LEAP PECAUT CENTRE FOR SOCIAL IMPACT

In research partnership with

BCG BOSTON CONSULTING GROUP

HEALTHY FUTURES

The Need for Action

By LEAP | Pecaut Centre for Social Impact

May 2020

Table of Contents

pg. 2

Foreword

pg. 3

Executive Summary

Public Health Issues are Scaling Faster than Solutions

pg. 5

International Context

Canada is Doing Well Compared to Peer Nations, but not in Absolute Measure

Physical Activity:
Canada ranks favourably in the top 30%

Healthy Eating:
Canada is trending towards the top 50% for fruit and vegetable consumption

Smoking:
Canada is in the top 20%

pg. 11

Canada:
Issue Area Deep Dive

Physical Activity, Healthy Eating, and Smoking Cessation

Physical Activity:
We're moving less and sitting more

Healthy Eating:
We're lacking nutrition in the foods we eat

Smoking:
We're smoking less, but vaping and chronic smoking persist

pg. 25

Call to Action

Let's Try New Models to Attack Old Problems in Health

We must scale what works

We must collaborate across sectors

Introducing Healthy Futures: Accelerating What Works in Public Health

pg. 32

References

Foreword

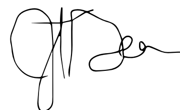
LEAP | Pecaut Centre for Social Impact (LEAP) believes in a society where everyone has the opportunity to reach their full potential. For the last seven years, LEAP has been a Canadian leader in venture philanthropy by selecting, supporting, and scaling 15 breakthrough social ventures. At LEAP, we are working towards tackling some of the most pressing issues facing Canadians today; healthcare, now more than ever, is arguably one of the most critical and time-sensitive challenges. Chronic diseases are on the rise — increasing at a rate of 14% annually, and have an estimated annual economic burden of $190 billion alongside a healthcare system that is stretched beyond capacity in many parts of the country.

Healthy Futures: The Need for Action, created by LEAP in research partnership with Boston Consulting Group (BCG), critically examines factors influencing this reality. While recognizing Canada's progress on key policies and programs, the report exposes deep inequities in healthy behaviours among vulnerable demographics, identifies gaps in the current public health infrastructure, and calls out a need for multi-sectoral partnerships, community-driven solutions, and application of socio-ecological models that address social determinants of health.

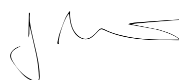
These are the types of challenges LEAP is best positioned to address — identifying and scaling new and innovative solutions to age-old problems affecting Canadians. To work towards a future where all Canadians have the capacity to live a healthy life, LEAP is launching **Healthy Futures**: a five-year accelerator, funded by the Public Health Agency of Canada (PHAC), that will select and scale 11 Canadian ventures that provide material solutions to the preventative health ecosystem.

LEAP, alongside our sector partners and ventures, is on an ambitious path, working towards a Canada in which Canadians have greater opportunities to choose a healthy life and reach their full potential. The current COVID -19 pandemic only underscores the importance of strong underlying health, as individuals with chronic diseases and weaker immune systems are most at risk of serious outcomes due to viruses or infections. This crisis also magnifies the urgency of finding solutions that reach remote, vulnerable and underserved segments of the Canadian population. We need solutions that work in today's world, but also ones that will be effective in a permanently changed post-COVID society.

LEAP believes innovative approaches and collaborative strategies are critical to creating impactful, scalable solutions to achieve success. The need for action is now to create these changes in behaviour, and ultimately, a healthier Canada.



Joan Dea
Board Chair – LEAP | Pecaut Centre for Social Impact



Joe Manget
Board Lead, Healthy Futures – LEAP | Pecaut Centre for Social Impact

Executive Summary

Public Health Issues Are Scaling Faster Than Solutions

Chronic disease in Canada is on the rise. Although we have made recent progress across the healthy behavioural indicators of physical activity, healthy eating and smoking cessation, which influence the prevalence of chronic disease, there is room for meaningful improvements to ultimately progress the health of Canadians and mitigate its economic burden.

Healthy Futures: The Need for Action highlights the criticality of these three key preventative health indicators within the Canadian healthcare landscape and provides examples of effective interventions across public, private and the social sector globally.

This report demonstrates the need for new thinking with innovative and impactful solutions enabled by cross sector collaborations with the Canadian government, civil society and private enterprise leading to the adoption of healthy behaviors among the Canadian population.

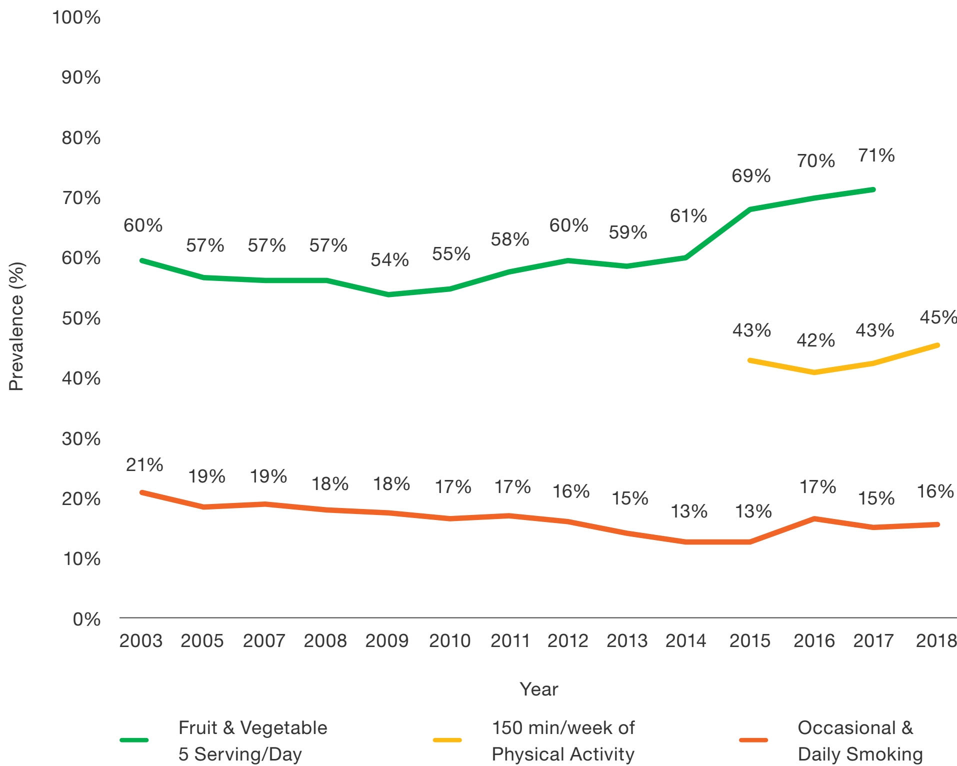
Areas with the greatest opportunity for impact are personalized interventions that target elderly and lower-income households for physical activity; address social determinants of health, including income insecurity and food accessibility, for healthy eating; and focus on lower-income communities and indigenous populations for smoking cessation.

These recommendations are driven by the report's findings that more than 40% of Canadians have failed to meet the physical activity guidelines, more than 70% of Canadians have failed to consume adequate fruit and vegetable servings, and 16% of Canadians continue to smoke, with e-cigarette use on the rise among youth (Figure 1).

These factors have resulted in rates of chronic diseases, such as diabetes and cardiovascular diseases, increasing at 14% per year[1], with an annual economic burden estimated at $190 billion.[2] There is an urgent need to address the well-established preventative risk factors that promote disease progression at the population level.

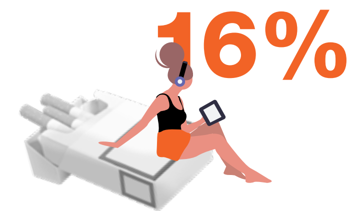
This urgency is only amplified with the ongoing global COVID-19 pandemic. Those with underlying chronic disease conditions and weaker immune systems are most at risk of serious outcomes due to such pandemics. We know that self-isolation has made it harder for Canadians to stay active. Being forced to stay indoors has significant impacts on sedentary behaviours and magnifies existing mental health challenges. We know that job losses and reduced hours have further exacerbated challenges with access to healthy foods, especially for already vulnerable population groups.

