

Nutrition Services, Population and Public Health
Household Food Insecurity in Alberta: A Backgrounder

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A Backgrounder

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Table of Contents

Contact and Acknowledgements	3
Purpose	4
What is Food Insecurity?	4
What is the Relationship Between Household Income and Household Food Insecurity?	4
How does Canada Measure Household Food Insecurity?	5
Household Food Insecurity Prevalence in Canada and Alberta	6
Do All Households or Household Members Experience Food Insecurity in the Same Way?	6
Who is at higher risk of experiencing household food insecurity?	7
Indigenous Peoples	7
How Does Household Food Insecurity Impact Health?	9
Diet Quality	9
Child and Youth Development	9
Mental Health	10
Chronic Conditions	10
Body Weight	10
How Does Household Food Insecurity Impact System-Level Healthcare Costs? ..	10
For More Information	11
References	13

Nutrition Services, Population and Public Health Household Food Insecurity in Alberta: A Backgrounder

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Nutrition Services, Population and Public Health Household Food Insecurity in Alberta: A Background

Purpose

The purpose of this backgrounder is to provide an overview of the research on the relationship between income, household food insecurity, and health in Canada and Alberta. The target audience includes health practitioners, leaders, policy-makers, decision-makers, organizations, and agencies who work to improve health equity.

What is Food Insecurity?

“Household food insecurity refers to the inadequate or insecure access to food because of financial constraints. Food insecurity takes a serious toll on individuals’ health and well-being, and it places a significant burden on our health care system.”¹

People who face household food insecurity (HFI) may endure a wide range of challenges, such as feeling constant psychological distress about running out of food, relying on a diet of less expensive but low-quality foods, restricting portions, skipping meals or eating nothing for a day or longer (Table 1).² Households can experience food insecurity as a sudden, intermittent, frequent, or continual pattern depending on the severity and frequency of changes in their access to money. Financial constraint is the key barrier to healthy eating for people experiencing HFI. Poor nutrition knowledge, food skills, or food-related financial management skills are not the cause of HFI.

What is the Relationship Between Household Income and Household Food Insecurity?

Household income is the strongest single predictor of who is at risk of experiencing HFI.³ Low-income households are many times more likely to report HFI compared to their middle and high-income counterparts.² However, not all people living on a low-income experience HFI and not all people who report HFI live on a low income.

Individuals who earn low wages may remain food secure if they do not suffer unpredictable financial shocks such as job loss, salary reduction, death of a breadwinner, relocation expenses, increased housing costs, or health or legal fees.^{4,5} Middle or higher-income households may experience HFI due to financial pressures related to debt load, economic recessions, high housing costs, large or increased number of household members, chronic illness, or job loss.⁶ Thus, HFI is seemingly the result of an imbalance between household resources (income, assets, access to credit), expenditures (housing, food, utilities, health, childcare, transportation), and debt load (loans, payments, fees).

There is also a relationship between the source of income a household receives and the risk of experiencing HFI. Canadians are approximately three times more likely to experience HFI when their primary source of income is a government benefit or transfer such as employment insurance, workers’ compensation, or social assistance.⁷ In 2021, 44.3% of households in Alberta who depended on social assistance experienced HFI.² In contrast, 13.7% of Canadian households who relied on salaries or wages and 14.5% who relied on dividends or pensions reported HFI.²

Nutrition Services, Population and Public Health Household Food Insecurity in Alberta: A Backgrounder

Unemployment is not the primary driver of HFI. In Alberta, 61.3% of food-insecure households were reliant on wages and salaries in 2021.² This indicates that employment is not always enough to prevent HFI. This is due to a variety of factors, including low hourly wages, seasonal work, irregular or inconsistent work hours, shift work, lack of job mobility or advancement,⁸ and discriminatory racialization in the labour force that results in racial groups obtaining work that is more likely to be insecure, temporary, and low paying.⁸⁻¹⁰

How does Canada Measure Household Food Insecurity?

HFI in Canada is measured using the validated [Household Food Security Survey Module \(HFSSM\)](#). The HFSSM measures self-reported HFI through questions on behaviours and experiences related to worry, food quality, and quantity. The 18 questions measure HFI resulting from limited financial resources over a prior 12-month timeframe. The number of affirmative responses to the questions asked determines HFI status as marginal, moderate, or severe in a given household.

