



# MyBreakfast Study of School Children: *Findings, Implications & Solutions*

## **Announcement of Key Findings**

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**3<sup>rd</sup> December, 2015  
Hotel Istana, Kuala Lumpur**

# Introduction



**Underweight & stunting remain a significant problem**



**Overweight & obesity increasing at an alarming rate**

**Existence of double-burden of malnutrition**

# Introduction

**Healthy dietary practices are required to prevent under- and overnutrition**

## Healthy Dietary Practices



**Balanced +  
Moderate +  
Variety**

**Do not skip meals  
(MUST take  
breakfast  
regularly)**

# Introduction

## Breakfast consumption among children in Malaysia as reported by previous smaller studies



**Breakfast is the most  
commonly skipped meal**



**The quality of food was  
found to be low**

# MyBreakfast Study of School Children:

- **The first nationwide, nationally representative study on breakfast consumption in Malaysia**
- **The whole range of primary and school children**
- **Provide latest data on nutritional status of school children**
- **Physical activity level**
- **Dietary intake, including whole grain intake**
- **Association between body weight, physical activity and breakfast habits**

# Objectives of study

**How serious is the prevalence of under- and overnutrition amongst our school children? Who are most affected?**

**Do our school children skip breakfast? Who tend to skip breakfast more?**

**What are the main types of foods and beverages that our school children consume at breakfast?**

**Are our school children physically active?**

**Are school children who skip breakfast more likely to be overweight and obese?**

## **Significances of study**

**Gain useful insights into  
breakfast habits of  
Malaysian school children**

**Provide basis for all policy  
makers and programme  
managers**

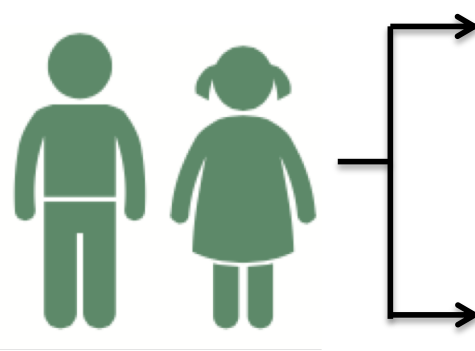
**Implement intervention  
programmes**

# Background of study



**Sampled based on 5 regions, rural/urban, ethnic groups & sex distribution**

**8705  
primary &  
secondary  
school  
children  
(6-17 years)**



**5581  
children from 56  
primary schools**

**3124  
children from 28  
secondary schools**



# **Main findings #1**

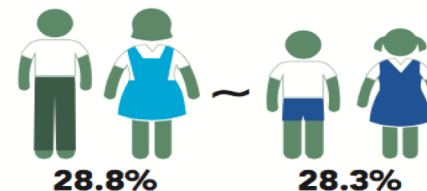
## **Nutritional status**

## Key Findings #1a

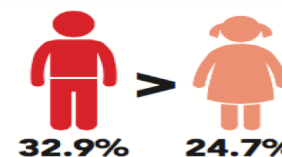
### High prevalence of overweight and obese



**1 in 4 children  
was either overweight or obese**



Prevalence is **similar** among **primary** and **secondary** school children



Prevalence is **higher** among **boys** than **girls**

Prevalence is **highest** in **Indian (33.0%)** and **lowest** in **Malay (27.7%)** children

Prevalence is **higher** among children in the **Central region (31.1%)** and **lowest** in **East Coast region (24.7%)**

Prevalence is **similar** in **rural (27.8%)** and **urban (28.8%)**.

## Key Findings #1b

**Significant prevalence of undernutrition, ie  
thinness and stunting**

**6.4%**

**Prevalence of  
thinness**

**7.2%**

**Prevalence of  
stunting**

**Confirming existence of double burden of  
undernutrition and overnutrition**

## Recommendations

**Urgent intervention programmes should be systematically implemented through country**



**Dietary habits**



**Physical activity**

**Nutrition education in all schools, utilising modules such as NSM+Nestle Healthy Kids Programme**

# **Main findings #2**

## **Breakfast habits**

## Key Findings #2a

### Prevalence of breakfast skippers



**1 In 4 children skipped breakfast**



**31.9%**

**20.1%**

Prevalence was **higher** among **primary** than **secondary** school children



**26.4%**

**22.5%**

Prevalence was **higher** among **girls** than **boys** for both primary and secondary school children