After weeks of low activity and poor eating habits. Canadians will emerge from forced isolation into a new reality. Going forward more Canadians will likely permanently work from home more than ever before. We have an opportunity to build a new environment that encourages and sustains healthy behaviours to fit those new lifestyle realities.



of Canadians have **failed** to consume adequate fruit and vegetable servings

of Canadians have **failed** to meet recommended physical activity levels



of Canadians continue to **smoke** cigarettes on a regular basis

Figure 1: Percentage of Canadians who do not meet recommended guidelines for health promotion (2003–2018)[3, 4, 5]

Civic entrepreneur and visionary David Pecaut — the inspiration behind LEAP | Pecaut Centre for Social Impact (LEAP) — believed in adopting new, innovative and collaborative models to address old problems. In this spirit, LEAP has a bold vision to scale what works in chronic disease prevention using the principles and strategies outlined in this report. Funded by the Public Health Agency of Canada (PHAC), LEAP introduces **Healthy Futures**, a five-year accelerator that will select and scale 11 impactful and innovative Canadian ventures focused on creative and adaptable solutions that will help Canadians get back on track to building healthier lifestyles. LEAP, with support from our sector partners, will provide selected ventures with strategic guidance, tools, funding and access to private sector expertise through coaching, workshops, and resources from our knowledge hub.

Visit **leap-pecautcentre.ca/healthyfutures** to learn more.

Data Integrity & Sources: The data and findings compiled in this report are drawn from national (Statistics Canada & Health Canada) and international (World Health Organization, the World Bank, United Nations Food and Agricultural Organization) databases, complemented by interviews with senior experts in the sector, and supported by credited academic journals.

Section	Preventative Health Indicator	Year	Metric	Source
Canada vs G20 Nations	Physical Activity	2016	"% attaining ≤ 150 min of moderate-intensity physical activity per week (18+) or ≤ 75 min of vigorous-intensity physical activity per week (18+)"	World Health Organization
	Healthy Eating	2017	kg consumption per capita/year	UN Food and Agricultural Organization
	Smoking Prevalence	2016	% of Daily/non-daily smokers (15+)	World Bank - World Development Indicators
Canada Specific	Physical Activity	2018e	"% attaining ≥ 150 min/week of moderate-vigorous activity (18+) or ≥ 60 min/week of moderate-vigorous activity (12–17)"	StatCan: Canadian Community Health Survey
	Healthy Eating	2017e	% consuming fruit & vegetables ≥ 5 times per day	StatCan: Canadian Community Health Survey
	Smoking Prevalence	2018e	% of daily/occasional smokers (12+)	StatCan: Canadian Community Health Survey

Disclaimer: The views expressed herein do not necessarily represent the views of the Public Health Agency of Canada

International Context

Canada is Doing Well Compared to Peer Nations, but not in Absolute Measure

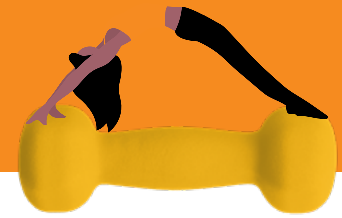
Physical Activity 6

Healthy Eating 7

Smoking 9

Physical Activity:

Canada Ranks Favourably in the Top 30%



Canada's national physical activity policies, guidelines, and campaigns put it above many peer nations. Indeed, **Canada ranked 6th** among countries in the G20 for physical activity (Figure 2).

One explanation for the high rates of physical activity in Russia and China is the relatively low proportion of the workforce employed in the service sector. In China, only 46% of the workforce is employed in services[6], and in Russia, this figure is 67%.[7] The rest of the workforce is split between industry and agriculture, allowing for physical activity to be primarily achieved in the work environment. Both of these figures pale in comparison to Canada's workforce, of which 83% of jobs are based in the service sector.[8] Increasing rates of urbanization and a shift towards service jobs may lower the percentage of adults that are physically active in these countries.[9]

Canada may stand to replicate some of the policies that have increased the prevalence of physical activity in Spain. In 2015, the country established a multisectoral Physical Activity Working Group to promote physical activity, created the Integral Council on Lifestyle in Primary Care to integrate the assessment of healthy lifestyles into standard practice for primary care, and launched a number of promotional campaigns on moving more and sitting less.[10] Switzerland has also found success in adopting a private sector approach to engage stakeholders.[11]

Physical activity per capita; by countries, by G20 nations

Figure 2: Percentage of adult population failing to meet WHO's adult physical activity guidelines, by country (2016). Reprinted from World Health Organization[12, 13]

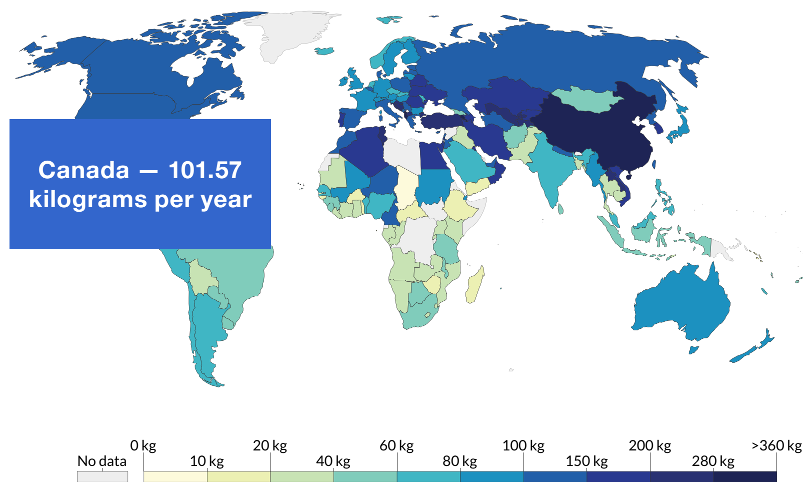
Healthy Eating:

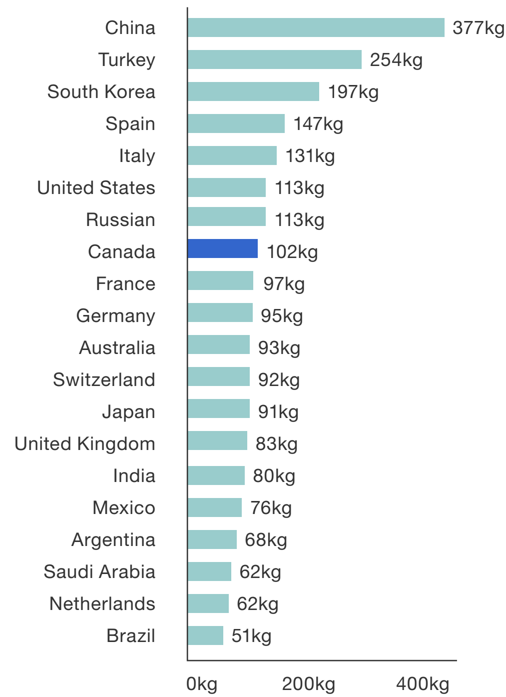
Canada is Trending Towards the Top 50% for Fruit and Vegetable Consumption

Canada has also been a leader in establishing healthy eating guidelines, strategies, and social programs. Among G20 nations, **Canada ranked 7th in fruit consumption and 8th in vegetable consumption** at 94 kg/per capita and 102 kg/per capita respectively (Figure 3). Despite the nation's positive standing, effective policies & practices can still be adopted from its international counterparts. Compared to peer nations, Canada imposes less aggressive taxes on the sale and marketing of unhealthy food, which are heavy in sodium and fat but low in nutrients.[14] Additionally, its vegetable consumption is relatively low in contrast to countries such as China, where vegetables are considered to be a meal staple.[15]

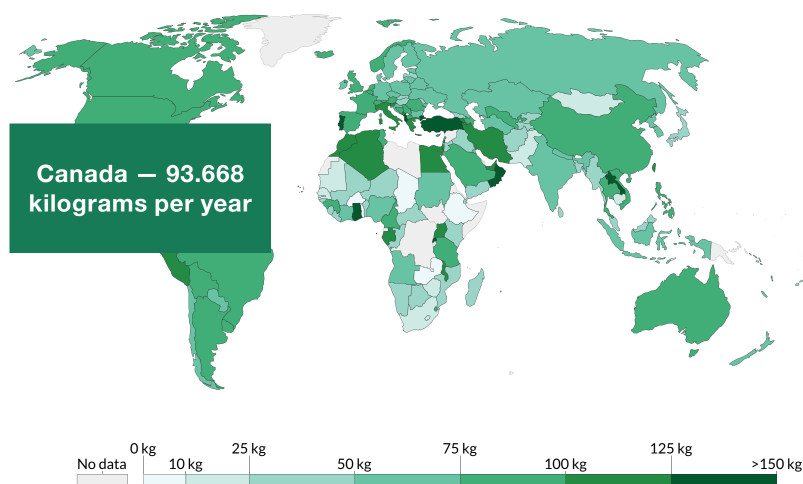
It is also worth noting that data on healthy eating in Canada focuses on consumption of fruits & vegetables. Though important, Canada can follow the lead of countries, such as those in the European Union, that measure a variety of dietary factors — nutritional quality, quantity, variety, combination of food & drinks, and frequency — that are more empirically associated with disease outcomes.[16]

