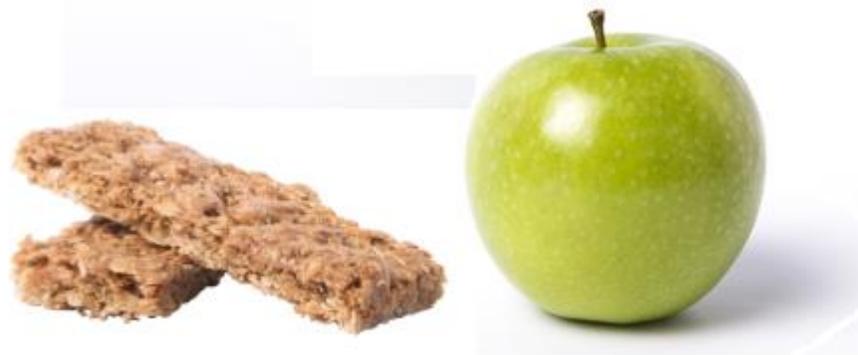


# SCHOOL-OWNED VENDING MACHINES



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## Considerations and strategies for the implementation of healthy vending machines in Saskatchewan schools

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Vending machines are a common resource for schools to generate revenue to support activities, equipment, programs and events. While vending machines can generate profit, there are some considerations to make before purchasing one. Considerations include: school nutrition guidelines in place, consumer demand, maintenance, marketing, implementation, time, and capacity. Typically, vending machines do not support a healthy food environment, but they have the opportunity to do so. This report will outline the importance of a healthy school food environment on student health and learning outcomes and how vending machines can follow nutrition guidelines while still making a profit.

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## Introduction

Sales from vending machines are a common and often important way for schools to raise money to support school programs, equipment, projects and, events. There are many considerations to make before purchasing a vending machine including revenues, expenses, maintenance, human resources, time commitment, nutrition, and implementation strategies.

While profitability is an important driving force for the implementation of a vending machine, the opportunity to encourage and promote healthy food choices should also be considered. School settings play an important role for students during influential stages of their lives when lifelong eating habits are formed.

### *The role of the food environment on food choice*

Healthy food choices and adequate nutrition are essential to physical well-being, healthy growth and development, readiness to learn, attendance, and school performance (Florence, Asbridge, & Veugelers, 2008) and lowering risks of certain diseases (Belot & James, 2011). Most students receive excellent education on the importance of making healthy food choices; however, if a student's food environment does not make the healthy choice the easy choice, the knowledge they have of healthy eating often does not translate to better food choices (Story et al., 2008). The research shows that the most effective way to influence students to eat healthier foods is to offer a supportive environment where healthy foods are more affordable and accessible than unhealthy alternatives (Story et al., 2008).

### *Linking foods offered in school to the Curriculum*

Offering healthy foods in schools will help reinforce curriculum learning outcomes in the areas of health and wellness. By providing healthy options in schools, this allows students to put into practice newly learned nutrition concepts.

Implementing school vending machines that offer nutritious foods and beverages is one strategy that schools can use to embrace their unique opportunity to influence healthy eating practices in children and adolescents. This report includes strategies to successfully implement a school-owned vending machine while supporting student health through nutritious foods and beverages.

## Nutrition Guidelines in Saskatchewan

The Saskatchewan Ministries of Health and Education have developed nutrition standards for food and beverages offered in Saskatchewan schools. The document, [\*Nourishing Minds: Eat Well – Learn Well – Live Well\*](#), uses a Comprehensive School Community Health approach to support schools and school divisions to develop and/or renew policy and administrative procedures related to child and youth nutrition. Supporting documents and tools include, [\*Healthy Foods for my School \(HFFS\)\*](#), [\*Planning Healthy Menus for my School \(PHMS\)\*](#), and [\*Food Safety for my School \(FSFS\)\*](#). HFFS helps users select foods and beverages that fit the nutrition guidelines as set out in *Nourishing Minds*. PHMS can be used as a guide to plan items to offer in a refrigerated vending machine, and FSFS helps to ensure safe food handling practices are followed during food prep, to prevent kids from getting food borne illness. These healthy eating guidelines can assist schools to promote the provision of high quality nutritious foods when operating a vending machine.

## Profits and Revenue

Many schools are concerned that offering healthier vending options or decreasing or inhibiting the sale of items of poor nutritional quality will result in a loss of revenue, or that kids just won't buy it. Here's what the research shows:

### *Increase in revenue*

- An examination of 17 schools in the United States who implemented nutrition standards for vending machines found that 71% of schools experienced an increase in revenue (U.S. Department of Agriculture, U.S. Department of Health and Human Services & U.S. Department of Education, 2005).

