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Recommended Citation

Kolanu, N and Meyer, B J.: The polyunsaturated fatty acid intakes of children from the Kids Eat Kids Play Survey 2010, 104-104.

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Keywords

intakes, children, kids, eat, polyunsaturated, play, fatty, survey, acid

Disciplines

Arts and Humanities | Life Sciences | Medicine and Health Sciences | Social and Behavioral Sciences

Publication Details

Kolanu, N. & Meyer, B. J. (2010). The polyunsaturated fatty acid intakes of children from the Kids Eat Kids Play Survey. In Conference Abstracts Nutrition Society of Australia and Nutrition Society of New Zealand 2009: IV, 8-11 Dec, 2009, Newcastle, Australia. *Australasian Medical Journal*, 1 (1), 104-104.



Concurrent Session 17: Paediatric Nutrition

Please cite this paper as: Conference Abstracts Nutrition Society of Australia and Nutrition Society of New Zealand 2009: IV. AMJ 2010, 1, 1, 28-45. Doi 10.4066/AMJ.2010.208

The polyunsaturated fatty acid intakes of children from the Kids Eat Kids Play Survey

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Background

The Kids Eat Kids Play survey is the first national survey of Australian children's nutrition since 1995 and the first national physical activity survey since 1985. The National Health & Medical Research Council (NHMRC) Nutrient Reference Values recommend Adequate Intakes (AI) for linoleic acid (LA), alpha-linolenic acid (ALA) and long chain omega-3 polyunsaturated fatty acids (LC n-3 PUFA) ranging from 5-12 g/day, 0.5-1.2 g/day and 40-125 mg/day respectively, depending on age and gender. The NHMRC also recommend Suggested Dietary Targets (SDT) for optimising diets for lowering chronic disease risk and the SDT for LC n-3 PUFA is 500 mg/day.

Objective

To determine the current PUFA intakes, including the LC n-3 PUFA, with comparison to AI and SDT and to determine potential differences in intakes between children of different body weight and physical activity levels.

Design

The demographic and nutrient data files were merged for 4834 children aged 2-16 years.

Outcomes

The mean (median) PUFA intakes for 2-3 yrs, 4-8 yrs, 9-13 yrs, 14-16 yrs are as follows: linoleic acid (g) 5.2 (4.3), 6.7 (5.7), 8.3 (6.9), 9.7 (8.3) respectively; alpha-linolenic acid (g) 0.85 (0.71), 1.03 (0.86), 1.16 (0.99), 1.36 (1.17) respectively; LC n-3 PUFA (mg) 116 (47), 124 (55), 168 (67), 168 (78) respectively.

Children met the AI for linoleic acid and alpha-linolenic acid, but only approximately 50% of children met the AI for LC n-3 PUFA. Furthermore, only 7% of the children met the SDT of 500mg LC n-3 PUFA per day for each of the age groups, accounting for total energy intake. Comparison of LC n-3 PUFA tertile intakes showed no differences in 1) LC n-3 PUFA intakes in underweight, normal weight, overweight and obese children and 2) mean physical activity levels.

Conclusion

The majority of children need to increase their LC n-3 PUFA intakes to meet the SDT.

Soft drink consumption among Australian children

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Background

A high intake of sugary drinks contributes to obesity and other adverse health outcomes such as type 2 diabetes, metabolic syndrome, dental caries, and osteoporosis. Soft drinks, or sugar-sweetened carbonated beverages, are the most popular sugary drinks in Australia. Although they are identified as an 'extra' food in the Australian Guide to Healthy Eating, they are consumed in large quantities by a significant portion of the population.

Objective

To examine the soft drink consumption patterns of Australian children using the National Nutrition Survey 1995 and the more recent 2007 Children's Survey.

Design

Sugar-sweetened soft drink consumption patterns were analysed by age and gender using one day 24-h recall data from the NNS 1995 (children aged 2-18 yr) and the 2007 Children's Survey (children aged 2-16 yr).

Outcomes

The NNS 1995 found that about a quarter of 2-7 yr olds, a third of 8-15 yr olds and half of 16-18 yr olds consumed soft drinks. Boys tended to consume more soft drink than girls, with boys aged 16-18 yr drinking an average of 480 mL per day (or 840 mL per day among those who consumed soft drink), double the consumption of girls that age. The more recent Children's Survey found similar results, with a third of 8-15 yr olds and 40% of 16 yr olds consuming soft drinks, although the proportion of 2-7 yr old consumers was lower (at 14%). Boys aged 12-16 yr were the highest consumers (17-18 yr old children were not included in this survey) with an average intake of 240 mL per day, or 580 mL per consumer per day. Per capita consumption of soft drinks was somewhat lower in the Children's Survey compared to the previous national survey. Direct comparisons between the surveys are limited due to differences in sampling frame, age groups, and collection of dietary data.

Conclusion

Soft drinks are consumed in excessive amounts by Australian children. Although the level of intake may be moderating, public health interventions to further reduce consumption are needed.