Average per capita vegetable consumption; by countries, by G20 nations





Average per capita fruit consumption; by countries, by G20 nations



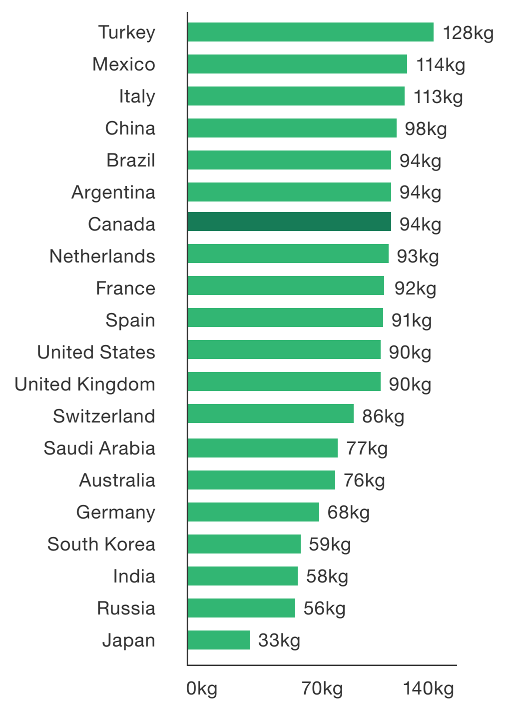


Figure 3: Fruit & vegetable consumption per capita (2017). Reprinted from Our World in Data[17, 18]

Smoking:

Canada is in the Top 20%

While the fight against smoking in Canada is far from over, Canada's anti-smoking initiatives make it a world leader in smoking prevention. Indeed, the country has received a number of positive citations from the World Health Organization for initiatives focused on smoking prevention and cessation.[19] As a result of these initiatives, **Canada ranked 4th lowest in tobacco smoking prevalence among G20 nations (Figure 4).**

Like India,[20] Brazil,[21] and Mexico,[22] Canada has banned smoking in some enclosed public spaces.[23] Additionally, health warnings are featured prominently on cigarette packaging.[24] Opportunities for improvement include enforcing greater numbers of bans on advertising — currently, the nation has enforced 4 out of a possible 7 direct ad bans, and 4 out of a possible 10 indirect ad bans[25] — and running anti-tobacco mass media advertising campaigns. Additionally, Canada can follow the lead of India, Brazil, and Mexico, which have all banned the sale of e-cigarettes within their borders.[26]

Percentage of smoking prevalence; by countries, by G20 nations

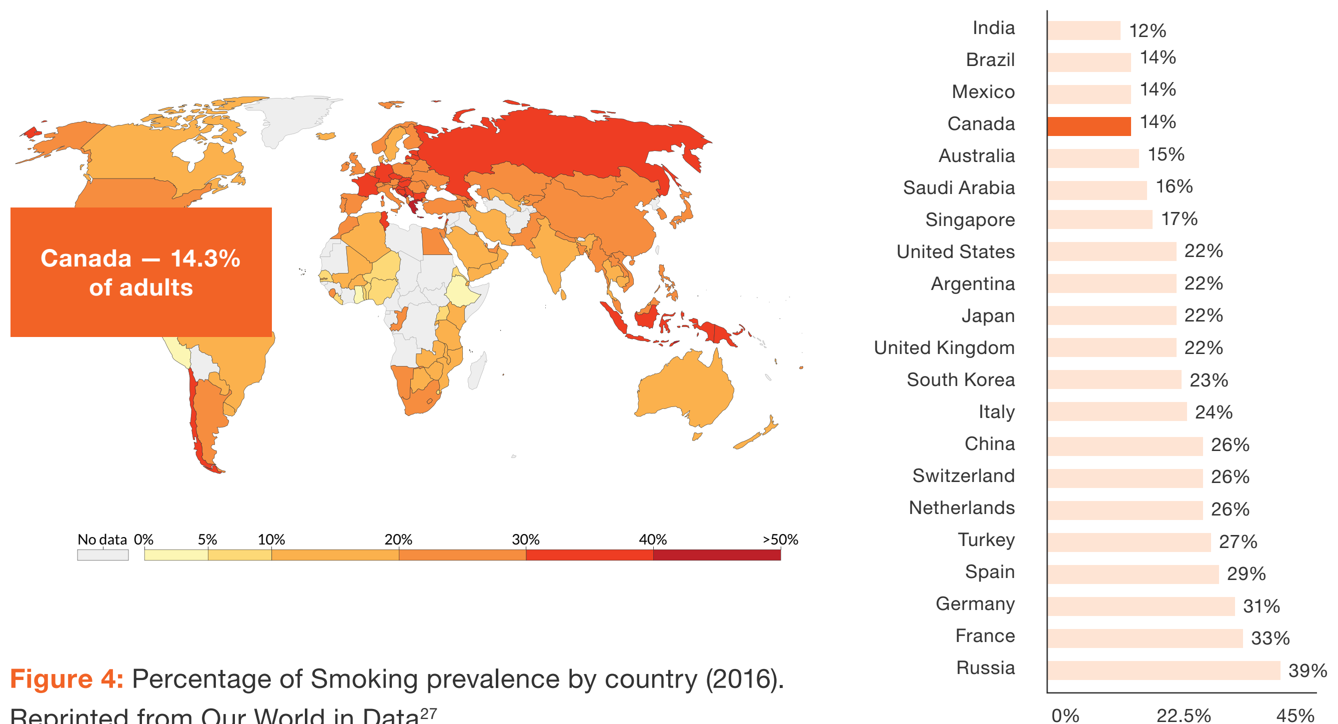


Figure 4: Percentage of Smoking prevalence by country (2016). Reprinted from Our World in Data[27]

At an international level...

Canada has successfully encouraged a variety of healthy behaviours within its population, ranking in the top 20% to 50% among G20 nations for rates of physical activity, healthy eating, and smoking cessation. In spite of its favourable ranking, health indicators within Canadian population are framed by deep inequities among our nation's demographic segments.

A truly holistic evaluation of the state of public health in Canada requires a deeper dive into its history, specific population groups, and existing support system.

Canada
Issue Area Deep Dive:

Physical Activity, Healthy Eating, and Smoking Cessation

In this section of the report, we will take a deeper dive into three preventative health indicators in Canada: physical activity, healthy eating, and smoking cessation. For each health indicator, we will 1) summarize Canada's performance as a nation, 2) analyze the prevalence of the indicator by demographic, 3) provide an overview of key players & policies, and 4) propose effective intervention strategies.

Our aim is to identify gaps in the public health landscape and outline our vision for solutions that will contribute to a healthier Canada.

Physical Activity 13

Healthy Eating 17

Smoking 21

Physical Activity:

We're Moving Less and Sitting More

The first preventative health indicator we explore in this report is the level of physical activity among Canadians. Physical inactivity is one of the key drivers of physical & cognitive decline, and is shown to increase susceptibility to chronic conditions such as diabetes and cardiovascular disease. **It is now widely accepted to be the fourth leading risk factor for premature mortality.**[28]

Though Canada is doing comparatively well when compared to G20 nations, rates of physical activity within our nation are lacking: as of 2018, 45% of Canadians reported not meeting physical activities guidelines. The rates of physical activity among Canadians become even more interesting once they are broken down by demographic.

Canada Needs to Do Better for Lower Income, Seniors, and Indigenous Populations

To conduct an analysis of physical activity by demographic, data was derived from the Canadian Community Health Survey (CCHS). The following facts may imply where healthy living programs are needed the most:[29]

Figure 5: Percentage of adult population meeting physical activity requirements in Canada by age, socioeconomic status (SES), sex (2018), and Indigenous identification (2014)[30, 31, 32]

5.1 Physical Activity by Age Groups (%)

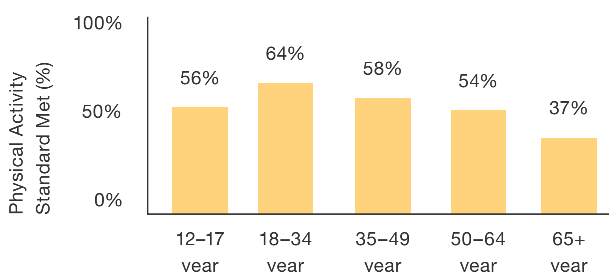


Figure 5.1:
37% of seniors aged 65+ self-report meeting recommended physical activity guidelines, compared to an average of 59% of their peers aged 18–64

