

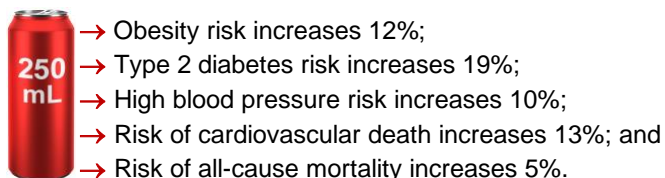
# Taxing sugary drinks: A fiscal policy to improve public health

Sugary drinks are a key driver of modern surges in nutrition-related diseases worldwide, including obesity, type 2 diabetes, high blood pressure, and heart disease. These and other non-communicable diseases are now the leading causes of disability and death in the world.<sup>1</sup> To curb consumption of sugary drinks and their associated health, economic, social, and environmental harms, over 60 countries and smaller jurisdictions have implemented taxes to raise their prices, lower consumer demand, incentivize industry to reformulate or replace them, and ultimately reduce the burden of diseases driven by high sugar consumption. This fact sheet presents information on:

- **Connections between sugary drinks and risks for non-communicable diseases (NCDs);**
- **Worldwide prevalence of nutrition-related NCDs;**
- **Connections between sugary drinks and environmental harms;**
- **Real-world evidence that taxing sugary drinks is an effective public health policy; and**
- **A summary of best practices for taxing sugary drinks, based on evidence to date.**

## Sugary drinks contribute to obesity and NCDs

- The World Health Organization recommends limiting free sugar intake to less than 10% of total calories and ideally less than 5% — roughly 25 grams (6 teaspoons) per day for adults.<sup>2</sup> Free sugars are any sugars added to a food or drink, as well as sugar from honey, syrups, and fruit juices.
- Sugary drinks are one of the top sources of added and free sugars in the global diet.<sup>3-7</sup>
  - › In countries without sugary drink taxes, a typical 500 mL (16.9 oz) regular soft drink contains 53 grams (13 teaspoons) of free sugar. For an adult consuming 2,000 calories per day, drinking just one of these will contribute 12% of total calories from free sugar, exceeding recommendations.
  - › For most children and adolescents, drinking a single 355 mL (12 oz) can of regular soft drink will put them over the recommended 10% of daily calories from free sugars.
- Sugary drinks often offer little or no nutritional value and pose unique risks due to their liquid form:
  - › The liquid sugars used to sweeten beverages are absorbed more quickly by the liver and processed in a way that increases fat and glycogen deposits,<sup>8-12</sup> which can lead to fatty liver disease and increase risks for type 2 diabetes and other NCDs.<sup>10,13</sup>
  - › Sweeteners consumed in liquid form do not lead to feelings of fullness equal to their calorie content, making it less likely that people will reduce food intake to compensate for calories consumed from sugary drinks.<sup>14-16</sup> This imbalance can lead to greater total calorie intake than what the body needs.
- Sugary drinks also contribute to undernutrition when consumed in place of foods containing essential nutrients.
  - › For example, in some countries, infants may be fed sugary drinks as a weaning food, which can worsen undernutrition and stunting.<sup>17-23</sup> Infants with stunting face much greater risks later in life for high visceral fatness, hypertension, and type 2 diabetes.<sup>20,24-28</sup>
- Regular consumption of sugary drinks is associated with increased risks for a myriad of health problems throughout life, including: obesity,<sup>29-36</sup> type 2 diabetes,<sup>29,36,37</sup> hypertension,<sup>29,38,39</sup> heart disease and its risk factors,<sup>8,36-38,40-42</sup> tooth decay and poor oral health,<sup>43,44</sup> certain cancers,<sup>45-48</sup> liver disease,<sup>49-52</sup> frailty in older age,<sup>53</sup> declining cognitive function and dementia,<sup>54-56</sup> and premature death.<sup>37,47,48,57-61</sup>
- Meta-analyses in 2020<sup>29</sup> and 2021<sup>57</sup> estimated that for every 250 mL increase in daily sugary drink intake:



*High-sugar drinks can include carbonated soft drinks, energy and sports drinks, sweetened coffees and teas, fruit drinks, 100% fruit juices, and dairy and non-dairy milks with added sugars.*

