

# Policies to support nutritious School food environments



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## Childhood is a pivotal time to establish lifelong eating habits

that can raise or lower the risk of developing non-communicable diseases such as obesity, type 2 diabetes, cardiovascular diseases, and even some cancers. Schools are meant to provide a safe environment to nurture children’s development. They provide an optimal setting for teaching and encouraging healthy eating both inside and outside of the school environment. Not only do most children spend many hours at school, but they consume a large portion of their daily intake there.<sup>1</sup> Schools are an important source of food via school meal programs, particularly for children from food-insecure households.

Despite this, unhealthy foods and drinks are frequently provided and promoted within and around schools globally, contributing to poor nutrition and increasing childhood obesity and other nutrition-related diseases. A 2023 review of evidence on the nutritional status of school-age adolescents from several global regions in Asia, Africa, Europe, and Latin America found that poor growth, micronutrient deficiencies, obesity, and food insecurity plague young students.<sup>2</sup> Implementing robust school food policies that restrict access to unhealthy foods, shield students from food industry marketing, and uphold nutritional standards essential for their growth and development will foster an environment that encourages healthier food choices, both in school and beyond.<sup>3</sup>

## Obesity and the school environment

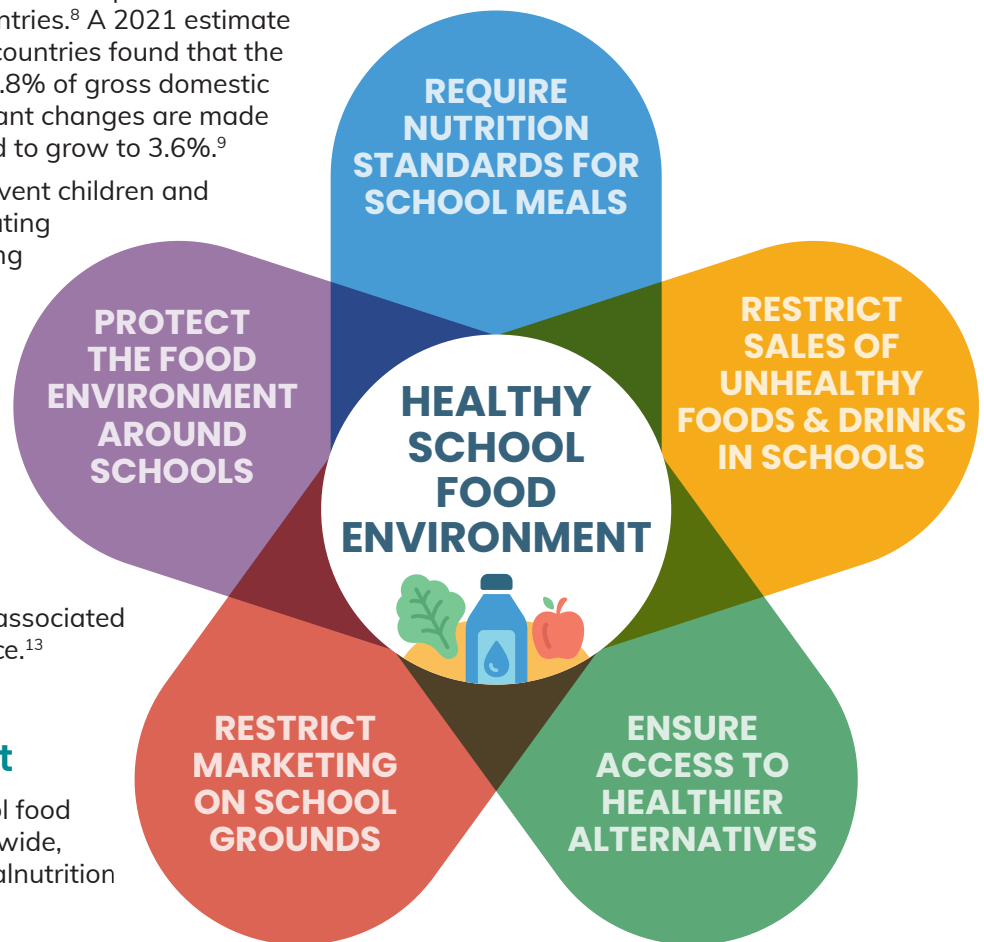
- Globally, over 390 million children ages 5–19 years and 37 million children under 5 years are now classified as overweight or obese.<sup>4</sup>
- Obesity in childhood often continues into adolescence and adulthood along with increased risks for insulin resistance, type 2 diabetes, hypertension, cardiovascular disease, non-alcoholic fatty liver disease, kidney disease, and cancer.<sup>5</sup> Children and adolescents are developing these nutrition-related conditions at younger ages than ever before.<sup>6</sup>
- Obesity increases risks for depression, anxiety, low self-esteem, peer bullying, eating disorders, and poor school performance.<sup>7</sup>
- In addition to impacting health, the per capita lifetime costs of obesity can equal as much as 3–4 years of annual income, almost 90% of which is attributed to obesity-related illnesses' impact on work and productivity in higher-income countries.<sup>8</sup> A 2021 estimate of economic impact across eight countries found that the cost of obesity is comparable to 1.8% of gross domestic product, on average. If no significant changes are made by 2060, this estimate is projected to grow to 3.6%.<sup>9</sup>
- Unhealthy food environments prevent children and adolescents from making good eating choices and learning healthy eating habits in schools.<sup>10</sup> Students consume more unhealthy foods and drinks when they are easily accessible in and around schools and are surrounded by marketing for those foods.<sup>11</sup> This, in turn, is associated with lower-quality diets and higher weight, especially among economically disadvantaged children.<sup>12</sup>
- Lower diet quality has also been associated with poorer academic performance.<sup>13</sup>

