THE PRODUCT: A VARIED OFFERING TO RESPOND TO A SEGMENTED MARKET
A Multidimensional Approach to Reduce the Appeal of Sugar-Sweetened Beverages

This report is a central component of the project entitled “A Multidimensional Approach to Reducing the Appeal of Sugar-Sweetened Beverages (SSBs)” launched by the Association pour la santé publique du Québec (ASPQ) and the Quebec Coalition on Weight-Related Problems (Weight Coalition) as part of the 2010 Innovation Strategy of the Public Health Agency of Canada on the theme of “Achieving Healthier Weights in Canada’s Communities”. This project is based on a major pan-Canadian partnership involving:

- the Réseau du sport étudiant du Québec (RSEQ)
- the Fédération du sport francophone de l’Alberta (FSFA)
- the Social Research and Demonstration Corporation (SRDC)
- the Université Laval
- the Public Health Association of BC (PHABC)
- the Ontario Public Health Association (OPHA)

The general aim of the project is to reduce the consumption of sugar-sweetened beverages by changing attitudes toward their use and improving the food environment by making healthy choices easier. To do so, the project takes a three-pronged approach:

- The preparation of this report, which offers an analysis of the Canadian sugar-sweetened beverage market and the associated marketing strategies aimed at young people (Weight Coalition/Université Laval);
- The dissemination of tools, research, knowledge and campaigns on marketing sugar-sweetened beverages (PHABC/OPHA/Weight Coalition);
- The adaptation in Francophone Alberta (FSFA/RSEQ) of the Quebec project Gobes-tu ça?, encouraging young people to develop a more critical view of advertising in this industry.

The SRDC will conduct a formative evaluation throughout the entire project.

This report, which is a component of the project entitled “A Multidimensional Approach to Reducing the Appeal of Sugar-Sweetened Beverages”, has been prepared by the Quebec Coalition on Weight-Related Problems, with Université Laval helping to evaluate the nutritional value of the products. All project partners (Appendix 3) contributed to disseminating the contents of this report and its conclusions.
**Acknowledgments**

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We wish to thank all the partners in the project entitled “A Multidimensional Approach to Reducing the Appeal of Sugar-Sweetened Beverages” for their involvement and support, and for their contribution in the editorial preparation of this report.

Last but not least, we wish to sincerely thank our **advisory committee** made up of the following individuals. Their presence on the advisory committee should not be interpreted as an endorsement or approval of the Weight Coalition’s positions expressed in this report.

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Introduction

Sugar-Sweetened Beverages, a Topical Issue

Sugar-sweetened beverages are proliferating on supermarket shelves, in convenience stores, arenas, vending machines, sports centres and the various public places frequented by young people. The increasingly wide range of differentiated products, combined with their unprecedented availability, allows consumers to have sugar-sweetened beverages anywhere at any time and often at very low prices. Sugar-sweetened beverages also benefit from intense advertising that mainly targets a young population using social media, product endorsements by athletes and sports teams, as well as many other marketing strategies. The consumption of sugar-sweetened beverages has therefore become worrying in light of the many consequences on health, particularly among the young, who are highly susceptible to the marketing of these products.

While health professionals worry about today’s consumption of sugar-sweetened beverages by our youth, marketeers are cleverly using new technologies, new media and massive budgets to reach this target population and encourage them to consume sugar-sweetened beverages. For example, in 2004, the food, drink and snack industries in the United States spent 1,178 times as much on advertising as the government spent on its “5 A Day” campaign to promote eating fruit and vegetables. This represents more than US$11.26 billion advertising per industry, versus the US$9.55 million spent by the Federal and the California State governments on the “5 A Day” campaign\(^1\). The industry’s ongoing massive investment makes a level playing field impossible, which is why public health campaigns are not enough to make the difference. We therefore need to identify all other possible avenues for action and must prioritize the creation of environments that promote healthy eating habits.

The Marketing of Sugar-Sweetened Beverages: A Topic to Sink Your Teeth Into!

The 2006 Petit Robert dictionary defines marketing as “the set of actions whose purpose is to analyze the present or potential market of a good or service and to implement the means to satisfy, stimulate or create demand for it”.

Marketing and the “Four Ps”

In this report, we want to present a view of the Canadian sugar-sweetened beverage market as a whole, as well as the marketing strategies used in this industry to reach young people. To do so, we split the information into four distinct but complementary sections, using “marketing mix” as the underlying organizing principle to focus on Product, Price, Place and Promotion, commonly known as the “four Ps” of marketing. These “four Ps” are also used by the companies themselves when defining their global marketing strategies.

This analytical structure allows us to determine the extent of sugar-sweetened beverages marketing, as well as to make recommendations. We hope that these avenues of thought can serve as a basis for implementing concrete actions and public policies that reflect the reality of the Canadian market and are aimed at eventually reducing the consumption of these drinks that can be harmful to one’s health. In this respect, we should note that the World Health Organization (WHO) has recognized that the regular consumption of sugar-sweetened beverages is a probable contributing factor to the global obesity epidemic\(^2\).
Volume 1 – The Product: A Varied Offering to Respond to a Segmented Market

In this first volume, entitled “The Product: A Varied Offering to Respond to a Segmented Market”, we will begin by presenting a picture of the consumption of sugar-sweetened beverages by young Canadians as well as its impact on health. Then, we will spend some time looking at the products available in the Canadian market, as well as their nutritional value. We will continue with an examination of the various marketing techniques used for the products themselves, to finally formulate recommendations consistent with our findings.

Definition of “Sugar-Sweetened Beverages”

Although sugar-sweetened beverages worry and mobilize people of all viewpoints, there is no consensus or legal definition of the term “sugary drink” in Canada today.

To facilitate our analysis, we borrowed from various suggested definitions, in particular, the one used by the Government of Canada in its children’s health and safety campaign aimed at sugar-sweetened beverages. Therefore, in this report we have used the term “sugar-sweetened beverages” to refer to any drink for human consumption, carbonated or not, that contains added sugar.

More precisely, we have identified seven categories of sugar-sweetened beverages whose content, market positioning and promotion will be analyzed in this report:

- soft drinks
- energy drinks
- sports drinks
- punch and cocktail-type fruit drinks (excluding 100% fruit juice)
- enriched/vitamin-enhanced water
- ready-to-drink tea and coffee
- flavoured milk

However, we are aware that there are other categories of sugar-sweetened beverages (soya-based drinks, slushes, etc.). Although they often contain added sugar, we will not be analyzing these drinks in this report. Nevertheless, certain marketing strategies associated with their merchandising may occasionally be referred to.

Sugary products with a sweetening agent, otherwise known as “diet” drinks, are outside the scope of this report. We should note, however, that the health impact of these drinks is currently the subject of considerable debates, and it should not be automatically assumed that they are a “healthy” alternative to sugar-sweetened beverages.

Consumption of Sugar-Sweetened Beverages by Young Canadians

The energy value of drinks for children and teens is not negligible and is often underestimated. In Canada, the drinks consumed by children and teens account for 20% of their daily calorie requirements.

As for plain soft drinks (including energy drinks and iced tea) and fruit drinks, children and teens in Canada consumed an average of 309g/day. This figure varies somewhat from province to province with Newfoundland & Labrador and New Brunswick reporting a considerably higher consumption, with averages of 421g/day and 368g/day, respectively, while British Columbia is the lowest consumer of sugar-sweetened beverages at an average of 249g/day.
Children in Canada get into sugar-sweetened beverages at a very early age, and their consumption increases as they progress into adolescence, peaking at ages 14-18.

**Table 1: Consumption of drinks by children and teens**
Data drawn from Statistics Canada (2008)⁹

<table>
<thead>
<tr>
<th></th>
<th>ages 1-3</th>
<th>ages 4-8</th>
<th>ages 9-13</th>
<th>ages 14-18</th>
</tr>
</thead>
<tbody>
<tr>
<td>% consuming SSBs the day before the interview</td>
<td>35</td>
<td>60</td>
<td>77</td>
<td>78.5</td>
</tr>
<tr>
<td>Daily consumption of SSBs in grams</td>
<td>104</td>
<td>205</td>
<td>332</td>
<td>465</td>
</tr>
</tbody>
</table>

Until the age of 13, young Canadians seem to prefer fruit drinks over plain soft drinks. This trend, however, reverses among teens 14 to 18. Moreover, health statistics analyst Didier Garriguet has found differences in consumption between boys and girls. In general, boys drink more sugar-sweetened beverages than girls, particularly soft drinks. Looking at sugar-sweetened beverages as a whole, 14- to 18-year-old boys consume about half a litre a day while girls drink about a third of a litre. These sugar-sweetened beverages represent 8% of the daily energy intake for boys aged 14-18 and 7% for girls the same age.

A recent survey of 10,000 teens aged 13-17¹⁰ by the Réseau du sport étudiant du Québec (RSEQ) reported that:

- 61% of them consume fruit-flavored drinks on a regular basis
- 44% of them consume soft drinks (53% for boys)
- 35% of those surveyed occasionally consume energy drinks
- 28% of them consume sport beverages on a regular basis, boys twice as much as girls, and this ratio quadruples when we look at frequent consumption ("every day or almost every day" and “3 to 4 times a week”), with 4% for girls and 16% for boys.

In addition, we have recently found that soft drinks, energy drinks and iced teas are the main source of sugar for 9- to 18-year-olds in Canada, while fruit drinks rank 5th among 1- to 8-year-olds¹¹. The data to support this conclusion is from 2004. Since then, the sharp increase in energy drinks and the arrival on the market of vitamin-enriched water and enriched fruit drinks suggests that sugar-sweetened beverages may be responsible for delivering even more sugar to young Canadians.

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¹ The frequency of consumption options in the questionnaire distributed to young people were:
- Every day or almost every day
- 3 to 4 times a week
- 1 to 2 times a week
- Rarely
- Never

"Regular" consumption includes categories from “1 to 2 times a week” to “Every day or almost every day”.

¹¹ “Occasional” consumption includes categories “Rarely” to “Every day or almost every day”.

Table 2: Sugar consumption among Canadians of all ages
Statistics Canada (2011)\textsuperscript{12}

<table>
<thead>
<tr>
<th>Ages</th>
<th>% of total sugar from regular soft drinks</th>
<th>% of total sugar from fruit drinks</th>
<th>% of total sugar from “sugar-sweetened beverages”</th>
</tr>
</thead>
<tbody>
<tr>
<td>ages 1-8</td>
<td>3.6%</td>
<td>6.2%</td>
<td>9.8%</td>
</tr>
<tr>
<td>ages 9-18</td>
<td>14.3%</td>
<td>9.1%</td>
<td>23.4%</td>
</tr>
<tr>
<td>ages 19 and +</td>
<td>13%</td>
<td>3.7%</td>
<td>16.7%</td>
</tr>
</tbody>
</table>

Sugar-sweetened beverages therefore participate, in a non-negligible way, in the total sugar consumption of young Canadians. Moreover, it is among boys aged 14-18, who are also some of the biggest consumers of sugar-sweetened beverages, that the absolute quantity of sugar consumption is the highest (172g a day, or 41 teaspoons), which puts them well above the national average of 110g a day (or 26 teaspoons), while the recommended daily glucose requirement for teens is 100g\textsuperscript{13}.

As for the consumption of other types of sugar-sweetened beverages, there is little data accessible or available in Canada. A 2010 report by an expert group on caffeinated energy drinks commissioned by Health Canada emphasized the “general absence of data on the consumption of energy drinks by children and teens”\textsuperscript{14}. The market in added-value drinks (drinks for athletes, vitamin-enriched and energy drinks) is relatively recent, but seems to be growing strongly in Canada, especially among the young. Nearly 7 million units of energy drinks are consumed in Canada every year\textsuperscript{15}.

**Health Impact of Sugar-Sweetened Beverages**

The consumption of sugar-sweetened beverages is of increasing concern to health professionals because of its negative impact on health. Of particular concern are the impacts on children and youth.

Like many countries around the world, Canada today has worrying levels of obesity, among adults as well as children. Astonishingly, more than 1 in 4 children in Canada are overweight or obese\textsuperscript{16}. Moreover, although many factors contribute to obesity, respected international agencies such as the Institute of Medicine\textsuperscript{17}, the Center for Control Disease and Prevention\textsuperscript{18}, the United States Department of Agriculture\textsuperscript{19} and the Rudd Center\textsuperscript{20} are proactively engaged in trying to reduce the consumption of sugar-sweetened beverages that are directly implicated in the obesity epidemic. In a recent campaign\textsuperscript{21}, the Canadian Government identified sugar-sweetened beverages as a contributor to obesity in children. And for good reason, as the daily consumption of sugar-sweetened beverages increases the risk of obesity by 60% in children\textsuperscript{22}, thereby also increasing the risk of developing associated diseases such as type 2 diabetes, cardiovascular diseases and certain types of cancer. In a review of verified findings on 28 diet factors thought to be associated with obesity among children, the consumption of sugar-sweetened beverages was the only behaviour consistently linked to excess weight in children\textsuperscript{23}.

**A Considerable Economic Impact**

Action becomes imperative when we recognize the alarming prevalence of excess weight, obesity and chronic disease that creates major costs for the State, our health system and our society as a whole. The most conservative estimates suggest that obesity alone adds some $4.3 billion a year\textsuperscript{24} to Canada’s tax bill, while actuaries estimate the cost at over \textbf{$30$ billion} a year\textsuperscript{25}.  

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To reduce health costs related to obesity and associated chronic diseases, we need to act on its causes from the earliest ages. “The probability of childhood obesity persisting into adulthood increases with the age of the child (from 20% to 50% for pre-teens to 50% to 70% for pubescent adolescents)”26. Clearly there is a strong case for investing in our younger generations by helping to protect them from known risk factors for unhealthy weights.

Moreover, in addition to the links established between sugar-sweetened beverages and obesity27, these drinks are also directly implicated in type 2 diabetes28, dental caries29,30, dental erosion31 and cardiovascular disease32,33.

**Caffeine: An Ingredient No Longer to be Taken Lightly!**

First and foremost, energy drinks are sugar-sweetened beverages, but the large amount of caffeine they contain is an additional source of concern34. The energy drinks that young people consume quickly reaches the daily caffeine intake that is recommended by Health Canada35. “Exceeding recommended daily caffeine limits can produce side effects, from simple nausea to serious cardiac problems”36.

**Mobilization of Canada’s Health Professionals**

As the impact of sugar-sweetened beverages on health and especially on obesity is increasingly a matter of public record, we now need to help the country join forces to tackle the challenge. There are many youth-oriented projects in place, with a common objective, which is to reduce the consumption of sugar-sweetened beverages.

**The Position of Key Actors in Canada**

As mentioned above, the Canadian Government’s position is to keep the population informed of the link between sugar-sweetened beverages and obesity. In addition, Canada’s Food Guide recommends drinking water and restricting the consumption of sugar-sweetened beverages “that can be high in calories and low in nutrients”37.