- Among children and adolescents:
  - › Drinking sugar-sweetened beverages four or more times per week is associated with 24% greater odds of childhood overweight or obesity.<sup>30</sup>
  - › High sugary drink consumption is associated with a 0.75 kg/m<sup>2</sup> increase in BMI, 2.35 cm greater waist circumference, and 2.74% higher body fat percentage compared to low consumption.<sup>35</sup>
  - › Pediatric hypertension is 36% more likely to develop among children and adolescents drinking high vs. low amounts of sugary drinks.<sup>39</sup>
  - › These risks are especially concerning given that excess weight during childhood is likely to persist into adulthood,<sup>62-66</sup> increases risks of developing type 2 diabetes, heart disease, and cancer at a younger age, and can shorten life expectancy.<sup>64,65,67-73</sup>
  - › Excess weight during childhood and adolescence can also take a psychological and social toll due to weight stigma, increasing risks for depression, anxiety, low self-esteem, peer bullying, eating disorders, or poor performance in school.<sup>65,74-82</sup>
- In many places, groups who experience higher rates of nutrition-related NCDs and worse health outcomes from them also tend to consume more sugary drinks, due to factors such as lower cost and easier access relative to healthier options as well as highly targeted marketing by beverage companies.<sup>83-93</sup>
  - › Sugary drinks are one of the most heavily marketed products in the world. The beverage industry targets vulnerable populations — including children, certain racial and ethnic groups, and developing countries — with heavy promotional and marketing efforts.<sup>94-96</sup>
- NCDs carry tremendous personal costs in terms of quality and length of life and burdens of disease treatment and management, as well as public costs for health care systems, workforces, and economies.



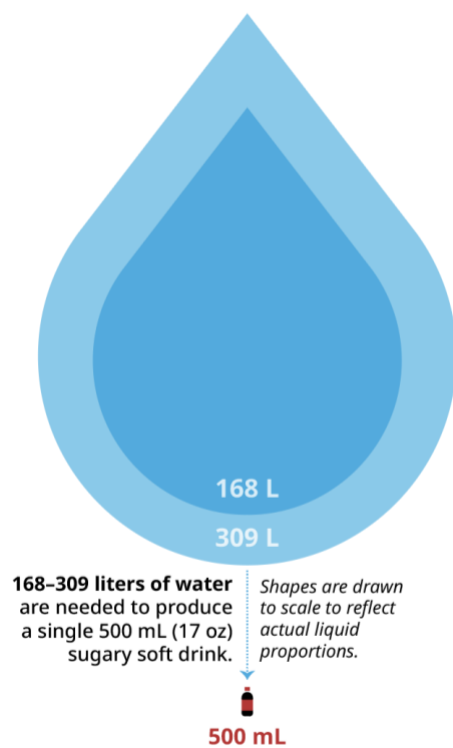
## Global prevalence of obesity and other nutrition-related diseases