Prevalence was **higher** from families with **low-income** skipped breakfast (**28.2%**) than children from **middle** (**22.5%**) and **high** (**17.7%**) income families

**Important finding:** Breakfast consumption is associated with bodyweight status



Breakfast skippers were

**1.34 X**

more likely to be  
overweight/ obese\*

**Main findings #3**  
**Breakfast foods & beverage choices**



## Key Findings #3a

**Choices for foods and beverages**

**Malaysian children consumed**

**more**



**Traditional Malaysia  
breakfast foods**



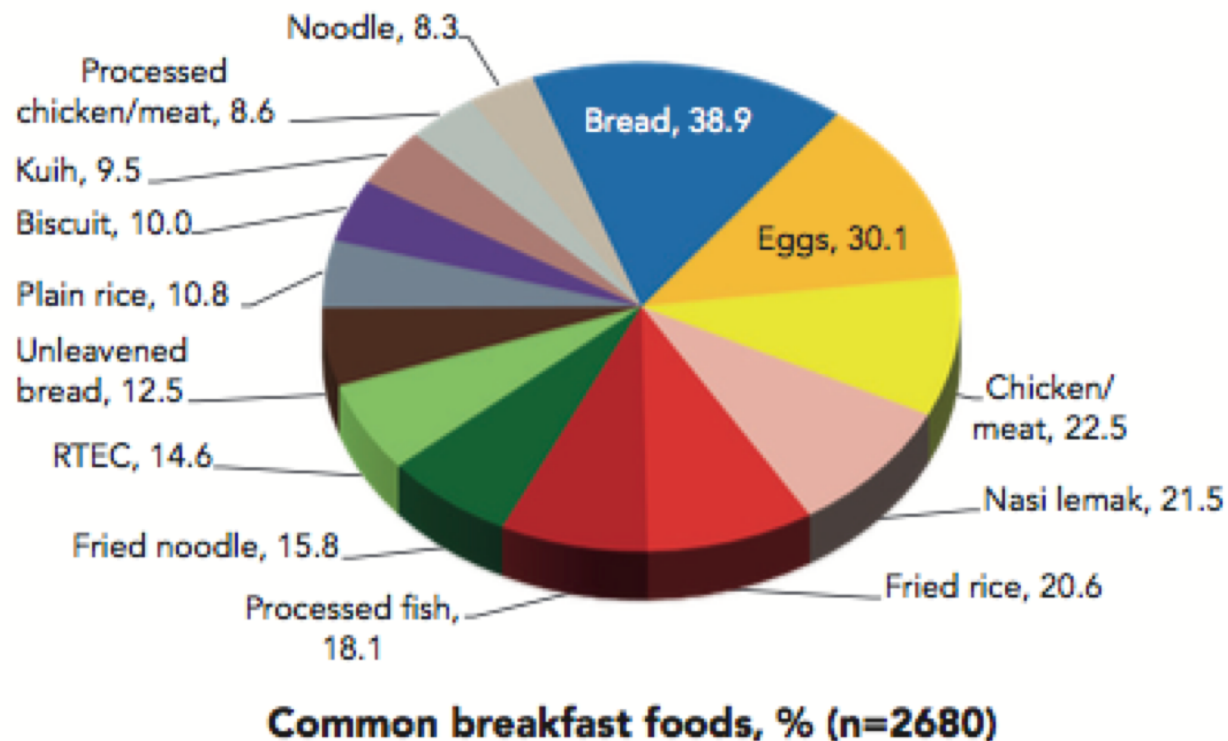
**High energy meals**



**Carbohydrate-based  
meals**

