

## NUCLEAR MEDICINE RESEARCH DIVISION

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	...	Daw Khin Thida Wai BA (Psychology)(YU)
Research Assistant (3)	...	Dr. Thiri Kyaw PhD (Zoology)(YU)
Research Assistant (4)	...	Daw Naw Myat Su Mon BSc (Chemistry) (Pathein University)
Laboratory Attendant	...	Daw Ma Gyi

The Nuclear Medicine Research Division has been actively involved in research studies on non-communicable diseases.

### RESEARCH PROJECTS

#### 1. NON-COMMUNICABLE DISEASES

##### 1.1 NUTRITION

##### 1.1.1 Assessment of nutritional status through body composition measurement by deuterium dilution technique in children living in areas targeted agricultural interventions for food security

This study is a collaborative research with Nutrition Research Division and funded by IAEA. Agricultural interventions can directly affect food and nutrition security by alterations in the production of nutrient-dense foods and/or income derived through agricultural livelihoods. The study aimed to assess the nutritional status of two to five years old children living in *Kyar Hone, Kyein Pike, Yaeso, Thanpayarkhone* and *Lamutangyi Village, Htan Ta Pin* Township, Yangon Region. Agricultural interventions have been carried out by WelthungerHilfe (International Non-Governmental Organizations of Food Security Working Group) in intervention villages (*Kyar Hone, Kyein Pike, Yaeso*). The first and second time surveys were conducted during October, 2014 and May, 2015. A total of 125 children aged between 2 - 5 years (63 children from families receiving agricultural interventions and 62 children from farmer- headed families living in *Thanpayarkhone* and *Lamutangyi* villages) participated in the study. Anthropometry and diet diversity scores data are shown in the report of Nutrition Research Division. The percentage of fat mass and fat free mass were calculated from total body water (TBW) which was measured by deuterium oxide dilution method using the Fourier Transform Infrared Spectrometry (FTIR). Mean percents of the non-intervention group and intervention group for first and second time surveys are shown in the following table.

Mean of fat free mass and fat mass of children in non-intervention and intervention group

	Non- Intervention group (n=62)		Intervention group (n=63)	
	1 <sup>st</sup> data collection	2 <sup>nd</sup> data collection	1 <sup>st</sup> data collection	2 <sup>nd</sup> data collection
FFM(kg)	10.60±1.75	11.45±1.96	10.20±1.32	11.18±1.47
FM (kg)	2.52 ± 0.87	2.61±0.93	2.39±0.77	2.74±1.03

In second time data collection, mean fat free mass was higher in children of non-intervention group than that of intervention group ( $11.45 \pm 1.96$  vs.  $11.18 \pm 1.47$  kg). However, fat mass was higher in children of intervention group than that of non-intervention group ( $2.61 \pm 0.93$  vs.  $2.74 \pm 1.03$  kg) but they were not statistically significant.

## SERVICES PROVIDED

### ACADEMIC

<b>Sr.</b>	<b>Name</b>	<b>Course</b>	<b>Responsibility</b>
1.	Daw Yin Yin Win	1 <sup>st</sup> year, MMedSc (Physiology) UM (1), UM (2), UMM 1 <sup>st</sup> year, MMedSc (Biochemistry) UM (1), UM (2), DSMA	Teaching Demonstration
2.	Daw Aye Aye Maw	1 <sup>st</sup> year, MMedSc (Physiology) UM (1), UM (2), UMM 1 <sup>st</sup> year, MMedSc (Biochemistry) UM (1), UM (2), DSMA	Teaching Demonstration