- **NCDs** — including nutrition-related diseases such as obesity, type 2 diabetes, hypertension, heart disease, stroke, and some cancers — cause 7 out of 10 deaths worldwide and in low- and middle-income countries, over 8 out of 10 premature deaths from ages 30–69.<sup>97</sup>
- In addition to causing **premature death**, NCDs take away years of healthy life: In 2019, NCDs cost the world 1.6 billion disability-adjusted life years (DALYs, or years of life lost due to premature death + years of disease-free life lost).<sup>98</sup> This is a roughly 20 percentage point increase since 1990.
- Diets high in sugar-sweetened beverages, specifically, were responsible for over 6 million lost years of healthy life in 2019.<sup>99</sup>
- Worldwide prevalence of **obesity** has tripled since 1975 and continues to climb, especially in low- and middle-income countries.<sup>100-105</sup>
- Over 2.2 billion people (more than one-third of the world's population) are now classified as **overweight** or **obese**.<sup>101,102,106</sup> Trends among children are especially concerning:
  - › Worldwide, an estimated 340 million children ages 5–19 years are now classified as overweight or obese — a tenfold increase over the past four decades.<sup>107,108</sup> Among preschoolers, prevalence has risen 60% since 1990, with 43 million preschoolers now classified as overweight or obese and a further 92 million at risk.<sup>109</sup>
  - › Low- and middle-income countries are now seeing the most rapid rise:<sup>107,110</sup> For example, estimated childhood overweight and obesity prevalence now meets or exceeds 30% in Argentina, Colombia, and Malaysia and exceeds 20% in Bolivia, China, Ethiopia, Indonesia, Jamaica, Kenya, Libya, Nigeria, and Vietnam.<sup>1</sup>
  - › Even at a young age, obesity can have negative effects on nearly every organ system and disrupt hormones that control blood sugar and normal development.<sup>65,67,72,73,110-112</sup>
  - › Excess weight during childhood is likely to persist into adulthood,<sup>62-66</sup> increases risks of developing type 2 diabetes, heart disease, and cancer at a younger age, and can shorten life expectancy.<sup>64,65,67-73</sup>
- **Type 2 diabetes** is also one of the fastest-growing global health threats, with an estimated 537 million adults living with diabetes today and 246 million more projected by 2045; 3 in 4 of these adults live in low- and middle-income countries.<sup>113</sup>
- An estimated 1.28 billion adults worldwide have **hypertension**. Of these, nearly half don't know they have the condition, and only 1 in 5 has their high blood pressure treated and under control.<sup>114</sup>
  - › Two-thirds of adults with hypertension live in low- and middle-income countries.<sup>114</sup>
- Obesity and other NCDs are associated with significantly increased health care costs, lost wages due to illnesses and disability, reduced productivity, and earlier retirement.<sup>115-117</sup>

## Environmental costs

Sugary drinks also have serious environmental costs:

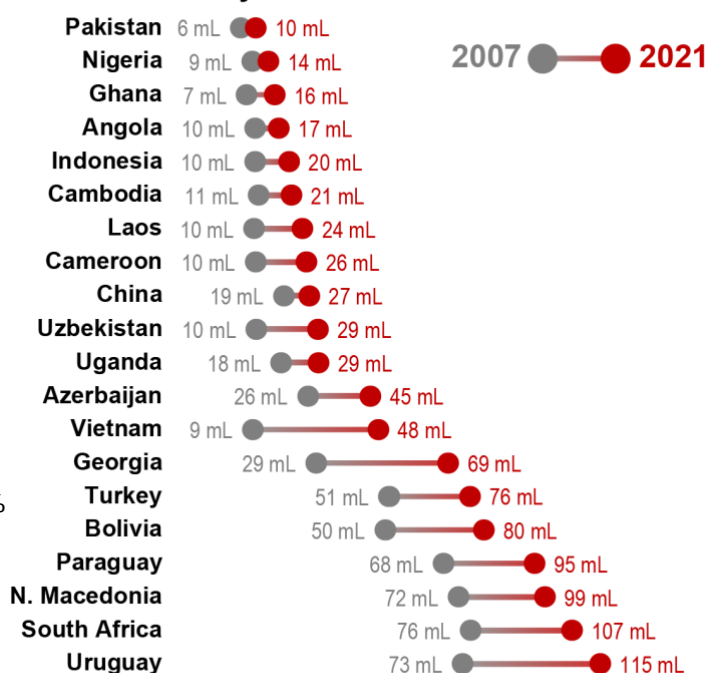
- Both the production and disposal of plastic drink bottles generate an enormous carbon footprint: Most are made from plastic derived from fossil fuels, and the billions of bottles that are not recycled every year wind up incinerated, in landfills, or littering natural environments.<sup>118</sup>
- An estimated 21–34 billion plastic drink bottles ended up in the world’s oceans in 2018, alone — the equivalent of up to 1.1 million metric tons of plastic bottle waste.<sup>119</sup>
- In 2020, three of the world’s largest drink companies generated a combined 121 million tons of heat-trapping greenhouse gases, exceeding the output of many entire countries.<sup>118,120</sup>
- An estimated 168–309 liters of water are used to produce a single 500 mL (16.9 oz) regular sugary drink (varies depending on sugar source and inclusion of ingredients such as caffeine or vanilla extract).<sup>121-123</sup>
- Beverage companies’ exploitation of water resources is of increasing global concern, for example, the practice of taking from water-scarce countries for use in production of exported beverages.<sup>124-126</sup>
- Curbing global sugar consumption could free up sugarcane feedstock or farmland for use in biofuel production and prevent destructive clearing of native, carbon-dense ecosystems to meet increasing demands for alternative energy sources.<sup>127</sup>
  - › For example, 30–54 metric tons of greenhouse gas emissions could be eliminated yearly if the European Union reduces sugar consumption to align with health recommendations and excess sugarcane is redirected to ethanol production.<sup>128</sup>



