



Key Messages

- March is Nutrition Month® in Canada. The theme of the 2004 campaign, *Eat Well, Play Well*, highlights the importance of healthy eating and active living in optimizing growth and development in school age children six to 17 years old.
- North American and Canadian data show low median intakes for most of the food groups of *Canada's Food Guide to Healthy Eating* in both males and females of all ages.
- Over half of children and youth aged five to 17 are not active enough for optimal growth and development.
- Many projects and programs targeted at children and youth are currently underway. Establishing a national surveillance program capable of providing longitudinal data remains a priority.

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This issue of *Nutrition File*™ for *Health Professionals* was reviewed by John Spence, Ph D (University of Alberta), Kate Calengor, Ph D student (University of Alberta), Helen Bishop MacDonald, M.Sc., RD, FDC (Dairy Farmers of Canada), Marg Schwartz (Alberta Learning) and Kerri Staden, RD (Calgary Health Region). Their contributions are greatly appreciated.

Reality Check (Part 1): The Health of Our Youth

March is Nutrition Month® in Canada. The theme of the 2004 campaign, *Eat Well, Play Well*, highlights the importance of healthy eating and active living in optimizing growth and development in school age children six to 17 years old.

The past several years have seen increasing amounts of attention directed towards understanding the interactions between eating habits and physical activity patterns and health in children and youth. At the same time, there is a growing awareness that the experiences of children and youth in contemporary society vary greatly from those of their parents and grandparents and significant challenges exist for young people striving to develop sound eating habits and physical activity patterns.

This issue of the *Nutrition File*™ for *Health Professionals* describes the food habits and physical activity patterns of children and youth. It highlights some of the factors that shape and influence the food choices of young people. The next edition of *Nutrition File*™ for *Health Professionals* will focus on the results of *The Alberta Healthy Schools Initiative: Beyond an Apple a Day (BAAAD)*, a project measuring activity and nutrition patterns of youth and their schools.

Nutritional Status and Physical Activity Patterns of Children and Youth

Limited data exist that describe food practices in Canadian children and youth. Canada has no surveillance system in place to monitor the nutritional status of the population (adults or children) and longitudinal data describing current dietary practices and physical activity patterns of young Canadians is virtually nonexistent. Since the most recent national data comes from the Nutrition Canada survey conducted in the early 1970s¹, American data are relied upon as a surrogate source of information on how Canadian children and youth eat.

Energy Intakes

Concerns about overweight and obesity have fostered an interest in quantifying total energy intake in children and youth. However, current understanding of the relationship between energy intake and weight disturbances is incomplete. The few studies which have assessed energy intake in children and youth have produced conflicting results.²⁻¹⁰ For example, some studies have observed increases in energy intake; others suggest that intake has been largely stable in children for the past twenty years; and one study found energy intakes, when

expressed per kilogram of body weight, have decreased since the early 1970s.⁸

Whatever the actual energy intakes and physical activity patterns of our youth are, we do know that the prevalence of overweight and obesity is increasing. From 1981 to 1996 overweight rose in boys and girls to 35 per cent and 29 per cent from 15 per cent respectively. At the same time, the prevalence of obesity has doubled— to 17 per cent from 5 per cent for boys and to 15 per cent from 5 per cent for girls.¹¹

Nutrient Intakes

Despite a climate of relative prosperity and food security, malnutrition is a problem for North American children and youth. The limited Canadian data show low median intakes for most of the food groups of *Canada's Food Guide to Healthy Eating* in both genders of all ages.² Not surprisingly, this pattern is associated with intakes well below the Recommended Daily Allowance for several nutrients.²

Nutritionfile™

The team of Alberta Milk Registered Dietitians are:

Lee Finell, MHSA, RD
Mary Anne Yurkiw, MSc, RD
Cindy Thorvaldson, MSc, RD
Charlotte Varem-Sanders, RD
Jennifer Michaelchuk, RD

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Phone: 1-800-252-7530, ext 319
Email: aventers@albertamilk.com

Adolescence appears to be a period of particular risk for nutritional inadequacies. A trend towards decreasing intakes of key nutrients has been observed in teenagers, especially teenage girls. Results from the *Food Habits of Canadians* study suggest that teenage girls consume inadequate servings of milk products and meats and alternatives as compared to the recommendations of *Canada's Food Guide to Healthy Eating* and, as a result, are at risk for low intakes of both calcium and iron.¹³

The inadequate calcium intakes of adolescents happen at a time of maximum bone deposition. At 13 years, girls have laid down 90 per cent of their adult bone mass, reaching 95 per cent at 16 years.¹⁴ Inadequate iron intake and iron deficiency anemia are common and well documented problems in teenage girls. Canadian data suggest that between 12.5 per cent and 39 per cent of adolescent girls are iron deficient.^{15,16}

Physical Activity Patterns

Canadian children and youth are becoming increasingly inactive. According to the Canadian Fitness and Lifestyle Research Institute (CFLRI), over half of children and youth aged five to 17 are not active enough for optimal growth and development.¹⁷

The levels of inactivity reported by Canadian children and youth suggest that barriers exist to greater participation. A 1999 CFLRI survey of Canadian parents identified barriers to participation in physical activity

by children and youth¹⁸. These included lack of skill and ability, cost, lack of information or programs, inconvenience, lack of social support, and safety concerns.

