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# CHILDHOOD MALNUTRITION

*What  
happens  
now?*



[www.msf.org](http://www.msf.org)

[www.StarvedForAttention.org](http://www.StarvedForAttention.org)

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**I**n 2010, Doctors Without Borders/Médecins Sans Frontières (MSF) launched a campaign to call on donor governments to stop providing sub-standard foods with insufficient nutritional quality to malnourished children living in developing countries.

Most of the damage caused by malnutrition occurs in children before they reach their second birthday. This is the critical window of opportunity, a time when the quality of a child's diet has a profound and sustained impact on their health and physical and mental development. For young children, the principles of good nutrition are well established. They center on good maternal nutrition and breastfeeding for the first six months followed by the introduction of a nutritious and diverse complementary diet containing some animal source foods, such as milk, meat, and eggs.

Diets that do not provide the right blend of high-quality protein, essential fats, carbohydrates, vitamins and minerals can impair growth and development, increase the risk of death from common childhood illness, or result in life-long health consequences. Yet the cereal-based fortified flours donated as food aid do not meet these basic nutritional standards.

The *Starved for Attention* campaign hopes to rewrite the story of malnutrition, by convincing governments to ensure food aid also targets the specific needs of young children with adequate nutritional products. More than 123,000 people from over 180 countries joined MSF in the campaign against childhood malnutrition.

The war and drought-fuelled humanitarian crisis in Somalia and neighboring countries serves as a poignant reminder of the need to act. In this report, we take stock of the progress achieved since the campaign began and assess what still needs to happen to ensure vulnerable children can access the nutrient-rich, energy-dense foods they need to escape the burden of malnutrition.

## **From Policy to Practice: Improved policies and guidelines, but considerable challenges remain**

**The policies of the United Nations agencies that distribute food aid have evolved.** Together, three UN organizations—the World Food Program (WFP), UNICEF, and the UNHCR, which works with refugees—are responsible for a significant proportion of the food aid that is distributed internationally to the most vulnerable children. Until recently, there were no formalized guidelines to ensure children's needs were addressed. Today, all three UN agencies now firmly acknowledge the need to ensure the nutritional quality of the products they distribute. Ready-to-use formulations are now included in the range of products these agencies use, along with cereal-based fortified flours that have been improved through the addition of milk. The policies of all three agencies now clearly

establish that flours that have not been augmented with milk are not sufficient to tackle childhood malnutrition and should only be distributed as a last resort to children under the age of two.

**The international standards on how to meet a child's nutritional needs are being changed, but far too slowly:** In late 2008, an expert meeting convened by the World Health Organization (WHO), the world's leading agency on health, considered the growing body of scientific evidence and concluded that nutritional standards of food aid needed to move away from cereal-based fortified flours. This position from nutritional experts is widely shared and was even formalized in a letter written by the heads of UNICEF, WFP and WHO in March 2010. But, unfortunately, the guidance

the WHO gives countries on how to meet a child's nutritional needs has still not been published as of yet, and it's unclear when it will be released. The latest draft is a mixed bag: while it recognizes that protein sources should preferably come from animal foods like milk, eggs or meat, it regrettably does not give precise guidance on how much of this kind of protein should be included in nutritional products provided to young children. Without guidance from the WHO, it will be hard to convince countries of the need to change the nutritional quality of the foods they distribute, or for other regional bodies such as the African Union to encourage countries to tackle malnutrition as an essential health intervention.

### **Looking ahead: Continuing to rewrite the story of malnutrition with more scientific evidence**

*How much milk is enough milk? Scientific evidence shows that animal-source foods and particularly dairy such as milk have a clear impact on a child's growth. But adding milk to products used for food aid means adding to the cost. For that reason, donors are often reticent to include it in sufficient proportions in food aid.*

*Having only small amounts of milk may be sufficient. If a child already has access to a diet that is sufficiently rich in nutrients, only a small amount of milk (delivered through food aid) may be required to ensure that all his or her nutritional needs are met. But if that is not the case, then adding too little milk to food products will leave children with food aid that does not meet their needs.*

*Pending studies are investigating whether other sources of protein can effectively address a child's nutritional needs (this includes forms of plant-based protein that are much more highly-refined than the soy present in current CSB formulations). But until it is shown that these work in all contexts, measures that aim to save costs on milk run the risk of failing to properly respond to the nutritional needs of children.*

**Some of the biggest food aid donors are looking to upgrade their policies:** Every year the United States sends more than 130,000 metric tons of fortified corn-soy blend flour (CSB) to nutrition programs, primarily in sub-Saharan Africa. These flours, grown on American farms and processed in American factories, are used as porridge to feed malnourished children or those under the age of two. Tragically, they do not meet the nutritional requirements of these children. In 2009, USAID asked Tufts University to conduct a Food Aid Quality Review and to recommend changes. The Tufts' report adds to existing scientific evidence that current food aid does not meet the needs of young children.