5.2 Physical Activity by Socio-economic Status (%)

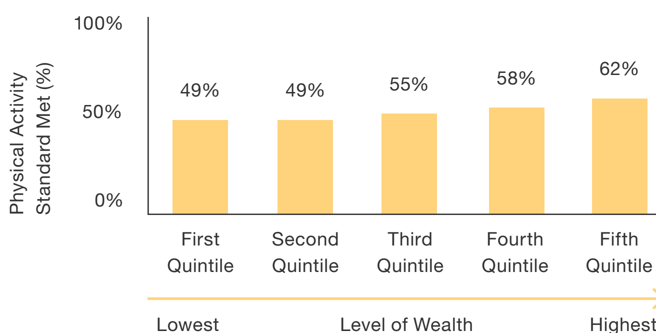


Figure 5.2:
There is a positive correlation between Canadians' socioeconomic status (SES) and the rate at which they meet physical activity guidelines

5.3 Physical Activity by Sex (%)

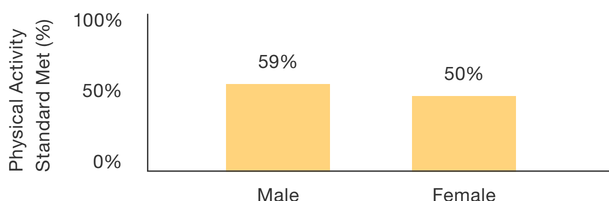


Figure 5.3:
Half of women and less than 60% of men feel that they are getting enough physical activity

5.4 Physical Activity by Indigenous Community (%)

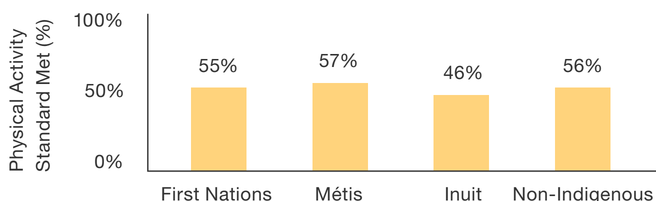


Figure 5.4:
Inuit peoples in Northern Canada experience lower rates of physical activity (46%) compared to other Indigenous and non-Indigenous peoples (56%)

Canada must prioritize its efforts to focus on individuals living on lower incomes, seniors, and indigenous groups, who demonstrate disproportionately lower physical activity levels when compared to the general population.

Policies and Interventions Have Focused on Guidelines and the Built Environment

To identify policies and interventions that will effectively contribute to an increase in physical activity rates, it is vital to understand the support system that currently exists. Analysis shows that rates of physical activity are influenced by three key players: federal government, national organizations, and regional municipalities.

Key Players

Federal Government

The federal government has developed and adopted a variety of policies aimed at addressing physical activity and sedentary behaviour. For instance, Canadian Heritage (Sport Canada) has launched a number of policies to increase the participation of women and girls and Indigenous peoples in sport; the Ministry of Health released a Pan-Canadian Healthy Living Strategy in 2005 outlining conceptual framework on what constitutes good health; and in 2010, Federal, Provincial, and Territorial (FPT) Ministers of Health issued a Declaration on Prevention and Promotion, stressing the importance of making preventative health a priority. In 2018, the FPT governments recognized the importance of reducing sedentary behaviour as a public health priority in the collaborative publication of *A Common Vision for increasing physical activity and reducing sedentary living in Canada: Let's Get Moving (Common Vision)* (Figure 6).

National Organizations in Public Health

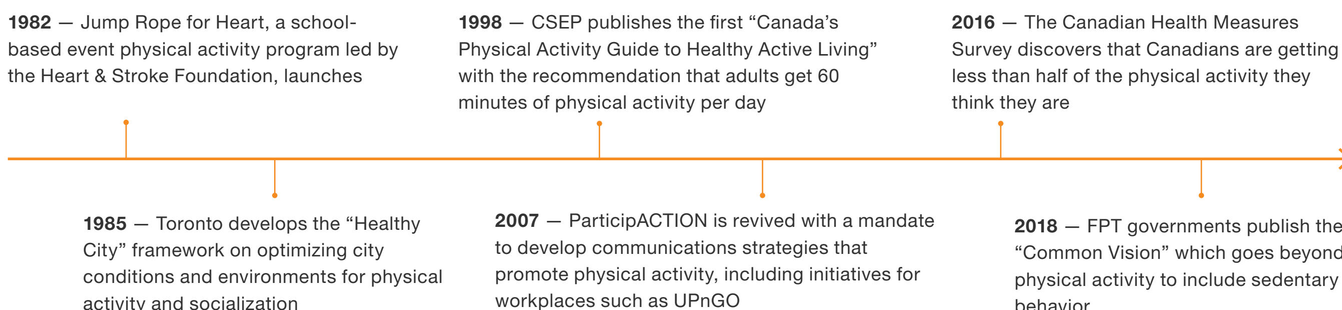
Public health organizations have worked to develop campaigns that inspire physical activity and behaviour change. In 1998, the Canadian Society for Exercise Physiology (CSEP) released its first Physical Activity Guidelines in an effort to curb obesity. The shift towards discouraging sedentary behaviour, in addition to promoting physical activity and movement, is more recent. Programs like Heart and Stroke Foundation's "Jump Rope for Heart" program for school children and ParticipACTION's "UPnGO" program for professionals in the workplace have been introduced in recent years to curb sedentary behaviour among Canadians (Figure 6). The government's ongoing contribution to these causes have been reflected in its $25M budget allocation towards ParticiPACTION's various campaigns, and PHAC's financial support towards CSEP on updating the 24 hour movement guidelines for Canadians.

Regional Municipalities

Cities such as Toronto and Vancouver have developed Healthy City Strategies with the aim of building a city that will enable residents to engage in physical activity, active transport, and socialization (Figure 6). For example, the City of Vancouver has set the goal of ensuring that all residents live within a 5 minute walk of a park by 2020.[33]

The following timeline summarizes major policies and interventions that have shaped the physical activity landscape in Canada.

Figure 6: Major policies and interventions developed to promote physical activity in Canada, in chronological order since 1982.[34, 35, 36, 37, 38, 39]



We believe that an active Canada will be the result of interventions allowing Canadians to build regular behaviours around physical activity while addressing social determinants of health, such as time, ability, infrastructure, and income.[40] The path forward will require a commitment to systemic change at all levels, from the individual, the private sector, the government and beyond.

Filling the Gaps for an Active Canada

1.Engage Your Elders

It is critical to develop targeted interventions for seniors who may be left out of current campaigns and programs for reasons such as ageism, ability, and social isolation; examples could include programs for seniors in long term care facilities or retirement complexes that accommodate individuals with a range of physical and mental disabilities.[41] As Canada's aging population is projected to grow by almost 70% over the next twenty years,[42] the time to develop interventions for seniors is now.

2.Start with Systemic Change

The socio-ecological model of health is a framework used to identify and understand the impact of various factors on an individual's behaviour, and can be applied to the examination of an individual's physical activity habits.[43] In particular, the model recognizes four groups of influence: individual, which includes biological and personal history factors; relationship, which includes the influence of peers, family, and friends; community, which explores the settings in which certain behaviours occur; and societal, which includes social and cultural norms surrounding behaviour. This model can be applied to explain the link between physical activity and socioeconomic status.

As referenced by our data and supported by academic research,[44] a positive correlation exists between the socioeconomic status, leisure time, and the corresponding level of physical activity. People in low socioeconomic status simply do not have time to be physically active, because their time is spent towards multiple jobs, long commutes, and family commitments. This is in direct contrast with groups at the other end of the wealth spectrum, who typically have a greater amount of time to allocate to physical activities and can afford high-quality gyms, workout programs, and equipment. A systemic change that addresses the affordability, accessibility, and familial needs of lower-income Canadians is needed — whether that is an offer of financial incentive, availability of cycling infrastructure, or provision of childcare.[45, 46, 47] Then, interventions can inspire the behavioural change needed to occupy the additional time created with regular physical activity.

3.Meet People Where They Are

Regular physical activity requires behavioural change and long term change requires commitment. To help foster this commitment, physical activity must become both feasible and enjoyable for each person. Rather than prescribing a type of physical activity for a population group, interventions must take the time to discover how individuals can and want to get physically active. Ultimately, this requires developing programs specific to them, such as sport programs developed by and for Indigenous communities[48] or school-based programs that accommodate children who enjoy either team-based or individual activities.[49]

The potential for social and economic impact is in the numbers:

- People who frequently sit all day have a 30% higher chance of mortality compared to those who don't, whereas people who avoid a sedentary lifestyle can extend their lives by about 3.8 years.[50]
- If 10% of Canadians with suboptimal levels of physical activity moved more and reduced sedentary behaviour, GDP would increase by a cumulative $7.5 billion by 2040.[51]

Healthy Eating:

We're Lacking Nutrition in the Foods We Eat

The second preventative health indicator we analyze is healthy eating. The food we eat plays a significant role in our quality of life today and our health in the long term. Excessive consumption of foods high in sugar and fat, or a lack of consumption of healthy foods such as fruits and vegetables, contributes to the prevalence of chronic diseases such as obesity, diabetes, and high blood pressure.[52]

Canadians are struggling to consume the recommended level of fruit and vegetable servings of 5 per day; as of 2017, only 29% of the population met this guideline, a level that is 15% lower than that of 2010.