## Key Findings #3b

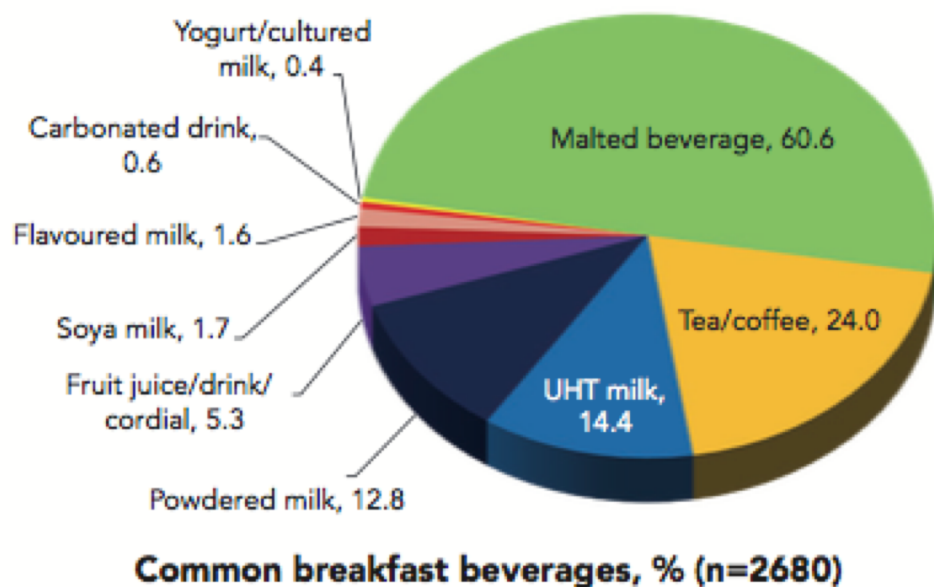
### Top 5 breakfast food choices



1. Bread
2. Eggs
3. Chicken/  
meat
4. *Nasi lemak*
5. Fried rice

## Key Findings #3c

### Top 5 breakfast beverages choices



1. Malted beverage
2. Tea/ coffee
3. Ultra-heat treated (UHT) milk
4. Powdered milk
5. fruit drink/ cordial

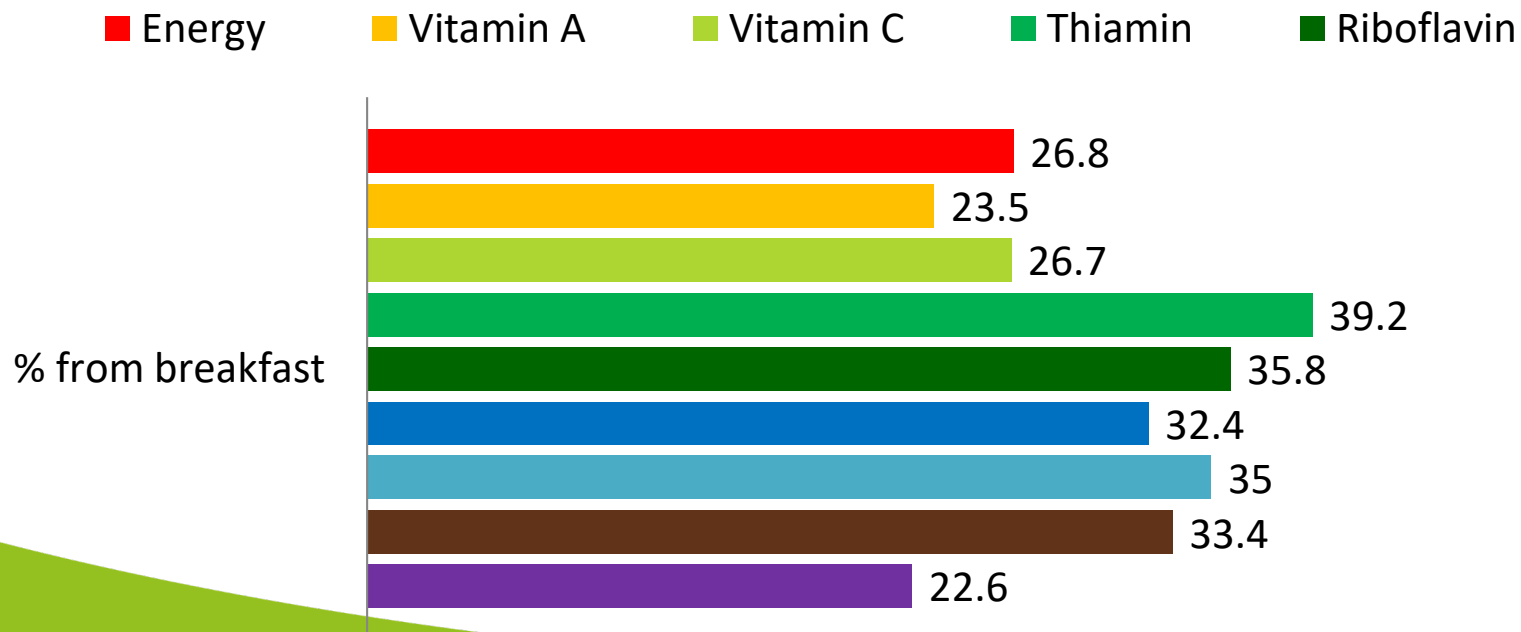
## Key Findings #3d

Among breakfast consumers, this meal contributed to about

**25%**

of their RNI for energy and selected micronutrients

Contribution of breakfast to daily energy and micronutrient intakes (n=2680)