The report cited a need to improve the nutritional composition of CSB currently distributed by USAID and to add foods specifically designed to address childhood malnutrition, such as ready-to-use supplemental

foods (RUSF), to the list of products that can be distributed as a part of food aid. This positive trend is a further clear signal of the need for change, but it does not go far enough. The proportion of animal-source foods that the Tufts report recommends is less than that of the improved corn-soy blend (known as CSB++) pioneered by WFP and UNICEF and nutritionally enhanced to meet a young child's dietary needs. This therefore means that children receiving food products supplied by USAID risk receiving products that are inferior to the ones used by the UN.

In addition, the US will still continue to distribute its own variety of CSB. It is, admittedly, an improved version of CSB, but far better products exist. Unlike the WFP, which developed adapted products for children on the one hand and adapted products for adults on the other, the US will continue to rely on a one-size-fits-all CSB, which will not contain the optimal amount of dairy to meet the nutritional needs of children. Such a move also complicates distribution, because those distributing the food aid have an additional product to contend with; it would be simpler for the US to apply, as other food aid donors do, the standards that the WFP has published.

**A**nother food aid giant, **the European Commission** (EC), is also falling short. Despite repeated pledges about the need to ensure that the nutritional needs of children under two are met, the EC has yet to publish clear guidelines about how to make this happen. Some European countries are already providing quality products as a central part of food aid – but the money that comes from the Commission level is not necessarily spent on such products. Planned policy announcements have also been delayed even as the distribution of substandard products continues to receive EC financing. This is particularly regrettable given that a strong, unambiguous guideline from the EC would have a ripple effect and would help European countries ensure that their own food aid policies address the needs of children.

The lack of a precisely targeted policy response to nutrition by the EC has an immediate impact on their practical interventions, which are equally incoherent. The EC finances the use of some products that meet a child's nutritional needs, including milk-based pastes fortified with vitamins and minerals and other essential nutrients that MSF uses in its own programs. But such financing has strings attached that significantly restrict their use: programs that will use improved nutritional supplements (CSB++, RUSF) have to commit to providing evidence on the benefits such products have on the children who receive them even though no such demands are made of EC-financed programs distributing products that are known to be far less effective, like CSB.

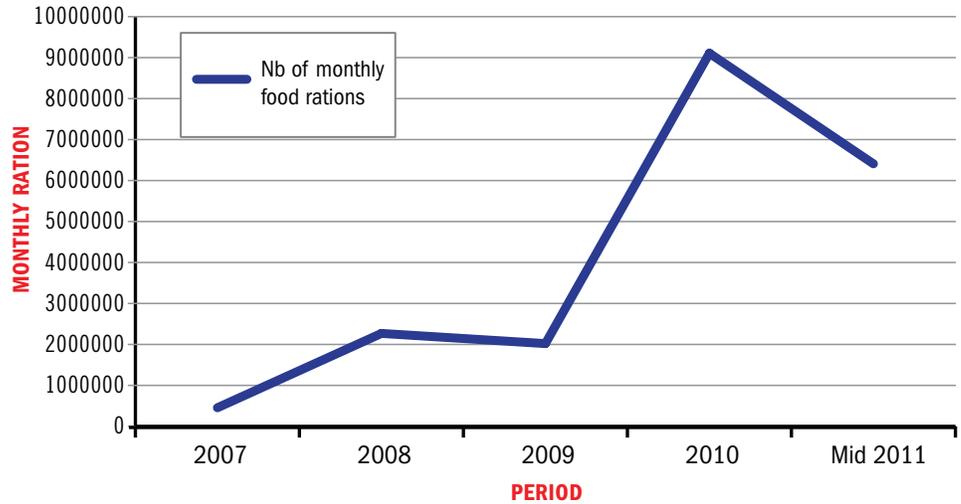
### Difficulties in practice: More children are now receiving food aid that responds to their nutritional needs, but millions more are going without

**Larger quantities of appropriate products are being purchased:** More and more donors have been purchasing the products developed specifically to address childhood malnutrition. But these are far from being the norm, as numerous poor quality products continue to circulate.

