MyBreakfast Study of School Children:

Findings, Implications & Solutions

SYMPOSIUM

Presentation 5:

Breakfast foods and beverages choices

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Introduction

- Breakfast consumption has been associated with a healthier body weight, better cognitive and academic performance, higher school attendance, and better mood in children (Rampersaud et al., 2005, Littlecott 2015)

- Children who consume breakfast regularly tend to have higher intakes of total daily energy and key nutrients such as fibre, calcium vitamin A and C, riboflavin, zinc and iron compared to those who skip breakfast (Rampersaud et al., 2005)

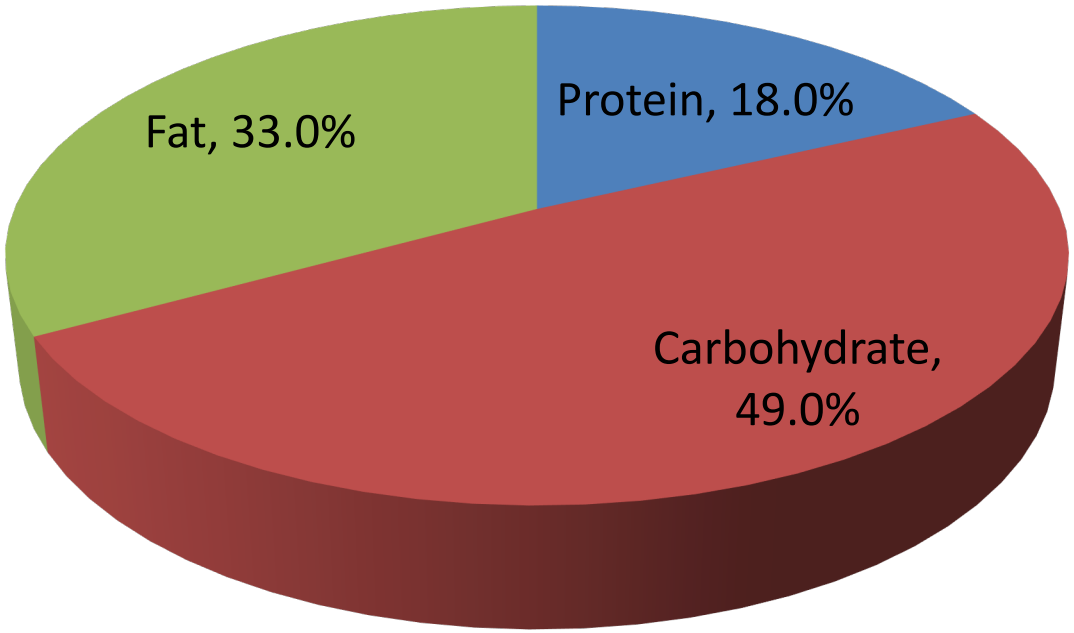
- Few recommendations exist on the nutritional composition of a healthy breakfast but it has been suggested that breakfast should provide about 25% of the daily nutrient needs (Grovenor & Smolin, 2002)

Findings #1

About 49% of the energy consumed by the children came from carbohydrate, 18% from protein and 33% from fat

Overall mean daily energy intake = 1859 ± 354kcal

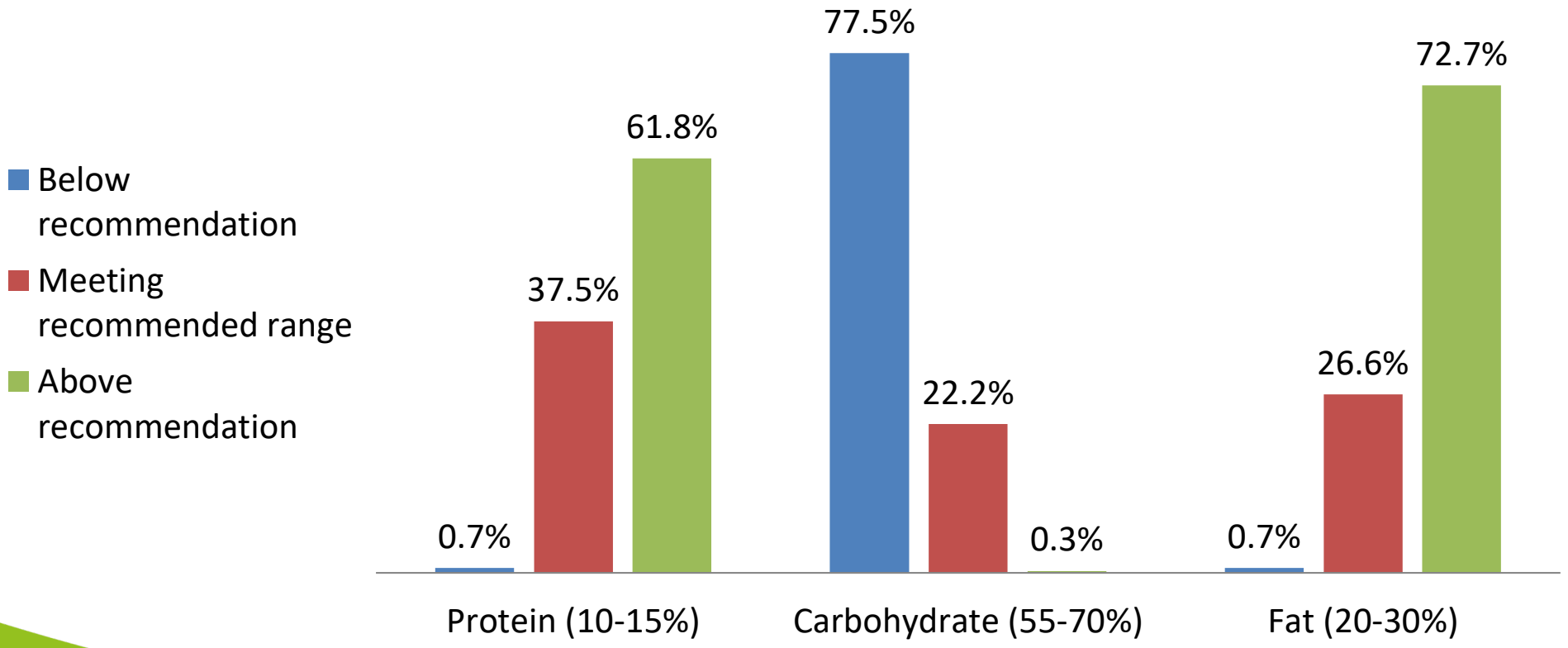
Contribution of macronutrients to total energy intake, %



Findings #2

Almost three-quarters (72.7%) of the children exceeded the recommended percent of energy from fat

% of children meeting recommended percent contribution of macronutrients to total energy intake