## Sugary drink intake is high or increasing, globally

- While sugary drink consumption has plateaued or even declined slightly in many high-income countries, it remains at levels high enough to continue driving increased risks for many NCDs.<sup>129-132</sup>
- In low- and middle-income countries, sugary drink consumption continues climbing as companies have invested heavily in expanding global production, distribution, and promotion of their products to developing markets.<sup>129-132</sup>
- Total volume of sugary drinks sold in middle-income countries now exceeds that of high-income countries.<sup>132</sup>
- The Caribbean has the highest sugary drink intake of any world region: Caribbeans drink nearly 2 servings per day on average; Central Latin American countries follow at 1.6 daily servings per person.<sup>129</sup>
- The cost of sugary drinks has fallen more than for healthier alternatives over time.
  - › In 79 out of 82 countries studied, the cost of sugar-sweetened drinks as a share of income fell from 1990–2016, decreasing on average 9% annually in low- and middle income countries and 2% annually in high-income countries.<sup>85</sup>
  - › In many countries, sugary drinks cost less than bottled water.<sup>85</sup>
  - › As sugary drinks become cheaper, people consume more, and rates overweight and obesity rise.<sup>86</sup>

### Growth in per capita sales of ready-to-drink soft drinks\* 2007–2011



\* Excluding bottled waters. Source: Euromonitor International Limited 2022 © All rights reserved


## Taxing sugary drinks to reduce harm and improve health

- Sugary drink taxes are triple-win, cost-effective policy option that can improve population health, increase government revenue, and reduce health care and environmental costs.<sup>133-139</sup>
- Sugary drink taxes are projected to save millions of years of life globally by reducing incidence of diseases caused by excess sugar and calorie intake.<sup>140,141</sup>
- Taxes on sugary drinks generate significant revenue that can be used to fund obesity prevention efforts and other health initiatives, further enhancing their overall positive impact.<sup>138,139,142,143</sup>
- Taxes based on sugar content rather than beverage volume (wherein higher-sugar drinks face higher taxation) can incentivize manufacturers to cut the amount of sugar in their product offerings, increasing likelihood of greater population health gains.<sup>133,144-147</sup>
- The process of passing and implementing sugary drink taxes can increase public awareness of the health risks associated with sugary drinks and incentivize industry to reformulate and introduce healthier beverage options ahead of tax implementation.<sup>148-153</sup>
- **Sugary drink taxes can improve health equity.** Reducing sugary drink consumption can have especially positive impacts among lower-income populations, who in many places experience obesity and other NCDs at higher rates, at greater personal cost, and with worse outcomes than higher-income groups.<sup>154-162</sup> Sugary drink taxes — especially alongside other public health policies such as [front-of-package warning labels](#) and [restrictions on marketing](#) — could help alleviate this disproportionate health burden. Using revenue from sugary drink taxes to enhance access to healthy food, health care, or other public services can offset any added costs that lower-income groups may incur from paying a greater percentage of income to continue purchasing sugary drinks.<sup>163,164</sup>
  - › For example, across the U.S. cities of Philadelphia, Seattle, and San Francisco, while lower-income populations paid a higher percentage of income on beverage taxes, the cities' allocation of tax revenue to fund programs targeting lower-income populations yielded a significant net transfer of funds towards lower-income communities.<sup>163</sup> Examples of equitable uses for tax revenue include:
    - › In the United States, the Philadelphia Beverage Tax has generated \$385 million in total revenue to date, the majority of which has gone towards funding the city's universal pre-kindergarten program.<sup>165</sup> This program has in turn enabled many parents to join the workforce or increase productivity and created an estimated 800–1,350 new jobs and \$28–60 million in additional labor income.<sup>166</sup>
    - › In Portugal, Poland, and Hungary, the majority of revenue from sugary drink taxes helps fund the countries' public health services, offsetting some costs related to NCD care.<sup>167-169</sup>
    - › In Malaysia, revenue from a sugar-sweetened beverage excise duty funds free, healthy breakfasts for children in primary schools.<sup>170</sup>

