

# INFACT

An up-to-date fact sheet brought to you by the Ontario dairy industry

## THE IMPORTANCE OF MILK IN CHILDREN'S DIETS

### GOOD FOOD = GOOD LEARNING

The link between good nutrition and school performance is well established. Studies show that well-nourished children are able to perform better in school; their ability to concentrate and perform complex tasks improves, as well as their overall ability to learn.<sup>1, 2, 3</sup>

Children who are hungry or poorly nourished are more irritable, lethargic, easily distracted and at risk for poor academic performance. Undernourished children not only have less learning ability, but also are more likely to be prone to infection and miss more school.<sup>3</sup>

Beyond impact on learning, unhealthy eating during childhood may interfere with growth and development and increase the risk of chronic disease later in life such as heart disease and osteoporosis.<sup>4</sup>

### SCHOOL LUNCH MATTERS

Since over 80 per cent of children are eating lunch at school, it is vitally important that the foods they eat promote their overall well-being as well as their ability to learn. Research supports that healthy school environments include both education about healthy eating and the provision of healthy foods.<sup>5, 6, 7</sup>

Unfortunately, nutrient-poor food choices (e.g. fruit drinks, sports drinks, soft drinks, sugary snacks) are displacing foods of higher nutritional value (e.g. milk, vegetables and fruit) in school lunch bags. This is particularly alarming as it may contribute to weight problems and obesity in children.<sup>4</sup>

Children who are eating less healthful choices at school do not compensate for this by choosing more healthful choices away from school.<sup>5</sup>

### MILK - THE NATURAL ALLY

*Eating Well with Canada's Food Guide* recommends that children aged 4 to 8 consume 2 servings of Milk and Alternatives (such as cheese and yogurt) each day. Youth aged 9 to 13 years need 3 to 4 servings.

Milk provides 16 essential nutrients that

help nourish healthy bodies and minds. No other beverage naturally comes close. Children who drink milk tend to have higher intakes of specific nutrients, such as vitamin A, folate, vitamin B12, calcium and magnesium, and have better overall nutritional status than non-milk drinkers.<sup>8, 9</sup>

Milk is the primary dietary source of Vitamin D and most reliable source of dietary calcium; both nutrients are increasingly recognized as being beneficial to overall health. To build strong bones during childhood, and help prevent osteoporosis later in life, it's critical that children get enough calcium and vitamin D by consuming the recommended food guide servings of Milk and Alternatives every day. Therefore, it is concerning that:

- More than one third (37%) of Canadian children 4-8 years of age do not have the recommended 2 daily servings of milk products.<sup>10</sup>
- Milk is the number one beverage choice for children 5 and under; however, this changes as they get older. From ages 6-11, milk is often replaced by fruit drinks, water, soft drinks and juice.<sup>11</sup>
- By ages 10-16, 61% of boys and 83% of girls do not meet the minimum recommended 3 daily servings.<sup>10</sup>

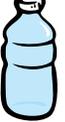
- According to a recent Ontario survey, only 21% of children drank milk during school lunch.<sup>6</sup>

Unfortunately, many children are not consuming enough milk products to support their health. Since roughly one third of a child's food intake for the day occurs at school, the school environment is a perfect place to encourage milk consumption.

### CHOCOLATE MILK BOOSTS NUTRITION TOO!

Packed with the same 16 essential nutrients, chocolate milk is just as nutritious as white milk. Consider:

- Just like white milk, chocolate milk is healthy for teeth, since the cocoa, milk fat, calcium and phosphorus in chocolate milk may help to protect against cavities.
- Chocolate milk contains about the same amount of sugar as an equal amount of unsweetened orange juice. Research shows that kids who drink chocolate milk don't have more added sugar or fat in their diet and they are able to maintain a healthy body weight.<sup>12</sup>
- Children who drink chocolate milk also drink fewer fruit drinks, sports drinks

NUTRIENT*	 WHITE 2% MILK	 CHOCOLATE 1% MILK	 100% ORANGE JUICE	 FRUIT DRINK	 SPORTS DRINK	 POP	 WATER
Calcium - %	27	28	2	0	0	1	0
Vitamin D - %	44	44	0	0	0	0	0
Vitamin A - %	14	15	1	0	0	0	0
Vitamin C - %	0	0	143	6	0	0	0
Protein - g	9	9	2	0	0	0	0
Fat - g	5	3	1	0	0	0	0
Carbohydrate - g	12	28	26	33	16	28	0
Calories	129	166	116	123	64	110	0

\* All values are based on 250mL of fluid. % = % Daily Value.