One difficulty is that no clear monitoring mechanism exists for detailing overall funding of nutrition programs, making it impossible to tell what strategies and what objectives are behind the money dedicated to addressing malnutrition.

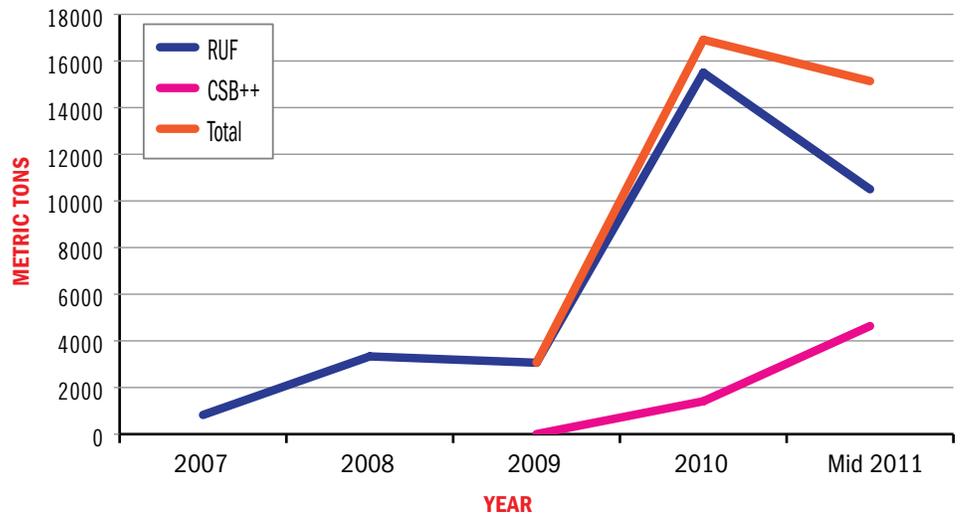
**Appropriate products are a central part of recent emergency responses:** In the past few years, products that meet the nutritional needs of children under two have been the cornerstone of responses to medical emergencies. They played a key role in 2010 in the responses to the nutritional crisis that hit Niger, the floods in Pakistan, and the earthquake in Haiti. This is encouraging, but more needs to be done.

**More Children Receiving Better Products: Evolution of distributions of nutritionally enhanced supplementary food products to young children through international food aid**



Graph 1: The evolution in the number of monthly rations of adequate nutrition distributed to young children as international food aid. Ready-to-Use Foods (RUF) are spread-like products made with milk and fortified with minerals and vitamins. They are specifically designed to respond to the nutritional needs of young children. Improved corn-soy blend (or CSB++), which was pioneered by WFP and UNICEF, is flour nutritionally enhanced to meet a young child's dietary needs. Unlike the older version of CSB, it includes milk, better fortified minerals and vitamins and is easier to digest.

**Trends in Production of Nutritionally Enhanced Supplementary Foods for Young Children**



Graph 2: The numbers of children being reached with nutritionally enhanced foods has expanded considerably in recent years.

*Food aid programs are no longer about taking agricultural surpluses from wealthy countries and seeing how best to distribute it in developing countries.*

The ongoing crisis in Somalia and in the refugee camps across the border in Northern Kenya provides a good illustration of what needs to change. As the emergency began to unfold, the need for Kenyan government to authorize organizations to import large quantities of nutritionally enhanced products, such as ready-to-use supplementary foods or reformed composition of fortified blended flour, grew more pressing. In the time it took for the government to grant this authorization, substandard corn-soy blend products were used to fill the gap, so that when permission was finally obtained, a large stock of lower quality products had already been stockpiled. Delays for getting these foods in countries slowed their use.

These problems demonstrate how important it is to have clear international guidance or recommendations on what the minimum composition should be for food distributed to young and malnourished children. This guidance would support and enable governments of countries affected by malnutrition to include adequate nutritional products in their programs. Furthermore, food aid donors would find it difficult to ignore such recommendations.

**But emergencies are the tip of the malnutrition iceberg:** Far from the glare of the media's attention, malnutrition takes a routine but deadly toll across vast swathes of sub-Saharan Africa and South Asia. Devising ambitious national programs that address childhood malnutrition and authorizing the use of products that meet a child's needs should not be restricted to emergencies. There should be no difference in the standards of care given to a child exposed or suffering from malnutrition during emergencies like war or natural disasters and a child suffering from the same condition while living in a relatively stable country with no declared crisis.