## Taxes work: The global experience

To date, 47 countries and 16 smaller jurisdictions have implemented taxes on sugary drinks with an aim toward improving population health.<sup>171</sup> Fifty-five of these taxes were passed in the last 10 years, demonstrating increased global concern about the harms associated with sugary drink consumption and the need for cost-effective policies to curb high sugar consumption and reduce NCDs.

These taxes are working, according to multiple large reviews of real-world evidence.<sup>133,172,173</sup> The latest review in 2022 found that based on evaluations to date, sugary drink taxes have been associated with significantly increased prices on targeted beverages (i.e., 82% of the tax cost was passed on to consumers) and 15% lower sales of sugary drinks, with no negative impact on employment.<sup>133</sup> Examples of outcomes in specific countries include:

-  **Mexico:** With one of the world's highest sugary drink intakes, Mexico was the first large country to implement a sugary drink tax aimed specifically at improving nutrition and reducing NCDs. Introducing a modest tax of **1 peso per liter** on sugary drinks in 2014 (roughly a 10% volumetric tax) led to reduced purchases of taxed drinks and increased bottled water purchases, with no change in total employment.<sup>174-180</sup>
  - › From 2012 to 2016, purchases of taxed beverages dropped by an estimated 37% in Mexico.<sup>179</sup>
  - › Reduced sugary drink consumption following Mexico's tax was greatest among lower-income and high-volume consumers, the two groups facing the greatest health risk.<sup>177,181</sup>
  - › Mexican consumers replaced some sugary drinks with healthier beverages: Water purchases increased an estimated 5% in the first year,<sup>180</sup> while all untaxed beverage purchases (i.e., drinks with lower sugar content)



*Learn more about different sugary drink taxes around the world* [↗](#)

increased 11%.<sup>179</sup> This trend appears to have plateaued, following an initial jump, but has remained higher than pre-tax levels.<sup>177,179</sup>

- › Three years after Mexico implemented the sugary drink tax, the proportion of health care workers who were medium or high soft drink consumers dropped from over 50% before the tax to 43%, while non-consumers of soft drinks increased from 10% to 14%.<sup>182</sup>
- › Adolescent girls in Mexico had a 3% relative decrease in overweight or obesity prevalence in the first two years of the tax, with greater improvements found in cities where prices increased more than 10%.<sup>183</sup>
- › Based on the first-year reduction in sugary drink consumption in Mexico, it is estimated that 10 years after implementation, Mexico's sugary drink tax will result in an average 2.5% reduction in obesity prevalence (with the largest reductions for lowest-income groups) and prevention of up to 134,000 cases of type 2 diabetes.<sup>184</sup>
- › Implementation of Mexico's sugary drink tax was associated with significant declines in the number of outpatient visits for dental caries (–2,921 visits per month, on average); the probability of experiencing decayed, missing, or filled teeth; and the number of teeth with caries.<sup>185</sup>
- › Employment in food and beverage stores and in the beverage manufacturing sector did not decrease after Mexico's sugary drink tax was implemented.<sup>176</sup>



**United Kingdom:** Announced in 2016 and implemented in 2018, the UK Soft Drinks Industry Levy (SDIL) is a tiered tax based on sugar content. Drinks containing >8 g total sugar per 100 mL are taxed at a rate of **£0.24 per L**, while drinks with 5–8 g total sugar per 100 mL are taxed at **£0.18 per L**.<sup>186</sup> Drinks containing less than 5 g total sugar per 100 mL are not subject to the levy. Tiered tax designs such as this are more likely to encourage industry to reformulate their products, reducing sugar content to avoid higher tax rates.<sup>133</sup> Announcement and implementation of the SDIL resulted in widespread beverage reformulation that significantly reduced sugar in the UK beverage supply.