Other Canadian agencies have also expressed concern about the consumption of sugar-sweetened beverages, in particular:

- the Chronic Disease Prevention Alliance of Canada (CDPAC)
- the Canadian Diabetes Association
- the Childhood Obesity Foundation
- the Quebec Coalition on Weight-Related Problems
- the Dietitians of Canada
- the Federation of Medical Specialists of Quebec
- the Heart and Stroke Foundation
- the activists of the Quebec Liberal Party
- the Ordre des hygiénistes dentaires du Québec
- the Canadian Pediatric Society
- Québec en forme
- etc.
Our Youth: An Ideal Target for Manufacturers of Sugar-Sweetened Beverages

We established earlier that regular soft drinks (including energy drinks and iced tea) are very popular among Canadian teens and that they are the main source of sugar for 9- to 18-year-olds. This enormous consumption is partly the result of a massive investment by the industry of sugar-sweetened beverages to reach this young population. Indeed, due to their greater susceptibility to marketing and their increasing purchasing power, children and teens are now this industry’s target of choice. Moreover, according to a WHO report, “the enormous expenditure on marketing fast food and other products in the ‘consume as little as possible’ category (US$11 billion in the United States alone in 1997) is a key factor in the increasing consumption of ready-to-eat food in general and in high-energy but low-nutritional and low-trace-element foods in particular”38.

Vulnerability of Children and Teens

Children and teens are highly susceptible to the various marketing strategies used to reach them and are incapable of recognizing the commercial purpose of some ads. In fact, young children cannot distinguish the content of the message from its advertising purpose39. From 4 to 5 years of age, children start being able to distinguish between a program and advertising, but the latter is perceived as just additional entertainment, until at least ages 7 or 8. After that, as their cognitive and social development progresses, young people become increasingly able to discern marketing intent40. Understanding the true nature of advertising, which is to try to sell a product in order to make a profit, is not something that all children understand until the onset of adolescence,41 at about ages 11 to 12. More still, a recent survey of 10,000 young Quebecers by the Réseau du sport étudiant du Québec reported that nearly half of the teens surveyed could not distinguish between the various types of strategies used by manufacturers to sell more sugar-sweetened beverages.

A Purchasing Power Targeted by Industry

Children have had a growing direct and indirect economic power42, 43, 44, 45 affecting all industries. This is partly because they get pocket money that they can spend any way they like. Canadian children 2-12 years old spent an estimated CAD$1.5 billion pocket money in 200246. It is also because children influence 40% of family spending47, accounting for more than CAD$20 billion in 200448.

Companies rely enormously on this influence, and even try to accentuate it by developing what is commonly known as the “nag factor”. This nag factor can be described as a child’s incessant demand for a product or brand that influences the parent’s buying decisions. Companies target children directly through advertising and target parents indirectly but deliberately through harassment.

A study has been released on the nag factor associated with various product categories aimed at children or adults49. It also looks at soft drinks “because they are clearly important for children…and because it is a category in which teens have the most impact on buying decisions”. The findings suggest that the nag factor is real in the product categories aimed at children, which include soft drinks.
Marketing Investment by the Sugar-Sweetened Beverages Industry

In the absence of Canadian data on marketing investment by the sugar-sweetened beverages industry we will use U.S. data, mainly released by the Federal Trade Commission (FTC) in a 2008 report on the industry’s spending on marketing aimed at young people.\(^{50}\)

Among the 44 companies studied by the FTC, the total spending to promote food and drink to children and teens amounted to US$1.6 billion in 2006. Soft drinks accounted for US$492 million, 96% of which was directly aimed at teens (US$474 million, nearly US$20 per teen\(^{51}\)), making these drinks the single largest category of marketing expenditure aimed at teens. Non-carbonated drinks accounted for US$109 million (3rd largest) aimed at teens. In 2010, drinks companies spent US$948 million to promote sugary and energy drinks in all the media surveyed, 5% more than in 2008.\(^{52}\)

Over the course of this report, where the data is available, we will detail the spending by the sugar-sweetened beverages industry in keeping with marketing strategies and media used.
The Sugar–Sweetened Beverage Market in Canada

Although some categories of drinks have existed for years, such as soft drinks and fruit drinks, for example, others have appeared more recently but are nonetheless prominent in the market. This is the case with “energy drinks” and other supposedly “added value” drinks that contain added vitamins and minerals in an attempt to highlight their possible health benefits.

In this report, we focus our analysis on the following sugar-sweetened beverages:

- soft drinks
- energy drinks
- sports drinks
- fruit drinks
- enriched/vitamin-enhanced water
- ready-to-drink tea and coffee
- flavoured milk

We will start by presenting a picture of the Canadian market in terms of the economic weight of the various products and the various regulations governing sugar-sweetened beverages in Canada, as well as their potential impact on product marketing. This will allow us to set the scene for analyzing the nutritional content of the products and the marketing strategies that we will examine in subsequent sections.

Economic Weight of Sugar-Sweetened Beverages

Soft Drinks

Although the market is constantly diversifying and offering new products, soft drinks still seem to dominate the sugar-sweetened beverages industry. According to our sources, they represent between 16% and 32% of the beverage market in Canada and are the second most popular drink in Canadian restaurants, next to coffee. The consumption of soft drinks, which have been on the market for many decades, is well engrained in Canadian eating habits.

Nevertheless, despite their domination of the sugar-sweetened beverage market, soft drinks as a category have been losing momentum in recent years. This is mainly due to a general trend among consumers to opt for “healthy” drinks, as well as the arrival on the market of supposedly “added value” drinks (energy drinks, vitamin-enriched water and fortified juices). We should note, however, that these new drinks are generally developed by soft drink manufacturers looking to diversify their offering to reach more segments of the population. Thus, VitaminWater® (vitamin-enriched water), Full Throttle® (energy drink), Monster® (energy drink) and Nestea® (iced tea), among others, are products belonging to and/or distributed by Coca-Cola®.
According to the Canadian industry’s definition of soft drinks in the North American Industry Classification System (NAICS), used by both Statistics Canada and Agriculture & Agri-Food Canada, there are no fewer than 30 different brands of soft drinks and over 200 flavours in Canada. Also, according to this same definition, the Canadian soft drink market was valued at some $4.5 billion in 2009.

**Energy Drinks**

Although this market has grown strongly in recent years, there is still no regulatory definition of the term “energy drink”. In this document, however, we will use the definition proposed by the *Institut National de Santé Publique du Québec* (INSPQ): “the term ‘energy drink’ means any product in the form of a drink or concentrated liquid that claims to contain a mix of ingredients with the property of increasing energy levels and physical alertness”.

Energy drinks have appeared on the Canadian market recently and have experienced phenomenal and relatively constant growth. With over 300 varieties of products sold under more than 210 brands and with 43% growth in value between 2003 and 2008, the energy drinks segment in North America in 2008 represented a $1 billion market. In 2011, the value of the Canadian market was estimated at $318 million, and it should reach $404.8 million by 2015.

Looking at the data available for convenience stores and service stations in Canada, we see a similar trend with sales of energy drinks growing by 15% in 2010-2011. Energy drinks now represent 30.3% of the total soft drink market with some $178 million sales in 2011.

Despite the impressive number of competitors in the energy drink market and “the high product rollover that characterizes this sector”, certain brands dominate North America. It is the case for Red Bull®, Monster® (distributed by Coca-Cola®) and Rockstar® (distributed by Pepsi®).

**Sports Drinks**

“Sports drinks are non-alcoholic products that claim, based on scientific analysis, to improve physical performance during sporting activities or to accelerate recovery after physical efforts.”. Sports drinks can also be called “energy drinks”, but in order to avoid confusion with “energy” drinks, we will use the term “sports drinks” in this report.

In Canada, sports drinks have been available for many years. Two brands dominate this market, namely Gatorade® (Pepsi®), with 71% of total retail sales by volume in 2009, and Powerade® (Coca-Cola®), with 19%.

In 2009, the value of the sports drink market was $423 million in Canada and $1.6 billion in the United States.

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[iii] Statistics Canada considers beverages (including flavoured bottled water) containing more than 1% of flavouring substances by weight to be soft drinks. Soda water, seltzer water and tonic water are also considered soft drinks. Thus, the soft drinks manufacturing industry produces and bottles non-alcoholic carbonated beverages, including fruit-flavoured drinks, cola, ginger soda, ginger beer, root beer, iced tea, iced coffee, seltzer water, tonic water and other cocktail preparations. The industry also produces other non-alcoholic beverages such as milk drinks, fruit juice and fruit drinks, bottled water, sports drinks and energy drinks. See [http://www4.agr.gc.ca/AAFC-AAC/display-afficher.do?id=1172167862291&lang=eng](http://www4.agr.gc.ca/AAFC-AAC/display-afficher.do?id=1172167862291&lang=eng)

[iv] Statistics Canada groups soft drink, bottled water and ice cream manufacturing into the same NAICS class (31211).
Fruit Drinks

Fruit drinks, containing less than 100% fruit juice, represented about 8.6% of the Canadian beverage market in 2006.74

Vitamin-Enriched Water

Given their recent appearance on the market, it is difficult to define the present economic weight of vitamin-enriched water in the Canadian market. However, in light of their sometimes misleading positioning, it would be interesting to evaluate their true “popularity”. In fact, these beverages are marketed in a way that leads the customer to see it as a form of water (close to water on shelves, similar formats, brand names) without highlighting the fact that the main difference is the sugar content. In addition, their advertising emphasizes on the “health” aspect leading the customer to believe that these drinks can be beneficial for their health, whereas nutritional analysis, which is presented later in this report, proves that these sugar-sweetened beverages, despite being enriched with vitamins and minerals, have little nutritional value.

Ready-to-Drink Iced Teas and Coffees, and Flavoured Milk Drinks

It is difficult to find economic data specifically for these two categories because they are included in the definition of “soft drinks” used by both Statistics Canada and Agriculture & Agri-Food Canada (NAICS 31211).

Regulation of Sugar-Sweetened Beverages

The sugar-sweetened beverages studied in this report are not all governed by the same regulations. Their nutritional composition determines their classification as a food or as a natural health product (NHP) and, consequently, the particular regulations applicable to them. In general, drinks containing added vitamins and minerals are subject to the Natural Health Products Regulations (NHPR), effective January 1, 2004.75 Thus, carbonated drinks, ready-to-drink iced coffee and flavoured milk drinks are, without exception, classified as food and are therefore subject to the Food and Drug Regulations. Vitamin-enriched water, energy drinks and some fruit drinks, however, are classified as NHPs because of their added vitamins and/or minerals. Other types of drinks, such as fruit drinks and ready-to-drink iced teas, have compositions that can vary greatly from product to product and may therefore belong to either of the two categories.

On October 6, 2011, however, Health Canada announced new measures concerning energy drinks.76 Previously considered to be NHPs, they will now be transferred to the food category. Certain differences between the Natural Health Products Regulations and the Food and Drug Regulations, mainly regarding nutrition labelling, explain this government decision.

In fact, one of the main differences between the two sets of regulations concerns labelling standards. While a nutritional value table is mandatory for food, it is not mandatory for NHPs. But now that energy drinks are subject to the Food and Drug Regulations, they will very soon be displaying more comprehensive nutrition labelling. These new measures will also allow the consumer to see the total caffeine content of these products, which had not been the case in the past.
From 1 November 2011, Health Canada intends to examine energy drinks to see if they satisfy the new requirements. Products that do satisfy the requirements will receive Temporary Marketing Authorization (TMA) valid for a period of five years. The industry will also be allowed a window of time within which to make the necessary changes (for example, new labelling to include nutritional value and allergy risk). The transition period is likely to be 18 to 24 months from when the product receives the Temporary Marketing Authorization (TMA) granted by Health Canada.

**More and More Sugar on our Shelves**

The sugar-sweetened beverage market is changing fast. More and more brands, more and more products, more and more categories. But amidst all this activity, there is a certain degree of confusion, particularly in terms of the regulation and content of these liquid candies. We therefore need to look more deeply into the nutritional analysis of these products.
Nutritional Analysis of Sugar-Sweetened Beverages

As the name indicates, sugar-sweetened beverages consist mainly of water and sugar. Although continuously evolving and increasing in variety, the product offering of certain types of drinks remains constant in the Canadian market.

For this analysis, we have selected various brands of products based on their popularity among consumers. The flavours selected are similar to each other, in the interests of comparability. We then lined up the nutritional values of the sugar-sweetened beverages against the nutritional needs of children and teens aged 9 to 18 and their eating habits. We will finish with a brief conclusion to highlight the key points of this section.