## Recommendations



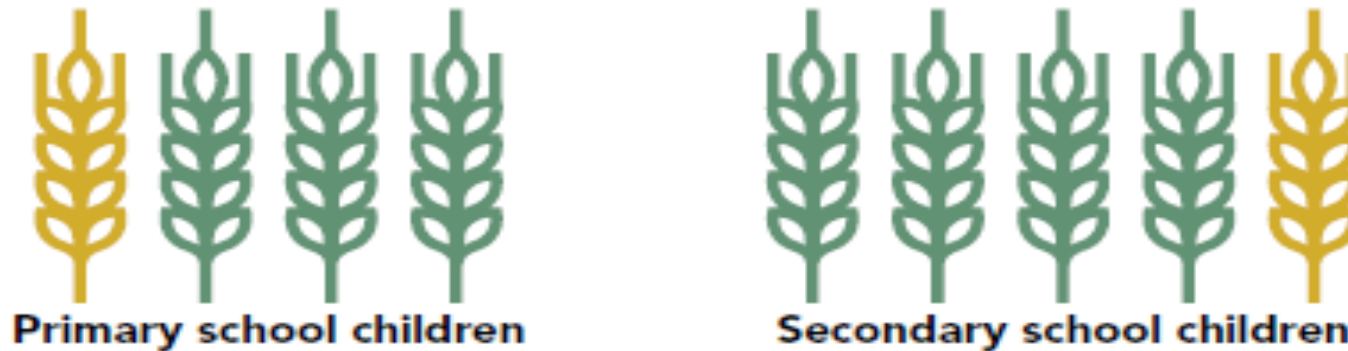
**Interventions to promote regular breakfast consumption including through schools, should be one of the approaches undertaken to combat the serious problem of overweight and obesity in the country**

## **Main findings #4**

# **Whole grain and wholegrain food consumption**

## Key Findings #4a

### Wholegrain consumption among school children was very low



**Only**

**25%** primary school children & **19%** secondary school children

**consumed whole grain**

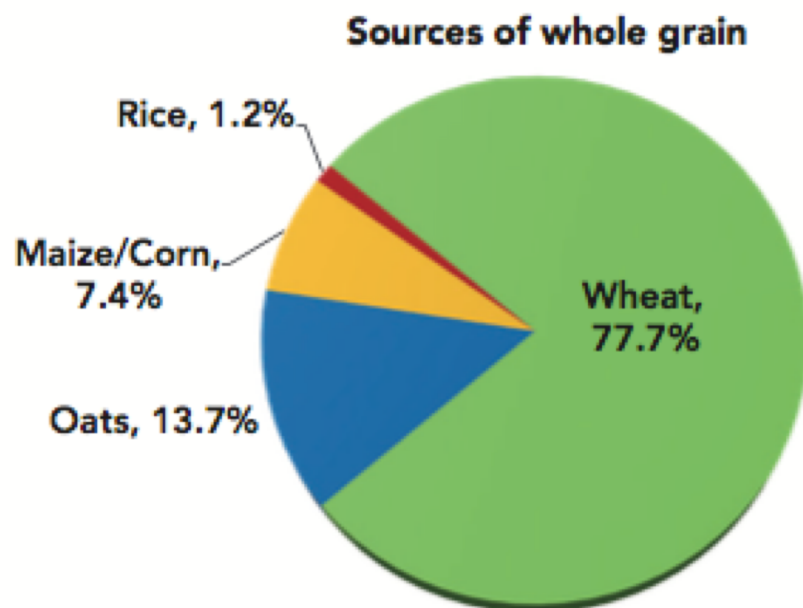
## Key Findings #4b

Even among **wholegrain consumers**,  
the mean intake was about **9g/day**,  
well **below** the recommendation intake

Almost **all the children** (over 99%)  
did not meet the recommended intake  
of **48g/day**



