reviews its progress by coming together every two years to discuss emerging themes, priorities and the policy and programme implications of the research undertaken. A variety of outputs, including peer-reviewed academic papers, technical briefs, reports and blog posts have been published by members of the WaSt TIG, culminating in a [Viewpoint article](#) in the journal 'Lancet Child and Adolescent Health' in 2019.

A [recent evaluation](#) of WaSt TIG using a 'Story of Change' method found that successes have been driven by the way in which the WaSt TIG operates: it is made up of a mix of expert individual members who represent themselves rather than their institution's agenda and who function in an engaged, iterative, exploratory and task-orientated manner. The varied experience of the group's members, with expertise related to both wasting and stunting, the flexibility to allow individuals to set their own degree of engagement based on other commitments, and its open and collaborative structure, were also identified as key features of success.



Credit: World Food Programme.

Calling for Action

Since its inception in 2014, the WaSt TIG has identified evidence of a relationship between the processes of wasting and stunting, and the consequences of this for infants and children. The group has increased awareness among donors and development agencies of the limitations that dealing with wasting and stunting as separate problems places on their work, leading to critical shifts in thinking. As one respondent noted in the Story of Change evaluation, 'Everything we know about (the relationship between) wasting and stunting' is a product of this group.

A lot has been achieved by the WaSt TIG in a relatively short period and with limited financial resources. It has utilised existing data as much as possible and relied on open collaborations and data sharing. Both the interest and motivation of the people involved are very high and many give their time unpaid. Bringing together researchers with policy developers and nutrition programme staff has enabled discussions about how research can be used to improve our understanding of undernutrition, its consequences for children's growth, and how to prevent it.

The WaSt TIG has also identified important gaps in knowledge that have the potential to strengthen efforts to tackle undernutrition in childhood. This includes a better understanding of risk factors for undernutrition, how to identify children that are most vulnerable to becoming wasted or stunted (including identifying adolescent and pregnant mothers at risk of giving birth to undernourished children), and how to care for such high-risk children.

The opportunities and solutions to prevent both outcomes of undernutrition are the same: children need to be protected from disease, given a nutritious diet and grow to their potential, which requires integrated policies, programmes and interventions.

The WaSt TIG is calling for faster and more concentrated efforts to improve child health and reduce child mortality across the globe by approaching wasting and stunting together, as two intrinsically linked outcomes of undernutrition, particularly before children become wasted or stunted.

Meet the researchers

Wasting and Stunting Technical Interest Group Emergency Nutrition Network Oxford UK

The Wasting and Stunting Technical Interest Group (WaSt TIG) is a group of experts in international nutrition that, since 2014, has worked to bring together existing and original research on wasting and stunting in children. The overarching aim of WaSt TIG is to better understand how wasting and stunting are linked, so that resources can be better directed towards improving health outcomes for children and reduce associated child mortality. WaSt TIG is coordinated by the Emergency Nutrition Network (ENN), a UK-based charity founded in 1996 and part of the international community of organisations and individuals seeking to reduce the global burden of undernutrition.

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FURTHER READING

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