- › In the two years between announcement and implementation of the levy, manufacturers preemptively removed 45 million kg of sugar from their products.<sup>187</sup>
- › In the levy's first year, shifts in UK consumers' beverage choices led to a 10% drop in the amount of sugar purchased from all soft drinks (taxed and untaxed) — roughly 30 g less sugar per household per week.<sup>188</sup> This was achieved with no change in the total amount of soft drinks purchased and without shoppers spending more on confectionery or alcoholic beverages.
- › By 2019, manufacturers reduced sugar content by 44% in taxable beverages,<sup>189</sup> and the proportion of drinks subject to the levy (i.e., those containing >5 g sugar per 100 mL) fell an estimated 34%.<sup>151</sup>
- › While overall sales of taxed sugary drinks increased 15% from 2015–2019, the amount of sugar purchased from taxed beverages dropped 35%, due to the drinks containing less sugar.<sup>189</sup> These decreases in purchased sugar were much larger than what was observed among food categories targeted as part of a voluntary sugar reduction program.



**South Africa:** In April 2018, South Africa became the first African nation to implement a tax on sugar-sweetened beverages. The country's Health Promotion Levy (HPL) taxes drinks according to their sugar content, at a rate of **0.021 South Rand (ZAR) per gram of sugar above 4 grams**.<sup>190</sup> Roughly the equivalent of a 10% tax, the HPL was enacted at half the originally intended 0.028 ZAR rate (roughly 20% tax) following intense pressure from sugar and beverage industries.<sup>191</sup> Despite this, positive changes from both consumers and industry have been observed following implementation:

- › Purchases of taxable beverages dropped an estimated 29% from 2014 (pre-announcement of the HPL) to post-implementation (2019).<sup>192</sup> Sugar from taxable beverage purchases declined by 51%, with greater declines among lower-income households.
- › Dietary trends in the first year of the HPL mirrored changes in purchases:
  - Young adults (ages 18–39 years) surveyed in Langa, South Africa reduced their daily intake of taxed beverages by 37%.<sup>193</sup> This led to a 31% drop in sugar intake from taxed beverages, or 9 grams sugar per person per day.
  - Black adolescents and adults in Soweto, Johannesburg decreased their frequency of drink sugary beverages by 7 times per week among high-intake consumers and 2 times per week among medium-intake consumers.<sup>194</sup> This change persisted over the following year.
- › Declines in how much sugar South Africans purchased and consumed from beverages resulted from a combination of changes in consumer behaviors and industry reactions to the HPL (i.e., reformulating products to contain less sugar or adding/removing products).<sup>192,193,195</sup>

- From before announcement of the HPL to one year after it was implemented, sugar purchased from all beverages dropped by an estimated 5 grams per capita per day. Overall, 71% of this drop was due to consumers choosing different beverages or reducing the volume of sugary drinks purchased.<sup>195</sup>
- Among households with lower socioeconomic status, consumer-led changes drove 80% of the drop in sugar purchased from beverages. This drop was also greater among these households at –6.4 grams per capita per day.<sup>195</sup>
- › In its first two fiscal years, the HPL generated 5.8 billion ZAR in revenue, which has gone towards the country's general fund.<sup>191,196</sup>
- › At the originally proposed 20% tax rate, it was predicted that South Africa's obesity prevalence could be lowered by an estimated 3.8% in men and 2.4% in women, resulting in 220,000 fewer South African adults with obesity.<sup>197</sup> A 20% tax could offer significant additional healthcare cost savings for the government and for South African families by preventing an estimated 72,000 premature death and saving over R5 billion in healthcare costs over 20 years.<sup>198</sup> over 20 years.<sup>198</sup>



**Philadelphia, Pennsylvania, USA:** In 2017, the city of Philadelphia implemented a **1.5¢ per ounce** excise tax on sweetened drinks — including those containing non-caloric sweeteners.<sup>199</sup> Philadelphia is one of seven U.S. cities with a sugary drink tax, but the first to tax “diet” or “zero-calorie” sweetened beverages at the same rate as sugar-sweetened drinks. Evaluations find that even with some expected cross-border shopping in neighboring towns, the tax has contributed to significant reductions in purchases and consumption of sweetened drinks in Philadelphia, while also raising substantial revenue, which has been invested primarily in free early childhood education.