Nutritional Profile of Sugar-Sweetened Beverages by Product Category

Table 3: Nutritional value of various sugar-sweetened beverages available on the market per 250 ml portion

NA = not available

<table>
<thead>
<tr>
<th>Soft Drinks</th>
<th>Calories (kcal)</th>
<th>Carbohydrates (g)</th>
<th>Sugars (g)</th>
<th>Sodium (mg)</th>
<th>Caffeine (mg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coca-Cola Classic®</td>
<td>110</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>26</td>
</tr>
<tr>
<td>Pepsi Classic®</td>
<td>106</td>
<td>29</td>
<td>29</td>
<td>11</td>
<td>27</td>
</tr>
<tr>
<td>Pepsi Retro®</td>
<td>110</td>
<td>28</td>
<td>28</td>
<td>15</td>
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<tr>
<td>Sprite®</td>
<td>100</td>
<td>27</td>
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<td>0</td>
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<tr>
<td>Dr Pepper®</td>
<td>100</td>
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<td>27</td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Energy Drinks</th>
<th>Calories (kcal)</th>
<th>Carbohydrates (g)</th>
<th>Sugars (g)</th>
<th>Sodium (mg)</th>
<th>Caffeine (mg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guru®</td>
<td>100</td>
<td>25</td>
<td>25</td>
<td>110</td>
<td>NA</td>
</tr>
<tr>
<td>Monster®</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>86</td>
</tr>
<tr>
<td>Red Bull®</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>80</td>
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<tr>
<td>Rockstar®</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>85</td>
</tr>
<tr>
<td>AMP Performance®</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>84</td>
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</table>

<table>
<thead>
<tr>
<th>Sports Drinks</th>
<th>Calories (kcal)</th>
<th>Carbohydrates (g)</th>
<th>Sugars (g)</th>
<th>Sodium (mg)</th>
<th>Caffeine (mg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Powerade® Fruit Punch</td>
<td>89</td>
<td>23</td>
<td>17</td>
<td>32</td>
<td>0</td>
</tr>
<tr>
<td>Gatorade Perform® Fruit Punch</td>
<td>55</td>
<td>14</td>
<td>14</td>
<td>102</td>
<td>0</td>
</tr>
<tr>
<td>Product Name</td>
<td>Calories (kcal)</td>
<td>Carbohydrates (g)</td>
<td>Sugars (g)</td>
<td>Sodium (mg)</td>
<td>Caffeine (mg)</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>-----------------</td>
<td>-------------------</td>
<td>------------</td>
<td>-------------</td>
<td>---------------</td>
</tr>
<tr>
<td>Fruitopia® Fruit Integration</td>
<td>63</td>
<td>17</td>
<td>16</td>
<td>11</td>
<td>0</td>
</tr>
<tr>
<td>Sunny D®</td>
<td>60</td>
<td>16</td>
<td>14</td>
<td>190</td>
<td>0</td>
</tr>
<tr>
<td>Früité® Fruit Punch</td>
<td>110</td>
<td>27</td>
<td>26</td>
<td>40</td>
<td>0</td>
</tr>
<tr>
<td>Fuze® Vitalize Fruit Punch</td>
<td>105</td>
<td>26</td>
<td>26</td>
<td>32</td>
<td>0</td>
</tr>
<tr>
<td>SoBe Energize® Mango and Melon</td>
<td>120</td>
<td>30</td>
<td>30</td>
<td>15</td>
<td>0</td>
</tr>
<tr>
<td>Oasis Premium® 100% Pure Orange Juice</td>
<td>120</td>
<td>29</td>
<td>25</td>
<td>20</td>
<td>0</td>
</tr>
<tr>
<td>VitaminWater® Defense</td>
<td>55</td>
<td>14</td>
<td>14</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Arizona® Green Tea</td>
<td>70</td>
<td>19</td>
<td>18</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>Nestea® Lemon Tea</td>
<td>80</td>
<td>21</td>
<td>21</td>
<td>20</td>
<td>12</td>
</tr>
<tr>
<td>Lipton® Iced Tea</td>
<td>53</td>
<td>14</td>
<td>14</td>
<td>61</td>
<td>18</td>
</tr>
<tr>
<td>SoBe® Green Tea</td>
<td>100</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>4</td>
</tr>
<tr>
<td>Starbucks® Frappuccino Mocha</td>
<td>160</td>
<td>29</td>
<td>28</td>
<td>85</td>
<td>66</td>
</tr>
<tr>
<td>Natrel® 1% Chocolate Milk</td>
<td>150</td>
<td>27</td>
<td>26</td>
<td>214</td>
<td>0</td>
</tr>
<tr>
<td>Hershey’s® Chocolate Milk Drink</td>
<td>264</td>
<td>41</td>
<td>38</td>
<td>271</td>
<td>0</td>
</tr>
<tr>
<td>Oh Henry!® Chocolate Milk Drink</td>
<td>235</td>
<td>34</td>
<td>31</td>
<td>271</td>
<td>0</td>
</tr>
</tbody>
</table>
Soft Drinks

The various soft drinks analyzed all have similar nutritional values (Table 1). The differences are mainly in the addition of caffeine for cola-type drinks. All drinks contain similar amounts of sugar per standard portion (between 27 and 30 g per 250 ml) and similar energy values (between 100 and 110 kilocalories per portion). Sodium content varies slightly, between 11 mg per 250 ml for Pepsi Classic® and 45 mg for Sprite®.

Energy Drinks

Energy drinks are a separate class of sugar-sweetened beverages. They usually consist of a mix of carbonated water and various sugars (glucose, saccharose, sucrose, fructose, etc.) to which natural and/or artificial flavours are added, plus various substances (for example: B-group vitamins, guarana, taurine, glucuronolactone, inositol, ginseng, ginkgo biloba, etc.). Looking more closely at the ingredients, we can highlight two main categories: ingredients that provide nutrients essential for bodily health and other added ingredients that cannot be considered nutrients.

Apart from water, the main ingredients found in energy drinks are sugar and B-group vitamins. However, it is difficult to know exactly what the sugar and calorie content is of most energy drinks on the market because few of them include a nutritional table on the label (Table 1). In fact, when writing this analysis, energy drinks were classed as a Natural Health Product (NHP), for which the regulation do not require to display nutritional value on their packaging.

The Weight Coalition, alerted by Université Laval to this known problem in nutritional analysis, contacted the federal Minister of Health to inform him of this shortcoming (Appendix 4). The recent change in the regulation of these products (currently governed by food and drug regulations) suggests that this lack of disclosure will soon be resolved78.

When this report was being prepared, only Guru® supplied a nutritional table. We have therefore used it as the standard reference for sugar content. Guru® contains about 25 g of sugar per 250 ml, which is similar to other sugar-sweetened beverages on the market (Table 1).

Vitamins

The vitamins most frequently added to energy drinks are B2, B3, B5, B6 and B12. The quantities of B-group vitamins added to energy drinks are often high and sometimes exceed official Tolerable Upper Intake Levels (TUIL). For example, a 471 ml can of Rockstar® (Khaos) contains 40 mg of vitamin B3 while the TUIL is 20 mg for 9-13 year-olds and 30 mg for 14-18s79. Some harmful effects have been reported due to excessive B3 content in food, supplements and/or drugs, such as hot flushes, nausea, vomiting and liver toxicity.

Caffeine

As mentioned earlier, the ingredients added to energy drinks cannot be considered nutrients. One of these ingredients is, obviously, caffeine, and the caffeine added to energy drinks comes from several sources: synthetic caffeine or “natural” caffeine (guarana, yerba maté or cola nuts)80. When this report was being prepared, none of the drinks analyzed indicated the total caffeine content (all types). However, the new Health Canada regulations on energy drinks will correct this situation by making it mandatory for labels to show total caffeine content. Moreover, these new regulations will limit total caffeine content to 400 mg per litre, with 180 mg as the maximum caffeine content of any container.
presented as an individual portion (which means any non-reclosable container, and any reclosable container 591 ml or less)\textsuperscript{81}. For the time being, some products contain very high quantities of synthetic caffeine per litre.

**Other Substances**

As well as caffeine, taurine, ginseng and glucuronolactone are often added to energy drinks\textsuperscript{82}.

Taurine is an amino acid. The human body is able to naturally produce the taurine that it needs, so ingesting it as a food supplement is superfluous. Also, taurine can mask side effects associated with high caffeine consumption\textsuperscript{83}.

Ginseng, like caffeine, is a mild central nervous system stimulant. When used together, the two have a greater combined effect\textsuperscript{84}.

Glucuronolactone is produced naturally in the liver during the metabolism of glucose\textsuperscript{85}. It is found in various products, including wine, meat, thickening agents and stabilizing agents\textsuperscript{86}, and the Health Canada Tolerable Upper Intake Limit is 1,200 mg/day. Red Bull\textsuperscript{®} Regular contains 2,400 mg of glucuronolactone per litre, and Red Bull Energy Shots\textsuperscript{®} contains 10,000 mg/litre, which is more than eight times the TUIL. Few studies have been carried out on glucuronolactone consumption or its effects in combination with other energy drink ingredients\textsuperscript{87}.

**Sports Drinks**

Sports drinks are intended to rehydrate the body and replace electrolytes lost in strenuous efforts. Athletes are recommended to choose a rehydration drink containing 10-20 g of carbohydrates and 125-175 mg of sodium per 250 ml portion\textsuperscript{88}. Both drinks analyzed as part of this report contain adequate quantities of carbohydrates in terms of the criteria suggested for rehydration drinks. However, they contain lower levels of sodium than recommended. Sodium quantities vary greatly between the two products, with Gatorade\textsuperscript{®} containing three times more sodium than Powerade\textsuperscript{®}. This means that a 591 ml bottle of Powerade\textsuperscript{®} provides 3\% of the Recommended Daily Intake of sodium (32 g), while Gatorade\textsuperscript{®} provides 10\% (102 g).

The two sports drinks analyzed provide similar quantities of sugar, at 14 g per 250 ml for Gatorade\textsuperscript{®} 17 g per 250 ml for Powerade\textsuperscript{®} (Table 1). These drinks contain sugars that are essential for physical exercise but which, if consumed when not exerting sustained physical effort, can be a source of added sugar and can contribute to weight gain. Sports drinks should therefore only be used in combination with strenuous physical exercise that lasts more than an hour. For any exertion that lasts less than an hour, the best rehydrating drink is water\textsuperscript{89}.

**Fruit Drinks**

Fruit drinks are the most clearly identified products in this study. Sugar content varies greatly between products, up to double in some cases (30 g versus 16 g per 250 ml), as does calorie content (120 kcal vs. 60 kcal per 250 ml) (Table 1). The quantities of sodium found in the products also vary greatly from drink to drink, from 11 mg for Fruitopia\textsuperscript{®} to 190 mg for Sunny D\textsuperscript{®} per 250 ml. This additional sodium is a major concern, especially as the quantity of drink normally consumed can easily exceed 250 ml, given the size of a typical individual bottle. For example, a regular Sunny D\textsuperscript{®} drinker can ingest a quarter of the maximum tolerable limit of sodium (officially 2,200 mg for 9-13 year olds and 2,300 mg for 14s and over).
by drinking three 250 ml glasses of this beverage. Given that Quebeckers’ eating habits already exceed recommended sodium levels, additional sodium content is not desirable.

Most of the products in this category include fruit juice in their list of ingredients, but only Fruitopia lists it as the main ingredient. For the rest, “fruit juice” often comes third after water and sugar. Although the nutritional composition of some drinks matches that of 100% pure fruit drinks, such as orange juice (see Tables 1 and 2), it is important to emphasize the natural character of 100% fruit juice. Certain phytochemical compounds present in 100% fruit juice, such as flavonoids and carotenoids, may have a significant impact on health (for example: in protecting against some types of cancer), which is not necessarily the case for fruit drinks.

Table 4: Vitamin and mineral content of various fruit drinks per portion indicated on the label

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Portion (ml)</th>
<th>Vitamin C</th>
<th>Vitamin A</th>
<th>Calcium</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fruitopia® Fruit Integration</td>
<td>473</td>
<td>100%</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Sunny D®</td>
<td>250</td>
<td>100%</td>
<td>-</td>
<td>-</td>
<td>20% Vitamin B1</td>
</tr>
<tr>
<td>Fruité® Fruit Punch</td>
<td>250</td>
<td>-</td>
<td>-</td>
<td>2%</td>
<td>-</td>
</tr>
<tr>
<td>Fuze Vitalize® Fruit Punch</td>
<td>547</td>
<td>300%</td>
<td>340%</td>
<td>8%</td>
<td>9% potassium 31 mg Vitamin E 35 mg magnesium</td>
</tr>
<tr>
<td>Sobe Power® Fruit Punch</td>
<td>250</td>
<td>100%</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Oasis Premium® 100% Pure Orange Juice</td>
<td>250</td>
<td>120%</td>
<td>-</td>
<td>2%</td>
<td>10% magnesium 2% iron</td>
</tr>
</tbody>
</table>

The majority of the fruit drinks analyzed are enriched with all kinds of vitamins and minerals in order to provide higher nutritional value, which is generally highlighted on the packaging. In general, the drinks analyzed are enriched with vitamin C in the form of ascorbic acid. The vitamin C content found was at least 100% of the Recommended Daily Intake (RDI) (Table 4). Two fruit drinks contained low quantities of calcium (2-8% of RDI). Other drinks, however, such as milk or 100% pure juices enriched with calcium, are better sources of calcium for children and teens.

“Fortified” Fruit Drinks Marketed as Natural Health Products

Fuze Vitalize® and Sobe Power® are different from the other products analyzed in this study in that they are classified as Natural Health Products (NHP). Consequently, they contain varying quantities of a range of added substances. Sobe® contains ginseng, hibiscus and camomile, as well as added vitamin C. Fuze® contains more than 3 times the RDI of vitamin A and 3.4 times the RDI of vitamin C, which are very high quantities of these two nutrients. Although continuous consumption of high levels of each of these vitamins can produce undesirable side effects, adverse reactions are rarely seen when the vitamins are taken in the form of food. Problems typically arise, however, when people ingest megadoses of food supplements.
**Vitamin-Enriched Water**

Vitamin-enriched water provides considerable quantities of sugars and calories per portion for a relatively low intake of vitamins and minerals (Table 3). Vitamin-enriched water actually contains only 2 mg of vitamin B3, 1.1 mg of vitamin B5, 0.2 mg of vitamin B6, 0.6 mg of vitamin B12, 38 mg of vitamin C and 1.6 mg of zinc (per 250 ml portion). Furthermore, the amount of sugar in the vitamin-enriched water analyzed is the same as in Gatorade® (Table 3).

The information displayed on the packaging of vitamin-enriched water highlights the vitamin and mineral content of these products. However, the quantities found are low compared to the nutrients normally found in food (in fresh fruit, for example) while the sugar and calorie content are higher. Despite its name emphasizing its content of water and vitamins, the nutritional profile of this type of drink seems to show that it is essentially sugary water that also contains some vitamins and minerals.

These products are considered to be Natural Health Products due to their composition and therefore are not required to display a nutritional value table on their label. However, they are marketed and consumed like food in Canada. In the same way as with energy drinks, the classification of vitamin-enriched water should be reviewed to better regulate their composition and marketing.

**Ready-to-Drink Tea and Coffee**

The products in the ready-to-drink iced tea and coffee category vary greatly. Iced teas are the most popular, and there are many varieties on the market. However, all the products analyzed had one nutritional characteristic in common: the presence of added sugar. The sugar content of the various ranges varies between 14 and 29 g per 250 ml, which affects their calorie content (Table 3). The sodium content is very low for some of them (Arizona Green Tea, for example), while it is eight times higher for others (Starbucks Frappuccino Mocha, for example). The caffeine content of ready-to-drink coffee is nearly seven times higher than some of the teas analyzed.

The quantities of other nutrients are negligible, with the exception of Starbucks Frappuccino Mocha, which contains about 18% of the RDI of calcium per 250 ml portion. It is also the only product in this category that contains protein (6 g per 250 ml). We should note that its calcium and protein content comes from the milk used in making the Frappuccino. Nutritionally, it would be more beneficial for a consumer to drink milk directly to get the necessary calcium and protein, especially for children and teens (given the presence of caffeine), as milk contains no added sugar (the carbohydrate content of milk coming from lactose, a naturally present sugar).

**Flavoured Milk Drinks**

Although the sugar content of these drinks is as high as or higher than that of the other sugar-sweetened beverages analyzed, milk drinks have the advantage of providing young consumers with protein, calcium, iron, vitamin A and vitamin D, and in substantial proportions. In fact, these drinks provide about 15-20% of vitamin A, 60% of vitamin D, 30-35% of calcium and 15% of iron per 350 ml portion. We should note that these vitamins and minerals are also found in regular milk and in other foods which contain much less sugar (about 3-4 times less). The sodium content of these drinks is also high at 214-271 mg per 250 ml, which is double the content of sodium present in 1% regular milk (Table 3).

Note also that Hershey’s milk drink contains 12 more grams of sugar and about 100 more calories per portion than the Natrel chocolate drink. Both, however, contain similar quantities of other nutrients. These differences in nutritional value are considerable and can make a difference, particularly to regular
consumers of this type of product. Of all the drinks analyzed, Natrel chocolate drink is the most interesting nutritionally speaking, as it provides protein, calcium and vitamin D in the same proportions as milk. However, it contains 15 more grams of sugar per portion than regular milk.

**Nutritional Needs and Usual Nutrient Intake among Children and Teens**

As described earlier, most sugar-sweetened beverages consist of a mix of water (carbonated or not) and sugar, with the exception of flavoured milk drinks, as they are mainly milk. Although they are mainly water, the majority of sugar-sweetened beverages are high in calories and sugar and low in nutrients. The next section looks at the nutritional needs of children and teens focusing on the main nutrients present in sugar-sweetened beverages. With the help of data from the 2004 Canadian Community Health Survey (CCHS), these nutrient levels can be compared against the usual nutrient intake among children and teens in Quebec.

**Water**

Water accounts for more than 60% of body weight. It plays a number of roles in the human body, including cell homeostasis, maintenance of blood volume, distribution of nutrients and elimination of waste. We therefore need to replenish our bodies with water every day to maintain water balance. Lack of water manifests itself as various symptoms connected with dehydration (headache, dizziness, lack of energy, etc.). There is no official Estimated Average Requirement (EAR) for water. However, there has been an Adequate Intake (AI) set per age range and gender. Thus, boys 9-13 should consume 1.8 L of water per day while 14-18 year olds should consume 2.6 L. For girls, the figure is 1.6 L for 9-13 year olds and 1.8 L for 14-18s. Water can come from many sources. Drinking water is of course the main source and the ideal way of ingesting the recommended quantities. Sugar-sweetened beverages are also a source of water. However, their sugar and calorie content make them less preferable as sources of hydration. Also, the high caffeine levels in energy drinks can have a diuretic effect which makes them potentially “dehydrators”.

**Calories**

We need to take in calories for our bodies to function and to carry on our daily activities. Calories come from various food sources, mainly macronutrients (carbohydrates, fats, proteins). Our calorie requirements vary over the course of our lives, depending on age, level of physical activity and body composition. An energy balance is necessary to maintain a stable body weight.

In the 2004 CCHS study, 23% of young Quebeckers 2-17 years old were overweight, highlighting the presence of a positive energy imbalance among a certain part of the population. The “Other Foods” category, which includes sugar-sweetened beverages, provides a large proportion of energy intake among teens (22-29% for 9-17 year olds). In this respect, some studies suggest that sugar-sweetened beverages may contribute to this energy imbalance by providing additional calories. Moreover, “liquid” calories are less satisfying than food calories, thus encouraging higher overall food intake.

**Added Sugars**

Added sugars belong to the large family of carbohydrates. The main role of these nutrients is to provide energy for the body’s cells. A minimum intake of glucose is also essential for proper brain function. The EAR for children and teens is 100 g per day. However, less than 25% of total energy intake should come from added sugar, such as that found in sugar-sweetened beverages, to ensure that the overall diet has an optimal nutritional content. In fact, products containing added sugar usually have low
nutrient density. The term nutrient density refers to the quantity of nutrients present in a food and its calorie content. Lastly, excessive sugar consumption is related to an increased likelihood of being overweight and of dental caries.

The CCHS data highlights the fact that the total sugar consumption of young people varies between 109 and 195 g per day, which is about 24% of total energy intake. However, the data collected does not distinguish between types of sugar (natural vs. added) that contribute to total sugar intake. Thus, 34-46% of sugar intake comes from the “Other Foods” category, which suggests a major intake of added sugar. This means that sugar-sweetened beverages, which make up part of the “Other Foods” group, undoubtedly contribute to the added sugar intake among teens.

**Vitamins and Minerals**

Vitamins and minerals are essential nutrients for the human body to function properly. The following table shows the nutritional needs of children and teens in terms of vitamins and minerals that have been identified in certain sugar-sweetened beverages.

<table>
<thead>
<tr>
<th>Nutrient</th>
<th>Boys</th>
<th>Girls</th>
<th>Boys</th>
<th>Girls</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vitamin A (µg EAR/day)</td>
<td>445</td>
<td>420</td>
<td>630</td>
<td>485</td>
</tr>
<tr>
<td>Vitamin B1 (mg/day)</td>
<td>0.7</td>
<td>0.7</td>
<td>1.0</td>
<td>0.9</td>
</tr>
<tr>
<td>Vitamin B2 (mg/day)</td>
<td>0.8</td>
<td>0.8</td>
<td>1.1</td>
<td>0.9</td>
</tr>
<tr>
<td>Vitamin B3 (mg/day)</td>
<td>9</td>
<td>9</td>
<td>12</td>
<td>11</td>
</tr>
<tr>
<td>Vitamin B6 (mg/day)</td>
<td>0.8</td>
<td>0.8</td>
<td>1.1</td>
<td>1.0</td>
</tr>
<tr>
<td>Vitamin B12 (µg EAR/day)</td>
<td>1.5</td>
<td>1.5</td>
<td>2.0</td>
<td>2.0</td>
</tr>
<tr>
<td>Vitamin C (mg/day)</td>
<td>39</td>
<td>39</td>
<td>63</td>
<td>56</td>
</tr>
<tr>
<td>Vitamin D (µg/day)</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Vitamin E (mg/day)</td>
<td>9</td>
<td>11</td>
<td>12</td>
<td>15</td>
</tr>
<tr>
<td>Calcium (mg/day)</td>
<td>1,100</td>
<td>1,100</td>
<td>1,100</td>
<td>1,100</td>
</tr>
<tr>
<td>Iron (mg/day)</td>
<td>5.9</td>
<td>5.7</td>
<td>7.7</td>
<td>7.9</td>
</tr>
<tr>
<td>Magnesium (mg/day)</td>
<td>340</td>
<td>300</td>
<td>330</td>
<td>255</td>
</tr>
<tr>
<td>Potassium* (mg/day)</td>
<td>4.5</td>
<td>4.5</td>
<td>4.7</td>
<td>4.7</td>
</tr>
<tr>
<td>Sodium* (mg/day)</td>
<td>1,500</td>
<td>1,500</td>
<td>1,500</td>
<td>1,500</td>
</tr>
<tr>
<td>Zinc (mg/day)</td>
<td>7.0</td>
<td>7.0</td>
<td>8.5</td>
<td>7.3</td>
</tr>
</tbody>
</table>

*Adequate intake only. Not EAR.
As for the usual intake among young Quebeckers, the CCHS\textsuperscript{111} shows that vitamin A, the B-group vitamins, vitamin C, vitamin D, vitamin E, iron and zinc are usually present in adequate quantities in teen diets. However, some specifics should be noted:

**Iron**: Some teens 14-18 years old have inadequate iron intake, due mainly to their higher needs because of iron loss through menstruation.

**Calcium, magnesium and potassium**: Intake among the young is often below reference values, especially among teens. The CCHS data\textsuperscript{112} shows that many young Quebeckers do not eat the minimum portions of “Fruits and Vegetables” and “Milk Products” recommended in Canada’s Food Guide. These findings could explain the prevalence of inadequate intake of certain nutrients, including calcium, magnesium and potassium. Optimal intake of these nutrients among the young should therefore be a priority.

**Vitamin D**: Although the usual intake seems adequate according to the CCHS, more and more data tend to show that the vitamin D intake among the general population is sub-optimal\textsuperscript{113}. Understanding that adolescence is a crucial period for bone, muscle and endocrine development, it is important to ensure that teens take in enough calcium and vitamin D for maximum growth.

**Sodium**: The usual quantities consumed by teens generally exceed the official Tolerable Upper Intake Level (TUIL) of 2,300 mg for ages 14 and up (2,200 mg for ages 9-13)\textsuperscript{114,115}. Such consumption increases the risk of related side effects, mainly high blood pressure and cardiovascular diseases\textsuperscript{116}.

**Caffeine**

Caffeine is a central nervous system stimulant that increases alertness and reduces fatigue in the short term\textsuperscript{117}. Excessive consumption of caffeine can cause side effects, including heart palpitations, nervousness, nausea, vomiting and insomnia, among others\textsuperscript{118}. When consumed regularly, caffeine can create psychological and physical dependency\textsuperscript{119}. Excessive caffeine consumption is a particular risk for young people because their TUIL is lower than that of adults. By way of comparison, the TUIL for adults is 400 mg/day, whereas the TUIL for children ages 10-12 is 85 mg/day, and for teens ages 13-18 is 153 mg/day for boys and 135 mg/day for girls\textsuperscript{120}. According to the CCHS\textsuperscript{121}, it is not possible for the time being to estimate the usual intake of caffeine among young Quebeckers. However, they are advised to consume foods containing it in moderation. By taking into account only the synthetic version of caffeine content, most energy drinks on the market exceed the official Tolerable Upper Intake Limit for teens. As for other sugar-sweetened beverages, some also contain caffeine but in small quantities. This is true of soft drinks as well as ready-to-drink iced tea and coffee, among others. Consumed frequently, these drinks can add quantities of caffeine to young people’s diets and contribute to side effects related to excessive consumption of this substance.

**Moderation is Best... and Water Too!**

According to this nutritional analysis, it seems clear that sugar-sweetened beverages are not necessary for a healthy balanced diet for teens. Moreover, they can unfortunately replace more nutritious drinks such a milk or 100% pure fruit juice, as well as contribute to dental caries and dental erosion, and add empty calories that can result in weight gain\textsuperscript{122}. The fact that sugar-sweetened beverages may be enriched with vitamins and minerals does not constitute a valid argument for justifying their

\textsuperscript{v} Note that the TUIL corresponds to 2.5 mg per kg of body weight in teens ages 13-18: the calculations are based on normal body weight as used in the Institute of Medicine 2006 nutritional intake report, which is 61 kg for teenage boys and 54 kg for teenage girls.
consumption. First of all, the nutrients currently added are not necessarily those that people's diets lack most. For example, vitamin C is frequently added to sugar-sweetened beverages even though vitamin C deficiency is very rare in Quebec. Then, the quantities of nutrients added are usually very low compared to the quantities of sugar and calories present in these drinks. This means that sugar-sweetened beverages, despite being enriched, still have low nutrient density. Lastly, according to the CCHS findings, the inadequate intake of certain nutrients is generally caused more by low consumption of high nutrient density foods (fruit and vegetables and milk products, for example) than inadequate vitamin and mineral content in food. Thus, enriching drinks that have little nutritional value only detracts from the real problem rather than solving it.

In brief, calories provided by sugar-sweetened beverages are somewhat superfluous, as they contribute little to solving the nutritional needs of children and teens. Moreover, despite some of them being enriched with vitamins and minerals, our analysis shows that these products have low nutrient density. Among the young, sugar-sweetened beverages should therefore only be consumed occasionally and in moderation.
Analysis of Marketing Strategies Associated with the Product

As demonstrated by our nutritional analysis, sugar-sweetened beverages are clearly superfluous in our diet. So why do we still drink them? This is mainly due to the extensive strategies and financial resources deployed by manufacturers of sugar-sweetened beverages to entice consumers to the detriment of their health. To do so, the industry develops marketing strategies based on the “four Ps” (Product, Price, Place and Promotion). Although some of them may focus on more than one “P” at a time, we will illustrate here the main strategies associated with the product.

Proliferation and Diversification of Products

In order to build their position in a market that today offers hundreds of different sugar-sweetened beverages, companies need to be creative in positioning and gaining—or at least not losing—market share. A company’s objective is to entice as many consumers as possible and position itself as the reference in its category. In offering “a drink for every occasion”\(^1\), Coca-Cola Canada\(^\text{®}\) illustrates this concept perfectly. Originally known for its soft drinks, The Coca-Cola Company\(^\text{®}\) now offers a wide variety of products that also have market share in fruit drinks, energy drinks, sports drinks, iced teas and vitamin-enriched water:

Refined Segmentation for Better Targeting

Faced with a plethora of products, brands try to differentiate themselves from their direct and indirect competitors. We therefore see finer and finer segmentation in the hunt for new market shares, identified as consumers sharing particular characteristics. Furthermore, this micro-segmentation is founded on the North American consumer’s constant search for individualism. Consumers can be segmented according to many criteria, such as demographics (age, gender, etc.), consumer behaviour (brand loyalty, buying frequency, consumption context, etc.) or psychographic criteria (lifestyle, attitudes, beliefs, values, interests and opinions of consumers)\(^125,126\). This market segmentation not only defines the development of new products and/or the multiplication of existing ones but is also used above all to adapt the overall marketing strategy (product, price, distribution and advertising) to the target population.

In this respect, young people are usually segmented by gender or lifestyle and values. By using a particular name or packaging, the product itself can communicate values that young people identify with and want to be part of.
Positioning and Target Markets

Positioning allows the consumer to identify a product or brand (sometimes unconsciously) and to differentiate it from its rivals. In our analysis, we look at the positioning of sugar-sweetened beverages in terms of:

- The **functional dimension**: quenching thirst, providing energy, improving health, etc. This dimension allows us to distinguish in a basic way among the various categories of sugar-sweetened beverages;
- The **symbolic dimension**, i.e., the image and universe created by the brand (cool, zen, family-oriented, rebellious, etc.). This dimension is especially important for products that are functionally similar, particularly to differentiate the brands within a single category of products (for example, Monster® and Hype®). It also plays a major role for products that are consumed in a social context because the product’s symbolic dimension reflects the consumer’s interests and lifestyle. This factor is especially key among young people because their identity is in the process of being formed, and peer opinion and peer approval are highly prized.

**Soft Drinks**

According to a recent study, “adolescents and young adults are the chief targets of soft drink marketing”\(^{127}\). However, due to the proliferation of all sorts of formats, flavours, diet and light versions for virtually every product, their multi-platform marketing and their easy accessibility in terms of both price and availability, every conceivable segment of the population can be a target for a product category.

From a functional point of view, soft drinks are generally all considered to be thirst-quenching. The symbolic dimension of the positioning is therefore very important, as this category is teeming with different products. Thus, the positioning of a brand or product varies according to the target segment and differentiates the brand or product in a competitive market.

For example, on its website, Sprite® advertises itself as a drink with a strong appeal to young people\(^{128}\). The message could not be clearer. The brand positioning is thus based on a strong identity and a cool, dynamic image.

