

BMC Nutrition | 基于 24 小时膳食回顾法调查中国城市地区婴幼儿饮食中的能量和营养素来源

本文关键字： 能量、营养素、中国城市地区、婴幼儿、喂养模式

影响因子： 无

建议阅读时间： 2 分钟

背景

目前有关我国婴幼儿营养素食物来源的研究很少，本研究旨在通过分析中国城市地区婴幼儿饮食中的能量和营养素来源，来了解婴幼儿的喂养模式。

方法

本项研究是明研究的一部分，通过与主要照料者进行面对面访谈，对 1409 名儿童（6-11 个月婴儿、12-23 个月幼儿以及 24-36 个月较大幼儿）进行了一次 24 小时膳食回顾。记录儿童在前一天摄入的所有食物、饮料和膳食补充剂，并使用包含中国食品成分表数据在内的数据库对结果进行了处理。所有报告的食物和膳食补充剂均被分配到本次研究中开发的 83 个食物组的一组中，然后计算每一食物组对营养素摄入量的贡献率。

结果

所有 3 个年龄段的儿童都是从少量食物中摄入了大部分能量（52%-69%），包括婴儿配方奶或成长（强化）奶、大米、面条、猪肉、鸡蛋等。其中大米成为 24 个月内的最主要能量来源。大米和面条不仅是最主要的能量（17-26%）和碳水化合物（27-40%）来源，也是蛋白质（13-16%）、铁（13-18%）和锌（11-18%）的最主要来源。膳食补充剂对维生素 A、锌、铁和钙的贡献很大，在家庭烹饪中添加的盐是钠的主要来源（60-80%）。

结论

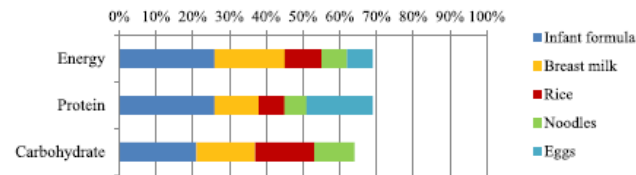
中国城市地区婴幼儿的饮食仅由少量食物构成，营养素密度较低的大米和面条成为很多营养素的主要来源，这可能会潜在地导致部分关键营养素摄入不足。

Table 1 Food group classifications among infants and toddlers 6–35 months from the MING study

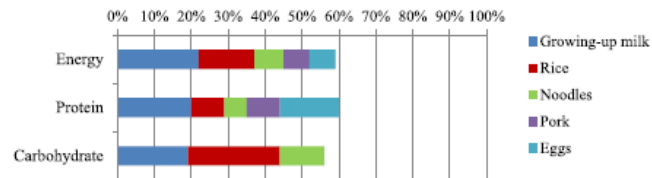
<i>Milk and milk products</i>	<i>Other grains/grain products^e</i>	<i>Peaches/nectarines/plums</i>
Breast milk	Flour/baking ingredients ^f	Pears
Infant formula	<i>Vegetables</i>	Grapes
Growing-up milk ^g	Broccoli	Melons
Milk ^b	Chinese cabbages	Dried fruits
Soy milk	Coles	Other fruits ⁱ
Cheese	Celeries	100 % juice
Yogurt	Carrots	Baby food fruits
<i>Meat/poultry/fish/meat alternates</i>	Corn	<i>Desserts and sweets</i>
Beef	Green beans	Cakes/pies
Lamb	Eggplants	Cookies
Sausages	Peas	Ice cream
Pork	Potatoes	Honey
Organ meats	Pumpkins	Chocolates
Chicken/duck	Spinach	Candy
Fish/shellfish/shrimps	Sweet potatoes/yams	Sugar/syrups/jams/jellies/other sweeteners
Eggs ^c	Tomatoes/tomato sauce	Other desserts
Other meat ^d	Pickles	Sweetened beverages
Soy/tofu/meat substitutes	Other root vegetables ^g	<i>Other</i>
Nuts/seeds	Other leafy vegetables ^h	Salad dressings/mayonnaise
Baby food meat	Other baby food vegetables	Oil/other fats ^j
<i>Grains and grain products</i>	<i>Fruits</i>	Condiments ^k
Infant cereal	Apples/applesauce	Chips/puffed food/other salty snacks
Bread/biscuits	Apricots	Salts ^l
Pancakes/sesame seed cakes	Kiwi fruits	Soups
Noodles	Dragon fruits	Other beverages ^m
Rice	Mangoes	<i>Supplements</i>
Millets	Jujube	Vitamin and mineral supplements
Steamed bread	Bananas	Other supplements
Cornmeal	Berries	
Other baby food grains	Citrus fruits	

^aFortified milk for young children^bIncludes cow's milk and goat's milk^cIncludes eggs reported separately and eggs included in disaggregated food mixtures^dIncludes donkey, horse, dog, rabbit and turkey meat^eIncludes buckwheat, barley, glutinous rice, highland barley and sorghum^fIncludes flour, com-starch, yeast and baking powder included in disaggregated food mixtures^gIncludes white radish, asparagus, water chestnut, lotus root, onion, winter squash and bean sprout, peppers, cucumbers, mushrooms and balsam pear^hIncludes Chinese leeks, baby cabbage, lettuce, coriander, fennel, heartleaf houttuymia herb, fiddlehead, crown daisy and Shepherd's purseⁱIncludes pineapple, cherries, papaya, hawthorn, persimmon, pomegranate, coconut and mangosteen^jIncludes olive oil, soybean oil, canola oil, lard oil, butter and fats included in disaggregated food mixtures^kIncludes shallot, garlic, ginger, Chinese red pepper, peppermint, vinegar, soy sauce and other condiment sauces^lIncludes cooking salts and salts included in disaggregated food mixtures^mIncludes unsweetened tea and coffee and alcoholic beverages