- › Philadelphia's 1.5¢-per-ounce tax on sweetened drinks was associated with a drop in taxed beverage purchases of up to 38%,<sup>200,201</sup> with a net positive impact on the city's employment and economy.<sup>166,202,203</sup>
- › Two years after Philadelphia's tax began, high school students reported drinking 0.81 less weekly servings of soda compared to students in 7 comparison cities without taxes.<sup>204</sup> The drop was greater among Hispanic and Latinx adolescents (1.13 fewer servings per week) and students with obesity (1.2 fewer servings per week).
- › There is no evidence to date of shoppers in Philadelphia buying more snack foods or alcoholic drinks to replace taxed beverages.<sup>205</sup> Some substitution to untaxed drink concentrates has been observed, but these make up a small portion of overall beverage purchases (12% of dollar sales before the tax vs. 15% after).<sup>205</sup>
- › Philadelphia's tax has generated \$385 million in total revenue since it began.<sup>165</sup> In 2020–2022, roughly half of this went towards funding a universal pre-kindergarten program for Philadelphia children.
- › Provision of free, quality childcare using revenue raised by the Philadelphia Beverage Tax has created an estimated 800–1,350 new jobs and \$28–60 million in additional labor income, as parents were able to join the labor market or increase productivity.<sup>166</sup> These gains primarily impacted low-income families.



**Gulf Cooperation Council (GCC):** The GCC countries of Saudi Arabia, Bahrain, Qatar, United Arab Emirates, and Oman have levied the largest sugary drink taxes to date: a 50% excise tax on carbonated soft drinks and 100% excise tax on energy drinks since 2017–2019 (implementation years vary by country).<sup>206,207</sup> The 50% tax rate has been expanded in several GCC countries in recent years to apply more broadly to sugar-sweetened drinks. These taxes are unique beyond their large rates in that they are levied in countries where sales of alcoholic beverages is largely prohibited and there is limited opportunity to shop tax-free across borders, as the entire region adopted similar taxes. While few evaluations have been published to date, one study from Saudi Arabia — the first of the GCC countries to implement the taxes in 2017 — found that sales volume of taxed carbonated beverages dropped 33% relative to untaxed beverage sales by 2018 (prior to tax expansion to sweetened soft drinks).<sup>208</sup>

## Lessons for future policies

Jurisdictions considering adopting or strengthening a sugary drink tax now have the benefit of learning from real-world successes, both in strategies to build support for a policy and effective tax designs to reduce sugary drink purchases. While the best approach will vary depending on local contextual factors, resources, and goals, evidence from real-world policies, scientific modeling studies, and economic and behavioral foundational research, provides some key guidelines:

- **Choose a tax base that includes all drinks high in free sugar.** For meaningful health improvements and to avoid substitution to other high-sugar options, a tax should ideally target all sugary beverages, including drinks sweetened with added sugars as well as sugars naturally present in honey, syrups, nectars, and fruit juices. Taxes should apply to all sugary beverage types commonly consumed, including liquid or powder concentrates, and ideally sugar-sweetened dairy-based drinks and 100% fruit juices, as these all contribute to free sugar intake.