Validated by a number of academic studies, fruit and vegetable intake is often used as an indicator of overall diet quality[53, 54] and it is also the metric used by Health Canada. Despite the commonality of its usage, it is important to highlight the indicator's limitation. **More evidence on broader dietary patterns that reflect the true eating habits of Canadians — which are more predictive of disease risk — is needed for a holistic evaluation of healthy eating.**

Our analysis of Canadian Community Health Survey (CCHS) data provides a preliminary illustration of eating habits among Canadians. The numbers show that we need to do better if we want a healthier Canada, and suggest that disparities in healthy eating exist across demographics within our nation.

All Canadians Needs to Do Better across all Demographics

A breakdown of healthy eating by demographic reveals where healthy eating programs should target their efforts:[55]

Figure 7: Percentage of population meeting Canada's healthy eating guidelines by age, socioeconomic status (SES), sex (2017), and Indigenous identification (2014)[56, 57, 58]

7.1 Healthy Eating by Age Groups (%)

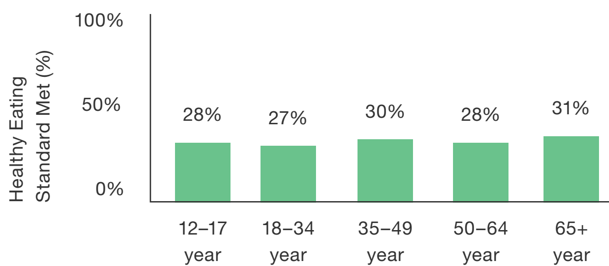


Figure 7.1:
Low rates of fruit & vegetable consumption are observed across all age groups

7.2 Healthy Eating by Socio-economic Status (%)

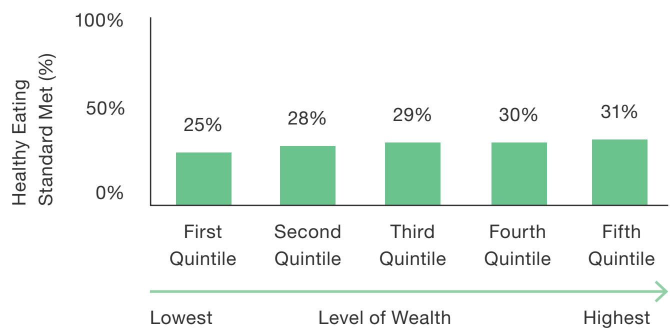


Figure 7.2:
There is a positive correlation between an individual's socioeconomic status (SES) and their consumption of fruits and vegetables

7.3 Healthy Eating by Sex (%)

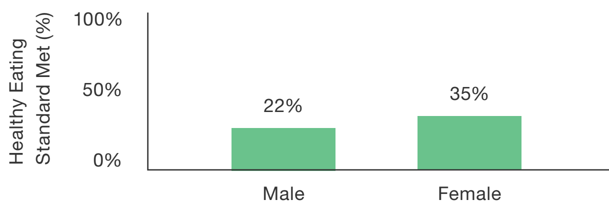


Figure 7.3:
Males are consuming a lower number of fruits and vegetables than females, at 22% and 35% respectively

7.4 Healthy Eating by Indigenous Community (%)

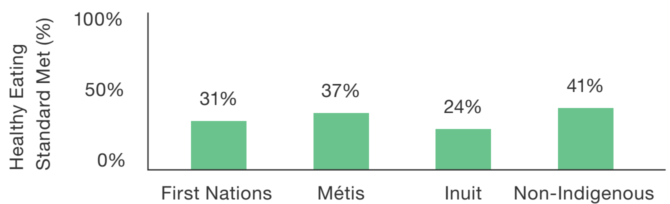


Figure 7.4:
Indigenous communities consume fewer fruits and vegetables when compared to the general population; this is most acutely represented by the Northern Inuit population, where only 24% meet healthy eating guidelines

Discrepancies in healthy eating between demographics carry implications for the health of these subgroups and questions about their equity and access to healthy food. Our findings affirm that innovative solutions are needed at both policy- and community-level to address the unique and diverse needs of our population.

Policies and Interventions Have Focused on Healthy Eating Behaviours and Food Insecurity

Engaging in healthy eating is impacted by several key players, including the government, food banks, and food manufacturers & distributors. A summary of their progress, as well as the implications of key initiatives, is described below.

Key Players

Government

Federal guidelines, most visibly the Canada Food Guide (CFG), have been critical in shaping the way people and organizations think about healthy eating in Canada. The CFG originated in 1942, identifying six food groups and encouraging the consumption of healthy food; the guide later evolved to include recommendations on moderating fat, sodium, and sugar intake in 1982 (Figure 8). In 2007, the guide began providing advice targeted to specific groups, such as children and older adults. In 2019, recommendations began to include suggestions for healthier eating habits, such as cooking more, eating together, and incorporating plant-based food into one's diet. 2019's Healthy Eating Strategy aims to help Canadians make healthier choices in several ways, including the improvement of healthy eating information and increased accessibility & availability of nutritious food.[59] The government has also recently proposed efforts to restrict food and beverage advertising targeted at children through Bill S228 (Figure 8).

Food Banks

While population level policies have the potential to impact those with the power to choose the food they consume, community-based organizations recognized the importance of addressing food accessibility. Since the foundation of Canadian Association of Food Banks, now Food Banks Canada, in 1987, more than 700 food banks have been established across Canada for Canadians without the income or ability to access nutritious food (Figure 8). Food Banks Canada acts as a coalition of food banks across the country and connects them through the National Food Sharing System and the annual HungerCount report. Recently, more food banks have made an effort to increase the provision of fresh and healthy food.[60]

Food Manufacturers, Distributors, & Retailers

Corporations that produce, distribute, and market the food work in tandem with grocery stores that supply the food to determine the accessibility and affordability of food to Canadians. This is because the rate of healthy eating in Canada is inextricably intertwined with another issue: food insecurity. Food insecurity is defined as having a lack of accessibility to sufficient quantity of affordable, nutritious food. Across the country, hardest-hit communities have been classified as "food deserts": regions where it is difficult to buy affordable, fresh food. Food deserts are often located in communities with individuals of low socioeconomic status or Indigenous identity. And research shows clear associations between food insecurity and certain chronic diseases, such as diabetes.[61]

The decisions made by manufacturers, distributors, and retailers in the food supply chain, such as food access points, prices, and locations, have a great impact on the presence of food deserts, and as a result, the food that Canadians are able to consume.[62, 63] For example, members of Northern Indigenous communities face grocery prices several times higher than the price of groceries in other areas in Canada — a phenomenon that harms those who do not have the income to access fresh and healthy food.[64]

The following timeline summarizes the major activities and milestones for healthy eating in Canada.

Figure 8: Major policies and interventions enacted to promote healthy eating among Canadians, chronologically since 1982.[65, 66, 67, 68, 69, 70]

It will take more than guidelines and food handouts to address unhealthy eating. Collaboration across the government, private, and social sectors is critical to ensure that Canadians want and are able to eat healthier today. Below, we summarize principles on which new initiatives should be anchored.

Filling the Gaps for a Nutritious Canada

1.Put Social Determinants of Health First

Mirroring physical activity, the socio-ecological model can be used to explain the strong correlation between socioeconomic status and rates of healthy eating. There is an increasing need to incorporate this model into food and nutrition research, so that the widening gaps in diet quality, obesity, and chronic disease between food secure and insecure population groups are addressed. Going beyond food provision by resolving the systemic causes of food insecurity, including income and accessibility, is critical to creating material change. Some community food centres are exploring wrap-around approaches that target both food provision and social determinants simultaneously through the incorporation of community spaces and advocacy.[71]

2.Provide Food Beyond Food Banks and Grocery Stores

We can do more for population groups who do not have a significant amount of determination over their food consumption, such as children. Canada is one of the only industrialized countries without a national school food program and was recently ranked 37th of 41 countries in providing healthy food for children.[72] Targeted programs that provide healthy food directly to specific groups, including youths in schools across the country, have the potential to help Canadians eat healthier today and build better eating habits tomorrow.[73]

3.Collaborate to Nudge Healthier Eating Behaviours

There is an opportunity for collaboration between the government, social sector, and private sector to provide better access to healthier food and incentivize behavioural change. For instance, consultants have worked together with the food bank employees to successfully 1) increase the supply and range of healthy food available to the food insecure population and 2) improve the nutritional quality of food selected by the people through strategically sorting, grouping, and positioning different types of food throughout the pantry.[74, 75]

The potential for social and economic impact is in the numbers:

- Sugar sweetened beverages (SSBs) alone are projected to account for an additional 63,321 deaths and 624,856 new cases of type 2 diabetes over the next 24 years[76]
- If everyone consumed half a serving closer to Canada's Food guide recommendations for each food group, the estimated economic burden of unhealthy eating would be $4.9 billion lower at $8.9 billion[77, 78]

Smoking:

We're Smoking Less, but Vaping and Chronic Smoking Persist

Last, this report examines smoking prevalence in Canada, the third preventative health indicator. In 2018, 16% of Canadians self-identified as smokers — making Canada a leader among peer nations.[79] However, cigarette smoking rates have remained relatively unchanged for the last decade, suggesting there is room for improvement in smoking prevention and cessation programs.[80]

Furthermore, the consumption of cigarette alternatives, such as e-cigarettes, is on the rise. Despite scarcity of data on vaping rates and associated health outcomes, online surveys have demonstrated that **vaping rates for youth aged 16–19 grew from 8.4% in 2017 to 14.6% in 2018,[81] a 73% increase.**

For this reason, the smoking of nicotine products continues to be a critical issue, and not a problem of the past.

Canada Needs to Do Better for Lower Income & Indigenous Groups

Breakdown of smoking across demographics reveals where smoking cessation programs should target their efforts:[82] Individuals with lower income and those that identify as Indigenous have higher reluctance to smoking cessation. To be effective, policies and interventions must account for these disparities.

Figure 9: Prevalence of current smokers in Canada by age, socioeconomic status (SES), sex (2018), and Indigenous identification (2014)[83, 84, 85]

9.1 Smoking Prevalence by Age Groups (%)

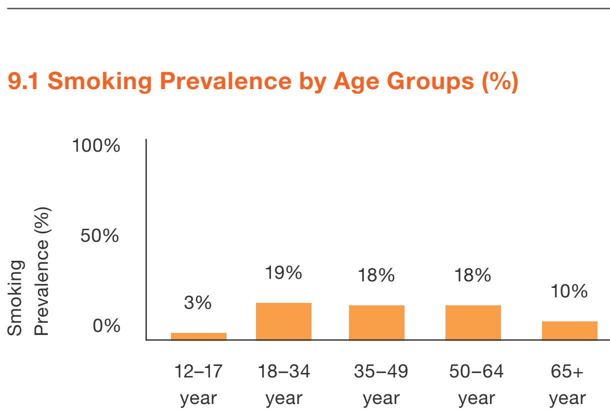


Figure 9.1:
Smoking prevalence is noticeably low among youth (12–17 yrs) and seniors (65+ yrs) at 3% and 10% respectively

9.2 Smoking Prevalence by Socio-economic Status (%)

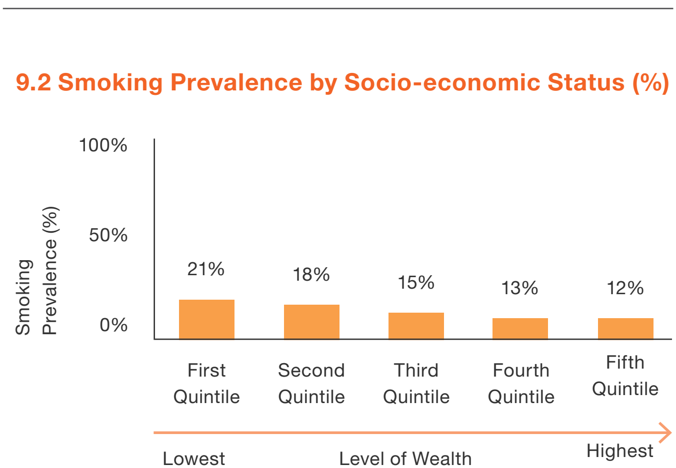


Figure 9.2:
Smoking is more prevalent among individuals with lower incomes, with rates differing by as much as 9%

9.3 Smoking Prevalence by Sex (%)

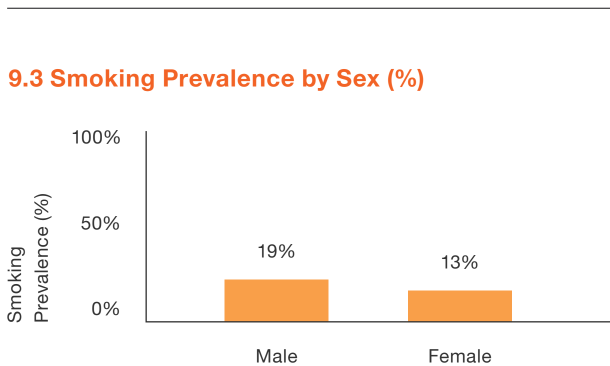


Figure 9.3:
Males are smoking more than females at 19% and 13% respectively

9.4 Smoking Prevalence by Indigenous Community (%)

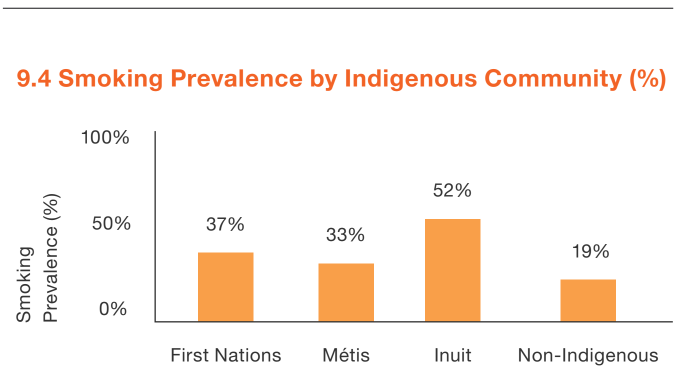


Figure 9.4:
Smoking prevalence is significantly higher within Indigenous populations compared to non-Indigenous populations, with smoking rates as high as 52% among Northern Inuit communities

Policies and Interventions Have Focused on Restricting Access and Ads

Smoking prevention and cessation are impacted by a variety of factors; interventions have focused primarily on restricting access to cigarettes and limiting advertisements, especially to vulnerable populations such as children.

Key Players

Government

Federal legislation such as the Tobacco and Vaping Products Act sets a legal framework that provinces and territories can adapt to encourage smoking prevention and cessation.[86] Specifically, Canada has witnessed smoking legislations with a focus on three core levers: (1) limiting the use of tobacco in public spaces; (2) enforcing strict marketing, packaging, and content rules; and (3) governing who may purchase tobacco and where.[87] More recently, government bodies have also played a key role in funding and developing strategies on smoking and vaping. Canada's 2018 Tobacco Strategy sets a bold vision to reduce the rate of tobacco smoking to less than 5% by 2035.[88]

Media & News Outlets

The media has historically played a role in encouraging smoking — establishing cultural norms that it is "cool" or "trendy" to smoke cigarettes. More recently, entities such as social media influencers have done the same for e-cigarettes. Yet, the media has also taken a significant stake in encouraging members of the public to quit smoking. Canadian news outlets, such as CBC, have recently taken bold stances on the potential harms of vaping and its dramatic uptake among youth, in order to keep Canadians informed of progress in vaping regulations.[89]

National Organizations

For chronic smokers looking for support to quit, national organizations have implemented population level interventions. In 2000, the Canadian Cancer Society developed the Smokers' Helpline to advise on personal quitting plans and resources in their communities. Since the Helpline number was put on cigarette packaging, Smokers' Helpline has experienced 160% increase in the number of calls.[90]

The following timeline summarizes the major policies and interventions on smoking prevention and cessation.

Figure 10: Major policies and interventions enacted to prevent smoking among Canadians, in chronological order since 1988[91, 92, 93, 94]

While we have made considerable strides, there is still a significant amount of work that needs to be done to ensure equity in smoking cessation rates across Canada. This starts with interventions that incorporate the growing influence of tobacco-alternative products while addressing the severity of the issue among specific demographic groups.[95] Below, we have identified critical considerations for such interventions.

Filling the Gaps for a Smoke-Free Canada

1.Do Good, Better For Indigenous and Low SES Populations

The disproportionately high rates of tobacco smoking in Indigenous and low SES populations demonstrate that targeted interventions are needed to empower the most affected populations to quit. Interventions such as anti-smoking campaigns can fail to be inclusive of all communities, such as those who do not share the dominant language and culture of the country, or those who have difficulty accessing programs and resources. Targeted, culturally appropriate interventions that meet people where they are and address social determinants of health, including income and housing, are material steps in alleviating difficulties that prevent people from quitting.[96] Approaches could include leveraging existing social services providers to provide community-driven smoking cessation support.[97]

2.Go Long Term and Deep

It takes an average of 8 to 11 attempts to quit for good.[97] For chronic smokers who have tried quitting multiple times, interventions that provide ongoing support and accountability, in combination with clinical efforts in nicotine replacement products, have been shown to be the most effective in the long term.[99, 100]

3.Act On Vaping Now

The 2018–19 Canadian Student Tobacco, Alcohol, and Drugs Survey demonstrated that one-in-five students in grades 7–12 reported using vaping products within the last 30 days.[101] Regulations restricting access and appeal of vaping products to youth, in addition to interventions that educate youth on the harms of vaping, are necessary to lower this figure. School-based programming may be a place to start.[102] The use of e-cigarettes has the potential to become a public health crisis if action is not taken now.

The potential for social and economic impact is in the numbers:

- Cigarette smoking causes 90% of all lung cancer deaths and 80% of all deaths from chronic obstructive pulmonary disease (COPD)[103]
- Smoking in 2012 alone accounted for $6.5 billion in direct healthcare costs[104]

Let’s Try New Models to Attack Old Problems in Health

We must scale what works 27

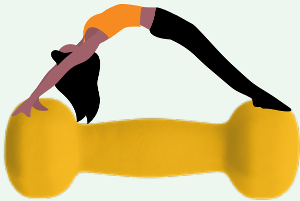
We must collaborate across sectors 29

Introducing Healthy Futures: Accelerating What Works in Public Health 30

This report demonstrates that we know about the state public health in Canada. We know that issues in public health are getting worse, not better.

These three risk factors will continue to exacerbate the prevalence of chronic diseases and their respective treatments, which are projected to cost Canadian taxpayers more than $190 billion annually.[109]

We know that current policies and interventions are not enough. We know that there are gaps we must address to meaningfully integrate the social determinants of health, sustainable healthy behaviour change, and increased access for marginalized population groups to the current public health ecosystem. And if we do not address these gaps – we know that rates of chronic disease will increase in the future.



More than 40% of Canadians have failed to meet the physical activity guidelines[105]

More than 70% of Canadians have failed consume adequate fruit and vegetable services, representing an increase of 15% in the past decade[106]

16% of Canadians continue to smoke despite cigarettes being the leading cause of preventable death — while students are increasing their use of vaping products[107, 108]

We Must Scale What Works

The solutions to these public health challenges exist: interventions that go beyond policy and educational campaigns to inspire healthy behaviour change, account for the critical social determinants of health, and reach communities missed by population level programs. However, these interventions lack the resources and funds to increase the breadth and depth of their impact. Scaling what works is the new, high-potential approach.

After speaking to public health experts across the country and researching what works in public health, we have become excited by models with potential for high impact and scale. These models, both innovative and proven, not-for-profit and for-profit, demonstrate that it is possible to close the gaps that have prevented Canadians from moving more, sitting less, eating healthier, and quitting smoking.

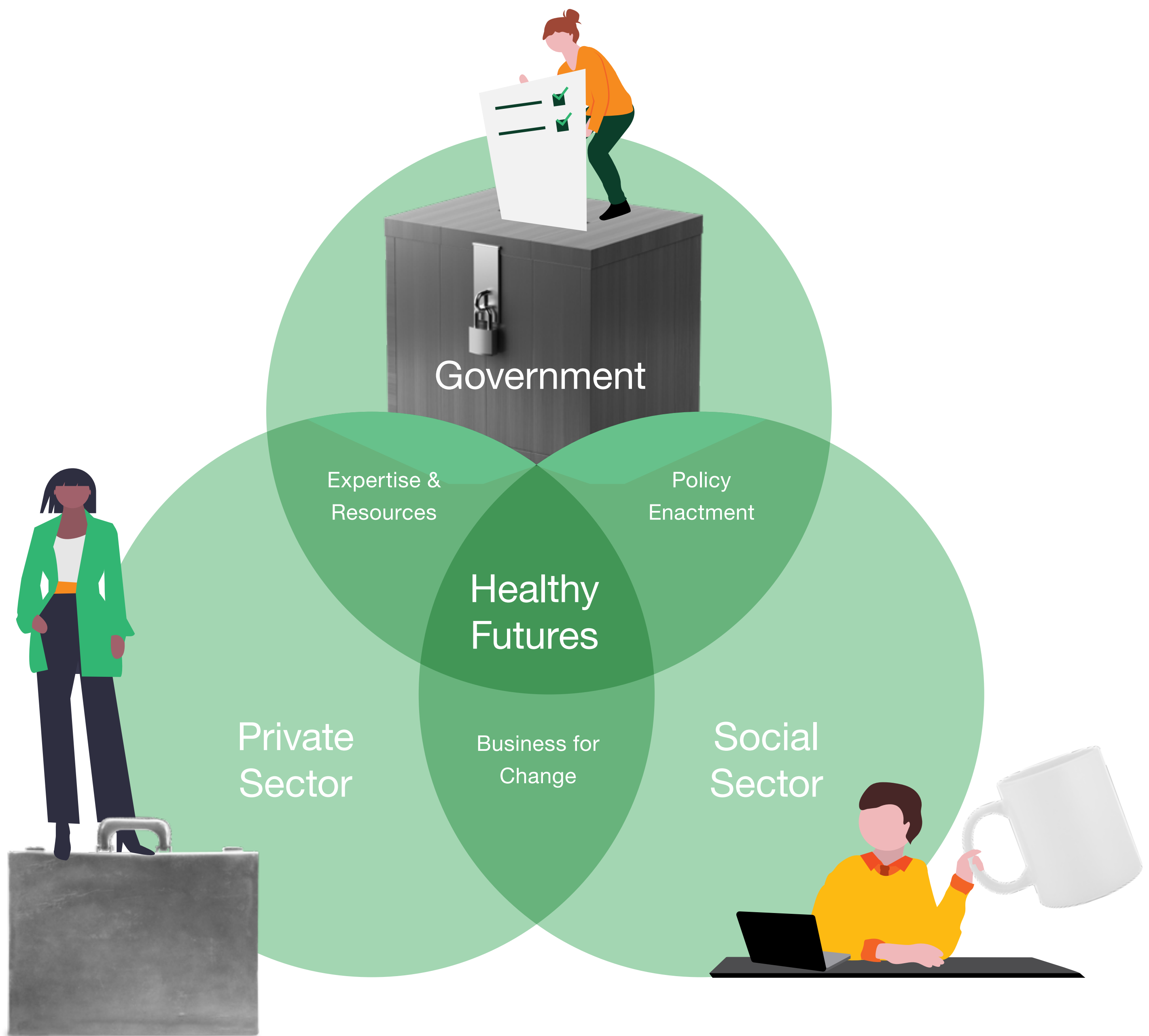
We're excited by…	The Potential
Group-based interventions that create positive feedback loops, build social capital, and increase accountability	"Groups themselves offer therapeutic benefits …, by underpinning patients' engagements with program materials and contributing to wider health and well being" — How group-based Interventions can Improve Services for People with Severe Obesity (2019)[111]
Interventions that address social determinants of health, such as income and accessibility, to encourage healthy behaviors	"It is increasingly recognized that to improve population health, health equity needs to become a priority in the health sector, and measures to reduce disparities must be integrated into health program and services" — Taking action on the social determinants of health in clinical practice: a framework for health professionals (2016)[112]
Interventions that leverage gamification to nudge individual behavior	"In review of 24 empirical studies on the effect of gamification, majority have stated that gamification does produce positive effects and benefits" — Does Gamification work? Literature Review of Empirical Studies on Gamification (2014)[113]
Interventions that collaborate with key players to enable them to build healthier environments and choices	"Collaborative partnerships are a particularly attractive strategy for changing community-wide behavior, owing to their multi-component, multisector approach to changing the environments that establish and maintain behaviors" — A Review of Collaborative Partnerships as a Strategy for Improving Community Health (2000)[114]
Interventions that target children and youth with a focus on prevention, especially in schools	"There is a strong evidence base that school based interventions with involvement of the family or community and multicomponent interventions can increase physical activity in adolescents." — Effects of School-based Health Promotion Intervention on Health Behaviors among School Adolescents in North Lima and Callao, Peru (2018)[115]
Interventions that take a tailored approach to target population groups, such as indigenous and seniors, who have been missed by population level programs	"A culturally appropriate, peer-led, healthy living program attenuated weight gain and improved healthy living knowledge in children living in a remote isolated First Nation in a cost-effective way." — Peer Mentoring for Type 2 Diabetes Prevention in First Nations Children (2014)[116]