**Energy Drinks**

The term “energy” has been applied to this type of drink by the industry to communicate the essence of the product. The term, however, can lead to a false perception of the product among consumers\(^{129}\) by promising to boost energy but not always delivering the desired effect and creating confusion about the benefits of consuming these drinks during physical activity. We should remember that these drinks are not actually formulated to meet physiological needs connected with physical exercise\(^{130}\). The merchandising and advertising of these products varies by brand but focuses mainly on extreme sports, blowouts like raves, sex, and performance in general. Energy drink brands regularly sponsor athletes and sports clubs, which gives the impression that these drinks are designed for physical activity, which is not the case. Also, the connection with shows and festivals can encourage potentially harmful drinking habits, especially when energy drinks are mixed with alcohol. Lastly, by emphasizing the energy-boosting aspect of these drinks, manufacturers deliberately disguise their sugar content, similarly to how soft drinks are marketed. Young people are therefore not aware that energy drinks are more than anything sugar-sweetened beverages and that they are a major source of calories. As proof, according to a recent survey of 10,000 young people by the Réseau du sport étudiant du Québec, **only 39%** of respondents identified energy drinks as products that could make them gain weight.
When they first appeared on the market, energy drinks targeted a primarily young, energetic male population looking for performance. Today, although young males are still the main target, energy drinks are looking to gain new market shares and develop products for women, older consumers and even the very young. Students and teens of both genders are also intensively targeted by energy drink marketing, a fact recently confirmed by Health Canada in its new approach to managing these drinks, acknowledging that: “...energy drinks with high levels of caffeine are marketed to this subset of the population [adolescents and young adults].” Also, Health Canada now requires companies who obtain Temporary Marketing Authorization (TMA) for their products under the new regulations to collect data “related to product consumption, market share and consumer complaints (incident reporting etc.)”, which should allow us to better understand their target.

**Sports Drinks**

Sports drinks are often confused with “energy” drinks although their composition and nutritional value are very different. Sports drinks are specially formulated for top athletes performing sustained strenuous physical activity, in contrast to “energy” drinks, which are designed to give the consumer a short-term energy boost and are not formulated to be consumed during physical exercise. Although their advertising focuses on sports (sponsoring athletes and teams) and the functional dimension centres on physical activity, these drinks can be found everywhere, and some consumers see them simply as “healthy” refreshments. In consuming these products, the consumer expresses his sense of belonging to a group and shares its sports- and health-related values, although he doesn’t get the benefits they are formulated to deliver.

Historically, Gatorade® was developed in the 1970s for young American athletes and arrived on the Canadian market 20 years later. Although right from the start sports drinks targeted young male adults involved in strenuous training, even professional training, the market today is looking to diversify and reach a wider population that includes recreational sports as well as consumers simply concerned about their health.

**Fruit Drinks**

The composition of fruit drinks, including punches and fruit cocktails, varies enormously from product to product. Although often positioned on shelves like fruit juices, fruit drinks need to be distinguished from 100% fruit juice. In fact, these drinks always contain added sugar and less than 100% juice, sometimes without a trace of fruit. The use of the term “fruit” makes the product seem “healthy” and can mislead the customer. Parents can be enticed by this aura of “healthiness”, which partly explains their high consumption among Canadian children.

The range of fruit drinks is vast and a large number of sub-groups of the population are targeted depending on the product. While children are the main consumers of these drinks, some brands directly target mothers in their marketing strategy. To do so, the brands play on emotional and protective relationships by positioning their drinks as “healthy” products (symbolic dimension) and make themselves available to answer mothers’ questions about what best to give their children.

**Vitamin-Enriched Water**

Vitamin-enriched water is clearly positioned in the market as a “healthy” source of hydration and is often presented as having medicinal virtues that can prevent or treat certain minor ailments. Given the composition of these products, which are sugared water more than anything, their positioning emphasizes the presence of vitamins and is clearly misleading to the consumer. In fact, these drinks are essentially composed of water and sugar and contain only low quantities of vitamins and minerals.
Moreover, the addition of certain vitamins (vitamin C) is superfluous because there is no evidence of vitamin C deficiency in the population. Lastly, despite being enriched with vitamins and minerals, these products still have low nutrient density and can in no way replace a balanced diet. In this respect, legal proceedings have been launched against VitaminWater by the Center for Science in the Public Interest (CSPI) in the United States\textsuperscript{142, 143} as well as in some Canadian provinces\textsuperscript{144}.

The VitaminWater range includes a dozen products that are relatively similar in their functional positioning as “healthy” water, but which are differentiated by a very sharp symbolic dimension for each product. In fact, these coloured drinks are clearly identified as meeting the specific needs of defined target populations, reinforcing the feeling of belonging to a group.

Young consumers seem to be the main target of vitamin-enriched water products, which are generally positioned as alternatives to soft drinks, juice and energy drinks\textsuperscript{145} and use aggressive focused advertising.

**Ready-to-Drink Tea and Coffee**

Ready-to-drink iced teas are generally positioned as refreshing and “healthy” drinks due to the presence of (sometimes miniscule amounts of) tea. However, their antioxidant content is 20 times lower than freshly brewed tea, and they contain as much sugar as soft drinks\textsuperscript{146}. Consumers are not necessarily aware that these drinks can contain high quantities of sugar because everything is done to suggest their “healthy” nature. This is especially true of the packaging.

As for ready-to-drink iced coffees, they are not very common in retail outlets. However, they can be found in many catering outlets and specialized chains. They are generally positioned as “refreshing” drinks. Ready-to-drink iced coffees, however, are generally high in sugar as well as fat, if cream is added.

**Flavoured Milk Drinks**

If we look at a recent advertising campaign for chocolate milk, we see the product positioned as a “recovery” drink to be consumed after physical activity\textsuperscript{147}. It has the ideal composition to “refuel” and “replenish energy reserves” after exercise. The target market for classic chocolate milk seems to be a young, dynamic, sporty population.

As for the various flavoured milk drinks that can be found on the market, they are all equivalent in terms of nutritional content. However, they are not all positioned the same way. Because of their flavour, they can attract the very young.

**Trend toward “Added Value” Drinks**

Consumers seem increasingly concerned about their health. The industry is also exploiting this trend to develop an entire range of products with a health slant. This is how supposedly “added value” products (drinks consumed mainly for the nutrients they contain and the health benefits they claim to offer) have appeared on the Canadian market. This trend is fuelled by government messages urging us to eat a balanced diet to stay healthy\textsuperscript{148}. However, the drinks developed by the industry are very often more attractive than “healthy”. Look especially at ready-to-drink teas. The presence of tea (in sometimes miniscule amounts) immediately confers an aura of health on these products which, however, is not always justified. Take Nestea\textsuperscript{®} iced tea, for example, which has no fewer than 21 grams (5 teaspoons) of sugar per 250 ml of product. Before becoming iced “tea” (the tea well after the sugar in the list of ingredients), it is sugared water more than anything. Vitamin-enriched water also has an aura of health.
due to the added vitamins and minerals, but we should not lose sight of the fact that these products contain on average 33 grams of sugar per bottle (about 8 teaspoons) and that the vitamins and minerals added to it are superfluous in a balanced diet. As for energy drinks, some companies, such as Guru, develop products containing “natural” ingredients that in no way improve their low total nutritional value.

Thus, by claiming to meet the needs of consumers looking for “healthy” drinks, the industry is developing new sugared products dressed up as “better for you” drinks. Apart from the fact that it is developing more and more light and diet versions of these drinks, the industry should stop playing on perceptions and giving the impression that these liquids have health benefits, ignoring their high sugar and calorie content. Such practices can, indeed, mislead consumers. Moreover, these products are generally advertised aggressively, emphasizing the “coolness” factor of the product itself and of drinking it.

**Infinite Product Proliferation**

Apart from the fact that there are many brands competing in any particular category of drinks, it is interesting to see that any given product in any given brand comes in an impressive range of varieties and flavours. This proliferation has a definite impact on product distribution because some big brands end up monopolizing shelf space to the detriment of small producers who may offer better beverages. This aspect will be developed in Volume 3 on distribution.

Take Pepsi®, for example, which comes in seven different varieties: Pepsi Classic®, Diet Pepsi®, Caffeine-Free Pepsi®, Caffeine-Free Diet Pepsi®, Pepsi Max®, Pepsi Lime®, and Diet Pepsi Lime®. To this variety of products, of course, you need to add merchandising (formats, packaging, and availability) and advertising adapted to the target clientele. We will look at these two topics more fully in Volumes 3 and 4, on Distribution and Promotion.

VitaminWater® is also merchandised as a wide range of vitamin-enriched water. In addition to different flavours and colours, each of its products is designed to “respond to a need” and is therefore potentially aimed at different targets. It also comes in a range of low-calorie versions. Whatever the variety may be, the vibrant colours of the product itself and the tone (very informal) as well as the language used on the label clearly suggest that these products target teens and young adults of both genders. Its Canadian website also clearly indicates that some of the products have been developed for “ages 12 and over” (e.g., the “recharging” drink) while others target “ages 18 and over” (the “wake up” drink specially “designed” for the morning after).
We see the same with energy drinks. Take Rockstar, for example, which is sold today in nine different versions.

We also find this concept among some fruit drinks and ready-to-drink teas and coffees, but very little among flavoured milk drinks.

This product proliferation multiplies not only the number of potential targets but also the occasions for consumption within a given segment. If we look at VitaminWater®, for example, each product offers an “added value” that is claimed to meet a need. The consumer is therefore offered various occasions for consuming a product, based on differing needs throughout the day. This approach is a major contributor to increasing the total consumption of the product.

A Name Positioned in the Market

While some brands of sugar-sweetened beverages occupy a choice position in consumers’ hearts due to their long historical presence in the market, their character as a reference in a category or a strongly established brand image, others need to compete in ingenious ways to define a name that positions them in the market. The case of energy drinks, only recently having appeared on the market and growing fast in an intensely competitive segment, is a very interesting category to study when it comes to product names.

Key Brands

Coca-Cola® and Red Bull® were the first to capture the soft drink and energy drink segments, respectively, which today gives them the major market shares in their categories. Thus, the first brands to arrive on the market will be the first to get established in consumers’ hearts. This is also the case for Glacéau® with its VitaminWater®, a pioneer in the vitamin-enriched water category. The success of these beverages—and, consequently, the brand—was such that it was not long in attracting the interest of Coca-Cola®, which bought the company for $4.1 billion in 2007. According to estimated value of the top 10 brands worldwide, the Coca-Cola® brand is worth US$70 billion, for its “name” alone. Coca-Cola® thus claims to be the leading brand, in terms of value, ahead of IBM®, Microsoft® and Google®. By comparison, the Pepsi® brand is in 23rd place with a brand value of US$14 billion, and Sprite® in 61st place with US$5 billion.

In the case of energy drinks, these brands have been in the Canadian market for years. Over the course of time, they have built their brand image by associating their product with values, and their original name is now enough to make them attractive to consumers. The Coca-Cola® brand is now recognized by 94% of the world’s population.
More Evocative Names

For the new arrivals on the sugar-sweetened beverage market, the story is not the same. They need to carve out a position in a market that is highly competitive—even saturated—by being effective in reaching their target clientele. The use of a catchy name loaded with connotations is therefore key to enticing the consumer. This is especially true for the energy drink market, where the name itself is immediately associated with product values.

By evoking power, performance, sex, glory and celebration, the brands are trying above all to attract a target segment that will identify itself with these lifestyles, particularly among teens looking for strong sensations. Thus, it is mainly boys who are targeted by the names of the usual energy drinks and sports drinks. Girls are targeted more by the sugar-free versions of these products (by more “girly” or refined packaging) or by certain vitamin-enriched drinks touting health benefits.

Power

Power is a value transmitted mainly by energy drinks with connotation-laden names like Red Bull®, Monster®, Full Throttle® and NOS® (Nitrous Oxide Systems, used in sports cars to boost engine performance).

Performance

Drinks with names that reflect a desire for performance can be sports drinks such as Powerade® and the various forms of Gatorade® (Perform®, Recover®, etc.) as well as certain varieties of vitamin-enriched water, such as VitaminWater Energy®, Multi-V®.

Lifestyle

Through their names, some brands of sugar-sweetened beverages develop symbolism around their products. In the case of the sugar-sweetened beverage market, which has grown fast, a name loaded with symbolism can sometimes make the difference in the mind of the consumer. Energy drinks such as Rockstar® and Hype® clearly position themselves for young, trendy party people. This is also the case with VitaminWater Réveil®, which explicitly evokes celebration and the problem of the morning after.

In another symbolic dimension, some brands of sugar-sweetened beverages play on concepts related to nature and biological products that are often associated with health. This is true of the Guru® brand, which contains only “natural” products.

Health

Health can be evoked in the branding of fruit drinks (Fruitopia®, Fuze Vitality®), vitamin-enriched water (VitaminWater Essential®, Defense®) and iced teas that benefit from the positive healthy aura of the word “tea” in Nestea®, for example.

Sex

Some energy drinks currently on the international market have names like Pussy® and Pimp Juice®. These drinks are not yet available on shelves in Canada, but they can be ordered over the Internet. The names of some drinks in Canada are also sexually suggestive, although more subtly so, as with VitaminWater XXX®.
Packaging: A Marketing Tool that Can Make the Difference

With the vast number of products in the sugar-sweetened beverage market, packaging is a great tool for making a product stand out from its direct competitors. Consumers today are impulsive consumers that need to be enticed and persuaded fast. Packaging is often the first direct contact between the consumer and the product, as well as the first possibility of expressing the brand at point of sale. The use of attractive colours and novel formats can make the difference on the shelves.

Packaging also allows the brand to personalize the product and position itself in the market by spotlighting the name of the product, its logo and catchphrases that have a particular significance for the target segment of the population. Packaging is also an essential vehicle for transmitting information to the consumer about the product (nutritional information) as well as any promotions (competitions or special offers) associated with the product.

For example, on this packaging of 12 cans of Fruitopia®, a fruit drink, we see nutritional claims about the product (“excellent source of vitamin C”, “Made with real fruit”, etc.) as well as information about a promotion associated with the product (“downloadable DVD offer in each pack”).

Packaging, which can easily evolve over time, is thus an information, communication and promotional tool for the brand. According to Agriculture and Agri-Food Canada, packaging “is one of the most innovative and dynamic groups in the beverage category. In some cases, it is the packaging, not the product, which is the real draw”.

Lastly, sugar-sweetened beverages packaging plays a major role in social communication during consumption. In fact, these products are often consumed in a social context and allow the consumer to indirectly communicate his identity to others. Packaging is part of this communication in its format, colours and associated symbolism.

In the United States, in the soft drink market, the financial investment in “packaging” and “in-store marketing” to reach adolescents was US$90 million, thus placing teens at the heart of this activity.
The Format of Sugar-Sweetened Beverages Says a Lot...