## Blueprint for a healthy school food environment

Policies to protect and optimize school food environments are underutilized worldwide, leaving students at greater risk for malnutrition and other diet-related diseases.<sup>6</sup>

To achieve and protect a healthy school food environment, policies should ideally include the following components:

- 1) Nutrition standards for school meal programs;**
- 2) Restrictions on selling unhealthy foods and drinks in schools;**
- 3) Ensured access to healthy alternatives;**
- 4) Restrictions on unhealthy food marketing on school grounds; and**
- 5) Protection of the food environment surrounding schools.**



# 1

## Require nutrition standards for school meals

Healthy school meals bolster children’s diets and help meet their overall nutritional needs.<sup>14</sup> Young people around the world consume an estimated one-third to one-half of their meals at school,<sup>1</sup> underscoring the importance of school meals as an opportunity not only to support children’s growth and development but also to establish healthy lifelong eating habits and preferences. Nutrition standards for healthy meals should include restricting procurement and provision of foods, nutrients, or ingredients that do not build health (i.e., ultra-processed or non-essential foods high in sugar, salt, or saturated fat) while also ensuring availability of adequate and palatable healthy options including minimally processed whole grains, legumes, vegetables, fruits, and water.

### Current policy landscape

- Out of 139 nations included in the 2021 Global Survey of School Meal Programs, 125 had at least one large-scale school meal program.<sup>15</sup> Nearly all programs surveyed (93%) had an objective to meet students’ nutritional and/or health needs, however only 35% had a goal in place to prevent obesity.
- A 2024 scoping review of countries with government-sponsored, national-scale meal programs found that only 15% had mandatory policies restricting unhealthy foods served in school meals, with the majority of policies found in high-income countries.<sup>16</sup>
- An estimated 418 million children worldwide benefit from school meal programs — an increase from levels before the COVID-19-pandemic and the lowest levels during the pandemic.<sup>17</sup> Low-income countries have recovered more slowly, however, with 4% lower coverage than before the pandemic.

### Examples and evidence

- Setting nutritional standards for school meals can reduce fat and sodium intake and increase fruit intake across children’s entire diets — not just foods consumed at schools — according to a meta-analysis of research examining the impact of different school food environment policies around the world.<sup>14</sup>
- In the **United States**, strengthened mandatory school nutrition standards have significantly improved the nutritional profile of school meals and their alignment with national dietary guidelines.<sup>18</sup>

- From school year 2009–2010 (before strengthened nutrition standards) to 2014–2015 (after updates went into effect), the total Healthy Eating Index scores of school menus in the United States increased from 58% to 82% for school lunches and from 50 to 71% for school breakfasts.<sup>18</sup> Improvements were driven by increases in whole grains, greens, beans, and whole fruit and decreases in refined grains, sodium, and “empty calories.
- Students who ate school lunch were more likely to consume milk, fruits, and vegetables than students who brought lunch from home or other places and less likely to consume other snacks, beverages, or desserts.<sup>18</sup>
- A 2023 evaluation found, however, that stronger standards on sugar, sodium, and whole grains more closely aligned with dietary recommendations could improve diets and childhood health and prevent disease into adulthood.<sup>19</sup>
- In 2023 — one year after **California** implemented a new universal (i.e., free to all students) school meal policy — school food authorities reported many benefits including improved meal quality, increased participation in the school meal program, increased revenue, higher staff salaries, and reduced meal debt and associated stigma.<sup>20</sup>
- An analysis of the correlation between food sourcing and diversity suggests that procuring foods for school meals from local farmers results in a wider variety of healthier options for students.<sup>6</sup> Programs that partner with local farmers are more common in lower-income countries. Examples include the National Home-Grown School Feeding Program in **Nigeria**,<sup>21</sup> for which 90% of foods come from local sources, and **Brazil’s** Programa Nacional de Alimentação Escolar (National School Food Program or PNAE), which requires at least 30% of food purchased for PNAE to be procured directly from family-owned farms.<sup>22</sup> Over 85% of Brazilian municipalities purchased food from family farms in 2016 for use in schools.