## Key Findings #4c



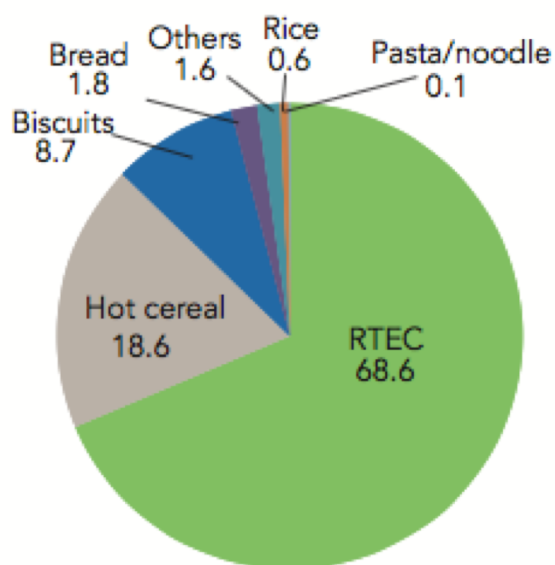
**Wheat**  
was the main source of  
whole grain intake

## Key Findings #4d

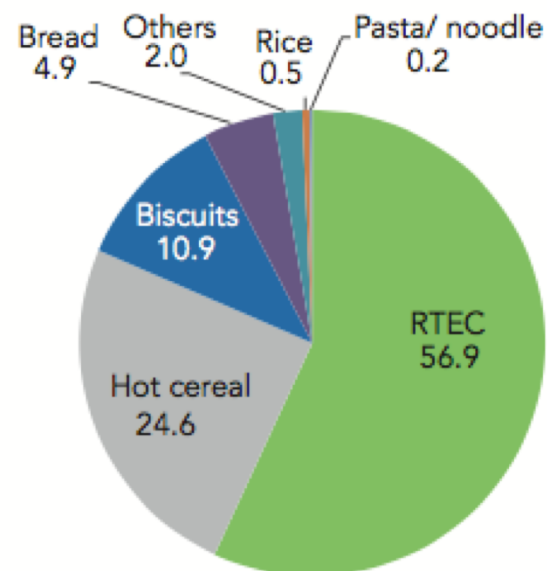
# RTEC

was the main source of wholegrain food among both primary & secondary school children

Sources of wholegrain foods, %



Primary school children



Secondary school children

## Recommendations

**Greater efforts must be made to promote whole grain consumption, in line with Malaysian Dietary Guidelines**



**More research required to understand barriers to wholegrain consumption**



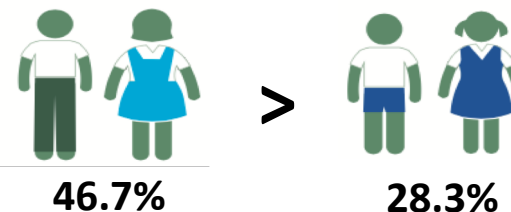
**Regulatory authorities to consider measures to encourage manufacturers to add or increase whole grain in products**

**Main findings #5**  
**Physical activity level**

## Key Findings #5a



**1 in 3 children have low physical activity level**



Prevalence of low physical activity level was **higher** among **secondary school** than **primary school children**.

Prevalence of low physical activity level was **highest** among **secondary school girls (59.5%)**

## Key Findings #5b

Prevalence of  
overweight and obesity was  
**higher**  
among children with  
low physical activity level

## Key Findings #5c

Low physical activity level  
was also observed to be

**higher**

among

**breakfast skippers**  
than breakfast eaters

# Recommendations



**Make participation in physical education compulsory for every child**



**Classes intended for physical education should be strictly utilized for this purpose**



# Promoting optimal child nutrition

- **Findings from MyBreakfast Study to be utilised by all stakeholders to implement effective intervention programmes**
- **Vital that programmes and activities identified through National Plan of Action for Nutrition of Malaysia be implemented effectively**
- **Nutritionists should be assigned to effectively implement nutrition related activities in schools**
- **Interventions must include parents**
- **Strategic partnership among government ministries, private sector and professional bodies is an effective approach to combat nutritional problems**

**Investing in the nutritional wellbeing of children today is the only way to ensure a healthier generation of adult Malaysians tomorrow**

# Acknowledgements

## Research Committee

Dr Tee E Siong (Principal Investigator)  
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Ng Lee Teng

## Funding

Cereal Partners Worldwide, Switzerland  
Nestle R&D Centre, Singapore

We would also like to express our gratitude to the Ministry of Education Malaysia and Department of Education in each of states involved for approving our study. We also thank all the schools, teachers, parents and children who were involved in this study.

# Acknowledgements

## SYMPOSIUM

Supported by:

