

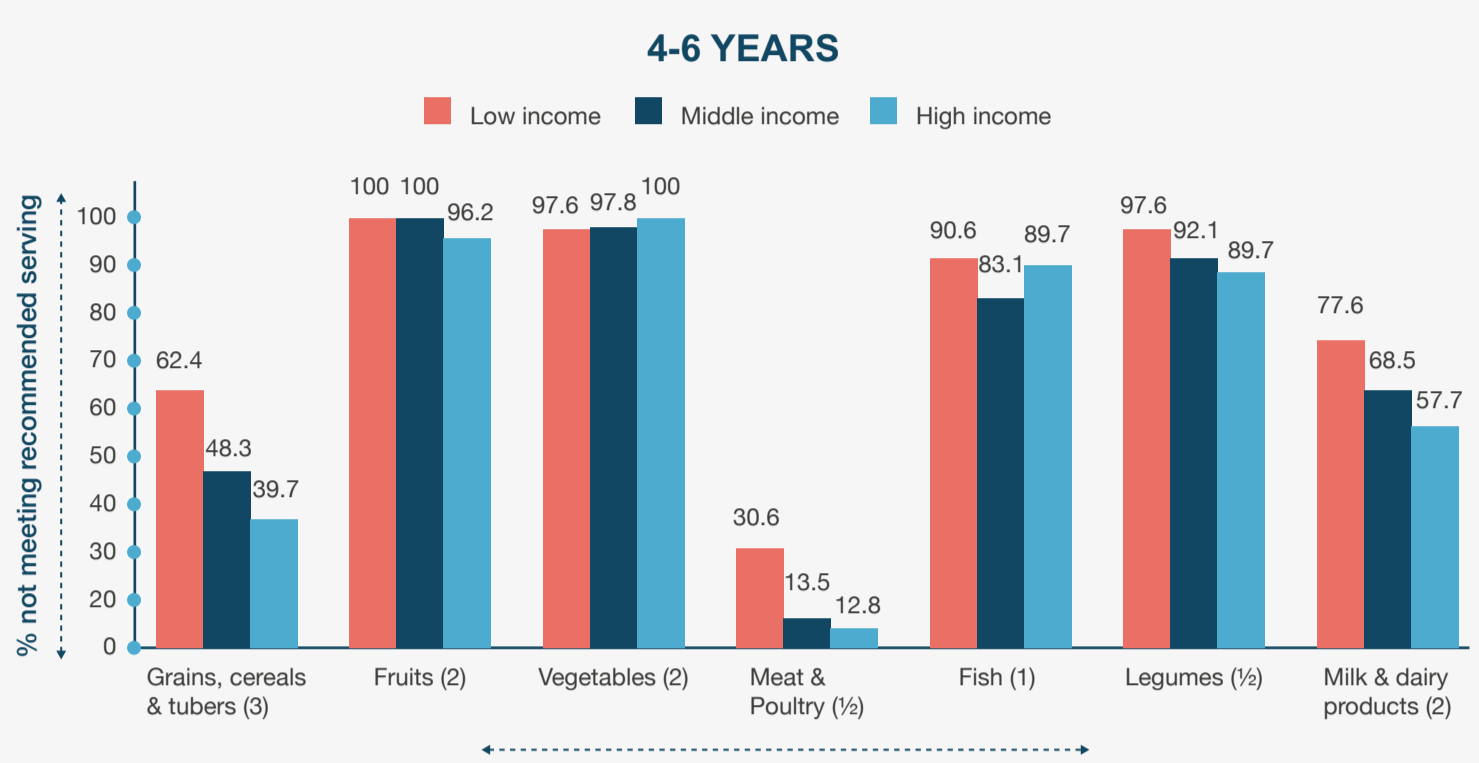
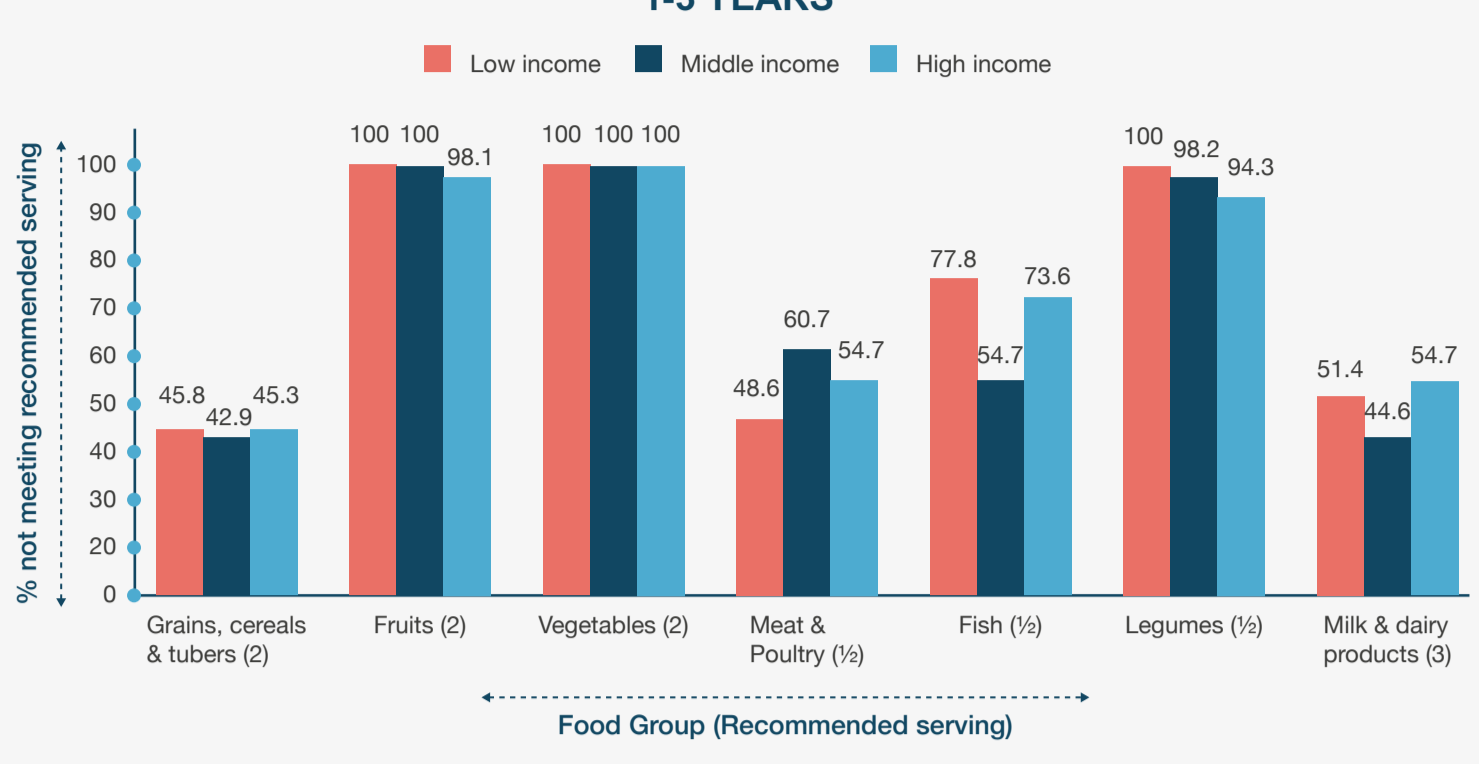
INADEQUATE FOOD AND NUTRIENT INTAKES IN EARLY CHILDHOOD

Early childhood offers a unique window of opportunity to build long-term health. Adequate nutrition is essential in early childhood to prevent stunting, overweight and micronutrient deficiency¹. Child malnutrition is also shown to impact cognitive functions.

A nutrition study of urban Malaysian children has shown that children under 6 years of age do not consume the adequate number of servings from the various food groups².



FOOD GROUP INTAKES OF CHILDREN UNDER 6 YEARS OF AGE²:



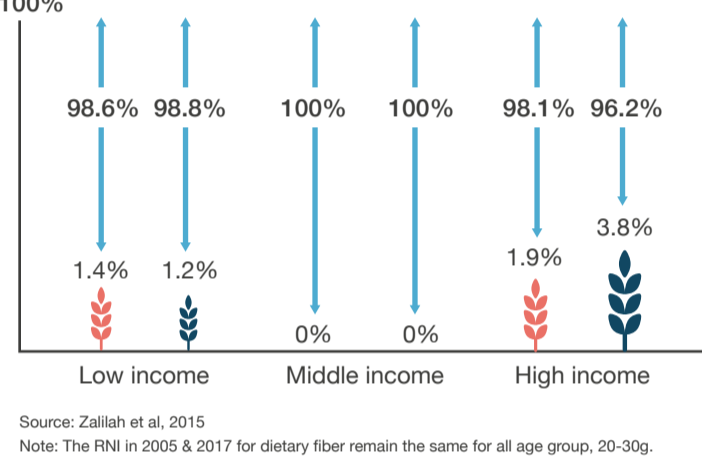
THE INADEQUATE INTAKE OF MAJOR FOOD GROUPS COULD MEAN LOWER INTAKE OF THE FOLLOWING IMPORTANT NUTRIENTS²:

- DIETARY FIBER
- VITAMIN A
- VITAMIN D
- CALCIUM
- IRON

DIETARY FIBER

- Required for maintenance of healthy gastrointestinal function³
- Prevents and treats childhood constipation³
- > 95% of children across all income and age groups in the study did not achieve the recommendations for dietary fiber

CHILDREN NOT ACHIEVING DIETARY FIBER RNI* BY AGE AND HOUSEHOLD INCOME

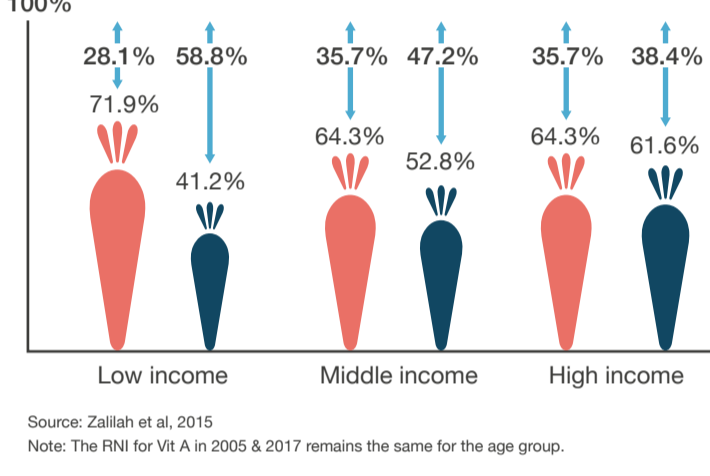


Source: Zailiah et al., 2015
Note: The RNI in 2005 & 2017 for dietary fiber remain the same for all age group, 20-30g.

VITAMIN A

- Supports rapid growth and fights infections⁴
- Deficiency may cause night blindness⁴
- Deficiency may also increase the risk of infections including measles and diarrhea⁴

CHILDREN NOT ACHIEVING VITAMIN A RNI* BY AGE AND HOUSEHOLD INCOME

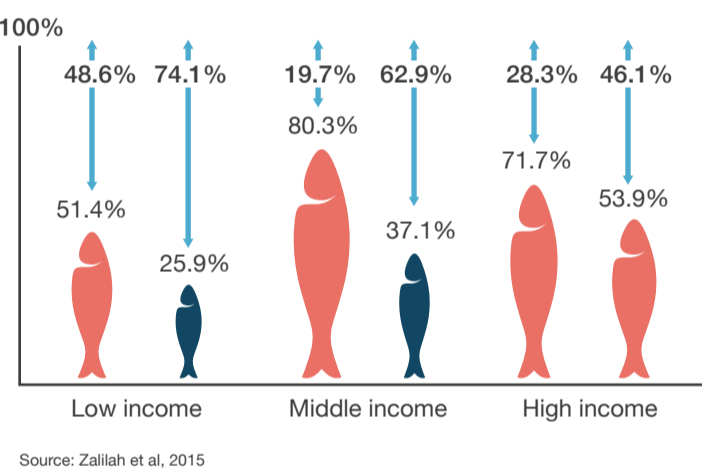


Source: Zailiah et al., 2015
Note: The RNI for Vit A in 2005 & 2017 remains the same for the age group.

VITAMIN D

- Promotes calcium absorption and maintains adequate calcium and phosphate concentration to support bone mineralization⁵
- Supports neuromuscular and immune function modulation and decreases inflammation⁵
- Deficiency may result in thin, brittle and misshapen bones⁵

CHILDREN NOT ACHIEVING VITAMIN D RNI* BY AGE AND HOUSEHOLD INCOME

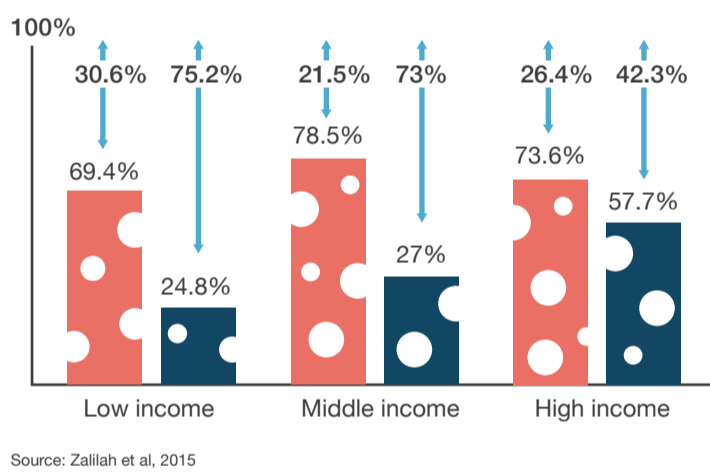


Source: Zailiah et al., 2015
Note: The RNI for Vitamin D increased from 5 ug (2005) to 15 ug (2017) across the age group. This indicates that it is even harder to achieve the recommendation now with the new RNI.

CALCIUM

- Calcium is needed to achieve peak bone mass⁶
- Optimal peak bone mass prevents osteoporosis later in life⁶.

CHILDREN NOT ACHIEVING CALCIUM RNI* BY AGE AND HOUSEHOLD INCOME



Source: Zailiah et al., 2015
Note: The RNI for Calcium increased across the age group. Making the RNI even harder to meet.

IRON

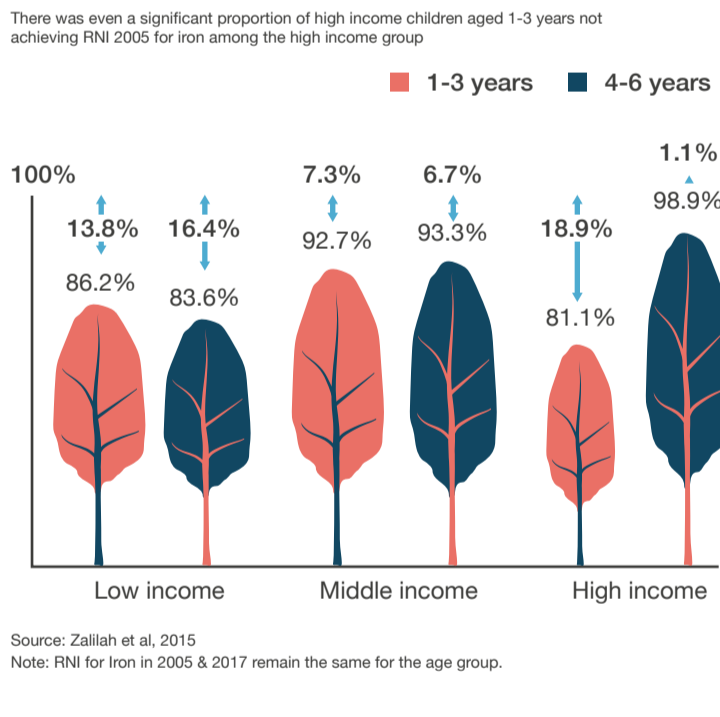
- Iron has many important functions in the immune system and neurodevelopment⁷
- Iron deficiency anemia in infancy may result in poor cognitive and behavioral performance⁷

CHILDREN NOT ACHIEVING IRON RNI* BY AGE AND HOUSEHOLD INCOME



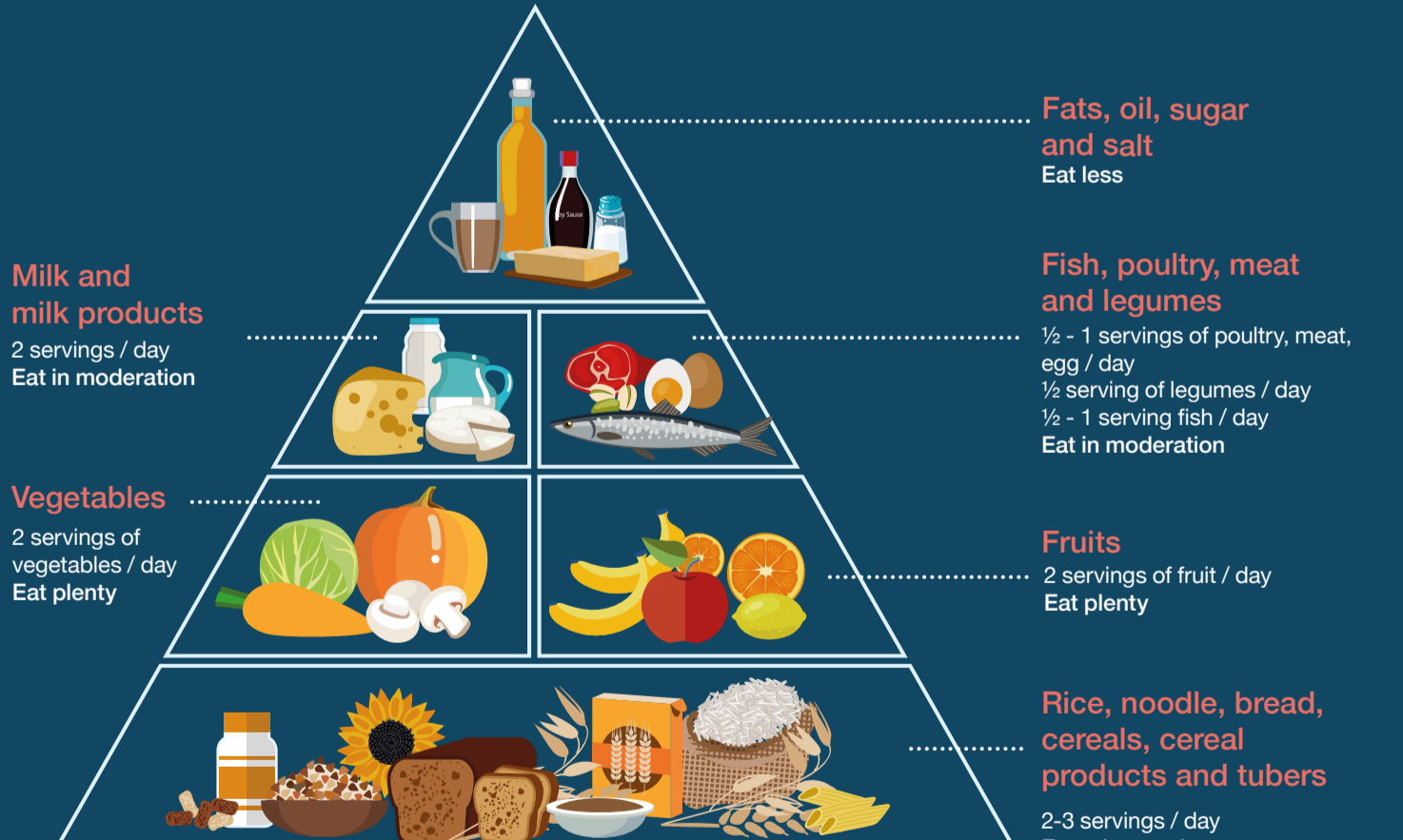
Source: Zailiah et al., 2015
Note: RNI for Iron in 2005 & 2017 remain the same for the age group.

There was even a significant proportion of high income children aged 1-3 years not achieving RNI 2005 for iron among the high income group.



THE MALAYSIAN DIETARY GUIDELINES FOR CHILDREN AND ADOLESCENTS ADVOCATES A DAILY DIET OF RECOMMENDED NUMBER OF SERVINGS FROM DIFFERENT FOOD GROUPS BASED ON THE MALAYSIAN FOOD PYRAMID FOR CHILDREN.

THE MALAYSIAN FOOD PYRAMID FOR CHILDREN AGED 6 YEARS AND BELOW:



NUMBER OF SERVINGS BASED ON DAILY ENERGY NEEDS:

Food Groups	600 (6-8 months)	700 (9-11 months)	900 (1-2 years)	1000 (3 years)	1300 (4-6 years)
Cereals, cereal based products and tubers	¾ serving	1 serving	2 servings	2 servings	3 servings
Vegetables	½ serving	1 serving	2 servings	2 servings	2 servings
Fruits	½ serving	1 serving	1 serving	2 servings	½ serving
Meat/Poultry, fish & legumes	¼ serving	¼ serving	½ serving	½ - 1½ serving	½ serving
Milk & milk products	Continue breastfeeding on demand		Breastfeeding on demand + 1-2 cups of milk	2 servings	2 servings
Fats & oils	2 teaspoons	1½ teaspoon	1 teaspoon	-	-

Note: Energy requirements are rounded up to the nearest hundred.

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This infographic is developed in collaboration with Prof. Dr. Zailiah Mohd Shariff, Universiti Putra Malaysia.