Factors Influencing Nutritional Status and Physical Activity in Children and Youth

Eating in is Out!

Changes in North American society as a whole over the past two decades have influenced the eating patterns of Canadian families. More women, and thus more mothers, are holding paid jobs than ever before.¹⁹ Between 1970 and 1990, the proportion of husband–wife families in which both spouses worked climbed to 63 per cent from 42 per cent, with increases right across Canada.¹⁹

The trend towards dual income families has been paralleled by changes to eating patterns in children and youth. Lack of time is a frequently cited barrier to healthy eating and home cooked family meals are becoming a thing of the past. Less than half of all U.S. children aged nine to 14 years report eating dinner with their families on a daily basis and 17 per cent report never eating dinner with family.²⁰

The contribution of home prepared foods to the energy intake of both children and youth has been replaced by foods from restaurants and fast food outlets²¹ and consequently their intakes of fast food items and salty snacks have

increased.^{22,23} At the same time, children report eating fewer desserts as well as certain milk and meat products.^{20,22}

The trend towards restaurant eating poses a threat to the nutritional health of children. Frequently eating fast foods is positively associated with increases in daily soft drink and french fry use and negatively associated with daily servings of nutrient-rich foods including fruit, vegetables and milk.^{22,23} In contrast, meals cooked at home are associated with healthful dietary intake patterns.^{20,21} Relying heavily on restaurant meals may also detract from the development of food purchasing and preparation skills in children and youth due to a lack of role modeling.

Parents: Role Models for Healthy Eating and Physical Activity

Parents influence the eating habits of their children in different ways, both obviously and subtly. Research indicates that girls' fruit and vegetable intake is positively related to their parents' reported fruit and vegetable intake.²⁴ Similarly, children who observe parents and important others consuming calcium-rich foods such as milk are more likely to have adequate calcium intakes.^{25,26}

The same type of relationship exists for physical activity. Children with active parents are more likely to be active than children who do not have an active parent.^{27,28}

In addition to these obvious examples of role modeling,

family connectedness and the quality of parent-child interactions also influences food behaviours in children and youth. Simply having a parent present at the evening meal is positively associated with higher consumption of fruits, vegetables and milk products in adolescents.²⁹ Other research shows that teens who report low levels of family connectedness are at increased risk for inadequate food intake patterns and unhealthy weight control practices.³⁰

Food Marketing: The Impact on Children

Children, like adults, are exposed to food marketing campaigns on a daily basis through television, magazines, the Internet, product packaging, books and vending machines. Recent research suggests that the impact of these promotional activities on the eating habits of children is profound.

Marketing to children has increased dramatically over the last two decades. Television advertising aimed at children increased tenfold between 1983 and 1997 to \$1 billion (U.S.) from \$100 million (U.S.) and research shows that half of all ads aired during children's television are for food.^{31,32}

The importance of healthy eating is rarely a component of the advertising seen by children. Instead, research indicates that most food advertising to children is for foods of low nutrient quality such as sugary cereals, soft drinks, fast foods, candy and potato chips.³³ Broadcast monitoring studies

suggest that 43 per cent of the ads aired during children's programming are for foods from the grain products food group³³; more than 60 per cent of these ads are for high-sugar cereal.³³ Advertising for foods from the milk products (four per cent) and meat and alternatives (two per cent) groups represent only a small percentage of the television ads viewed by children, while ads for vegetables and fruits are virtually non-existent.³³ In sharp contrast to recommendations of healthy eating, the bulk of food ads aired during children's programming (50 per cent) highlight foods that fall into the "other foods" category of *Canada's Food Guide to Healthy Eating*.³³

Food advertising influences children's food choices and eating habits. Multiple studies demonstrate that children exposed to advertising are significantly more likely to choose the advertised items.³⁴ In addition, children's preferences for specific foods have been shown to increase after seeing the foods advertised on television.³⁵

The marketing of food products to children in Canada is regulated by both voluntary and legislated measures.³⁶ However, concerns have been raised about the adequacy of these systems to protect the nutritional health of children. Recognizing this, educators, health-care providers and others who work with children and families need to encourage measures aimed at decreasing children's exposure to food advertising such as limiting television-viewing time.

For More Information on the Health of Children and Youth



Access the **Dietitians of Canada** Nutrition Month website (www.dietitians.ca/eatwell); background materials for the 2004 Nutrition Month® campaign on school age children and youth will be available in February. Starting on March 1, you can search the Resource Inventory and use the Stories & Strategies inventory to find healthy living initiatives happening in Canada.

THE FOUNDATION FOR

active
healthy
kids

The Foundation for Active Healthy Kids (www.activehealthykids.ca) is dedicated to building the capacity of schools, communities and families to provide quality physical activity programming and supporting the development of comprehensive, effective public policies and strategies.



The Summer 2004 edition of *Nutrition File for Health Professionals™ Reality Check (Part II): The Alberta Healthy Schools Initiative: Beyond an Apple a Day (BAAAD)*.

An on-line copy of this issue of *Nutrition File for Health Professionals* including a complete list of references, may be found on our website at www.albertamilk.com under "Nutrition & Education - Health Professional Newsletter."

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A complete list of references is available on request.

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