A number of developing countries have, much like the US and Europe before them, successfully addressed malnutrition by implementing large-scale programs that focus on ensuring vulnerable children receive foods that meet their nutritional needs. Mexico, for example, has largely eradicated malnutrition through its Oportunidades/Progresa program in which children receive milk-based supplements during early childhood in combination with conditional cash transfers and access to health care.

In 2010 and 2011, Niger undertook large-scale RUSF distributions for children under two who are exposed to malnutrition. This example of providing supplementary food aid should be replicated in more countries that have a high prevalence of malnutrition. It is the presence of malnutrition, after all, and not the attention of the world's media, that should determine the use of the nutrient-rich foods needed by children under two.

## What still needs to happen:

**All food aid donors should ensure that their contributions to nutritional programs are used to provide children with nutritionally adequate products that meet all appropriate standards.** In particular,

- *The U.S. should improve the quality of its food aid and stop providing substandard food to infants and young children in developing countries.*
- *The European Commission should ensure that its food aid systematically addresses and meets the nutritional needs of infants and young children, while ceasing to finance programs using substandard food.*
- *The WHO should release its guidelines on the quality composition of foods required for the management of children with Moderate Acute Malnutrition.*
- *Both donors and recipient countries should apply the WHO guidelines to ensure that children exposed to malnutrition have access to appropriate nutrition.*
- *WFP, UNICEF and UNHCR should systematically ensure that their practices match their policies and initiate negotiations in all countries where they have nutritional programs to get authorization to use nutritionally appropriate foods and supplements.*

### **Looking ahead: Continuing to rewrite the story of malnutrition, with better field programs**

*Niger has long been ranked among the countries with the most alarming mortality rates for children under the age of five. In 1990, 300 of every 1,000 children in Niger died before reaching their fifth birthday. In 2006, just after a nutritional crisis that stimulated a large-scale response to malnutrition, the rate had fallen to 200 in every 1000. And by 2010, despite another severe food and nutritional crisis, the rate decreased even further, to 143 deaths per 1,000 live births. The expansion of large scale nutritional programs for the treatment of children with severe acute malnutrition, as well as programs targeting children under two with adequate nutritional supplementation, have been key to this progress over the last five years.*

*Food aid programs are no longer about taking agricultural surpluses from wealthy countries and seeing how best to distribute it in developing countries. The thinking has evolved, and the need to change practice and products is widely recognized.*

*Programmatic evidence shows that moderately malnourished*

*children recover better when they are given products that are more nutrient-rich than CSB. The benefits of using appropriate products widely and early enough to protect children from becoming malnourished in the first place are also clear, as evidenced by the reduction of mortality in young children observed by MSF in its program in Niger. Interventions during which appropriate foods for children under two are included as an essential component in maternal and infant health, along with other activities, such as vaccination, should be the cornerstone of pediatric programs in countries with high burdens of malnutrition.*

*Today, different approaches using different products or even including cash distributions to vulnerable families are promoted as best strategies to reduce malnutrition. Together with the Nigerien non-governmental organization FORSANI, the WFP and with our epidemiological sister organization, Epicentre, MSF is conducting a study in Niger comparing these different strategies, in order to evaluate their respective impact, identify which are the most adaptable, and continue in this way to help rewrite the story of malnutrition.*

## Annex A

# *How Ready-To-Use Foods Have Revolutionized the Response to Malnutrition*

### **1994: First use of therapeutic milk**

In a meeting organized by Epicentre, MSF's epidemiological arm, the specifications of a therapeutic milk called F100 are designed by experts, including Mike Golden from the University of Aberdeen and André Briend, a French medical researcher from the Institut de Recherche pour le Développement. F100 is a new formulation that replaces high energy milk (a mix of milk, oil and sugar fortified with minerals and vitamins), and helps to increase the quality of care by reducing the mortality observed in clinics that specialize in the treatment of severe acute malnutrition to less than 5%.

The milk needs prior preparation; warm, clean water has to be added before it can be given to the child. Its use is pioneered by the organization Action Contre la Faim (ACF).

### **1997: Ready-to-use foods (RUF) are invented**

Building on ACF field experience, André Briend works with the French company Nutriset to make a nutrient-dense spread for the treatment of severe acute malnutrition. The spread, which is called Plumpy'Nut, contains milk powder, vegetable fat, peanuts, and sugar and is enriched with vitamins and minerals. The product has the same specifications as the F100 formula, but it comes with crucial advantages. It is ready-to-use, it can be stored even in tropical climates, and no preparation is required. Around the same time, with the collaboration of Mike Golden and Yvonne Grellety of ACF, Compact, a Norwegian company, conceptualizes a biscuit known as BP100 with the same specifications.

