

Burkina Faso: New research to treat acute malnutrition

Researchers from the University of Copenhagen and the medical humanitarian organizations ALIMA (The Alliance for International Medical Action) and Doctors Without Borders (MSF) released the findings from a study in Burkina Faso, which treated more than 1,600 children with moderate acute malnutrition. The results, published on September 11, 2017 in the open access medical journal *PLOS Medicine*, showed that corn-soy porridge should be replaced with a lipid-based nutrient supplement (LNS), a fortified peanut butter. The results of the study can be used directly both in the treatment and prevention of acute malnutrition.

Globally, more than 50 million children are affected by acute malnutrition. Those with the most severe acute malnutrition have a more than tenfold increased risk of death, and those surviving may have impaired development, compared to children without malnutrition. But this can be prevented if children are treated early, while they only have moderate acute malnutrition.

LNS supports healthy growth

Christian Fabiansen, MD PhD, the main author of the paper, along with a team from the Department of Nutrition, Sports and Exercise at the University of Copenhagen, conducted the study in collaboration with a PhD student from the *Institut de Recherche en Sciences de la Santé* in rural Northern Burkina Faso, where there is a high prevalence of acute malnutrition. The study, known as TreatFood, was primarily funded by Danida, MSF-Denmark, MSF-Norway and USAID via the World Food Programme. It was conducted within a malnutrition project run by ALIMA and its Burkinabe partners Keogo and SOS Médecins.

During the trial, 1,609 children with moderate acute malnutrition were given either LNS or corn-soy porridge for 12 weeks. The study found that children who received LNS experienced greater weight gain and that the majority of the weight gain was healthy lean tissue.

Dr. Fabiansen underscores the importance of the findings:

"Previous studies of nutritional supplements have mainly looked at the effect on weight gain," he said. "It has been a concern that LNS, with its very high fat content, would result mainly in weight gain composed of fat. But by using a method-based measurement of heavy water in the child's body we have found that LNS mainly increase lean mass - that is muscles and organs - which is important for immune function, survival and development."

The main TreatFood results are presented in the paper: [Effectiveness of food supplements in increasing fat-free tissue accretion in children with moderate acute malnutrition: A randomised 2 × 2 × 3 factorial trial in Burkina Faso](#). Earlier peer-reviewed articles from the study have appeared in the *American Journal of Clinical Nutrition*, *BMC Nutrition*, and *Appetite*.

Novel standard for research in malnutrition may save lives

Professor Henrik Friis, the senior author on the paper, points to the importance of the collaboration between university researchers and humanitarian organizations:

"It has been a new way to conduct research, that we tested the effect of nutritional supplements used mainly by aid agencies, employing very advanced research methods in remote rural areas where humanitarian organization are working, and not at the university hospitals. The collaboration between researchers and humanitarian organizations means these findings can have immediate practical impact on field practice."

The General Director of the Danish section of MSF, Jesper H. Brix, notes:

"Acute malnutrition is still a major global health problem. So, I hope we can use the results to provide the best possible treatment for more vulnerable children. If we can treat children with moderate acute malnutrition with the scientifically-proven, most-effective food aid products, and thereby prevent severe acute malnutrition, then many lives can be saved."

Dr. Susan Shepherd, a pediatrician who heads ALIMA's Operational and Clinical Research, says:

"ALIMA is very proud of its participation in this study. Vulnerable children, no matter where they live, deserve the best medical and nutritional treatments available. Studies like TreatFood generate the evidence we need to make the best decisions with our patients. ALIMA is committed to developing more research partnerships in its humanitarian projects, because this is how we will raise the quality of medical practice for all."