Table 1. Category of Food Security Status¹¹

Category	Definition
Food Secure	At all times throughout the previous year, these households had access to enough food for an active, healthy life for all household members.
Marginal Food Insecurity	At times during the previous year, these households had indications of worry about running out of food and/or limited food selection due to a lack of money for food.
Moderate Food Insecurity	At times during the previous year, these households had indications of compromise in the quality and/or quantity of food consumed.
Severe Food Insecurity	At times during the previous year, these households had indications of reduced food intake and disrupted eating patterns.

A measurement of “hunger” is not a measure of HFI and is not recommended as an indicator.¹² Hunger is an individual-level physiological condition that may or may not be related to HFI.¹² Hunger refers to a physical sensation and it influences individual decisions about what, how much, and when to eat.¹²

Monitoring HFI in Canada reveals the extent of the problem nationally and by province or territory. It also provides information on which households or population groups are most vulnerable to HFI. Canada has included the HFSSM in the Canadian Community Health Survey (CCHS) since 2005, and in other surveys such as the Aboriginal Peoples Survey, to understand the extent of the issue. Analysis of the data from these and other surveys, by Statistics Canada and research groups such as PROOF, provide estimates on the extent of HFI. Differences in surveys measuring HFI, such as respondent sources, data analysis techniques, time frames, and issue categorization, mean direct comparison between surveys is inappropriate.¹³ However, taken collectively, this database provides a more comprehensive view of the issue.

HFI is a key indicator in the Opportunity for All – Canada’s First Poverty Reduction Strategy.¹⁴ In 2019, Statistics Canada began including the HFSSM in the annual Canadian Income Survey (CIS)¹⁵ which provides consistent, annual HFI prevalence data for this indicator.

Household Food Insecurity Prevalence in Canada and Alberta

HFI is a significant issue across Canada and Alberta. National, provincial, and territorial HFI rates are sometimes reported differently for the same survey and timeframe, depending on whether marginal food insecurity is included. Canada’s Official Poverty Dashboard indicator reflects the rates for persons living in households that reported moderate or severe food insecurity (marginal rates are not included). Table 1 presents HFI prevalence rates for Canada and Alberta. In 2020, the most recent data at the time of this publication, Alberta had HFI rates significantly above the national average; the increase occurred in the moderate and severe food insecurity categories, indicating an impact on food quality and food quantity. As of 2022, the available evidence suggests that the COVID-19 pandemic may have slightly increased total HFI in Canada, especially in populations that were already vulnerable to HFI.¹⁶

Table 2. Food Insecurity Prevalence Rates by Level of HFI for Canada and Alberta

HFI Level	Marginal	Moderate	Severe	Total	
				All levels	Moderate or severe
Canada	4.6%	7.6%	3.6%	15.8%	11.2%
Alberta	4.6%	9.7%	5.4%	19.7%	15.1%

Source: Canada Income Survey – 2020 (CIS)¹⁷ *

*Statistics Canada. Table 13-10-0835-01. Food insecurity by age group and sex. Release date: 2022-03-23. DOI: <https://doi.org/10.25318/1310083501-eng>

Do All Households or Household Members Experience Food Insecurity in the Same Way?

No, although research has identified many shared and common struggles among populations who face HFI,² each food-insecure household experiences this issue in unique ways. The experiences within a household range from marginal (concerns about running out of food before there is money to buy more), to moderate (household compromises in the quality and/or quantity of food before there is money to obtain more), to severe (characterized by missing meals and reduced or no food intake, in addition to compromises in food quality and worry about where the food will come from).³

The questions in the HFSSM are not specific enough to identify whether **every** member of a household experiences food insecurity. However, the HFSSM measures **exposure** to HFI which represents a highly significant predictor of personal health and well-being.⁵ HFI prevalence rates do not indicate that all household members experience food insecurity in the same way. For example, research indicates that children experience cognitive, emotional, and physical awareness of HFI such as worrying about parental stress and hardships.¹⁹

Adult family members experience a range of stresses and employ a sequence of strategies, which may include restricting their own food intake in an effort to increase food availability for younger children in the household.²⁰

Who is at higher risk of experiencing household food insecurity?