MSF uses a prototype of the spread therapeutic RUF on an experimental basis in southern Sudan in emergency programs, where security conditions prevented teams from operating in-patient feeding centers. In this case, treatment outside the hospital was the only option.

### **1999: A protocol allowing decentralized care is adopted**

The aid organization Concern creates a protocol that allows for treatment at home using the ready-to-use product for severely malnourished children that don't present medical complications.

### **2000-2002: Therapeutic RUF becomes an essential tool to treat children during food crises**

In 2000, therapeutic RUF were used by MSF during major food crises in the Pool region in Congo and in the Ogaden region in Ethiopia, where more than 1,700 children were treated. In 2001, MSF treated 3,000 children in the Karuzi province of Burundi,

and in 2002, 8,600 children were treated in Caala, Angola. Each time, therapeutic RUF were used as part of the treatment provided in therapeutic feeding centers.

In some of these cases, therapeutic RUF were not yet used in the community because MSF teams were uncomfortable about setting up in-home monitoring. If a child treated at home presented with medical complications, MSF medical teams wouldn't be there to help. But with experience, teams saw that results were excellent and their fears were unfounded.

### **2001-2005: Community-based treatment with therapeutic RUF becomes the mainstay of nutritional programs**

MSF initiated outpatient treatment in northern Afghanistan's Faryab province in early 2001. Because mothers could not spend the night away from their homes, the teams had no alternative but to try out new options for treating severe malnutrition at home. The program involved only a few children, but it marked the launch of the new ambulatory strategy within MSF. By 2004, thousands of children were treated in Darfur, Sudan, as well as in Maradi, in Niger, using outpatient strategies with therapeutic RUF.

This new model of care authorizing most patients with severe acute malnutrition to be managed at home instead of at the hospital revolutionized treatment. It drastically reduced the resources needed; whereas around 80 people are needed to run a hospital of 100 beds, a staff of 12 can run an ambulatory center managing 500 patients. The impact on patients was considerable too, as mothers no longer needed to spend a month in a hospital while their child received treatment. A weekly control visit now sufficed.

These factors allowed the number of patients MSF could reach to skyrocket. In 2005, a year of exceptional food insecurity in Niger, MSF treated more than 60,000 severely malnourished children using RUF. Some 38,000 severely malnourished children were treated in the region of Maradi alone, with a cure rate above 90%. This experience suggested to MSF that the vast majority of severely malnourished children could be cured with ready-to-use therapeutic food.

### **2006: RUF as a tool to prevent malnutrition**

Given the excellent results for treating children with severe acute malnutrition in Niger, MSF extended the use of therapeutic RUF through an outpatient strategy to moderately malnourished children. Nearly 65,000 children were treated (including children

with moderate malnutrition and severe malnutrition). Recovery rates reached 95.5% among the moderately malnourished and 81.3% among the severely malnourished.

Most notable however was that for the first time since 2001 when the MSF program opened in Maradi, the seasonal peak of admissions of severe malnutrition cases did not occur in 2006. This suggests that treatment with therapeutic RUF can prevent the development of severe malnutrition.

### **2007: Distributing supplemental foods on a large-scale**

MSF implemented a new two-tiered approach: earlier access to treatment for severe cases and earlier access to supplemental RUF for all children at risk in the area. MSF began using the WHO's new growth standards to define admission criteria, which are more inclusive and therefore bring in more children at high risk of death. Based on these new standards, children suffering from severe acute malnutrition are treated with therapeutic RUF in outpatient feeding centers. Only in cases of serious associated illness are children hospitalized.

MSF also focused its program on the distribution of supplemental RUF, which does not replace a child's regular meals but compensates for major deficiencies in their regular diet by meeting their daily nutrient needs. MSF distributed supplemental RUF to all 62,000 children from six months to three years of age in one district in Maradi on a monthly basis during the seasonal hunger gap.

The effects of the program were similar to those achieved in 2006, as both severe and moderate acute malnutrition were managed in the same program. But distributing supplements to all children is far less resource intensive than treating all children with acute malnutrition. Furthermore, in a context where the incidence of malnutrition is very high in young children, such a program does not require a child to show signs of malnutrition to receive the supplements but aims to protect them from deteriorating into malnutrition in the first place.