...about Manufacturers’ Intentions

Although the average format at the beginning of the 20th century was only 6 ounces (about 177 ml), quantities rapidly doubled, first with 12-ounce bottles (355 ml) offered by Pepsi® in 1930, then with the arrival of family-size bottles from Coca-Cola® (26 ounces or 768 ml) in 1955. Formats have fast become bigger and bigger: these days, in a fast food outlet, a carbonated drink for a child is 50% bigger than in the 1950s, and the largest format is 300% bigger157.

Large portions are generally very advantageous in terms of cost and therefore very attractive to the consumer, who is encouraged to consume more. The presence of large formats in retail stores, and especially in fast food outlets, tends to make large portions the norm. Some prevention campaigns make direct reference to the increased size of portions and their consequences on health158:

While this strategy is harmful to the health of consumers, it greatly benefits the manufacturer, whose profits rise as a result. This aspect will be further explored in volume two on pricing.

...about the Target Clientele

Today, the Canadian market teems with all types of formats from shots of energy drinks to two-litre bottles of soft drinks. There is something to suit everyone. And that is the objective. In developing various formats, the industry is looking to reach precisely defined target markets: the young, women, families, men, the nostalgic, weight watchers, etc. Depending on whether you are an active woman who watches her weight or a 17-year-old teen, your view of the key format will certainly not be the same. This is why the industry develops so many different formats. A woman looking for a pleasant but low-calorie drink might consume the small format containing 100 calories, while the teen may opt for a 591 ml “individual” format of the same brand. Large formats were originally designed for men, who are less likely to go shopping than women and who are not bothered by the weight of the container if it means fewer visits to the store.
This photo taken in 2010 is no longer current because new formats have appeared since then, but it illustrates the extent of the phenomenon. For a single product, Coca-Cola Classic®, we see no fewer than eight different formats.

Most brands of energy drinks also offer a variety of formats. The most popular are 250 ml and 473 ml.
The Look of Packaging

The look of the packaging can play a key role in attracting consumers or influencing their perception of the product.

For example, young children are attracted by fun formats and flashy colours. “Marketers therefore constantly use attractive visual imagery, recognisable characters, colour and design to ensure that their product stands out to children” vi, 159. This is notably the case with the drink Chubby, a soft drink clearly aimed at young children160, with its small round format and different colours and flavours. Note, by the way, that this soft drink contains no fewer than 23 grams of sugar in a small round 250 ml bottle. With its fun appearance, packaging can entice the very young, although these drinks are clearly not a nutritious choice for this population, mainly due to their high sugar content.

The slim shape famously selected by Coca-Cola® for its 222 ml can, can also attract women who are watching their weight.
In this respect, and although we do not investigate diet drinks in this report, we should highlight Pepsi® coming out with its “Skinny Can” during New York Fashion Week in spring 2011, celebrating the beautiful, confident women 161.

Glass bottles can seduce consumers nostalgic about a bygone era, retro fans or “collectables” enthusiasts. You can see this “return to my roots” trend in many other food categories too.

**Colours**

Colours are not used in a boring way in marketing. Although they can simply be associated with the taste of the product, they are also used to evoke sensations and/or emotions in the consumer. No in-depth study has been conducted into the relationship between colour and emotions, but certain findings and observations stand out. Here are some examples of colours used in sugar-sweetened beverages and their potential meaning in marketing 162.

- **Blue** (e.g.: Pepsi®, Red Bull®, Full Throttle®)
  According to Luc Dupont, Associate Professor in the Communication Department of the University of Ottawa, “blue works for all refreshments including soft drinks”, bottled water, etc., because it gives a sensation of freshness. It is a cold colour used very often, notably by Pepsi® and Red Bull®.

- **Red** (e.g.: Coca-Cola®, Guru®, Red Bull®, Dr Pepper®)
  “Red is a promise of quality, of value.” In the case of sugar-sweetened beverages, Coca-Cola® is the first product that comes to mind if we think of the colour red (derivative products, delivery trucks, etc.). In the case of the Red Bull® logo, which is two bulls, the colour red reinforces the notion of power associated with the product.

- **Black** (e.g.: Monster®, Hype®, Rockstar®, Coca-Cola Zero®, Pepsi Max®)
  “Black confers nobility, distinction and elegance. It evokes sophistication... Black... also enhances colours placed beside it.” The drinks Coca-Cola Zero® and Pepsi Max® were developed to reach a male population that was health-conscious 163 but was not buying diet drinks because of their “feminine” connotation. The packaging of both of these soft drinks is black. The colour differentiates them from diet drinks and targets a male population by using a colour that is more “virile”.

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161. Reference
162. Reference
163. Reference
• **Green** (e.g.: Sprite®, Nestea®)
  Green “symbolizes health, freshness and nature”. It is used extensively by Sprite®, which positions itself as a refreshing drink, while Nestea® uses it selectively to suggest tea leaves and thereby evoke nature and health.

With fruit drinks, we find flashy vibrant colours that refer, in most cases, to the colour of the fruit that the drink contains or is claimed to contain (depending on whether the content is fruit or just fruit flavour). We also see photos/sketches of fruit on the packaging.

Vitamin-enriched water and sports drinks use flashy, dynamic colours that attract the eye and that young people generally like.

Lastly, flavoured milk drinks are typically brown for chocolate beverages, pink for strawberry and off-white for vanilla.

In the case of energy drinks, the products also differentiate themselves in terms of target gender. In the case of drinks that are aimed at girls and are often low-calorie versions, we find a lot of pink packaging. For boys, blacks and blues tend to be used.
Adaptation to Seasons and Events

As we have seen in certain cases, packaging can become the main attraction ahead of the product itself. In the case of Coca-Cola®, it can also adapt to seasons and events.

In the summer of 2011 in Canada, the packaging on individual 355 ml cans was given “freshness” appeal by adding summery images of barbecues and deck chairs.

As Denis Ferlatte, Coca-Cola® Marketing Director for Quebec, explains, summer is a brilliant season for soft drinks (every extra degree of temperature above 14 °C increases sales by 2-5%\(^1\)). Innovation is needed to attract the consumer’s attention\(^1\). Apart from the design of the can, the value of this packaging lies in the temperature indicator that tells you whether the contents are cold enough to drink.

In late October 2011, Coca-Cola® announced it was changing the colour of its individual cans for the holiday season at the end of the year. On cue, 355 ml cans with polar bear imagery appeared on the market. This new marketing coup was part of a multi-platform strategy aimed at emphasizing the partnership between Coca-Cola® and WWF on the protection of the polar bear habitat in the Arctic. Having used the polar bear motif since 1993, Coca-Cola® engages the public’s empathy and gives its brand a positive image. We will look at this strategy in more detail in the volume on advertising.

However, this entirely white packaging was not as successful in attracting customers as it was expected. According to an article by Mike Esterl published December 1\(^{st}\) in the *Wall Street Journal*\(^2\), the white cans were discontinued early. Why did they not work? They created three major problems for Coca-Cola®:

- the cans were confused with silver Diet Coca-Cola®;
- some consumers wrongly perceived them as having different content to regular Coca-Cola®;
- loyal Coke drinkers condemned the change as “sacriilege”.

This example shows the power that packaging can have on many parameters, such as consumer’s recognition of the product, their perception of the product and their emotional attachment to the brand.

The packaging here targets the consumer emotionally by associating Coca-Cola® with summer, freshness and good times on the one hand, and endowing it with high principles as a philanthropic and altruistic brand on the other.
And Where is Health in All This?

By multiplying and diversifying its products, the industry is creating desire for a category of products that has absolutely no health benefit. With no regard for the health of consumers, the manufacturers of sugar-sweetened beverages are refining their market segmentation to reach all consumers in order to increase the consumption of their products, primarily among the young. To seduce this young population, the industry dresses up its products with attractive packaging in flashy colours and graces them with evocative names to reach young people at the heart of their identity, just as it is developing. Thus, consuming a particular kind of sugar-sweetened beverage becomes a reflection of the consumer’s personality, and its appearance is sometimes more seductive than the content itself. In Volume 4, we will analyze brand advertising more closely in terms of the image that the brands want to reflect.

Nonetheless, these marketing strategies should not be allowed to obscure the true nature of sugar-sweetened beverages and the collateral damage they can cause. In fact, their impact on health is increasingly better documented. Although enticement is part of the game, it should not take priority over content. Decision-makers must take concrete action to protect the health of Canadians and especially that of the youngest.
“Product” Recommendations

The sugar-sweetened beverages studied herein account for a considerable portion of the calorie intake of children and teens in Canada. Furthermore, some of them also contain a potentially dangerous amount of caffeine, especially when consumed by young people. Most of the drinks studied use numerous marketing strategies to target the product at children and teens. As their impact on health is increasingly better documented, the consumption of these drinks by young people should not be encouraged.

Regulate All Sugar-Sweetened Beverages Uniformly and Consistently

Although some sugar-sweetened beverages studied in this report, such as soft drinks and milk drinks, are subject to the Food and Drug Regulations, others are subject to the Natural Health Products Regulations (NHPR) because of the vitamins and minerals added to them. Among others, it is the case with vitamin-enriched water such as VitaminWater®, some fruit-fortified drinks and sports drinks. However, all these drinks are marketed like food and are perceived as such by consumers. So why not regulate their marketing consistently and uniformly?

This is actually what has recently led Health Canada to adopt a new management approach to energy drinks, until now regulated like natural health products.

Health Canada has determined, based on consumption patterns, history of use, representation to consumers, and in accordance with its guidance document on “Classification of Products at the Food-Natural Health Product Interface: Products in Food Formats”, that products known as Energy Drinks fit the regulatory definition of a food and as such intends to classify these products as foods. This announcement was accompanied by a series of requirements relating to the content of energy drinks (maximum caffeine content) and their labelling. Also, only “Products that meet these requirements will be issued a Temporary Marketing Authorization (TMA) and will be subject to data collection related to product consumption, market share and consumer complaints (incident reporting, etc).” Thus, energy drinks are now subject to the Food and Drug Regulations.

There are significant differences between these two sets of regulations, notably the obligation to display a Food Nutritional Value table on labels, which energy drinks manufacturers will now need to comply with.

As for the other drinks currently subject to the NHPR, like VitaminWater®, it is impossible for the consumer to know the content of these beverages because they do not display a nutritional value table. Nevertheless, these drinks are marketed like food (and not like natural health products) and are consumed as such. Moreover, although they seem “healthy” due to the added vitamins and minerals, these products are still primarily sugar-sweetened beverages with little nutritional value, if any. Therefore, in order to avoid misleading the customer, these beverages should be considered foods, just like energy drinks, because they are now sold like foods. They should also display a nutritional value table.
Furthermore, due to the delay involved in certifying natural health products, many items find themselves on store shelves today without having been evaluated by Health Canada. Thus, neither the content nor the container has been verified to date, which leaves manufacturers with an open field. It is therefore urgent to regulate sugar-sweetened beverages uniformly and in a way that is consistent with consumption habits and how the products are marketed.

All drinks currently regulated as natural health products but marketed like foods and consumed as such by Canadians should be subject to the Food and Drug Regulations.

- These drinks should, at minimum, display full and understandable nutritional information.
- The necessary resources should also be deployed to exercise effective oversight of the practices in the industry following this change of category.

Ensure That Packaging Informs More Than Seduces

Simplify Nutritional Information on All Sugar-Sweetened Beverages

With the alarming obesity rate among Canadian children and teens, and with caffeine consumption by young people becoming a problem, a simple and detailed nutritional table on the label on all sugar-sweetened beverages would seem to be a minimal but essential measure to enable consumers to make more informed choices. Moreover, in a survey by the Réseau du sport étudiant du Québec (RSEQ), in response to the question “What actions do you think could reduce the consumption of junk drinks among young people?”, 62% of the 10,000 teens 13 to 17 surveyed selected clearer and more comprehensive product labelling.

Over the course of 2011, the beverage industry announced new measures regarding labelling standards. The Clear on Calories initiative, aimed at indicating the total calorie content of individual portions up to 591 ml on the front label, was launched in reaction to studies spotlighting the contribution of sugar-sweetened beverages to obesity and to the many criticisms they had generated. This initiative was presented as a measure aimed at helping Canadians make more informed choices.

Although this initiative is a first step towards clearer information, it does not go far enough to help all Canadians make healthier choices. Low literacy levels prevent many Canadians from properly understanding and using this information.

In Canada, the nutritional value table is mandatory on the back of all packaged foods, but the front of the packaging is still often available for nutritional claims, health claims and self-generated logos by the agri-food industry, which can create confusion among consumers. Also, the way the nutritional value table is used across the entire country does not seem optimal. Health Canada concluded in this respect that “despite educational efforts by Health Canada and others, the understanding of nutrition labelling is not reaching its full potential to assist Canadians in making informed food choices.” It is therefore essential for the Canadian government to study the various options for remedying this situation.
There is a worldwide move to simplify nutritional information. Options put forward include using a uniform, colour-based visual code, such as a traffic light, to indicate whether the nutritional content—and sometimes also the energy value—of a food product is high, medium or low. The traffic light system has been adopted in United Kingdom. Other countries use health logos for certain products that meet predefined nutritional criteria. This is the case in Sweden, which uses a keyhole symbol to help consumers identify the healthy options within a given category of products. Foods that display this logo contain less fat, sugar and salt, and more fibre than the same type foods without the label. The Food and Drug Administration (FDA) in the United States has also expressed a desire to simplify labelling.

As for sugar-sweetened beverages, it would be interesting to develop a simple tool that allows the consumer to evaluate the sugar content (and, for some, the caffeine content) at a glance. In particular, this would prevent a bottle of VitaminWater® from being associated with water and consumed as such. The use of a visual tool (number of teaspoons, for example) to illustrate the sugar content (regardless of its source) could potentially be understood by everyone, even the youngest, in contrast to the nutritional value table currently in place. It would be essential to evaluate the impact of such labelling on the food choices and consumption of target populations.

Health Canada should set up a working group to determine the best practices in nutritional labelling aimed at developing recommendations to simplify nutritional information and make it accessible and understandable for everyone.

Display Clear and Unambiguous Warnings

In this volume, we have found that packaging is a multi-faceted tool. By its position on the shelves, it is used both as an information tool (nutritional information) and as a marketing tool (colours, names, logos, symbols, etc.). This plethora of information generally makes packaging a dense tool that creates confusion among customers.

Packaging is also an essential vehicle for informing the consumer about potential adverse effects associated with the product. In the case of energy drinks, warnings will now appear on the label, especially regarding consumption by children. The approach to managing the caffeine content of energy drinks proposed by Health Canada includes the mandatory display of the statement “Not recommended for children, pregnant/breastfeeding women or individuals sensitive to caffeine.” In this same approach, Health Canada emphasizes the vulnerability of children and adolescents under 18 to the high caffeine content of most of these drinks. In this respect, clear and unambiguous warnings should be displayed on the labels of these products, and they should be properly visible.