### Challenges to regulating school meals

Implementing and maintaining a school meal program presents many challenges such as: procuring sufficient and reliable quantities of nutritious food; securing space and purchasing equipment for safe food storage and preparation; hiring and training staff to prepare and serve or distribute meals safely and at scale; and ensuring that the meals provided meet children’s nutritional needs. This requires ongoing funding, reliable infrastructure, and access to necessary foods and equipment. Successful programs will be built on partnerships across different sectors (e.g., education, agriculture, health, social protection) that can synergize strategies to promote healthy food environments, improve children’s nutrition status, and support local economies.<sup>23</sup>



## 2 Restrict sales of unhealthy foods & drinks in schools

Foods and drinks sold outside of formal school meals programs are often called “competitive foods,” as they compete with the school meals for consumption by students.<sup>24</sup> In countries that do not have school meal programs, these foods may serve as the main source of nourishment for students at school. Competitive foods and drinks — often ultra-processed products high in sugar, sodium, and saturated fat — are sold in kiosks, vending machines, snack stands, tuck shops, and as a la carte items from a school canteen or cafeteria. Greater availability of competitive foods at school has been associated with increased intake of nutrient-poor items and reduce the intake of fruits and vegetables.<sup>1</sup> Access to these foods tends to increase as students enter secondary education.<sup>24</sup> Because competitive foods can be available on or near the school grounds, regulating the environment both within and around school is essential for effective implementation.

### Current policy landscape

Some countries regulate sales of unhealthy foods and drinks in schools through policies that restrict sales based on nutritional content (e.g., grams of added sugar, grams of added fat, caloric value), specific food categories (e.g., chips, chocolate, fried foods, sugary sodas), and/or portion sizes.<sup>1</sup> It is also critical for governments to implement robust monitoring and enforcement mechanisms to ensure that the policies are implemented as intended. Vending machine and snack sales should mirror the standards used for school meals, and healthy alternatives should be available for purchase in place of competitive foods. Adoption of competitive food standards has been shown to decrease consumption of sugary drinks and unhealthy snacks in school and beyond.<sup>14</sup>

- In 2023, only 25% of countries had a national-level policy restricting sales of competitive foods based on nutritional criteria or health concern.<sup>6</sup> Of these 48 policies, only five extend to the area surrounding schools. Most (90%) of national policies restrict sale of specific categories of health concern, while 63% use nutrient thresholds or ingredient profiling to determine which products to limit in schools.
- From 2006–2014, the prevalence of US state-level policies regulating competitive food sales increased from 25% to 41%.<sup>25</sup> The USDA implemented a national-level policy in 2013 that limited the calorie,

fat, sugar, and sodium content of competitive foods sold in schools. Research shows that states with policies that support or enforce implementation of the federal standards see improved compliance and dietary intake in school.<sup>26</sup>

### Examples and evidence

- Policies regulating competitive food and beverage sales in schools are associated with improvements to health: A longitudinal analysis across 6,300 students in 40 **US states** found that students living in states with laws regulating “high-caloric-density, low-nutrient-density foods and beverages in schools” experienced lower BMI gain and lower risk of remaining overweight or obese over time; this finding was strongest among students exposed to specific, mandatory standards that stayed in place throughout their middle-school years.<sup>27</sup>
- A 2021 study found that students in first through 12<sup>th</sup> grade had significantly lower BMI in **US states** with stronger competitive food and beverage restrictions.<sup>25</sup>
- In a nationally representative study of nearly 2,000 **US** K–12 students, those attending school in states with laws requiring schools to implement the federal Smart Snacks in School standards consumed less fat and added sugar than students in states without requirements.<sup>26</sup>
- A districtwide policy that banned all sugary drink sales in **Boston, Massachusetts** public schools led to a significant reduction in students’ total consumption of sugary drinks,<sup>28</sup> and the state’s 2012 implementation of nutrition standards for competitive foods sold in schools statewide has also been associated with significant decreases in students’ sugar consumption, both during and after school.<sup>29</sup>
- In **Santiago, Chile**, the country’s ban on selling foods and beverages high in calories, sugar, saturated fat, or sodium (i.e., foods and drinks with front-of-package warning labels) in public schools led to these products dropping from 90% of competitive foods available for students to purchase to just 15% within the first 6 months of the law coming into force.<sup>30</sup>
- Seven years after the Brazilian state of **Santa Catarina** implemented the country’s first state-level law regulating sales of unhealthy foods in schools, nearly 70% of school vendors stopped selling fried snacks, sodas, ultra-processed popcorn, candies, lollipops, chewing gum, and packaged snacks.<sup>31</sup>
- An evaluation of a vending machine ban in **French** secondary schools found a reduction in the frequency of morning snacks as well as a 10-gram reduction in daily sugar intake.<sup>32</sup>



# 3 Ensure access to healthy options

Ensuring that only nutritious foods and drinks are available in schools — whether in school meal programs or from other sources — helps children maintain balanced, adequate diets and reinforces consistent messages about healthy eating.<sup>33</sup> Policies can achieve this by ensuring access to safe drinking water in schools, by replacing ultra-processed competitive foods for sale with healthier, minimally processed options or whole foods, by augmenting existing food programs with initiatives to promote access to fresh produce, and more.

## Examples and evidence

### Drinking water

Access to potable drinking water supports adequate hydration while also preventing sugary drinks from being the only safe drinking option in schools. Some countries are considering using tax revenue from sugary drink taxes to fund free drinking water in schools.<sup>34</sup> As of 2016, 570 million students in the world lacked basic water service at school, including roughly half of schools in Oceania and sub-Saharan Africa and a third of schools in Central and Southern Asia.<sup>35</sup> Nineteen percent of countries had no basic water service, and 12% have limited service.