# MILK HELPS STUDENTS PERFORM AT THEIR BEST

and soft drinks than kids who don't drink flavoured milk. As a result, they have higher intakes of calcium and phosphorus – two key bone-building nutrients.<sup>13,14</sup>

White or chocolate, the nutritional benefits of milk are impressive.

## NUTRIENT POOR BEVERAGE CHOICES

Consumption of beverages with extra calories but little nutritional value can displace healthy foods and beverages children need to optimize learning.

Many drink boxes, a popular school lunch choice, are sugary fruit-flavoured drinks that tend to have less than 10 per cent juice. Some have added vitamin C, but lack the other nutrients offered by real fruit juices.

Soft drinks are also a part of the daily diet for many school age children. Approximately one-third of Ontario students in grades 4-8 consume soft drinks daily.<sup>15</sup>

This is particularly concerning because:

- Soft drinks provide extra “empty” calories; one can of soft drink contains 9 teaspoons of sugar and no other nutritional value. Children who consume soft drinks typically have reduced milk intake and thus reduced intake of nutrients such as calcium.<sup>12,16</sup>
- While many factors play a role in obesity, research shows a link between increased consumption of sweetened drinks such as fruit drinks, sport drinks and soft drinks and childhood weight gain and obesity.<sup>17,18,19</sup> Conversely, children and youth who drink milk tend to have healthier weights and less body fat.<sup>12,20,21</sup>

- Soft drinks may contain caffeine. Research shows that too much caffeine can impact on a child's behaviour (e.g. restlessness and anxiety).<sup>22</sup>

Health Canada recommends limiting intake of high calorie, low nutrient beverages such as fruit and sport drinks and soft drinks. Better beverages include milk, water and 100% fruit juice.<sup>23</sup>

## BEVERAGE OF CHOICE

Roughly one third of a child's food intake for the day occurs at school; thus the school environment is a perfect place to encourage healthy choices such as milk. Refer to the chart on the front page and notice the nutrients milk provides compared with fruit-flavoured drinks, sports drinks, or soft drinks.

As you can see, nutrient rich milk provides children with benefits beyond refreshment. Here are just some of the health benefits delivered by the nutrients in milk:

**Protein:** helps build strong muscles and build antibodies to boost the immune system so kids can feel their best.

**Vitamin D:** milk is an excellent source of vitamin D that is essential for overall health, helps boost immunity, and is crucial for the body to absorb and use calcium to build strong bones.

**Calcium:** critical for healthy bones and teeth, but also involved in muscle functioning, for example, calcium contributes to a healthy heart beat.

**Vitamin B12:** found naturally only in animal products, vitamin B12 in milk is easily absorbed by the body and is important for healthy neurological functioning.

**Zinc:** especially important for kids, zinc is essential for optimal growth and development as well as cognitive function.

## MILK- BALANCING THE EQUATION

Young minds need good food to perform at their best; healthy choices at lunch give them the energy they need to get through the school day.

The Elementary School Milk Program gives Ontario students the opportunity to get the goodness of fresh, nutritious milk for lunch every day. The Elementary School Milk Program benefits schools and their students by:

- Providing children with essential nutrients they need to be the best that they can be.
- Linking the “whole school approach” to creating a healthy school environment.
- Reinforcing healthy living curriculum taught in the classroom.
- Encouraging children to adopt healthy eating habits.

Today, 71% of schools in Ontario are on the Elementary School Milk Program, reaching over 1 million students each year.