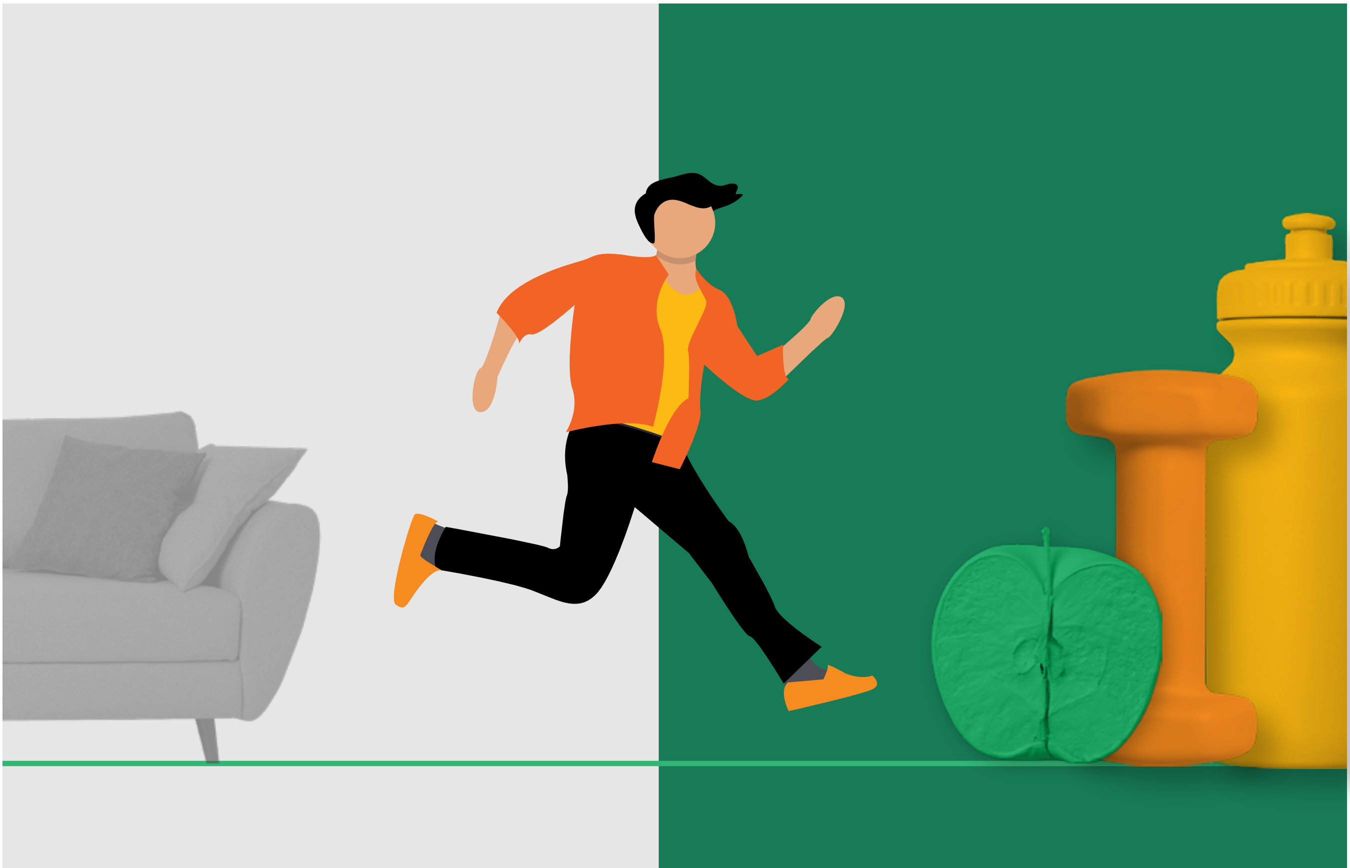
We must collaborate across sectors

To scale what works, collaborative engagements both within and across sectors are critical. Key players in the private, social, and public sectors all have material roles to play in moving the needle on public health issues in Canada and working together to maximize impact.

The government and the private sector can provide expertise and resources to scale game-changing public health interventions. The private sector and the social sector can create business models for change that are sustainable, data-driven, and efficient — delivering on impact and profit. The social sector and the government can work together to enact policies that are driven by the needs of every Canadian.

It all starts with a desire to create systemic change and drive a healthier future for all Canadians, regardless of their background or circumstances.





Introducing Healthy Futures: Accelerating What Works in Public Health

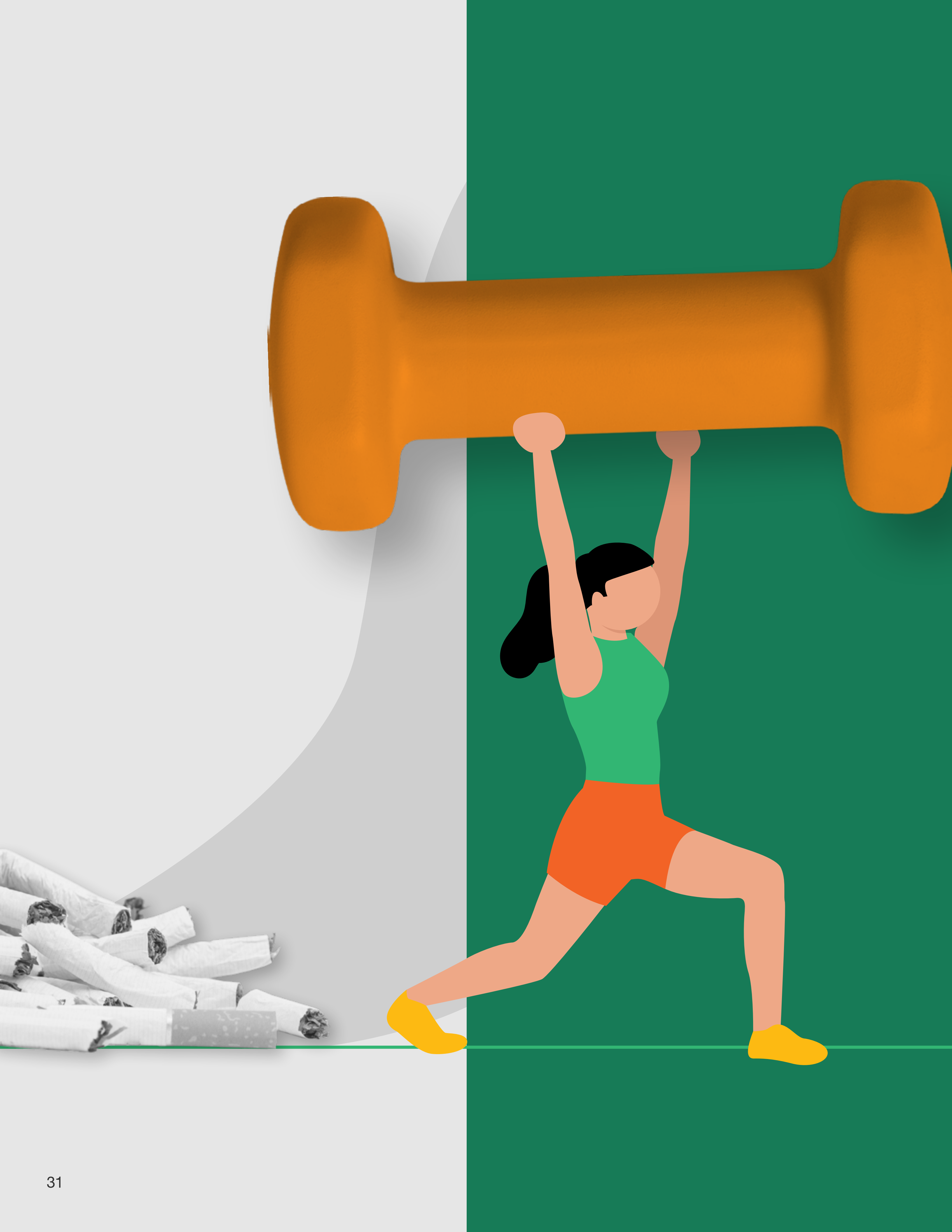
The LEAP | Pecaut Centre for Social Impact (LEAP) has a bold vision to collaborate across sectors and we are thrilled to introduce Healthy Futures: Accelerating What Works in Public Health.

Healthy Futures is a five-year accelerator funded by the Public Health Agency of Canada (PHAC). The accelerator will employ a rigorous, data driven selection process approach to select and scale 11 Canadian ventures that offer innovative solutions to chronic disease prevention and derive the largest impact. For selected ventures, LEAP will provide funding, coaching and leverage private sector resources to spearhead targeted projects to grow and deepen what works in chronic disease prevention.

Are you part of a social venture with a passion for public health and a strong desire to create healthy futures for Canadians?

Do you want to partner with us to scale what works in public health?

To learn more, visit
leap-pecautcentre.ca/healthyfutures



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