- In **Mexico**, many schools lack access to free, potable drinking water.<sup>36</sup> Combined with widespread availability of sugary drinks in and around schools, this is thought to contribute to greater intake of sweetened beverages among students. As of 2021, only 44% of the water fountains in schools were functional and 23% were considered clean.<sup>37</sup>
- An intervention study in **German** elementary schools found that promoting and providing drinking water effectively lowered risk of overweight by 31% in an intervention group compared to a control group.<sup>38</sup>
- Installing “water jets” in **New York City** public school cafeterias was associated with a significant reduction in students’ BMI and their likelihood of being overweight, according to a study involving over 1 million students.<sup>39</sup>

### Competitive foods

- The *Healthy Vending Machine Pilot Project* was a public health initiative implemented in four **Ontario** high schools wherein 50% of the snacks in vending machines were restocked with healthier options.<sup>40</sup> The new snacks averaged between 14–17% of total sales, while overall vending machine sales decreased

by 4%. Students in focus groups expressed a desire for more healthy options. Additionally, students reported enjoying fresh, healthy snacks like fruit and yogurt. These findings suggest that removing vending machines altogether and replacing with fresh snacks might be a more effective approach.

- The **Dutch Schoolgruitem Project** in 2010 provided free fruit and vegetables during a break in primary school classrooms two days a week.<sup>41</sup> This intervention encouraged students to bring more fruits and vegetables from home on alternate days and resulted in a modest decrease in unhealthy snack consumption, demonstrating the potential of such programs to improve dietary behaviors during school breaks.

## Farm-to-school programs

Local ingredient and food procurement for service in schools enhances students’ awareness of local agriculture, seasonality, and healthy eating; increases fruit and vegetable intake; and can boost academic achievement.<sup>42</sup> Farm-to-school programs also benefit local economies and reduce environmental impact.

- In **Brazil**, where over 85% of municipalities purchased food from family farms in 2016 for use in schools, school nutritionists surveyed in 2024 believed sourcing food from family farms can both boost the availability of healthy foods in schools and support rural economic growth.<sup>22,43</sup> They underscored the importance of aligning institutional food requirements with local agricultural production capabilities and enhancing the infrastructure for producing and distributing food locally to make these programs successful.
- The *Purchase from Africans for Africa (PAA) Program*, piloted in **Ethiopia, Malawi, Mozambique, Niger, and Senegal** beginning in 2012 linked local procurement from small farms with school feeding programs in each country.<sup>42,44</sup> In its pilot phase, PAA provided over 1,000 tonnes of locally produced food to nearly 130,000 students across 420 schools.<sup>45</sup> The program’s pilot also saw productivity rates on small farms increase by an average of 114% and provided these farmers a guaranteed market for 37% of the food they produced.
- *Good Food for Oxford Schools* sources produce from local farmers and encourages healthier eating at schools in **Oxford, Mississippi**.<sup>46</sup> The program led to increased fruit and vegetable consumption among children and greater enthusiasm for gardening and food literacy.<sup>47</sup> It also had a “trickle-up” effect on healthier eating habits at home among parents and teachers and lead children to be more open to trying new, healthier foods with their families. Students consumed more fruit, vegetables, and salads, with some parents even reporting changes in their child’s weight.



# 4 Restrict marketing on school grounds

Marketing for unhealthy foods and beverages on school grounds (e.g., via direct advertising, sponsorships, or branded vending contracts) reinforces unhealthy food choices and undermines messages from parents and educators about healthy eating.<sup>48-51</sup> Young people are particularly vulnerable to food marketing: Developmentally, children are highly impressionable, cannot recognize advertising intent, and lack nutritional knowledge; adolescents are also hypersensitive to reward and appetitive cues, and marketing disguised as entertainment or influencer recommendations can easily override their ability to resist advertising messages.<sup>51-59</sup> Food and beverage marketing influences students' food selections and encourages a future generation of loyal consumers to prefer unhealthy food and beverage brands. Restrictions on marketing unhealthy foods in schools have been implemented at local, state/province, and national levels worldwide, but are not widespread at any level.

## Current policy landscape:

- A global scoping review found that as of 2023, only 30 countries worldwide (16%) had a national-level policy restricting food marketing in schools in some manner.<sup>6</sup> These ranged from complete bans on in-school marketing for unhealthy foods to more limited restrictions for specific categories or foods and drinks that do not meet nutritional criteria.
  - All national-level marketing restriction policies identified in the review applied to primary and middle schools, while most applied to high schools (87%) and preschools (80%), and only four policies extended to the area surrounding schools.
  - Two-thirds of marketing policies included a plan to monitor implementation and compliance, such as inspection by committees or government bodies, while just under half included language pertaining to policy enforcement, such as financial penalties.
  - National-level marketing restrictions were found to be more common in higher-income countries, with only 17% of current policies found in middle-income countries and none in low-income countries.
- More policies are needed worldwide to protect children from harmful food marketing in places of learning. Regulations should include strong monitoring and enforcement mechanisms to ensure effective implementation.