The program registered good participation from the mothers. Of the 62,922 mothers who attended the first distribution, only 1.6% dropped out, despite having to walk 14 kilometers [8.4 miles] to get the supplements.

### **2008: The call for better food aid begins to get traction**

In 2008, the WFP and UNICEF began to examine how CSB needed to be reformulated in order to improve its nutritional content and make it fit for young children. They also began to consider the use of other nutritionally enhanced foods in large-scale pilot programs in Somalia or Burkina Faso.

MSF was invited to present its results at a WHO consultation organized with a view to reforming strategies to manage moderate acute malnutrition and reformulating the composition of foods provided to moderately malnourished children.

### **2010: Nutritionally enhanced supplements become the cornerstone of emergency response**

Facing a severe episode of food insecurity, Niger's government frames a large-scale response to prevent deterioration in the nutritional situation of young children. Programs include large-scale distribution of spread supplements to children aged under two. MSF joins the WFP, UNICEF, and the WHO to negotiate for authorization to use nutritionally-enhanced supplements to feed them. The Ministry of Health accepts, but on the condition their use leads to scientific data that demonstrates their impact.

Epicentre presents the results of its studies concerning the MSF programs distributing spread supplements. In these observational studies, mortality was 50% less in the group of children receiving the spread supplement in comparison with the group who did not receive them.

Nutritionally-improved supplements become the cornerstone of many an emergency response, including the Haiti earthquake, Niger's nutritional crises, and the floods in Pakistan.

### **2011: More moves for food aid reform, and more countries turn to RUF**

Tufts University is commissioned by USAID to review the quality of US food aid. Its report clearly calls for a change in the quality of products used, particularly for young children for whom CSB is nutritionally ill-adapted.

The government of Niger decides to repeat its large-scale distribution of nutritionally enhanced supplements to protect young children from malnutrition, and the Ministry of Health begins revising its protocol for the management of malnutrition. The Government of Kenya, meanwhile, authorizes the use of nutritionally enhanced supplements in its programs.

Although nutritionally-improved products are the cornerstone of the emergency response to a nutritional crisis in Somalia, precious few children in stable contexts with a high burden of malnutrition receive nutritional assistance. And when they do, most receive ill-adapted products such as CSB. The challenge to ensure that all children receive access to better nutritional products remains.

## About Doctors Without Borders/ Médecins Sans Frontières (MSF):

Doctors Without Borders/Médecins Sans Frontières (MSF) is an international medical humanitarian organization created by doctors and journalists in France in 1971.

Today, MSF provides aid in more than 60 countries to people whose survival is threatened by violence, neglect, or catastrophe, primarily due to armed conflict, epidemics, malnutrition, exclusion from health care, or natural disasters. MSF provides independent, impartial assistance to those most in need.

MSF reserves the right to speak out to bring attention to neglected crises, to challenge inadequacies or abuse of the aid system, and to advocate for improved medical treatments and protocols.

In 1999, MSF received the Nobel Peace Prize.

## About “Starved For Attention”:

“Starved for Attention” is a collaborative multimedia campaign produced by MSF and VII Photo that aims to rewrite the story of childhood malnutrition by featuring documentaries that blend photography and video from some of the most accomplished photojournalists working today.

An estimated 195 million children worldwide suffer from the effects of malnutrition, with 90 percent living in sub-Saharan Africa and South Asia. In fact, malnutrition contributes to at least one-third of the eight million annual deaths of children under five years of age. Many families simply cannot afford to provide nutritious food—particularly animal source foods such as milk, meat, and eggs—that their young children need to grow and thrive. Instead, they struggle to survive—far from the media spotlight—on a diet of little more than cereal porridges of maize or rice, amounting to the equivalent of bread and water.

VII photojournalists Marcus Bleasdale, Jessica Dimmock, Ron Haviv, Antonin Kratochvil, Franco Pagetti, Stephanie Sinclair, and John Stanmeyer traveled to malnutrition “hotspots” around the world—from war zones to emerging economies—to shed light on the underlying causes of the malnutrition crisis and innovative approaches to combat this condition.

To date, the “Starved for Attention” exhibit has been staged in numerous cities around the world. An online petition calling on world leaders to raise the quality of the food aid they send abroad has thus far been signed by more than 125,000 people who have shown that they, too, want to be part of the campaign to rewrite the story of malnutrition.

See [starvedforattention.org](http://starvedforattention.org) for more information.