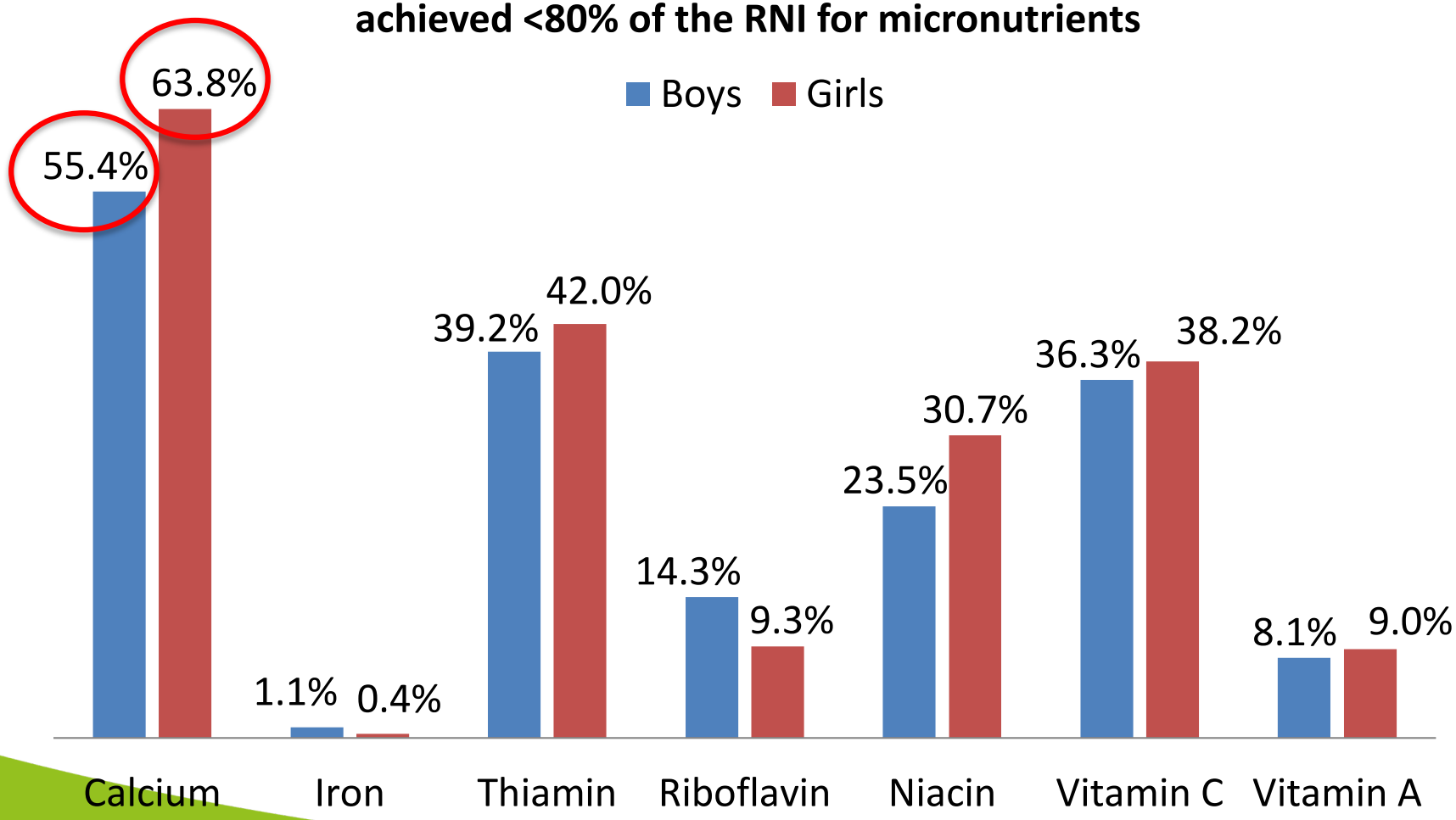


Macronutrients (recommended % contribution), (*n*=2680)

Findings #3a

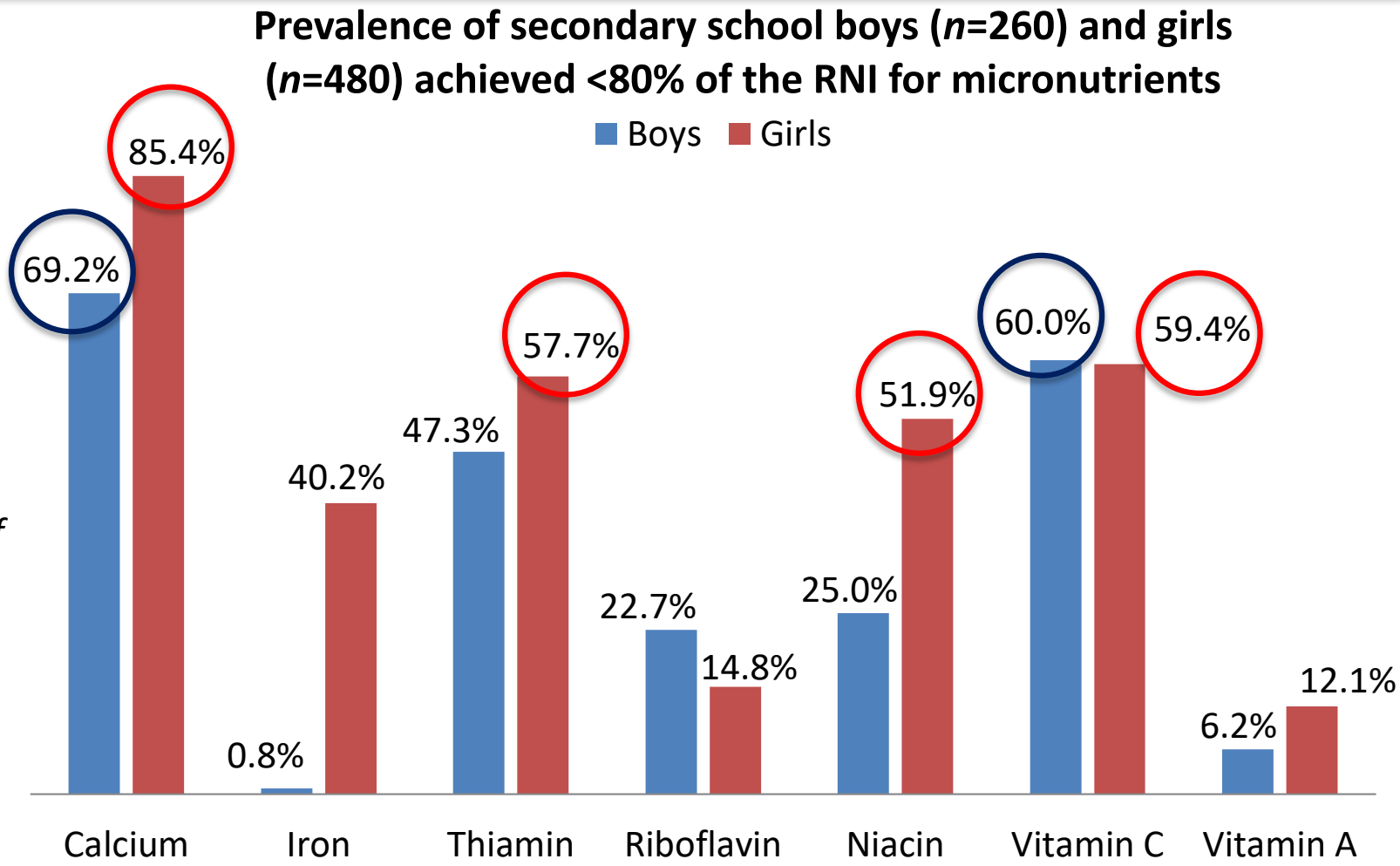
More than 50% of all primary school children did not meet 80% of the RNI for Calcium

Prevalence of primary school boys (*n*=835) and girls (*n*=1174) achieved <80% of the RNI for micronutrients



Findings #3b

More than 50% of secondary school girls did not meet 80% of the RNI for Calcium, Thiamin, Niacin and Vitamin C

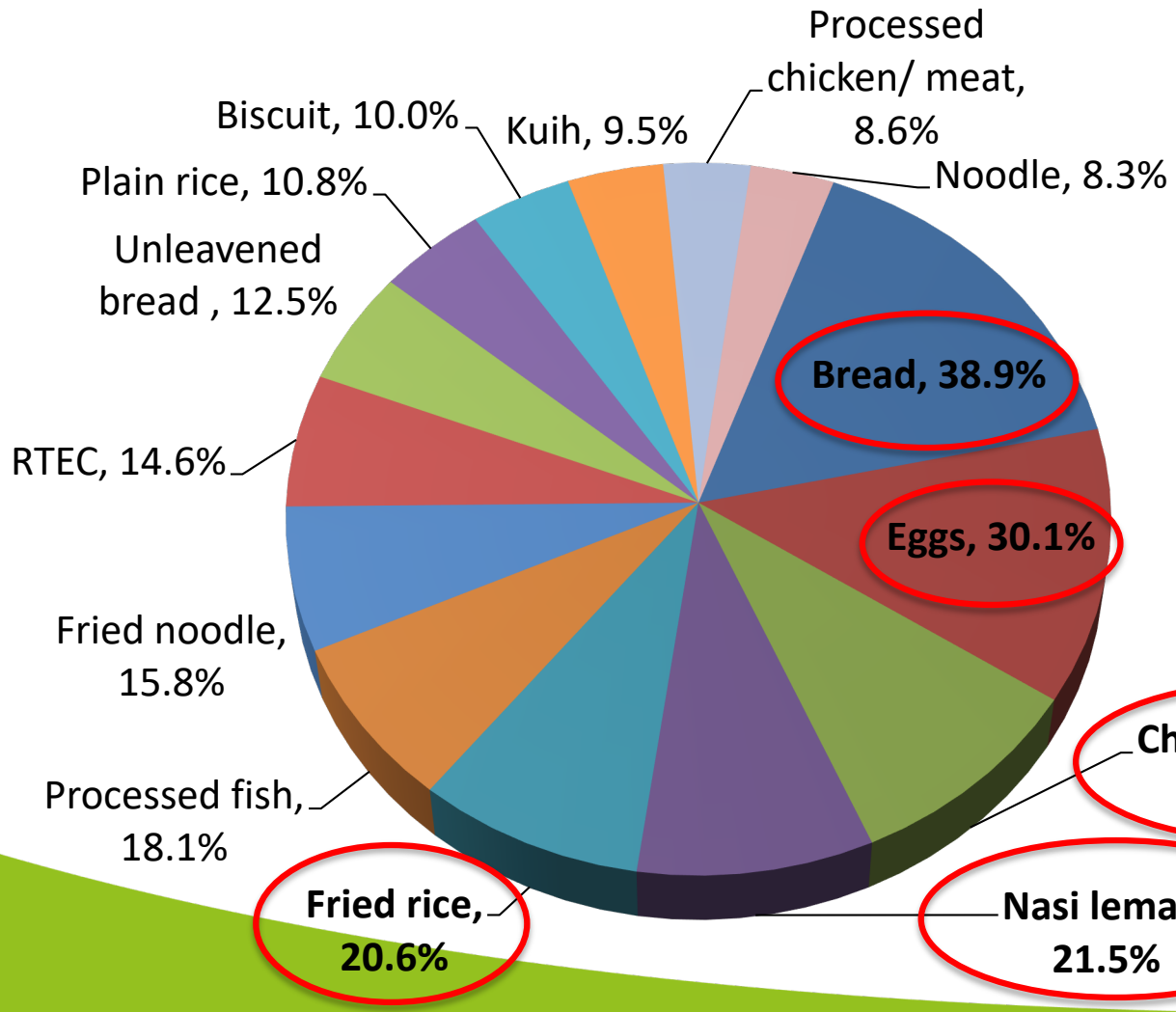


More than 50% of boys and girls did not meet 80% of RNI for Calcium and Vitamin C

Findings #4a

Top 5 Most Commonly Consumed Breakfast Foods

Types of breakfast foods consumed by breakfast consumers (*n*=2749)

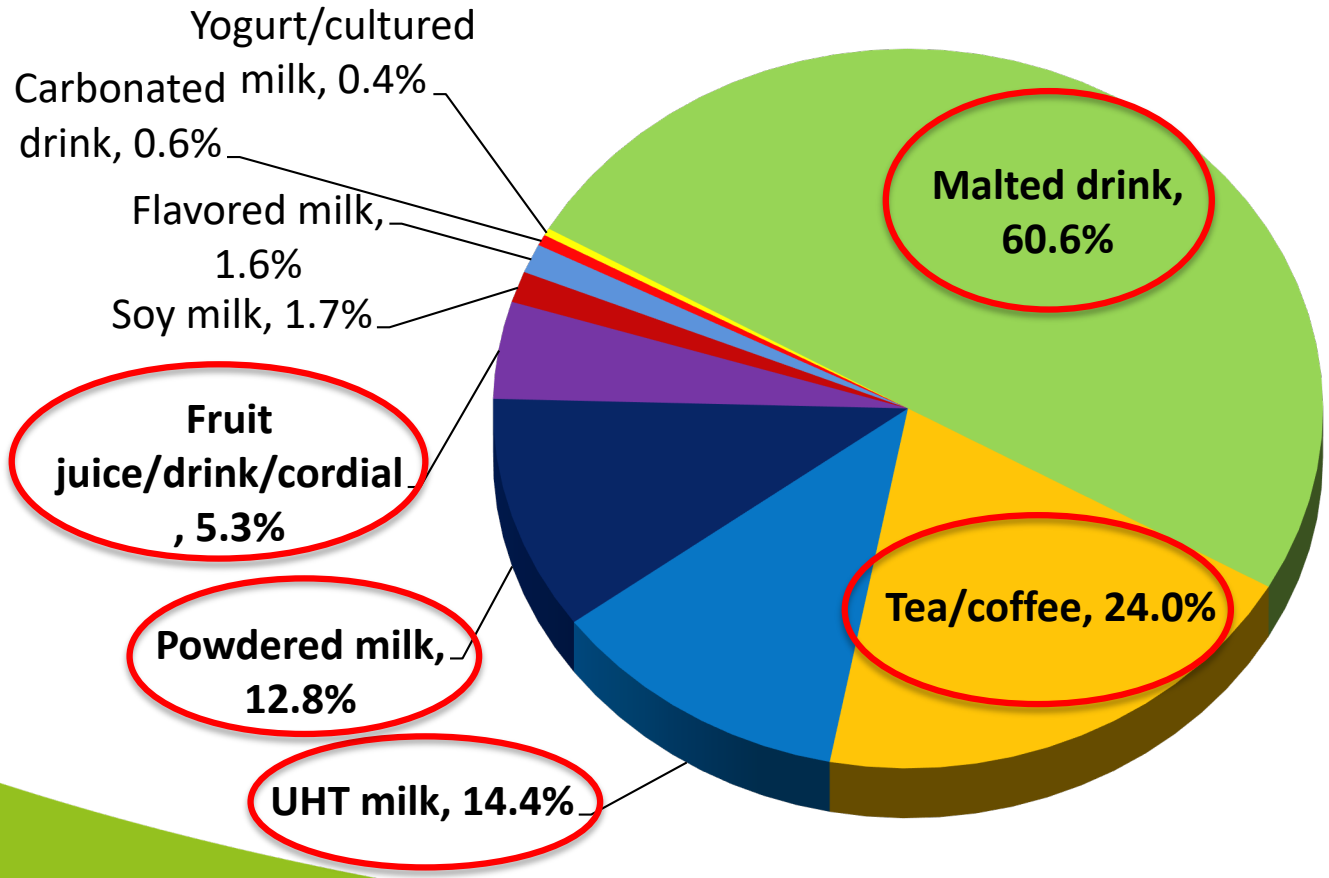


1. **Bread (38.9%)**
2. **Eggs (30.1%)**
3. **Chicken/meat (22.5%)**
4. **Nasi lemak (21.5%)**
5. **Fried rice (20.6%)**

Findings #4b

Top 5 Most Commonly Consumed Breakfast Beverages

Types of breakfast beverages consumed by breakfast consumers (*n*=2680)

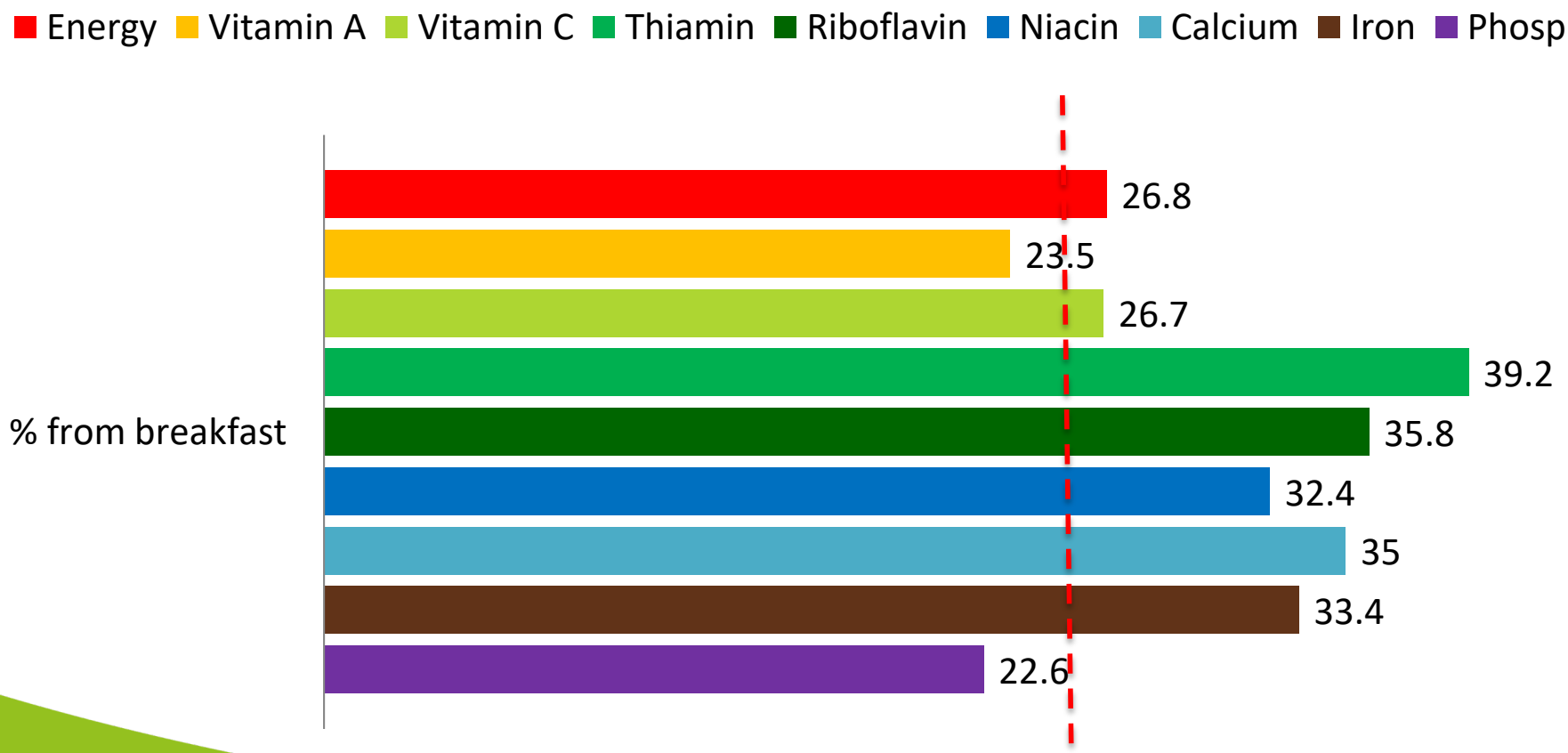


1. **Malted beverages (60.6%)**
2. **Tea/coffee (24.0%)**
3. **UHT milk (14.4%)**
4. **Powdered milk (12.8%)**
5. **Fruit juice/drink/cordial (5.3%)**

Findings #5

Breakfast contributed about 27% of daily energy intake and >30% of daily intakes of calcium, iron & B vitamins