## Examples and evidence

- Beginning in 2016, **Chile** banned promotion or sales of packaged products high in sugar, saturated fat, sodium, or calories in schools.<sup>60,61</sup> This is part of a [broader policy package](#) that also restricts advertising for unhealthy foods and drinks, prohibits use of creative techniques appealing to children in marketing for these products, and requires nutrient warning labels on their front-of-package. After Chile implemented these regulations:
  - In-school availability of products high in sugar, sodium, saturated fat, or calorie density dropped significantly — from 90% of foods and drinks for sale in schools to 15% in the first six months of the law in Santiago, Chile.<sup>30</sup>
  - Children consumed significantly less total sugars, saturated fats, and sodium at school after the law began.<sup>62</sup> Adolescents' consumption of total sugars and saturated fat at school also dropped.
  - Children also consumed less total sugar at home, and some mothers reported their children requesting healthier snacks after implementation of the law.<sup>62</sup>
  - Despite these decreases in unhealthy nutrients consumed at school and home, researchers also saw an increase in these nutrients consumed at other locations such as restaurants or during commutes for both children and adolescents.<sup>62</sup> This suggests that in-school policies should ideally be augmented by comprehensive policy strategies that address out-of-school marketing exposures as well.
- In 2007, **Maine** became the first U.S. state to restrict food marketing on school grounds.<sup>63</sup> The policy targets “foods of minimal nutritional value” and prohibits brand-specific advertising of food or beverages not meeting nutritional standards.
  - In 2010, 85% of randomly selected schools in Maine had instances of non-compliance with the statewide marketing restrictions, with most non-compliant food and beverage advertisements found on vending machines and scoreboards underscoring the need for policies to include comprehensive plans for monitoring and enforcing restrictions.<sup>64</sup>
- In 2016, the USDA began requiring school districts across the **United States** to create policies prohibiting marketing for foods and beverages that do not meet federal competitive food standards.<sup>50</sup> The ruling allowed districts to go beyond these minimum requirements and implement stronger policies as desired.
- In 2023, the **Brazilian municipality of Niteroi** amended a law prohibiting the sale, distribution, and advertising of products that contribute to childhood obesity on school premises, to include a ban on ultra-processed food items as defined by the Pan American Health Organization (PAHO).<sup>65</sup> Advocacy efforts are now aimed at monitoring the new law for compliance and modifying strategies to effectively communicate with the school community regarding changes.<sup>66</sup>



# 5

## Protect the food environment around schools

Convenience stores, fast food outlets, and food carts clustered near schools provide students easy access to unhealthy, often ultra-processed foods and sugary drinks, which are frequently displayed prominently alongside attention-grabbing advertising.<sup>67-70</sup> Healthy school food environment policies should ideally restrict marketing and sales of unhealthy foods and drinks within close proximity to schools. Research outlined below shows an association between exposure to unhealthy foods near schools and changes in weight.

### Examples and evidence

#### Association with body weight and obesity

- In **Baltimore, Maryland**, having greater healthy food availability within 100 meters of schools was associated with reduced BMI gain over one year among elementary students.<sup>71</sup>
- In **Finland**, students with low socioeconomic status were 61% more likely to have irregular eating habits such as skipping breakfast, not eating lunch and snacks provided at school, and not having dinner with family if they had grocery stores or fast-food outlets within 100 meters of their school.<sup>12</sup> They were also 25% more likely to be classified as overweight.
- A survey of food vendors within 100 meters of elementary schools in **Mexico** found that children attending schools with the highest concentration of mobile food vendors had higher BMIs.<sup>11</sup>
- A 12-year evaluation of changes in business establishments around primary and secondary schools in **Flanders, Belgium** found a significant increase in fast-food options and convenience stores between 2008 and 2020.<sup>72</sup> During this time, the availability of healthier options decreased. Proximity of fast-food outlets and convenience stores to primary schools was significantly correlated with higher weight status among students from low socioeconomic backgrounds.

#### Existing environments and policies

- A 2024 study used Google Street View to determine that unhealthy food outlets make up a significant proportion of the food environment near secondary schools in regional and metropolitan areas in **Australia**: 44% of food outlets were categorized as “unhealthful,” 40% as “less healthful,” and only 16% as “healthful.”<sup>73</sup>

- A 2022 audit of the surroundings of three public schools in **Santa Catarina, Brazil** found a large availability of establishments that sell ultra-processed foods.<sup>74</sup> Supermarkets and bakeries were determined to have the highest percentage of unhealthy products.
- A 10-year evaluation in 2022 of a restrictive zoning policy around schools in **Ontario** revealed that, due to exemptions for existing businesses, the policy failed to significantly reduce unhealthy food accessibility in areas already oversaturated with these options.<sup>75</sup> Since the regulations were primarily designed for developing areas, different approaches would be necessary to address established businesses.
- In 2010, the **South Korean** Special Act on the Safety Management of Children's Dietary Life implemented nutrition standards for schools which also included Green Food Zones, banning the sale of unhealthy foods such as fast food and soda at stores within 200 meters of school premises.<sup>76</sup> By 2017, over 90% of schools had implemented Green Food Zones.
  - A 2015 evaluation of a limited sample found no significant difference in dietary habits based on fast food proximity to schools but suggested that the policies have played a role in limiting unhealthy food density around schools and fostered a healthier environment for students.<sup>77</sup> The evaluation called for further research in a larger sample area to determine the full impact of these regulations.
- In 2022, **Jamaica** released a proposal for a new school nutrition policy that would ban unhealthy foods in and around schools up to 200 meters from campus property.<sup>78</sup> As of early 2025, the policy has not yet been made official by parliament.
- In 2022, **Barbados** released a National School Nutrition policy to combat childhood obesity and enhance student learning.<sup>79</sup> The policy regulates vendors around schools by issuing licenses that specify the types of food and beverages permitted to be sold to students in accordance with nutrition standards. As of 2024, policy implementation is ongoing, and the government has held workshops and training sessions to help vendors find healthier products to provide.<sup>80</sup>

**Additional considerations:** In many low- and middle-income country contexts, some vendors in the area around schools are small, informal vendors whose livelihoods depend on sales in these high traffic areas. There is a need when considering and adopting policies to limit unhealthy food sales and marketing in the vicinity of schools to engage with and support these vendors in transitioning to offering healthier options with safe food handling practices.