### *No change in revenue*

- An examination of 17 schools in the United States who implemented nutrition standards for vending machines found that 24% of schools experienced no change in revenue (U.S. Department of Agriculture, U.S. Department of Health and Human Services & U.S. Department of Education, 2005).
- According to another study, 68% of principals reported no change in vending revenues in schools who implemented healthy nutrition policies (West Virginia University, 2005).
- One report found that the implementation of a vending machine in a city park experienced a decrease in sales, but after six months sales returned to previous levels.

### *Decrease in revenue*

- A pilot project in Ontario School found that "Healthier choice" sales ranged from 14% to 17%. In all schools, vending revenues declined at least a little. A majority of participants had substantial knowledge of healthy eating and were in favour of healthier choices in vending machines; however, price, value, and taste were barriers that led them to purchase these products rarely. Students preferred to have "real" healthy snacks, such as yogurt, fruit, and vegetables, available in schools, [which can be accomplished in refrigerated vending machines] (Callagan and Mandich, 2010).

### *Refrigerated Healthy Vending Machines are more successful than non-refrigerated in Saskatchewan Schools*

- One Saskatchewan high school has shared their success in owning a refrigerated vending machine in which a home economics class and cooking program students are responsible for stocking it. It is located right beside the gym and they stock it with 100% *choose most often* items such as homemade wraps, salad, veggies and dip, fruit cups, yogurt, etc. and they report it is always sold out. The vending machine is available after school hours for sport teams and after school programs when the canteen is closed. There are no competing vending machines available. They don't make profit off of it, they break even and sell foods at cost. This vending machine serves the purpose of providing food planning and preparation experience for students and to have healthy foods available in the after school time period (Prince Albert, 2015).
- Two other Saskatchewan high schools offer 80% *choose most often* items in school owned refrigerated vending machines and do make a **profit** off the machine. All items sold are very popular, and are almost always sold out (Saskatoon).
- Non-refrigerated healthy vending machines have been reported by some schools as being less successful both for finding palatable and healthy items and in popularity.

## Strategies towards a successful and profitable healthy vending machine

There are many strategies that can be used to help ensure that the implementation of a healthy vending machine is accepted by students and profitable for schools.

### 1. Food Pricing

Price "Choose Most Often" items competitively by pricing them at or below the cost of similar items that do not meet the nutrition guidelines.

Research has shown:

- When healthier food options are **promoted, more visible, more accessible** and their **availability is increased** there is a higher sale of these foods (French, Story, Fulkerson & Hannan, 2004).
- Two studies have shown that **lowering the price** of fruits, vegetables, and low-fat snacks resulted in a significant increase in the sale of these foods with no decrease in total revenue even when unhealthy foods were still available (French et al., 2001; French et al., 1997).
- A study conducted found that by **reducing the price of healthier items** by 10%, 25%, and 50% there was a sales increase of 9%, 39%, and 93% respectively and the average profits per machine were not affected by the changes (Association of State and Territorial Public Health Nutrition Directors, 2013).

### 2. Student involvement

Engage students in the implementation of the healthy vending machine by having them involved in the preparation, marketing and promotion of the healthy products.

- Consult with students to select food and beverages that they enjoy and that meet the nutrition guidelines
- Integrate the promotion and food and beverage selection into the curriculum.
  - Students could create marketing plans including video advertisements, posters, or article in the school paper.
  - Have Home Economics or Wellness classes prepare or select items to sell in the vending machine based on nutrition standards.
- Ask for samples from vendors or prepare your own foods and host a taste testing event for students, staff and families.

### 3. Partnerships

The school can form partnerships with stakeholders, health professionals, community organizations, etc. to provide education, taste tests, promotions and other activities with school personnel and students to promote the vending machine products and initiative.

### 4. Spread the word

Provide education to teachers, parents, and student leadership groups to promote the benefits of creating a healthy food environment to cultivate support for the initiative. Promote the initiative by speaking to staff and parent council or advertising through school or community newsletters, posters, or videos. Announce the initiative to the public to increase acceptance of the initiative and make healthy eating the norm.

### 5. *Taste tests and surveys*

Offer taste testing of the food and beverage options that meet the nutrition guidelines to promote the initiative and determine consumer preferences. Surveys can be conducted to determine approved products that customers enjoy, dislike, or eat at home. Stocking the vending machine with preferred items can increase the revenue and acceptance of the healthy vending initiative.

### 6. *Phased-in approach*

If a high percentage of healthier options does not seem feasible right away, products that meet the nutrition guidelines can be phased-in.

### 7. *Products*

If using the phased-in approach, schools may determine current products that are not selling well and do not meet the nutrition guidelines and replace them with an approved product. Schools can use the *Healthy Foods for My School* tool to select foods and determine how they fit under the *Nourishing Minds* guideline. Foods and beverages can be classified as “Choose Most Often”, “Choose Sometimes” and “Choose Least Often”.

Remember to use the *Healthy Foods for My School* tool to determine whether the item meets the nutrition guidelines!

- “Choose Most Often” are items that fit into Canada’s Food Guide, contain a variety of nutrients for healthy growth and development, and are generally lower in fat, sugar and salt and higher in fibre (Government of Saskatchewan, 2018).
- “Choose Sometimes” are often more processed foods, are a source of nutrients for healthy growth and development, and are generally higher in fat, sugar and salt and lower in fibre than “Choose Most Often” foods (Government of Saskatchewan, 2018).
- “Choose Least Often” items do not meet the nutrition guidelines and have little nutritional value.
- See the [Healthy Foods for My School](#) resource for more information.

By classifying foods and beverages, schools can determine the ratio of items that fit the guidelines and items that do not that are offered in the vending machine. Fifty percent of foods and beverages offered in the machine should meet the guidelines (‘Choose Most Often’ or ‘Choose Sometimes’). Having at least 50% healthier options is a common guideline, but it is suggested that operators work towards having 75-100% of products as healthier options (‘Choose Most Often’ or ‘Choose Sometimes’) (CPSI, 2014). Other resources suggest implementing an “80/20” rule where 80% of foods meet the guidelines and 20% of foods do not (Ontario Society of Nutrition Tools for Schools, 2013).

### 8. *Placement*

Items that meet the nutrition guidelines should be more visible than items that do not meet the nutrition standards. Place “Choose Most Often” items closer to eye level to improve visibility.

### 9. *Advertising*

Promotional space on the vending machine should only promote products that meet the nutrient guidelines. Signage around the vending machine can be implemented to promote “Choose Most Often” items.

## Other Considerations

There are many other considerations that schools must make when implementing a healthy vending machine, including the type of machine, products to sell, companies to purchase from, time, resources, maintenance, and promotion.

### 1. Cost and profits

Non-refrigerated vending machines range from \$6,000-7000 and refrigerated machines range from \$8,000-9,000. One Regina School reported that revenue generated from sales can easily cover the cost of the machine with \$0.15-0.25 of profit per item.\*

\*This price quote is for products that do not meet the criteria outlined in the *Nourishing Minds* document.

**Note!** Not all products offered by “healthier” vending machines meet the *Nourishing Minds* nutrition guidelines. Read labels and evaluate products to determine if they meet the requirements.

### 2. Examples of Healthier Products to stock

In order to be considered a healthy vending machine, 100% of items offered should meet *Nourishing Minds* guidelines. The item’s Nutrition Facts table must be analyzed to ensure product meets the guidelines. Items offered may depend on the type of vending machine (eg. refrigerated vs. non-refrigerated). Here are some examples:

#### Beverages

- Water
- Unsweetened tea
- White milk
- Unsweetened Fortified soy beverage
- Low sodium vegetable juice

#### Snacks

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>○ Fresh vegetables and fruit</li> <li>○ Canned fruit packed in water</li> <li>○ Dried fruit or 100% dried fruit bars</li> <li>○ Lower fat cheese</li> <li>○ Whole grain crackers</li> <li>○ Yogurt</li> <li>○ Unsweetened Apple sauce</li> <li>○ Nuts/seeds, unsalted</li> </ul> | <ul style="list-style-type: none"> <li>○ Whole grain granola bars</li> <li>○ Whole grain cereal bars</li> <li>○ Popcorn</li> <li>○ Whole grain muffins</li> <li>○ Tuna to-go packages</li> <li>○ Hummus and cracker packages</li> <li>○ Small whole grain bagels</li> <li>○ Sandwiches</li> </ul> |
|---|---|

### 3. Time

Considerable time is required to purchase and stock privately owned vending machines. Schools report it can take up to 4-5 hours to purchase and deliver vending machine products. Purchasing is required every 3-4 weeks to operate one vending machine. A range of 25-45 minutes is required to restock the machine each day.

### 4. Human resources

A committed individual or group is required to operate a vending machine privately. Distributors have minimum order requirements which may exceed the ordering needs of the school. Human resources are required to purchase and deliver product for the vending machine or to prepare items for a refrigerated vending machine. Schools in Regina have found the Wholesale Club and Costco to be affordable and convenient locations to purchase products. Someone must

be available to monitor, restock, and tend to maintenance needs. The machine must be reconfigured daily and reset weekly.