- **Higher taxes will have more meaningful impacts.**
  - › To date, most taxes have raised prices on sugary drinks by a relatively small amount ( $\leq 10\%$ ).<sup>133</sup> Changes in calorie and sugar consumption from beverages have been significant, but small, and health benefits from could be enhanced and accelerated under larger taxes, ideally at a rate equivalent to 20% or greater.<sup>147,209-213</sup>
  - › Complete “pass-through” of taxes (raising sales prices of sugary drinks to match the full tax rate) will also enhance tax effectiveness. On average, taxes are currently passed through at a rate of 82%.<sup>133</sup>
  - › Excise taxes tend to be passed through to consumers more closely to their intended rate than other tax types (e.g., ad valorem taxes), but will need to be adjusted annually for inflation and changes in income.<sup>209</sup>
- **Specific excise taxes based on sugar content are most effective at lowering sugar consumption.** Specific excise taxes are the most commonly used sugary drink tax approach globally and can be based on beverage volume or sugar content. Evidence to date indicates:
  - › Taxes based on the amount of sugar in a beverage can yield greater reductions in sugar consumption, in part by incentivizing industry to reformulate or introduce new products that are lower in sugar.<sup>145-147,209</sup>
  - › Volume-based taxes (wherein specified sugary drinks are taxed at a rate per unit of volume, regardless of differences in sugar content) can generate more revenue relative to sugar density taxes but will have a lesser effect on product reformulation and reducing sugar consumption.<sup>145-147,209</sup>
- **Plan for strategic use of generated revenue.** Earmarking or directing revenue to fund programs or services that improve public welfare can increase support for its adoption, increase health equity, and enhance the net positive impacts of the tax.<sup>147,163,169,214</sup>
- **Combining taxes on sugary drinks with subsidies or price incentives to lower the cost of healthier foods and drinks can have a greater health impact than a sugary drink tax, alone.**<sup>215-220</sup>
  - › Combining a tax on sugary drinks (or other ultra-processed foods) with a targeted subsidy for fruits and vegetables can also offset any short-term financial burdens incurred by low-income consumers.<sup>215,218,219</sup>
  - › Other fiscal policies such as cash transfer programs and changes to agricultural subsidies or trade policies can further improve which foods and drinks are affordable and accessible.<sup>221</sup>
- **Sugary drink taxes should ideally be implemented as part of a broader policy strategy** that includes mutually reinforcing policies such as [restrictions on marketing](#) and mandatory [front-of-package warning labels](#) on [ultra-processed products](#) high in sugar, salt, saturated fat, and other harmful ingredients.
  - › Two years after increasing a tax on sugary drinks, Chile implemented broad marketing restrictions, front-of-package warning labels, and a ban on marketing and sales in schools for foods and drinks that do not meet nutritional criteria. Changes in consumer behavior observed after this set of policies took effect are larger than those achieved in many countries with standalone sugary drink taxes.<sup>222</sup>
- **Prepare for industry resistance.** Policymakers and health advocates will meet significant push-back from beverage industry actors.<sup>96,169,214,223,224</sup> For more information on common industry arguments and evidence-based responses to their claims, see: [Sugar-Sweetened Beverage Taxation – Industry Arguments](#). [↗](#)
- **Designing and passing a sugary drink tax requires the coordinated, sustained effort and expertise of a broad coalition.** Ultimately, a tax policy’s success will depend on the cooperation of government ministries (e.g., health, finance, and treasury), economists, public health experts, academics, medical organizations, public figures, and consumer advocates. This engagement should begin early in the tax development process to build consensus and strengthen support across sectors.<sup>169,214,223</sup>

It is now well-established that sugary drink taxes work as a public health policy intervention. A considerable body of evidence including several large reviews from existing sugary drink taxes around the world confirm that targeted taxes reduce prices, purchases, and intake of sugary drinks,<sup>133,172,173</sup> which can ultimately reduce risk for obesity and other NCDs and improve overall population and personal health. Evidence from countries using tax revenue to fund public programs or health initiatives also underscores the potential for taxes to benefit public welfare and improve equity beyond sugar reduction and its health impacts. These findings echo the success of tobacco taxes, which have played a major role in reducing tobacco use worldwide.<sup>225</sup> Like tobacco, the negative health, environmental, and economic impacts of sugary drink consumption harm everyone, whether directly or indirectly. The World Health Organization, World Bank, International Monetary Fund, and UNICEF all support the use of fiscal policy to reduce consumption of sugary drinks.<sup>134,209,226,227</sup> Sugary drink taxes are one key policy in an range of regulatory interventions needed to slow or turn the tide on the nutrition transition in low- and middle-income countries and alleviate the NCD burden worldwide.<sup>221</sup>

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