# Country school food policy snapshots

## School food policies in Brazil



First implemented in 1955, Brazil's free universal public school feeding program — the Programa Nacional de Alimentação Escolar (PNAE) — administers nutrition education and distributes roughly 10 billion meals every year to over 40 million students in almost 150,000 public schools.<sup>89,90</sup> In recent decades, PNAE has been updated by policies aiming to its nutritional standards while also supporting local agriculture, including:

- In 2009, Law No. 11.947 established that students have a right to school meals that provide them with food and nutritional security; that the food provided should be healthy, varied, and respect local culture as well as specific needs; and that nutrition education should be included in the school curriculum.<sup>22,91</sup> The law also secured funding for PNAE.
- In 2020, new guidelines for how schools may use PNAE funding<sup>92</sup> included:
  - At least 75% of PNAE funds must be used to purchase fresh or minimally processed foods ([Nova group 1](#)<sup>93</sup>).
  - At most, 5% of funding can be used to purchase culinary ingredients.
  - No more than 20% of funds may be used to purchase processed and ultra-processed products (Nova groups 3 and 4).
  - No PNAE funds may be used to purchase specific categories of ultra-processed products including sweetened soft drinks, sweetened cereals, candies, chocolate bars, biscuits, cakes, and others.

This resolution also banned the use of added sugars, honey, or sweeteners in culinary preparations or beverages served to children ages three years and younger and established guidelines for nutrition education.<sup>92</sup>

- In February 2025, Brazil's president announced that these processing-based limits will be strengthened in 2025 and 2026:<sup>90</sup>
  - At least 85% of the 2025 federal budget for public school meals must be allocated to raw or minimally processed foods (Nova group 1) or processed culinary ingredients (Nova group 2). This will increase to 90% in 2026.
  - No more than 15% of funds may be used for processed foods (Nova group 3), decreasing to 10% in 2026.
  - Ultra-processed foods (Nova group 4) should be avoided completely.

PNAE employs registered dietitians for meal planning, mandates a weekly minimum provision of fruits and vegetables (200 grams per student per week), prohibits sugar-sweetened beverages from being served or sold in schools, and limits sweets to two servings per week.<sup>94</sup> At least 30% of food purchased for the PNAE should be procured directly from family-owned farms, and over 85% of Brazilian municipalities purchased food from family farms in 2016 for use in schools.<sup>22</sup>

Beyond these national-level policies, several municipalities and states in Brazil have implemented additional policies to improve the school food environment:

- In the city of **Niterói**, products that contribute to childhood obesity are prohibited from being sold or offered in schools, including ultra-processed foods low in nutrients and high in sugar, fat, and salt, as well as those containing chemical additives.<sup>65</sup>
- In **Rio de Janeiro**, a law passed in 2023 to prevent childhood obesity by promoting healthy environments banned the sale or offer of ultra-processed food and beverages in both public and private schools.<sup>95</sup>

### Policy approaches implemented\*

-  Nutrition standards for school meals
-  Restrictions on unhealthy foods and drinks sales
-  Ensuring access to healthy alternatives
-  Restrict unhealthy food marketing
-  Protect the food environment around schools

\* Filled circles indicate that this strategy is used to some extent in this country. It does not indicate how robust or well-implemented the policy approach may be.

Continued ►





- In **Sao Paulo**, all school foods must be sourced from producers practicing sustainable farming by 2026, and all school meals served must be 100% organic by 2030.<sup>96</sup>

### Evidence of impact:

- Adolescents with high participation in the PNAE meal program have healthier diet quality, including a significantly greater regular consumption of beans and vegetables and less frequent consumption of soft drinks than students who less frequently consume school meals.<sup>94</sup>
- A 2023 evaluation of Brazilian city and state regulations found significant gaps in fulfillment of promoting a healthy food school environment. Measures need to be improved to align with the latest recommendations outlined in the Dietary Guidelines for the Brazilian Population to promote healthy dietary intake in schools.<sup>95,96</sup>

## School food policies in Jamaica



Jamaica's School Feeding Programme (SFP) is a social support system that provides breakfast and lunch in some of the nation's schools.<sup>100</sup> This initiative is specifically designed to help students from low-income households' access school meals.