6-11 months



12-23 months



24-35 months

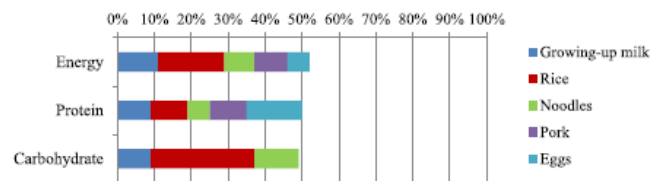
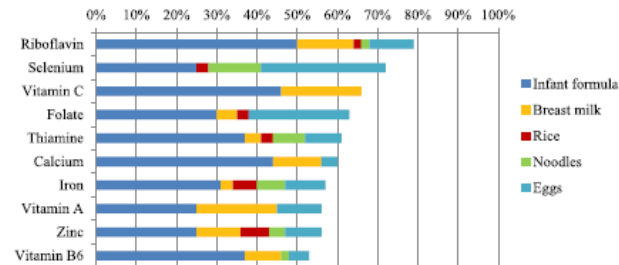


Fig. 1 Percent contribution of top 5 foods of energy to intakes of energy, protein and carbohydrate of infants and toddlers from the MING study

6-11 months



12-23 months

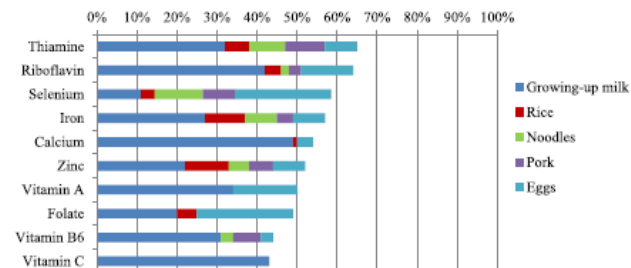
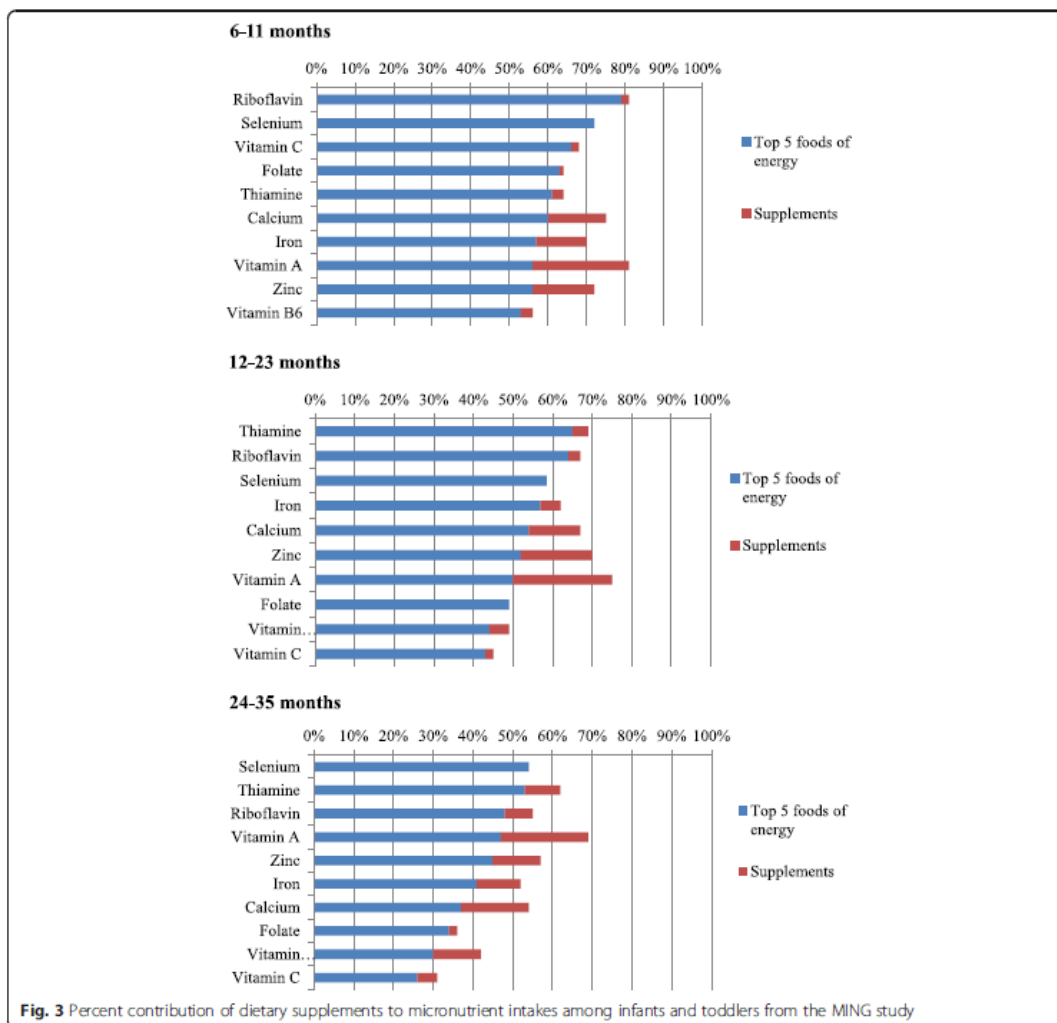


Fig. 2 Percent contribution of top 5 food sources of energy to intakes of micronutrients among infants and toddlers from the MING study



参考文献:

Huan Wang, et al. BMC Nutrition (2015) 1:19

文献链接: <https://link.springer.com/article/10.1186/s40795-015-0014-x>