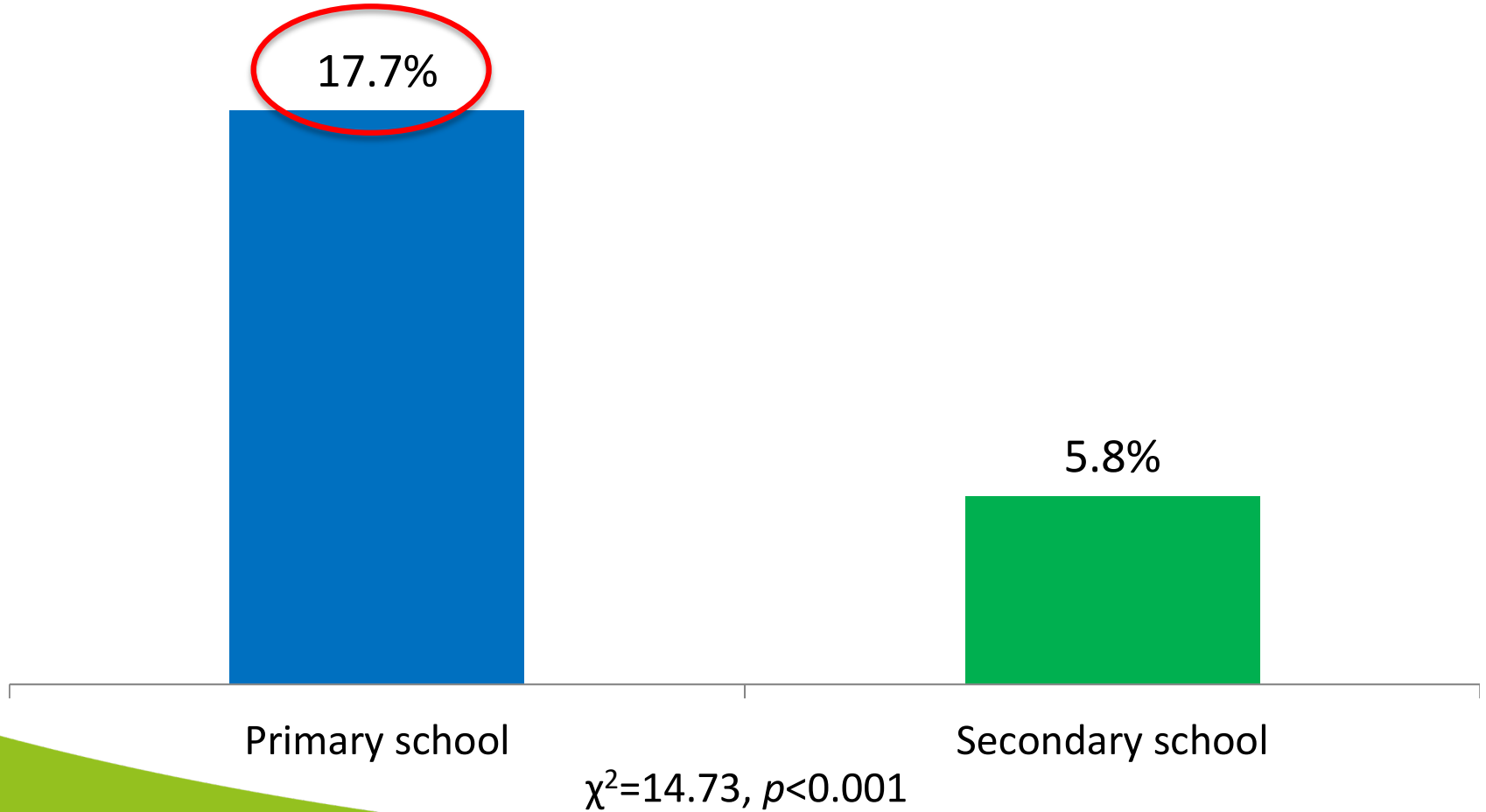
Contribution of breakfast to daily energy and micronutrient intakes (*n*=2680)



Findings #6

About 18% of primary school children consumed RTEC at breakfast

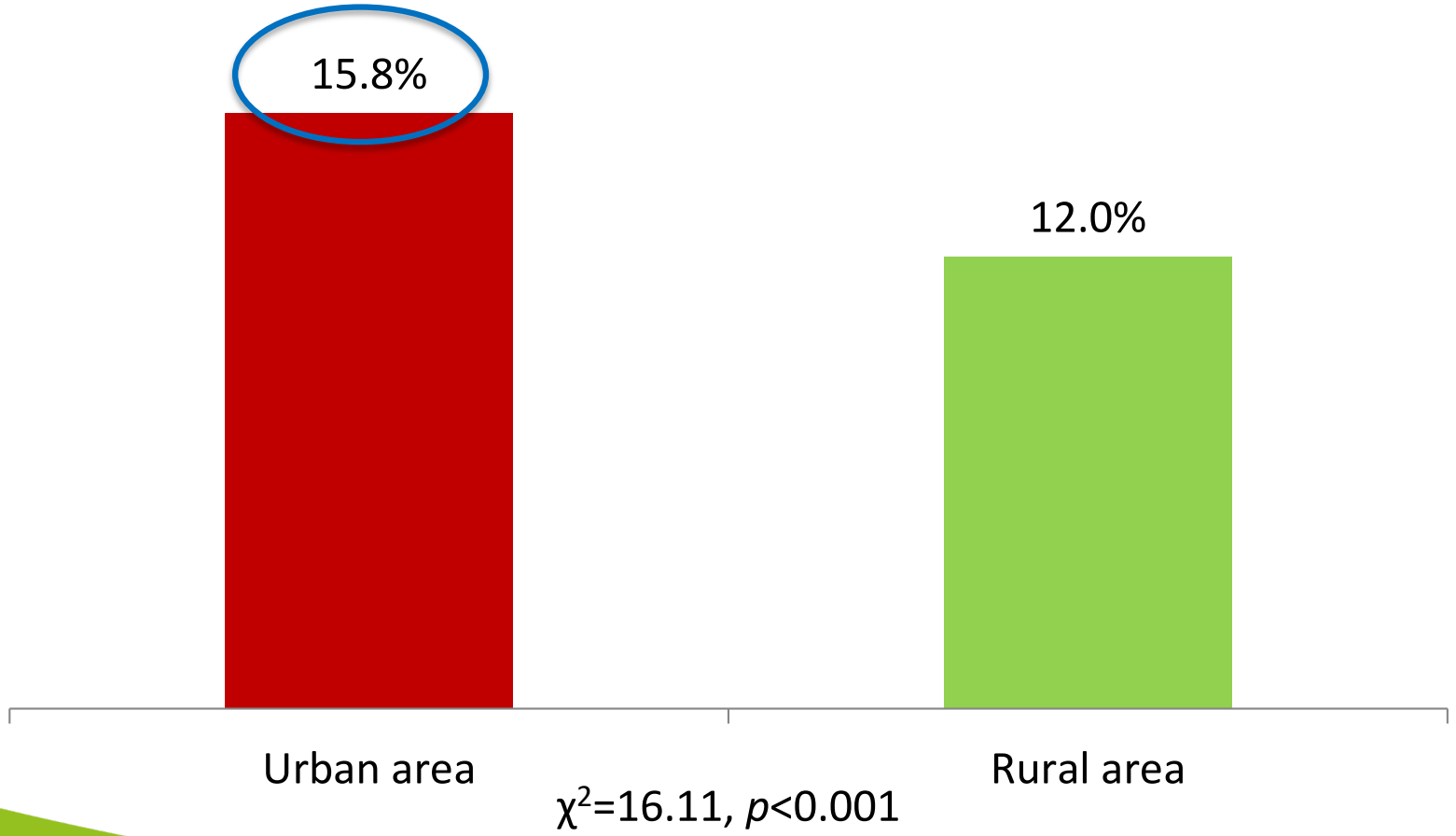
Prevalence of RTEC consumers among primary (*n*=2009) and secondary (*n*=740) school children



Findings #7

Consumption of RTEC was higher among children in the urban than rural location

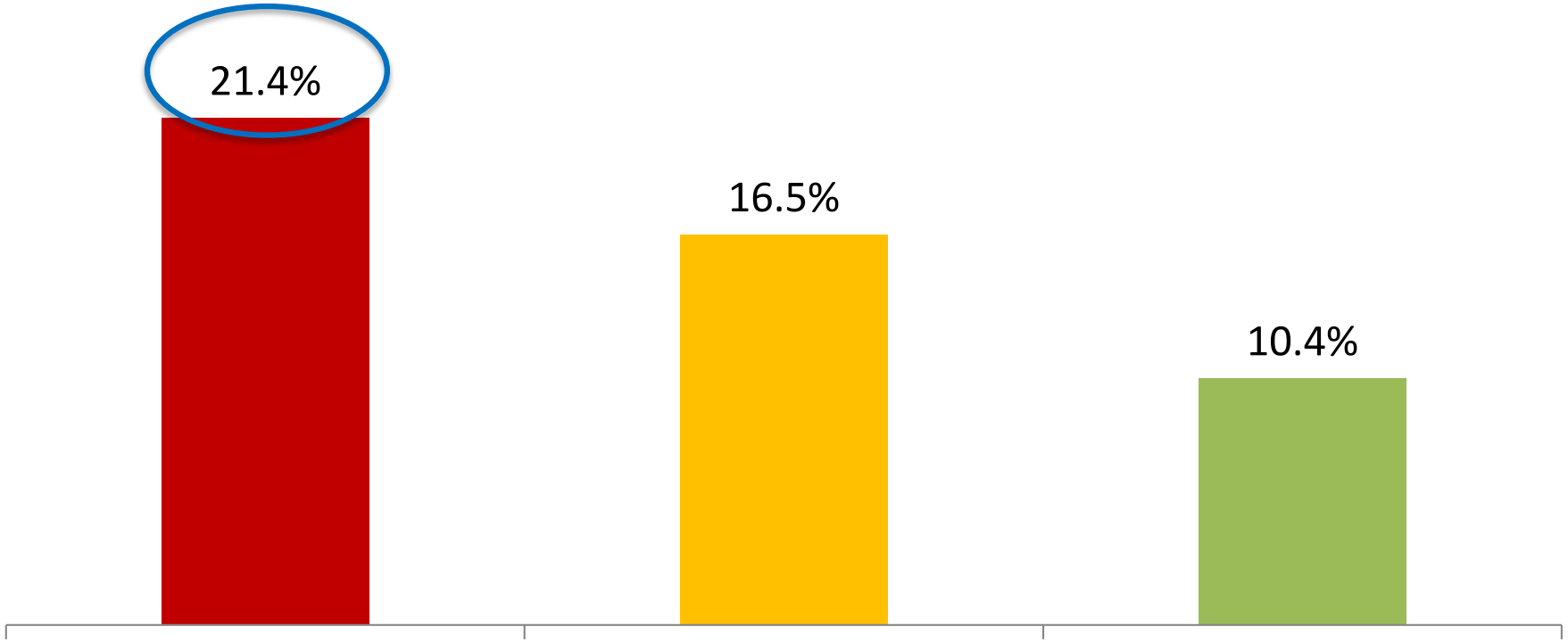
Percentage of RTEC consumers in the urban (*n*=1870) and rural (*n*=879) location



Findings #8

Consumption of RTEC was higher among children from high income families

Prevalence of RTEC consumers by income group (*n*=2627)

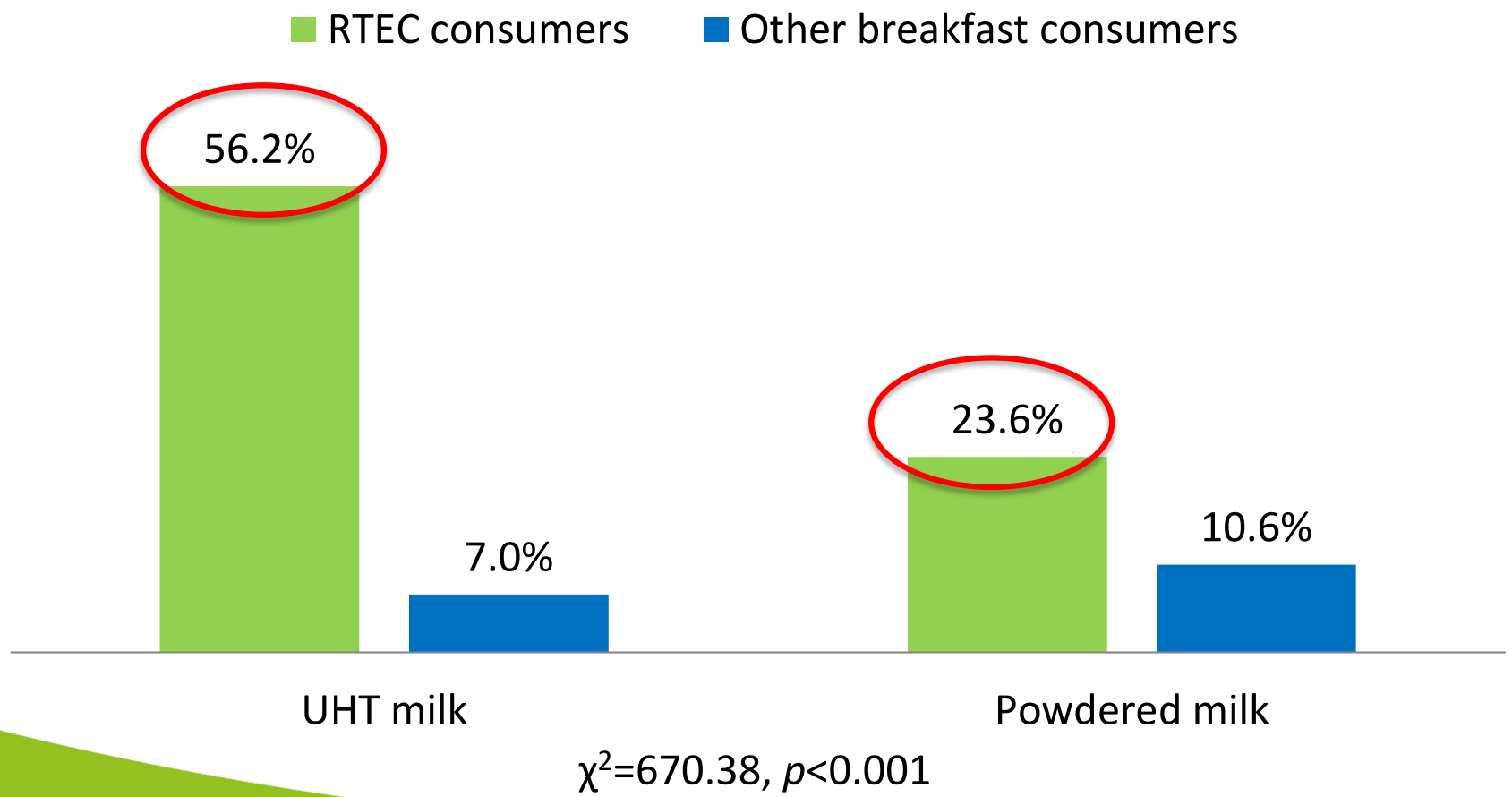


χ^2=17.27, p<0.001

Findings #9

RTEC consumers had higher consumption of UHT milk and powdered milk at breakfast than other breakfast consumers