If you would like to know more about the Elementary School Milk Program please visit [www.milkschool.ca](http://www.milkschool.ca)

This document has been prepared by a Registered Dietitian on behalf of the Ontario dairy industry. For more information contact:

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<sup>2</sup> Florence MD, Asbridge M, Veugelers PJ. Diet quality and academic performance. *J Sch Health* 2008; 78:209-215.

<sup>3</sup> Sorhaindo A, Feinstein L. What is the Relationship Between Child Nutrition and School Outcomes? Centre for Research on the Wider Benefits of Learning Research Report No. 18. Institute of Education, London, 2006. Available at [www.learningbenefits.net](http://www.learningbenefits.net). Accessed August 13, 2009.

<sup>4</sup> Ontario Society of Nutrition Professionals in Public Health School Nutrition Workgroup Steering Committee. Call to Action: Creating a Healthy Eating Environment. March, 2004.

<sup>5</sup> Dietitians of Canada. School Food and Nutrition Recommendations for Ontario Ministry of Education. October, 2004.

<sup>6</sup> Moffat T, Galloway T. Food consumption patterns in elementary school children. *Can J Diet Prac Res* 2008; 69:152-154.

<sup>7</sup> Institute of Medicine of the National Academies. Preventing Childhood Obesity – Health in the balance. The National Academies Press, Washington D.C., 2005.

<sup>8</sup> Ballwe C, Kuester S, Gillespie C. Beverage choices affect adequacy of children's nutrient intakes. *Arch Pediatr Adolesc Med* 2000;15:1148-1152.

<sup>9</sup> Bowman SA. Beverage choices of young females: changes and impact on nutrient intakes. *J Am Diet Assoc* 2002;102(9):1234-9.

<sup>10</sup> Garriguet D. Nutrition: findings from the Canadian Community Health Survey. Overview of Canadians' eating habits. Ottawa: Health Statistics Division, Statistics Canada. 2004.

<sup>11</sup> 2003 SIP (Share of Intake Panel), TNS Canadian Facts.

<sup>12</sup> Murphy MM, Douglas JS, Johnson RK, Spence LA. Drinking flavored or plain milk is positively associated with nutrient intake and is not associated with adverse effects on weight status in U.S. children and adolescents. *J Am Diet Assoc*. 2008;108: 631-639.

<sup>13</sup> Fray CD, Johnson RK, Wang MQ. Children and adolescents' choices of foods and beverages high in added sugars are associated with intakes of key nutrients and food groups. *Journal of Adolescent Health*. 2004; Vol.34(1):56-63.

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<sup>15</sup> Evers S, Taylor J, Manske S, Midgett C. Eating and smoking behaviours of school children in Southwestern Ontario and Charlottetown, PEI. *Cdn J P Health* 2001;92(6):433-436.

<sup>16</sup> Keller KL, Kirzner J, Pietrobello A, St-Onge MP, Faith MS. Increased sweetened beverage intake is associated with reduced milk and calcium intake in 3- to 7-year-old children at multi-item laboratory lunches. *J Am Diet Assoc*. 2009;109(3):497-501.

<sup>17</sup> Malik VS, Schulze MB, Hu, FB. Intake of sugar-sweetened beverages and weight gain: a systematic review. *American Journal of Clinical Nutrition* 2006;84:278-88.

<sup>18</sup> Healthy Weights for Healthy Kids. Report of the Standing Committee on Health. House of Commons, Canada. March 2007.

<sup>19</sup> Murray R, Frankowski B, Taras, H. Are soft drinks a scapegoat for childhood obesity? *J Pediatr* 2005;146:586-90.

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<sup>22</sup> Nawrot P, Jordan S, Eastwood J, Rotstein J, Hugenholz A, Feeley M. Effects of caffeine on human health. *Food Additives and Contaminants* 2003;20(1):1-30.

<sup>23</sup> Health Canada. Eating Well with Canada's Food Guide. Minister of Supply and Services Canada. 2007.