The products distributed through the SFP are produced and distributed by Nutrition Products Limited (NPL), which was established in 1973 and incorporated in 1974.<sup>101</sup> The national government and various donors provide funding for the SFP. As of 2021, the SFP provides hundreds of thousands of students with breakfast and/or lunch each week.<sup>102</sup> However, there is no formal school food policy in place that guides or sets standards for what meal options should be provided to students.<sup>103</sup>

The Food and Nutrition Security Policy 2013 called for the Jamaican government to issue a policy that more holistically accounts for schools' nutrition environments, including through curricula, national guidelines for the preparation and sale of food in schools, initiatives to increase the amount of local food products provided in schools, marketing campaigns, recruitment of qualified nutrition officers, and more.<sup>103</sup> The Ministries of Health and Education have been developing a school nutrition policy that has faced delays since the initial projected implementation date of January 2019 and as of 2024, has yet to be finalized.<sup>104,105</sup> More than 200 students from across Jamaica have signed an open letter to the government, urging the swift completion of the policy. The policy aims for meals to meet nutrition standards by using recipe manuals to prepare healthy meals using local produce and to ban unhealthy foods and drinks in schools and the surrounding area.<sup>106</sup> In the interim, the Ministry of Health and Education jointly developed guidelines implemented in January 2019 that restrict the sale or provision of sugar-sweetened beverages in schools that contain greater than 2.5 grams of sugar per 100 ml.<sup>107</sup>

In addition to these efforts, in 2008 the Ministry of Agriculture, in partnership with Jamaica 4-H Clubs, launched the National School Garden Program, with more than 300 schools registered initially.<sup>108</sup> As of 2020, there were roughly 500 school gardens, which were reported to improve the quality of school meals and teach students about nutrition and agricultural skills.<sup>109</sup> The Jamaica 4-H clubs have recently equipped 70 school gardens across the island with climate-smart technologies including rainwater harvesting equipment and drip irrigation systems.<sup>110</sup> In 2024, the Ministry of Education and Youth launched a new \$10 million project to establish an additional 23 gardens across the country that will feature various initiatives including hydroponics, vegetable and container gardening, herb gardening, and greenhouses.<sup>111</sup>

-  Nutrition standards for school meals
-  Restrictions on unhealthy foods and drinks sales
-  Ensuring access to healthy alternatives
-  Restrict unhealthy food marketing
-  Protect the food environment around schools

*\* Filled circles indicate that this strategy is used to some extent in this country. It does not indicate how robust or well-implemented the policy approach may be.*



## School food policies in South Africa



In 1994, South Africa launched its National School Nutrition Program (NSNP), which provides free meals to public school students in the nation's poorest communities.<sup>81</sup> Originally, the program applied only to primary schools, but in 2008 it was expanded to secondary schools. The Department of Basic Education (DBE) coordinates the program, which is administered at the province level and funded through a conditional grant program. The NSNP also provides nutritional education and supports school garden programs and ensures a clean and sanitary environment for consuming meals.

The DBE has issued standards for school meals which stipulate that NSNP meals should account for 30% of recommended daily nutrition.<sup>82</sup> The meals should be comprised of protein, starch, and fresh fruit or vegetables. School meals should use locally produced food, when possible,<sup>83</sup> and are encouraged to grow vegetables in their own garden and teach students and parents how to maintain and harvest fresh vegetables and live a healthier lifestyle.

The DBE has also published guidelines for tuck shop operators in schools.<sup>84</sup> Recommendations include making nutritious snacks available, selling processed snacks in “very limited quantities,” and encouraging students to drink water. These suggestions are not compulsory, however. Other nonbinding initiatives addressing the school nutrition environment include the Strategy for the Prevention and Control of Obesity in South Africa (2015–2020)<sup>85</sup> and the Action Plan to 2019 Towards the Realization of Schooling 2030.<sup>86</sup>

In 2012, South Africa implemented partial restrictions on marketing to young children, with one clause stipulating that food and beverage products not aligning with healthy choices may not advertise on or near preschools and primary schools. Recent reviews have found compliance to be low, however, and subsequent attempts to introduce new restrictions have not yet been successful.<sup>87</sup> The Department of Health introduced a draft of new regulations in 2023, but has since extended the review process.<sup>88</sup>

 Nutrition standards for school meals

 Restrictions on unhealthy foods and drinks sales

 Ensuring access to healthy alternatives

 Restrict unhealthy food marketing

 Protect the food environment around schools

*\* Filled circles indicate that this strategy is used to some extent in this country. It does not indicate how robust or well-implemented the policy approach may be.*

## School food policies in Barbados



The national school feeding programme in Barbados — in place since 1963 — prepares and distributes lunch to over 25,000 students per day in pre-schools as well as primary and secondary schools.<sup>15</sup> The National Nutrition Center works with the School Meals Department to review the menus each term with assistance from nutritionists. All cooks and caterers receive special training in nutrition, menu planning, and food safety, as well. All students in primary and public pre-schools as well as special schools are eligible for school meals. Students at secondary schools are evaluated by guidance counsellors and provided subsidized meals based on individual need.

In 2023, Barbados implemented an updated policy to improve the food environment in schools: The National School Nutrition Policy restricts the sale or marketing of food and beverages of health concern (using both categorical and nutrient-based restrictions).<sup>79</sup> This policy also prohibits food vendors from selling within 300 feet of school property lines. While evaluations have not yet been conducted, this comprehensive policy supports a healthy school environment using several policy approaches.