Percent consumption of milk at breakfast among RTEC consumers (*n*=390) and other breakfast consumers (*n*=2359)

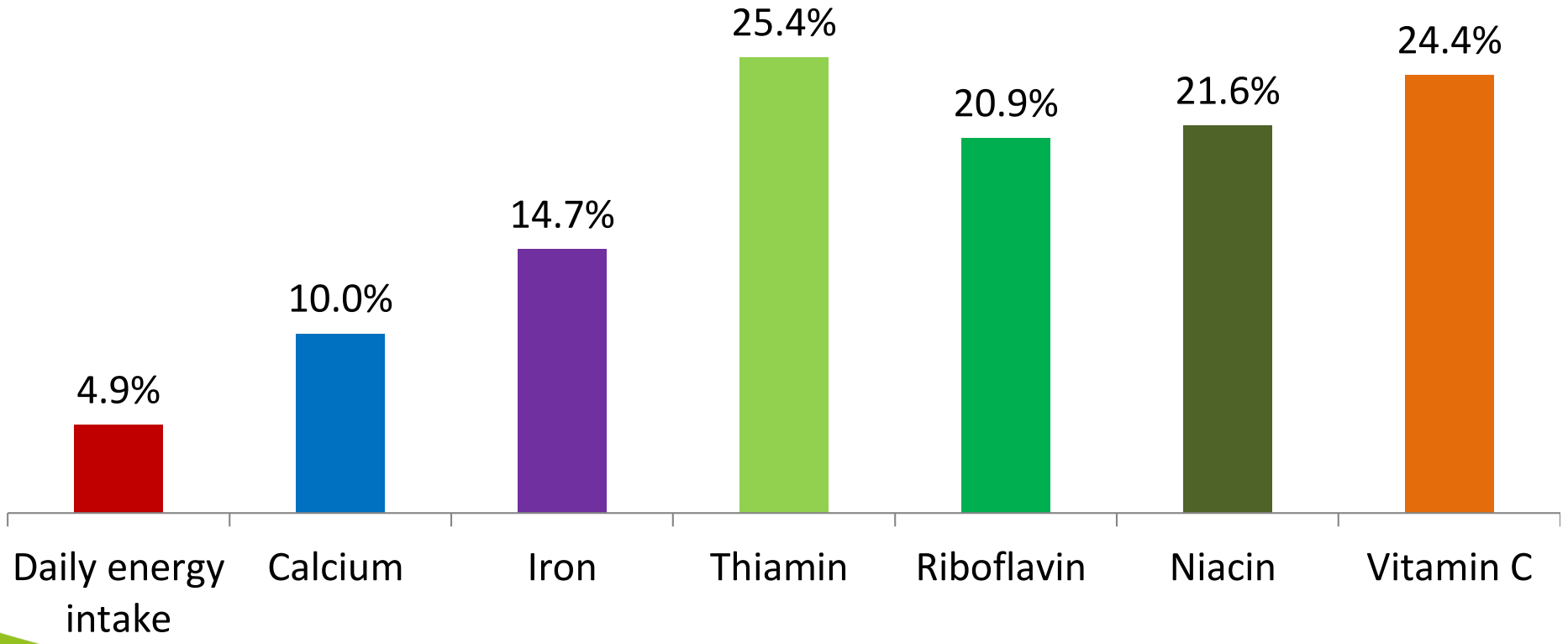


χ^2=670.38, p<0.001

Findings #10

RTECs contributed only 5% to daily energy intake but 20-25% to daily intakes of some B vitamins, 15% to iron intakes and 10% to calcium intake in consumers

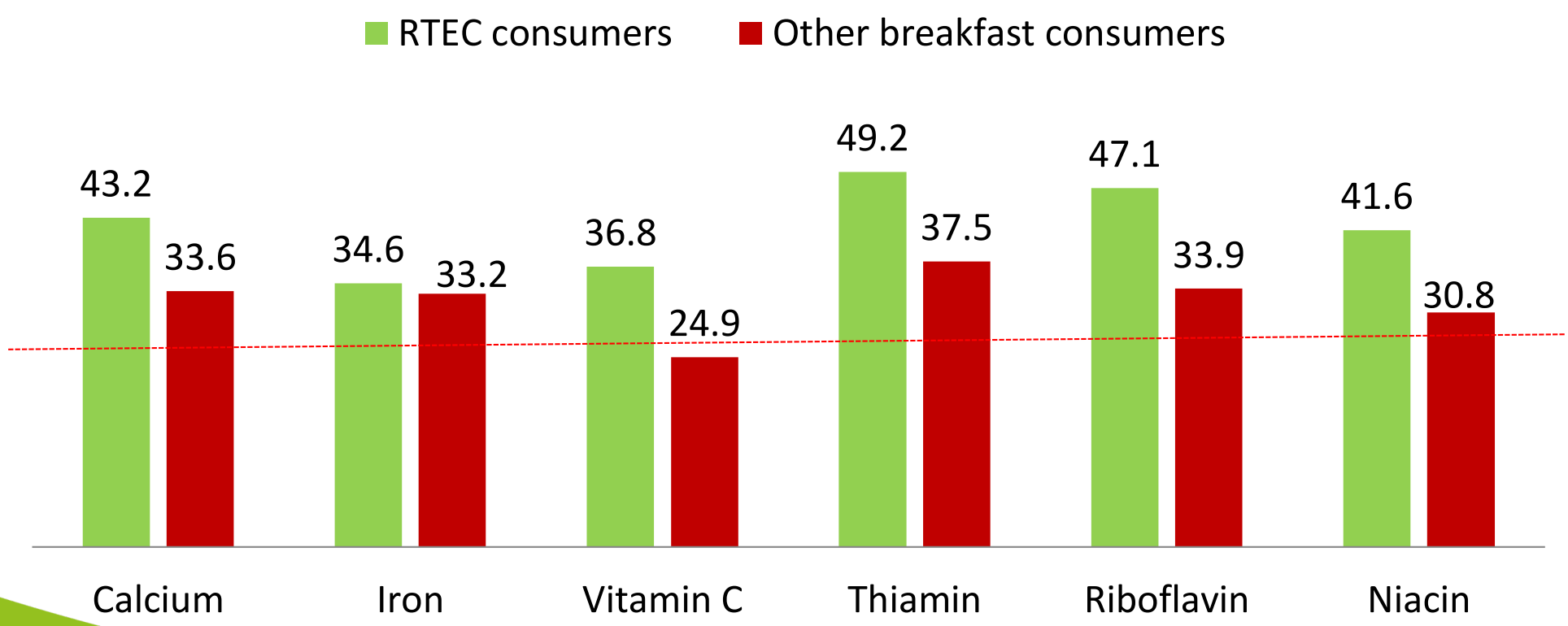
Contribution of RTEC to daily energy and micronutrients intake among RTEC consumers (*n*=390)