The front of energy drink cans should clearly state that they are not recommended for people under 18 years of age.
Reduce the Health Risks Associated with the Content of Sugar-Sweetened Beverages

Although the availability of simple and detailed nutritional information on all sugar-sweetened beverages labels is an essential first step in allowing consumers to make more informed choices, it generally does not sufficiently impact eating habits, especially among the young. On the one hand, low literacy levels prevent many Canadians from properly understanding and using this information. On the other hand, the availability of information in itself does not automatically change eating habits. This is why, in our opinion, it is essential to take concrete action on the content of sugar-sweetened beverages. Such actions will affect all Canadians regardless of their literacy and comprehension, their age, social status or critical maturity, with the global objective of prevention and the promotion of health.

Create a Working Group on Sugar

The Canadian government has already shown its concern over the consumption of certain nutrients, such as trans fat and sodium, by setting up specific working groups. Although the final measures taken as a result of the recommendations issued by these working groups are debatable, their implementation has been a significant first step regarding these nutrients.

It would be interesting to create a similar working group on sugar in Canada in order to formulate precise recommendations on the consumption of sugar in all its forms and to take concrete measures to protect the health of the entire population. Indeed, the acceptable limits of consumption of added sugar are not as scientifically clear as they are for trans fat and calcium.

Moreover, a recent study demonstrated that the presence of caffeine in sugar-sweetened beverages disguises the taste of sugar. Therefore, by reducing the amount of caffeine, we can also reduce the amount of sugar, without impacting the flavour of the product. In fact, in this study, removing caffeine from sugar-sweetened beverages allowed sucrose to be reduced by 10.3% without affecting the flavour of sugar-sweetened beverages, which is the equivalent of 116 calories per 500 ml portion. Taking this route would limit two potentially harmful ingredients in energy drinks and cola-based drinks.

The reformulation of sugar-sweetened beverages should be more effectively encouraged by the Canadian government to limit the growing proliferation of products high in calories with low nutritional value aimed at the young generation.

A working group on sugar should be created with a mandate to develop recommendations on the consumption of the various forms of sugar by Canadians and to assess the possibility of limiting sugar content in sugar-sweetened beverages.

The recommendations issued by this group must also be rigorously applied.
Trans Fatty Acids

High consumption of trans fats triples the risk of heart disease and causes nearly 3,000 deaths from heart attack in Canada every year\(^\text{176}\). In early 2005, a working group on trans fat was created as the result of a motion sponsored by the New Democratic Party, asking Health Canada and the Heart and Stroke Foundation of Canada to co-chair a multi-party working group whose mission would be “to provide the Minister of Health with concrete recommendations and strategies to effectively eliminate or reduce processed trans fats in Canadian foods to the lowest level possible”\(^\text{177}\).

In June 2007, after the publication of the report of the working group on trans fat, Health Canada gave the agri-food industry two years to reduce the amount of trans fat in vegetable oils & fats and vegetable oil spreads to 2%, and in other foodstuffs to 5%.

This initiative, however, demonstrated some limitations of voluntary measures as, at the end of the period allowed for industries to comply with the maximum trans fat values, 20% of products failed to meet the standards imposed by the federal government.

Sodium

Although the Institute of Medicine (IOM) of the National Academy of Sciences recommends that people ages 14 and over should not consume more than 2,300 mg of sodium a day\(^\text{vii}\), and that the intake adequate to maintain health for those ages 1 and over is between 1,000 and 1,500 a day\(^\text{178}\), Canadians consume nearly 3,400 mg of sodium a day. Accordingly, in October 2007, the Ministry of Health announced it was setting up a multilateral working group on reducing sodium, chaired by Health Canada, whose mission was to launch and oversee the implementation of a strategy aimed at reducing sodium content in the diets of Canadians to within the limits recommended by the Institute of Medicine of the National Academies\(^\text{179}\).

In 2010, the report of the sodium working group was issued, entitled “Sodium Reduction Strategy for Canada”, including a series of recommendations on food supply, public awareness, education, research, oversight and evaluation\(^\text{180}\), all of them to be on a voluntary basis. However, in December 2010, and contrary to all expectations, Health Canada decided to put an end to the activities of the working group on sodium.

\(^{\text{vii}}\) 1 tsp contains about 6 g of salt, and 6 g of salt contains about 2,400 mg of sodium.
Limit Caffeine Content

In recently announcing new measures governing the caffeine content of energy drinks, Health Canada took a step in the right direction. Manufacturers are now required to indicate their products’ total caffeine content, which must not exceed 180 mg per container or 400 mg per litre. However, according to Health Canada\textsuperscript{181}, the maximum recommended intake of caffeine is:

- 45 mg for children ages 4 to 6
- 62.5 mg for children ages 7 to 9
- 85 mg for children ages 10 to 12
- 2.5 mg/kg of body weight for teens ages 13 and over

This maximum recommended intake must also take into account other sources of caffeine that can be present in young people’s food, such as\textsuperscript{182}:

- carbonated drinks (35 to 50 mg of caffeine per can)
- chocolate (5 to 50 mg)
- chocolate snacks (7 to 19 mg)
- chocolate milk (8 mg)
- tea (15 to 50 mg per 175 ml)
- coffee (80 to 180 mg)

The proliferation of sources of caffeine, such as energy drinks, is becoming a worrying public health challenge. The consumption of an energy drink containing 180 mg could already provide a higher dose than the maximum recommended for young people, which could have serious consequences on their health. This is why the group of experts consulted on energy drinks by Health Canada recommended that “Health Canada should maintain stimulant drug containing drinks for use only in adults age ≥ 18 years.”

In this respect, a report issued in 2010 by the \textit{Institut national de la santé publique du Québec} highlighted the large number of calls to the Quebec poison control centre regarding energy drinks, rising from 4 in 2003 to more than 100 in 2008 and 2009. Also, 75% of intoxication cases were people ages 12 to 30 and nearly 10% were ages 11 and under, which indicates that children of young age are consuming this type of drink despite recommendations and warnings by Health Canada.

To ensure the health of young people, we need to go further than putting warnings on sugary drinks, particularly energy drinks, and take measures aimed at \textbf{significantly} limiting their caffeine content.
Appendix 1: About the Weight Coalition

The Quebec Coalition on Weight-Related Problems (Weight Coalition), an initiative that is sponsored by the Association pour la santé publique du Québec, seeks the required support to demand legislative and regulatory changes, as well as public policies within three strategic areas (agri-food industry, sociocultural and built environment) to foster the development of environments that enable healthy choices and help prevent weight-related issues.

Since its creation in 2006, the Weight Coalition has become a well established advocate supported by nearly 200 partners from various spheres, such as the municipal, school, health, research, education, environment, nutrition, and physical activity arenas.

The Weight Coalition’s partners recognize the importance of taking action and support the following environmental measures:

**Agri-Food Industry:**
- The elimination of junk food and soft drinks in schools and hospitals
- A strict adherence to the food policy in elementary and high schools
- A responsible policy for food display in supermarkets
- Cooking classes in schools to promote the development of culinary skills and the pleasure of eating well
- Moderate-size servings in restaurants
- A special tax dedicated to supporting preventative measures for weight-related issues

**Built Environment:**
- A safe environment surrounding every school to allow children to walk or cycle to school
- A policy for active schools
- Agreements between municipalities and schools in order to increase the use of sports facilities after school hours
- An increase in the number of parks, green spaces, bicycle paths, and walkway systems
- Restricting the use of vehicles in certain zones
- Improving the quality and accessibility of public transportation services

**Sociocultural Environment:**
- Regulations on weight loss products, services, and methods
- Strict application of the regulations governing advertising directed at children
- Legislative measures and regulations to restrict the encroachment of advertising within public spaces
- The creation of an independent body to govern the advertising industry
- The implementation of a policy for work-family life balance to enable families to prioritize their health and well-being
Partners of the Weight Coalition

As of February 1st, 2012

Partner Organizations:
- Accès transports viables
- Agence de la santé et des services sociaux de Chaudières-Appalaches
- Agence de la santé et des services sociaux de l’Estrie
- Agence de la santé et des services sociaux du Bas-St-Laurent
- Alberta Policy Coalition for Chronic Disease Prevention (APCCP)
- Anorexie et boulimie Québec (ANEB)
- Archevêché de Sherbrooke
- Association des dentistes de santé publique du Québec
- Association des jardiniers maraîchers du Québec
- Association des urbanistes et des aménagistes municipaux du Québec
- Association pour la santé publique du Québec
- Association québécoise d’établissements de santé et de services sociaux
- Ateliers Cinq Épices
- Azimut Santé
- Carrefour action municipale et famille
- Cégep de Sherbrooke
- Centre d’écologie urbaine de Montréal
- Centre de santé et de services sociaux – Institut universitaire de gériatrie de Sherbrooke
- Centre de santé et de services sociaux de Gatineau
- Centre de santé et de services sociaux de Jonquière
- Centre de santé et de services sociaux de Matane
- Centre de santé et de services sociaux de Papineau
- Centre de santé et de services sociaux de Rimouski-Neigette
- Centre de santé et de services sociaux de Rouyn-Noranda
- Centre de santé et de services sociaux de Témiscaming-et-de-Kipawa
- Centre de santé et de services sociaux des Aurores-Boréales
- Centre de santé et de services sociaux du nord de Lanaudière
- Centre de santé et de services sociaux Drummond
- Centre de santé et de services sociaux Jardins-Roussillon
- Centre d’écologie urbaine de Montréal
- Centre hospitalier de l’Université de Montréal
- Centre hospitalier universitaire de Sherbrooke
- Centre hospitalier universitaire Sainte-Justine
- Centre Normand
- Centre sportif Alphonse-Desjardins
- Chambre de commerce de Fleurimont
- Chambre de commerce de Sherbrooke
- Collège régional Champlain
- Comité Action Matapédia en Forme (CAMEF)
- Commission scolaire de la Région-de-Sherbrooke
- Commission scolaire des Phares
• Conseil québécois du loisir
• CytoKIN
• Direction de santé publique et d’évaluation de Chaudière-Appalaches
• Éclipse, Entreprise d’insertion
• Edupax
• ÉquiLibre – Groupe d’action sur le poids
• Équipe PAS à PAS du CSSS La Pommeraie (Brome-Missisquoi)
• Équiterre
• Fédération des éducateurs et éducatrices physiques enseignants du Québec
• Fédération des kinésiologues du Québec
• Fondation des maladies du cœur du Québec
• Fondation Lucie & André Chagnon
• Institut de Cardiologie de Montréal
• Jeunes pousses
• Kinergex inc
• La Tablée des chefs
• Le Collectif de la table des écoliers
• Municipalité de Lac-Etchemin
• Nomade entraînement
• Québec en forme
• Québec en santé – Groupe d’action pour une saine alimentation
• Regroupement des cuisines collectives du Québec
• Réseau du sport étudiant du Québec (RSEQ)
• RSEQ Cantons-de-l’Est
• RSEQ Est-du-Québec
• RSEQ Laurentides-Lanaudière
• RSEQ Mauricie
• RSEQ Montérégie
• RSEQ Québec – Chaudière-Appalaches
• RSEQ Saguenay – Lac St-Jean
• Réseau québécois de Villes et Villages en santé
• Sherbrooke Ville en santé
• Société de recherche sociale appliquée
• Société de transport de Sherbrooke
• Société de transport du Saguenay
• Sports-Québec
• Tennis Québec
• Union des municipalités du Québec
• Université de Sherbrooke
• Vélo Québec
• Ville de Baie-Saint-Paul
• Ville de Boisbriand
• Ville de Chambly
• Ville de Granby
• Ville de Joliette
• Ville de Laval
• Ville de Lévis
• Ville de Matane
• Ville de Montréal
• Ville de Rimouski
• Ville de Roberval
• Ville de Rouyn-Noranda
• Ville de Saguenay
• Ville de Saint-Georges
• Ville de Saint-Hyacinthe
• Ville de Shawinigan
• Ville de Sherbrooke
• Ville de Sorel-Tracy
• Viomax

Individual Partners:
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• Simon Bacon, Associate Professor, Concordia University
• Micheline Beaudry, retired public nutrition professor
• Annie Beaulé Destroismaisons, master’s student in nutrition, Université de Montréal
• Maryse Bédard-Allaire, special appointee for promoting healthy lifestyle, Carrefour action municipale et famille
• Murielle Béland, dental hygienist, CSSS du Grand Littoral
• Roch Bernier, MD, doctor
• Julie Bernier-Bachand, dietetic technician
• Patricia Blackburn, professor at the Department of Health Sciences, Université du Québec à Chicoutimi
• Paul Boisvert, coordinator, Chaire de recherche sur l’obésité de l’Université Laval
• Alysson Bourgault, development agent, Québec en Forme
• Thierry Bourgoignie, full professor, director of the Groupe de recherche en droit international et comparé de la consommation (GREDICC), Department of Law, Université du Québec à Montréal
• Jean-Guy Breton, consultant and former Mayor of Lac-Etchemin
• Annie Brouard, project manager, Egzakt
• Martin Brunet, physical and health educator, Commission scolaire des Patriotes
• Caroline Brutsch, nutritionist, CSSS d’Argenteuil
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• Claudia Rousseau, serveuse, restaurant Chez œufs
• Mathieu Roy, doctoral candidate in public health, Université de Montréal
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• Martin Sénéchal, doctorate student, Université de Sherbrooke
• Dominique Sorel, engineer
• Rafael Murillo Sterling, president, Gym Social Inc.
• Chantal St-Pierre, accompanying school health, CSSS de l’Énergie
• Laurent Teasdale, kinesiologist, Orange Santé
• Jacques Émile Tellier, consultant, Entreprises Multi-Services Inc.
• Sabine Tilly, Founder, ZEN BALANCE « mon équilibre »
• François Thibault, specialist applications, Kontron Canada
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• Helena Urfer, communications manager, École de santé publique, Université de Montréal
• Gabrielle Voyer, criminology student
Appendix 2: About the Innovation Strategy (IS)

The Innovation Strategy of the Public Health Agency of Canada focuses on innovation and learning in population health interventions to reduce health inequalities in Canada and effectively address priority public health problems and their underlying factors.

The Innovation Strategy puts a strong focus on the exchange and use of practical knowledge — based on the results of these interventions — and sharing of best or promising practices across the country.

The Innovation Strategy supports:
- The development, adaptation, implementation, and evaluation of promising, innovative population health interventions and initiatives in various settings and populations in Canada.
- Knowledge translation and dissemination based on the systematic collection of results and outcomes of these interventions and promotion of their use across Canada.

Each Innovation Strategy solicitation addresses a specific priority public health issue. A first cycle launched in June 2009 focused on mental health promotion called, “Equipping Canadians – Mental Health throughout Life”. In May 2010, a second cycle was launched focused on a new theme: “Achieving Healthier Weights in Canada’s Communities”; and, “Managing Obesity across the Life-Cycle: An Interventions Approach” launched in August 2010. Each solicitation has two phases: a developmental phase and a full implementation phase.

