MANGO PROJECT

RANDOMIZED CONTROL TRIAL IN NON-INFERIORITY

Where: 10 health centers in the district of Fada N'Gourma, Burkina Faso
When: 2015-2020
Who: 801 children aged 6 to 59 months
SAM according to WHZ< -3 and/or MUAC< 115mm with appetite

Standard Dose
n=399

Reduced Dose
n=402

Reduced dose from 3rd week onward, according to the child's weight.

What: To prove under ideal conditions the efficacy of a reduced dose of RUTF compared to a standard dose during the treatment of uncomplicated Severe Acute Malnutrition in children aged 6-59 months.

Scientific Partners and Funders :

CIFF, ECHO, HIF- ELRHA, AAH Foundation
Univ. of Copenhague, Centers for Disease Control and Prevention, (CDC, USA)

BODY COMPOSITION

BODY COMPOSITION IS SIMILAR WITH A REDUCED DOSE AND WITH A STANDARD DOSE DURING SAM TREATMENT

Data Collection

Fat Free Mass (FFM) is measured twice by Bioelectrical Impedance Analysis (BiA) at admission (n=452), at discharge (n=259) and among a community control group (n=95). The community control group is composed of children who are not SAM.

Fat Free Mass includes lean mass and bones. Fat mass (FM) was calculated as the difference between weight and FFM.

FM and FFM were adjusted for height to give the fat mass and fat free mass indexes.

Results

Fat Free mass account for nearly half of the children's weight gain (45%) during treatment in both groups.

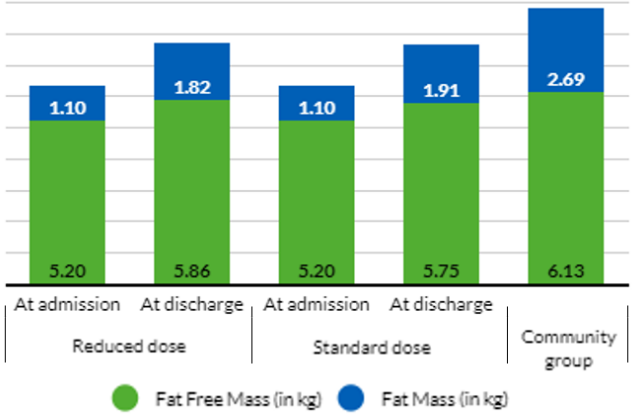
The reduced dose similarly induces fat free mass growth during treatment. Of note, receiving more RUTF does not result in greater fat mass gain.

However, recovered SAM children still have a lower fat mass than the community group.

Average evolution in body composition of children treated for SAM

in kg	Children treated for SAM		Deficiency at discharge compared to community group
Mean weight gain	+ 1,2		- 1.27
Mean FFM gain	+ 0.55	45%	-0.38
Mean FM gain	+ 0.67	55%	-0.90

Body Composition of SAM children treated with a reduced dose or a standard dose and body composition of community control group



Key takeaways

The reduced dose allows a recovery in fat free mass similar to that obtained with a standard dose. In a context of relative food safety, body composition still remains insufficiently corrected.

GLOSSARY

BiA	Bioelectrical Impedance Analysis
FM	Fat mass
FFM	Fat Free Mass
MUAC	Mid Upper Arm Circumference
RUTF	Ready-to-Use Therapeutic Food
SAM	Severe Acute Malnutrition
WHZ	Weight For Height Z-score