Findings #11

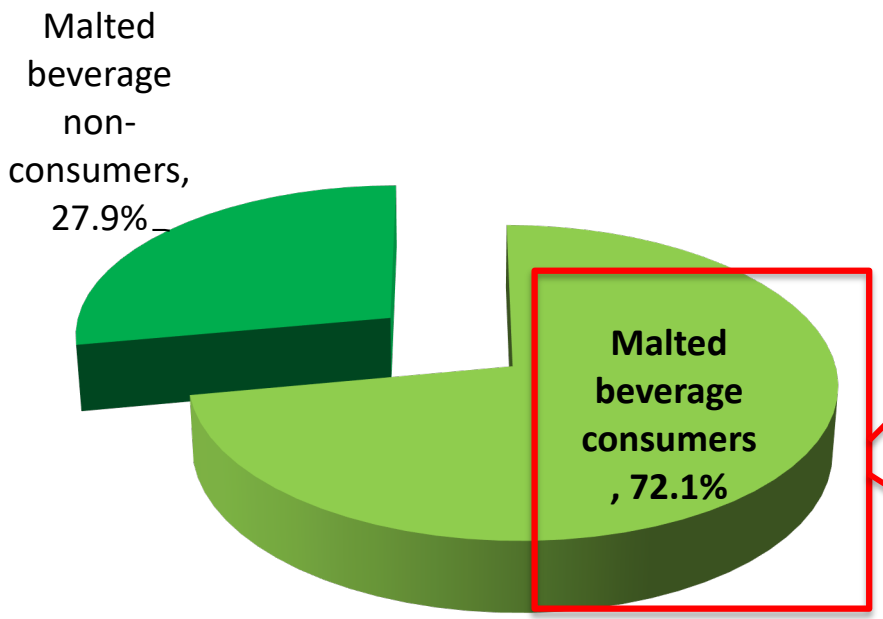
Consumption of RTEC at breakfast contributed to higher intake of calcium, iron, vitamin C and the B vitamins, including thiamin, riboflavin and niacin

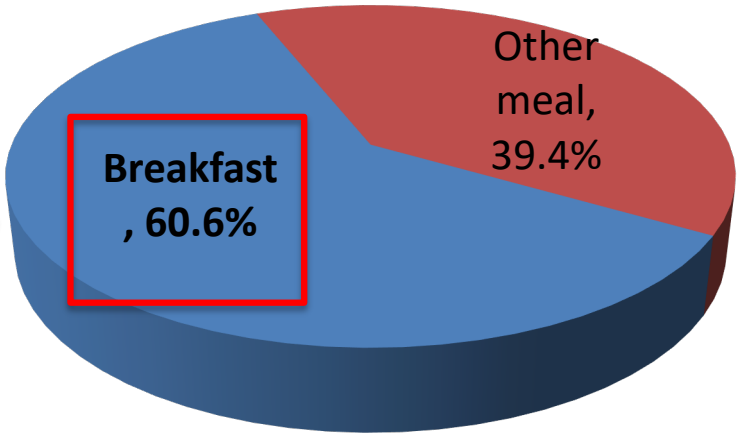
Percent contribution of micronutrient intake among RTEC consumers (*n*=390) and other breakfast consumers (*n*=2359)



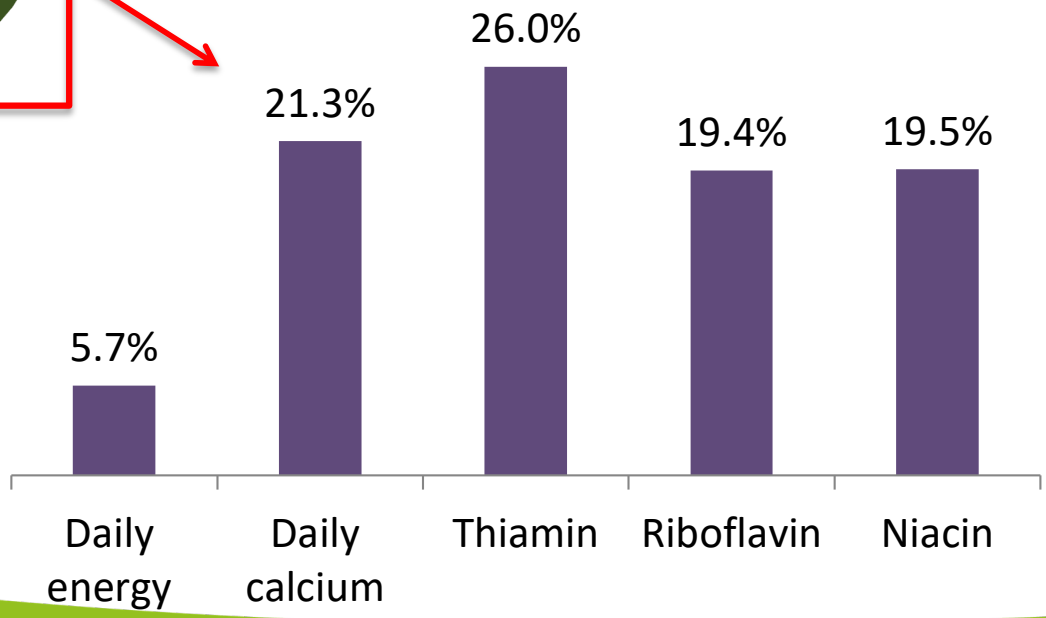
Findings #12

Majority of the malted beverage consumers consumed it at breakfast





Malted drink consumers had similar total energy intake but higher micronutrient intakes than non-consumers



Recommendations

- It is essential that breakfast foods are balanced and nutritious to enable children to have greater achievement of RNI for vitamins and minerals
- Greater emphasis need to be given to consumption of nutritious breakfast among school children. Breakfast meals should not be too sweet, salty or oily, and should be of appropriate serving size for children
- National dietary guidelines should include recommendations on consuming appropriate food and beverages along with recommended serving size to help educate children on how to achieve a balanced breakfast
- Parents should focus on the importance of choosing nutritious and balanced foods and beverages at breakfast especially dairy foods, whole grain based cereal foods and fruit

References

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Thank You