The main objective of the first cycle, “Equipping Canadians – Mental Health throughout Life” is to support more effective action on the underlying protective factors, conditions and skills that enhance long term mental health. The Strategy funds interventions targeting underlying determinants and protective factors among populations at higher risk due to environmental, social, demographic and / or economic factors with a focus on children, youth and families.

The main objective of the second cycle is to develop and implement more effective action on the underlying factors, conditions and skills that enable individuals and create supportive environments.

“Achieving Healthier Weights in Canada’s Communities” focuses on the promotion of healthy weights, prevention of overweight and obesity, and attainment and maintenance of healthy weights, using a population health approach with an emphasis on actions that will contribute to the reduction of health inequalities. “Managing Obesity across the Life-Cycle: An Interventions Approach” focuses on improving outcomes and reducing complications among Canadians who have been identified as obese and providing supports to Canadians who are overweight to prevent obesity.

For more information, please visit the following website:
Appendix 3: About the Project Partners

The project entitled “A Multidimensional Approach to Reducing the Appeal of Sugar-Sweetened Beverages (SSBs)” was launched by the Association pour la santé publique du Québec (ASPQ) and the Quebec Coalition on Weight-Related Problems (Weight Coalition) as part of the 2010 Innovation Strategy of the Public Health Agency of Canada on the theme of “Achieving Healthier Weights in Canada’s Communities”. This project is based on a major pan-Canadian partnership involving the following organizations.

Since 1988, the Réseau du sport étudiant du Québec (RSEQ) has been a leader in the development of sport and physical activity and is recognized as an innovator in the field in Quebec. The RSEQ is committed to the promotion and development of sport and physical activity in an educational setting from the grassroots level through to high performance sport. The RSEQ promotes the education and academic success as well as the health and well being of young people. Over the past decade, RSEQ has developed and implemented several programs promoting healthy lifestyles including the iGetit?ca program that was introduced to high schools across the province in January 2011 via the NewDrive contest (Moncarburant.ca).

Fédération du sport francophone de l’Alberta (FSFA) has the mission to promote and provide access to sports and wellness programs for French and French-speaking Albertans of all ages. Thus, allowing them to maintain an active and healthy lifestyle.

Université Laval, the first Francophone university in the Americas, offers a unique research environment. It is one of the top 10 research universities in Canada and has an overall annual budget of about $700 million. Université Laval has 17 faculties that cover every knowledge area, including the Faculty of Agriculture and Food Sciences. With its 20 chairs and research groups and its institute, this Faculty is at the forefront of its field. Through its research projects and activities, it affects all aspects of the bio-food chain. Moreover, its institute, the Institute of Nutraceuticals and Functional Foods (Institut des nutraceutiques et des aliments or INAF) is the largest group of researchers in Canada to dedicate its entire research program to the complex interactions between food, food components, nutrition and health. INAF’s research focuses on health targets that are major challenges for many developed countries that have a direct relationship with food. Accordingly, the Institute’s efforts aim to prevent, through nutrition, major chronic illnesses such as obesity, diabetes and cardiovascular disease. The research of many INAF researchers center on human nutrition and the development of new clinical practices and public health to promote healthy and sustainable eating habits.
The **Social Research Demonstration Corporation** (SRDC) is a non-profit social policy research organization and a leader in the field of social experimentation. SRDC’s mission is two-fold: 1) to help policy-makers and practitioners identify social policies and programs that improve the well-being of all Canadians, with a special concern for the effects on the disadvantaged, and 2) to raise the standards of evidence used in assessing social policies and programs. Since 1991, SRDC has been building a base of knowledge and experience in social policy about what works and what does not work, determining the genuine effectiveness of new program interventions before their full-scale adoption, using the most rigorous evaluation approaches appropriate to any given research question. SRDC brings particular expertise in the evaluation of population health interventions. Among other work, SRDC completed the evaluation of the Sip Smart! Program in British Columbia for the Michael Smith Foundation and the BC Healthy Living Alliance.

The **Public Health Association of British Columbia** (PHABC) is a voluntary, non-profit, non-government organization founded in 1953. PHABC was incorporated as a non-profit society in 1980 and operates under the Societies Act. The organization is a provincial affiliate of the Canadian Public Health Association (CPHA). PHABC maintains a membership of approximately 500 public health professionals and other stakeholders from both urban and rural areas across British Columbia. It promotes and protects the public’s health by actively working to advance the development and implementation of healthy public policy, encourage and facilitate research into the broad issues that affect the public’s health, and cooperates regionally, nationally and internationally with other organizations to promote health. It is joined in its mandate to the Canadian Public Health Association and other provincial and territorial branch organizations. This national linkage enables PHABC to participate in dialogue and act on matters of interest to provincial and national public health. The stability of the PHABC makes it a low risk for funding and granting agencies and demonstrates the viability of the Association to act for the common good over an extended period of time. The Association has considerable experience with coalition building, community development, health informatics, initiatives focused on addressing the determinants of health, strategic planning, policy development, research, survey design and evaluation and conducting studies to synthesize information for policy and action on public health issues.

The mission of the **Ontario Public Health Association** (OPHA) is to provide leadership on issues affecting the public’s health and to strengthen the impact of people who are active in public and community health throughout Ontario. OPHA achieves its mission by providing education opportunities and up-to-date information in community and public health, access to local, provincial and multi-disciplinary community health networks, mechanisms to seek and discuss issues and views of members, issue identification and advocacy with a province-wide perspective, and expertise and consultation in public and community health.
Montréal, le 3 octobre 2011

L’honorable Leona Aglukkaq, c.p., député
Ministre de la Santé
Santé Canada
Édifice Brooke-Claxton, pré Tunney
Ottawa (Ontario) K1A 0K9

Objet : Une réévaluation du statut des boissons énergisantes s'impose

Madame la Ministre,

La Coalition québécoise sur la problématique du poids (Coalition Poids) partage vos préoccupations quant à la promotion et au maintien de la santé de la population canadienne. À ce titre, vous n’êtes pas sans savoir que le Canada, comme nombre de pays, est en proie à une grave épidémie d’obésité, qui nous coûte collectivement 30 milliards $ par année. Il est urgent de prendre des mesures concrètes pour enrayer ce fléau.

Les boissons sucrées, dont font partie les boissons énergisantes, ont été directement pointées du doigt dans l’épidémie d’obésité actuelle. Le gouvernement canadien a d’ailleurs identifié les boissons sucrées comme un contributeur de l’obésité infantile dans sa récente campagne sur la santé et la sécurité des enfants.

Dans le cadre d’un projet financé par l’Agence de santé publique du Canada, nous analysons les stratégies marketing de l’industrie des boissons sucrées afin d’identifier des façons de réduire leur pouvoir d’attraction. L’une de nos premières constatations est la croissance importante de la consommation de boissons énergisantes au cours des cinq dernières années. En 2008, les ventes de boissons énergisantes s’élèvent à 154 millions de dollars et représentent maintenant environ 20 % des parts du marché des boissons. Bien que les habitudes de consommation de ce produit, qui ont fait leur apparition récemment sur le marché, soient encore peu documentées, nous constatons qu’elles sont consommées principalement par des adolescents et de jeunes adultes. Ce phénomène est dû aux pratiques de commercialisation attrayantes et vigoureuses, à l’utilisation de canaux de diffusion non traditionnels et à l’association directe avec un mode de vie extrême et la culture des jeunes.

Pour enrichir notre analyse des boissons sucrées, nous avons sollicité la contribution d’une experte, Mme Véronique Provencher DIP, Phd, professeure adjointe sous octroi à l’Université Laval, afin de réaliser l’analyse nutritionnelle des produits recensés. Celle-ci s’est vue dans l’impossibilité de réaliser ce mandat puisque l’information nutritionnelle des boissons énergisantes, qui ne sont toujours pas considérées comme des aliments, n’est pas disponible (le conseil de Mme Provencher vous est fourni en pièce jointe).
Alors que les Canadiens sont invités à limiter leur consommation de boissons sucrées\(^1\), l’étiquetage des boissons énergisantes ainsi que leur mise en marché peuvent induire le consommateur en erreur. Il est donc primordial que Santé Canada mette en place des actions significatives pour permettre aux Canadiens de faire des choix éclairés en matière d’alimentation, en cohérence avec les recommandations du gouvernement.

**Un étiquetage qui fait défaut**

Les boissons énergisantes sont actuellement régies par le *Règlement sur les produits de santé naturels* en raison de la présence de vitamines et minéraux dans leur composition. Ceci se traduit notamment par un affichage facultatif du tableau de valeur nutritive sur l’étiquette. Ainsi, la très grande majorité du temps, il est impossible pour le consommateur de connaître la teneur en sucre de ces produits. Alors que les campagnes de sensibilisation pressent les Canadiens de gérer leur consommation du sucre, il nous semble essentiel que la teneur de tous les ingrédients utilisés dans les boissons énergisantes soit détaillée, au même titre que les autres boissons sucrées, et ce, dans l’optique de fournir une information juste et non trompeuse au consommateur. Il en est donc de même pour la caféine, principal ingrédient actif dans ces breuvages, qui bénéficie aujourd’hui d’un étiquetage plutôt flou. En effet, seul l’étiquetage de la caféine synthétique est obligatoire. Les sources naturelles de caféine (Guarana, Yerba maté, etc.) ne sont pas soumises aux mêmes règles. Ainsi, le consommateur n’a pas accès à la teneur **totale** en caféine dans le produit, alors même que c’est ce composant qui présente le plus de risques pour la santé.

**Des produits de santé naturels perçus comme des aliments**

Bien que considérées comme des produits de santé naturels, les boissons énergisantes bénéficient d’une mise en marché similaire aux autres boissons sucrées. En effet, ces boissons riches en caféine, taurine et vitamines côtoient généralement les boissons gazeuses sur les tablettes des épiceries et des dépanneurs, et dans les machines distributrices. Mis à part l’étiquetage, et l’éventuel numéro de produit de santé naturel (rappelons qu’à ce jour, seules 9 boissons énergisantes ont obtenu un NPN), rien ne permet aux consommateurs de distinguer les boissons énergisantes des autres boissons sucrées qui sont considérées comme des aliments. Ainsi, la perception des consommateurs quant à ces produits pourrait être faussée, laissant croire que ces boissons peuvent être consommées sans danger et sans limite. Or, leur forte teneur en caféine est potentiellement dangereuse, particulièrement chez les jeunes. Il existe d’ailleurs actuellement une posologie associée au produit qui risque de ne pas être suivie en raison de la fausse perception du consommateur face au produit.

**Une réévaluation des produits pour une information juste**

En vertu de la réglementation en vigueur, de leur positionnement sur le marché, de la perception du consommateur et de la potentielle dangereux du produit, une réévaluation du statut des boissons énergisantes s’impose. Santé Canada pourrait notamment évaluer la possibilité de transférer les boissons énergisantes dans la catégorie des aliments tout en faisant les ajustements nécessaires pour rendre leur consommation plus sécuritaire.
Voici donc un tableau expliquant brièvement les retombées d’un tel changement.

<table>
<thead>
<tr>
<th>Avantages</th>
<th>Inconvénients</th>
<th>Ajustements nécessaires</th>
</tr>
</thead>
<tbody>
<tr>
<td>Étiquetage plus détaillé, intégrant le tableau de valeur nutritive et permettant au consommateur d’avoir accès à une information juste et non trompeuse</td>
<td>Normalisation du produit pouvant entraîner une consommation accrue</td>
<td>Limiter la teneur en caféine autorisée dans ces produits afin de rendre leur consommation sécuritaire ou interdiction pour les moins de 18 ans</td>
</tr>
<tr>
<td>Meilleur contrôle de la composition du produit permettant de limiter leur teneur en caféine et autres ingrédients n’ayant pas démontré, à ce jour, leur efficacité et leur totale innocuité</td>
<td>Suivant la teneur en caféine autorisée, possibilité qu’elle soit toujours potentiellement dangereuse pour les enfants et les jeunes</td>
<td>Étiquetage de la teneur totale en caféine quelque soit sa source</td>
</tr>
<tr>
<td>Meilleur encadrement et accès aux renseignements marketing de l’industrie des boissons énergisantes</td>
<td>Absence d’autorisation de mise en marché</td>
<td>Mises en garde plus visibles sur l’étiquette concernant la teneur en caféine (ex : femmes enceintes, enfants et mélange avec l’alcool)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Écarts de marketing de l’industrie</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Distribution dans un lieu distinct si l’on maintient son statut de produit naturel</td>
</tr>
</tbody>
</table>

Nous partageons votre préoccupation pour la santé des Canadiens et nous demeurons à votre disposition pour répondre à toutes vos questions.

Veuillez agréer, Madame la Ministre, mes salutations distinguées.

Suzie Pellerin
Directrice


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3 NPLAN (National Policy & Legal Analysis Network to prevent childhood obesity) (2011) : “Sugar-Sweetened Beverage” means any nonalcoholic beverage, carbonated or noncarbonated, which is intended for human consumption and contains any added Caloric Sweetener. As used in this definition, “nonalcoholic beverage” means any beverage that contains less than one-half of one percent alcohol per volume”. Consulted on September 16, 2011 at http://www.phlpnet.org/sites/phlpnet.org/files/SSB_Tax_Legislation_v2.0_FINAL_20110607..pdf

4 Bureau de soutien à la communication en santé publique (2009) : « On désigne par « boisson sucrée » toute boisson dans laquelle du sucre a été ajouté, principalement les boissons gazeuses ordinaires (non diètes), les boissons aux fruits (punchs, cocktails), les boissons énergétiques pour sportifs (Gatorade, Powerade, etc.) et les boissons énergisantes sucrées (Red Bull, Guru, etc.). Naturellement sucrés, les jus ne sont pas inclus dans cette catégorie ». Consulted on October 4, 2011 at http://www.espacecom.qc.ca/communiquer/fiches-thematiques/Les-jeunes-et-les-boissons-sucrees.aspx


6 Définition du gouvernement Canadien : « les boissons sucrées sont des liquides auxquels différentes sortes de sucres (monosaccharides et/ou disaccharides) ont été ajoutés, les rendant ainsi plus caloriques. Ce type de boissons comprend, entre autres, les boissons à saveur de fruits, les boissons gazeuses, les boissons sportives et énergisantes et les boissons sucrées chaudes ou froides ». Consulted on September 23, 2011 at http://www.canadiensensante.gc.ca/init/kids-enfants/obesit/index-fra.php


47 Kapferer (1985)


126 Le dico du marketing. Consulted on November 11, 2011 at http://www.ledicodumarketing.fr/definitions/Crite-re-psychographique.html
151 Rockstar Canada. Consulted on November 11, 2011 at http://www.rockstarenergy.ca/


