

The Relationship Between Nutrients and Foods in Children's Diets

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Dietary intake data from 822 nine- and ten-year-old girls enrolled in the Richmond, CA site of the NHLBI Growth and Health Study were examined. Fifty percent of the girls were black, 50 percent white. Each girl kept a three-day food diary and completed a nutrition patterns questionnaire. Sociodemographic information was collected from parents and guardians.

Three-day average nutrient intakes were calculated and examined by race, family income, and maximal parental education level. Percent kilocalories from fat, percent kilocalories from saturated fat, vitamin C, and calcium were independently associated with race, family income and parental education level. Percent kilocalories from polyunsaturated fat was associated with race. No differences between groups were found for kilocalories, protein or vitamin A. Significant interactions between variables were found for total fat intake and iron.

Contributions of specific foods to nutrient intake were examined for each sociodemographic grouping and found to vary with race, family income, and parental education. Patterns of eating were also related to nutrient intake. The data suggest that changing dietary intake and eating patterns of children are related to changes in family lifestyle and food supply.

In conclusion, the constructs by which nutrition professionals assess the dietary intake of children or develop nutrition intervention programs must be based on an understanding of the current relationship between foods, nutrients, and eating patterns in this subgroup of the population.