 Nutrition standards for school meals

 Restrictions on unhealthy foods and drinks sales

 Ensuring access to healthy alternatives

 Restrict unhealthy food marketing

 Protect the food environment around schools



## School food policies in the United States



In the United States, federal involvement in school feeding began with the National School Lunch Act of 1946, which aimed to provide nutritious meals to students across the country in response to concerns about the nutritional deficiencies of young people during World War II.<sup>112</sup> Over time, the program expanded to offer breakfast via the School Breakfast Program (piloted beginning in 1966 and made permanent in 1975). The USDA administers these programs, which have recently been updated with stronger nutrition standards aimed at reducing childhood obesity and improving Americans' overall health.<sup>18</sup>

Enacted in 2010, the Healthy, Hunger-Free Kids Act significantly reformed school nutrition standards for the first time in decades, requiring meals served in the National School Lunch Program (NSLP) or School Breakfast Program (SBP) to meet more stringent nutritional guidelines.<sup>18</sup> These included more servings of fruits, vegetables, and whole grains, reduced sodium and saturated fat content, and limiting overall calories to developmentally appropriate levels. The Act also included additional funding for schools that meet updated nutritional standards, support to establish local farm-to-school networks and create school gardens, expanded access to drinking water in schools, increases in the number of children eligible for and able to access free or subsidized meals, and increases in program monitoring and quality assurance.<sup>113</sup>

Beginning in 2014, Smart Snacks in Schools standards required all a la carte competitive foods sold in schools participating in national meal programs to be composed primarily of healthy ingredients (whole grains, fruit, vegetable, dairy, or a protein) and not to exceed nutrient thresholds for calories, sodium, fats, and total sugars.<sup>114</sup> Only plain water, milk/milk alternatives, and 100% juices can be sold to drink. Beginning in 2016, marketing for products not meeting these Smart Snacks standards was prohibited on school property.<sup>115</sup> This rule does not prohibit brand marketing, however, which is the most common type of marketing on school properties.

Most recently, the USDA announced updates to nutrition standards for school meals aimed at reducing added sugars and sodium as well as supporting local food purchases.<sup>116</sup> These were implemented in 2024, and schools will have until Fall 2027 to comply.

### Evidence of impact:

- Enhancements to mandatory school nutrition standards have significantly improved the nutritional quality of school meals, bringing them into closer alignment with national dietary guidelines and leading to increased consumption of nutrient-rich foods such as whole grains and beans.<sup>18</sup>
- The 2010 Healthy, Hunger-free Kids Act was associated with a significant 9% annual reduction in obesity odds among youth in poverty, resulting in roughly 500,000 fewer cases of obesity by 2018 compared to what was expected without the policy.<sup>117</sup>
- In addition to national Smart Snacks standards, some US states and districts have also implemented state- and local-level nutritional requirements for competitive foods sold in schools, which have helped reinforce compliance with national Smart Snacks standards and in some cases exact more strict regulations.
  - First- through 12th-grade students in states that have implemented strong competitive food and beverage restrictions have significantly lower BMI.<sup>25</sup>
  - Students in states that had laws facilitating implementation and compliance with Smart Snacks standards in the 2014 to 2015 school year consumed less fat and sugar than students in states without these policies.<sup>26</sup>

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## Industry actions that undermine or avoid school food and nutrition policies

Food and beverage companies' strategies for infiltrating or undermining attempts to regulate the school environment include:

- **Self-regulation:** Manufacturers preempt mandatory regulations by making voluntary pledges not to sell or market unhealthy products in schools.<sup>118</sup> Evidence shows, however, that such pledges do not lead to meaningful improvements in school food policies or environments.<sup>119</sup> Rather, strictly enforced policies are needed that are mandatory for all companies, without loopholes that are often written into industry pledges.
- **Subsidized programs, activities, and supplies:** Manufacturers will invest in school activities, much-needed supplies and infrastructure, and even school feeding programs under the guise of corporate social responsibility, positioning themselves as champions of healthier lifestyles or improved learning environments.<sup>54</sup> Meanwhile, these programs provide built-in marketing opportunities, cultivating brand loyalty and a base of young consumers for their products while providing cover against the need for strong school food policies, access to healthier, less-processed foods and clean water, and support human and planetary health.
- **Education is enough:** Manufacturers will argue against restrictions on selling and marketing unhealthy foods in schools in favor of simply educating students on healthier choices. While education campaigns may be helpful, they do not attain the reach of population-based policies and are easily undermined by an unhealthy school food environment.<sup>120</sup> Such campaigns should be a complement to school food policies, not an argument against putting such policies in place.
- **Reformulation and look-alike products:** Manufacturers may reformulate versions of their products to meet school nutrition standards and continue selling them in schools.<sup>121</sup> Meanwhile, they often undermine those restrictions by selling look-alike products in outside stores that don't comply with school standards (*right*). This can confuse students and parents into thinking that store versions are as healthy as the reformulated school versions.



McDonald's-branded portable school desks donated by the company to schools in Cape Town, South Africa in 2025. Photo source: [The Citizen](#)



School sports scoreboard featuring brand advertising for two sugary beverage brands. Photo: Billygilman39 via [Wikimedia Commons](#)

### Look-alike products sold in US schools:

#### IN SCHOOLS



\*40% less fat than Cheetos® Puffs Snacks



\*15 fewer calories, 1.5g less fat, and 2.5g less added sugar per tart

#### IN STORES



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