### 5. *Maintenance*

Maintenance and up-keep is required to operate a vending machine. A report from a Regina teacher indicated that vending machine revenue can be sufficient to cover maintenance costs. If the school has an individual with the expertise to troubleshoot and fix the vending machine, there can be cost savings. However, if this expertise is not available, the school should consider that additional costs may be required to maintain the machine.

### 6. *Alternative “healthier” vending companies*

If schools do not want to manage their own vending machines, there are several ‘healthier’ vending companies that are available in Saskatchewan. Products offered through healthier vending companies should meet the *Nourishing Minds* criteria. Companies offer schools a 10% commission on sales and some companies offer an additional yearly scholarship of \$500 for students.

Examples of “healthier” vending companies:

- HealthVendCanada: [www.healthyvendcanada.com/contact.htm](http://www.healthyvendcanada.com/contact.htm)
- MAX! Canadian Healthy Vending: [canadianhealthyvending.com](http://canadianhealthyvending.com)
- H.U.M.A.N.: [www.healthyvending.com](http://www.healthyvending.com)
- Smart Snack Canada: [www.smartsnackscanada.com](http://www.smartsnackscanada.com)

## **Alternative Initiatives for fundraising**

Some schools or school groups rely on vending machines as a fundraising supplement for programs, supplies, equipment, and events. A healthy vending machine is one way to fundraise while supporting a healthy eating environment. Schools can also consider alternative fundraisers that do not rely on the sales of unhealthy foods and instead promote healthy eating, physical activity, arts, and the environment.

### *Promoting healthy eating*

- Hold a school breakfast or lunch day with items that meet the nutrition guidelines
- Host a local farm to table dinner fundraiser with silent auction items donated from community businesses. Ensure dinner offerings meet the nutrition guidelines.
- Host a bake sale that includes items that meet the nutrition guidelines.
- Sales – Fresh Fruit Fridays
- Sell a recipe book created by students/staff at the school.
- Offer a farm-to school healthy food fundraiser [www.farmtoschool.ca](http://www.farmtoschool.ca)
- Sell healthy items in a school cafeteria, canteen or concession.

### *Promoting physical activity*

- Charge an entry fee for a:
  - Carnival organized by students
  - Dance
  - Sports clinic led by students or community members
  - Sports tournaments
- Hold walk-, dance-, or play-athons.
- Sell items to promote physical activity
  - Water bottles
  - Jump ropes
  - Sports equipment
  - School clothing
- Services
  - Recruit students to volunteer their services for a small donation (eg. Dog walking, yard work, snow shoveling, car washes, etc.)

### *Promoting the arts*

- Events:
  - Art and craft shows
  - Holiday concerts
  - Drama productions
  - Fashion shows
  - Talent shows
  - Musical shows
  - Trade shows
- Sales
  - Artwork
  - Calendars
  - Greeting cards
- Services:
  - Recruit students to volunteer their talents to offer a service to local business for a small fee or donation (eg. Rent out school band/choir)

### *Promoting the environment*

- Businesses may offer fundraising dollars in exchange for recycled items:
  - Bottle drive
  - Batteries
  - Cell phones
  - Printer cartridges
  - Paper
- Ecofriendly kits [makeitsow.com/index.php](http://makeitsow.com/index.php)

*Information adapted from Alberta Health Services, 2011*

## Resources for schools

### *Government of Saskatchewan*

- Nourishing Minds: Towards Comprehensive School Community Health: Nutrition Policy Development in Saskatchewan Schools; Healthy Foods for My School: Nutrition Standards for Saskatchewan Schools; Planning Healthy Menus for my School; Food Safety for my School. [www.saskatchewan.ca/government/education-and-child-care-facility-administration/services-for-school-administrators/student-wellness-and-wellbeing](http://www.saskatchewan.ca/government/education-and-child-care-facility-administration/services-for-school-administrators/student-wellness-and-wellbeing)
- Healthy Foods in Recreation Centres: Getting Started Guide [publications.gov.sk.ca/documents/13/109954-Healthy-Foods-for-my-Recreation-Setting-Getting-Started.pdf](http://publications.gov.sk.ca/documents/13/109954-Healthy-Foods-for-my-Recreation-Setting-Getting-Started.pdf)

*Alberta Health Services – Healthy Vending Toolkit - [www.albertahealthservices.ca/nutrition/Page13884.aspx](http://www.albertahealthservices.ca/nutrition/Page13884.aspx)*

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