Populations that face social barriers that render them more vulnerable to poverty are at higher risk of experiencing HFI. An ever-growing body of research across Canada coupled with CCHS data have helped identify the following groups who are at increased risk of experiencing HFI:

- individuals who rent rather than own their home^{2,21-23}
- lone parents^{2,7}
- households with children younger than 18 years old²
- Indigenous households living off reserve² and on reserve^{24,25}
- households whose members identify as Black²
- individuals who receive social assistance²
- women²⁶
- homeless populations²⁷⁻³³
- cis and transgender women sex workers^{34,35}
- unattached (single) women and men^{2,7}
- individuals who identify as bisexual,^{36,37} lesbian, gay, and transgender populations³⁸⁻⁴¹
- recent immigrants^{42,43} and refugees^{44,45}
- people living with a disability^{46,47}
- workers who experience limited employment due to racial discrimination⁸⁻¹⁰
- students who attend post-secondary institutions⁴⁸⁻⁵²
- households with a current or formerly incarcerated adult or parent^{42,53}

Indigenous Peoples

Food is an integral part of Indigenous culture and identity. It connects Indigenous people with their traditions, history, the land, stories, teachings, and their spirituality.⁵⁴ Food also connects Indigenous people with each other through harvesting, gathering, preparing, honouring, and the sharing or offering of food.⁵⁴ Traditional foods and foodways contribute to Indigenous peoples' mental, spiritual, physical, and emotional health.⁵⁴

"Indigenous food systems include all of the land, soil, water, and air, as well as culturally important plant, fungi, and animal species that have sustained Indigenous peoples over thousands of years of participating in the natural world."¹⁸

To adequately contextualize how HFI is impacting Indigenous people today, it is important to consider the history of colonization and the loss of control over traditional lands as an additional dimension of the determinants of health for Indigenous peoples.^{55,56} The data below describes Indigenous people's access to food. It includes the prevalence of HFI (which focuses on market food) and access to traditional foods. It is important to note that the data below does not reflect the impact the food insecurity and loss of traditional food on Indigenous people's mental and spiritual health.

Nutrition Services, Population and Public Health Household Food Insecurity in Alberta: A Backgrounder

Household Food Insecurity among Indigenous People

While there is limited published research reflecting the experiences of both on- and off-reserve Indigenous peoples (First Nations, Métis, and Inuit) in Alberta who live in food-insecure households, the available data reveals large inequities for these communities. HFI among Indigenous peoples is closely associated with other social determinants of health, including income level and source, education, and access to employment.⁵⁷ The prevalence of HFI amongst Indigenous peoples is at least two to three times higher compared to the general population in Canada.⁵⁶ For example, a Public Health Agency of Canada report found a prevalence of HFI that is 3.7, 2.7, and 2.2 times higher among Inuit, First Nations living off-reserve, and Métis, respectively.³⁷ In 2020, the prevalence of HFI in Alberta was 19.7%¹⁷ (see [Table 1](#)), whereas the most recent data for on-reserve First Nations populations in Alberta, collected in 2013, reported a prevalence rate that was almost three times higher, at 57.2%.⁵⁸ Unfortunately, there is a lack of Alberta-specific data on the prevalence of HFI among Métis and Inuit populations. Another data limitation is that the CCHS sample omits First Nations people living on reserve.⁵⁹

The use of a consistent tool, such as the HFSSM, to monitor HFI allows an opportunity to identify inequities and take concerted action to recognize and address the high prevalence of food insecurity in remote Indigenous communities in Canada. However, the HFSSM has key limitations for understanding and acting on this issue for Indigenous populations. For example, the HFSSM predominately explores food insecurity through the lens of economics and market food access,⁵⁸ and on the ability of a household to afford the food it needs.¹³ The tool does not capture the distinct food systems of Indigenous Peoples and honour their unique worldviews and perspectives.⁵⁸ It is also questionable whether the household is an appropriate unit since a household measure fails to capture important relationships with community members and reciprocity of sharing foods in a broader community.⁶⁰

Access to Traditional Foods

One aspect of the Indigenous food system is access to traditional foods. There is limited information on traditional foods for on-reserve First Nations households available from questions asked in the First Nations Food, Nutrition and Environment Study (FNFNES).⁵⁸ Key results reported include:⁵⁸

- most adults reported they would like more traditional foods in their diet
- the majority (67%) were engaged in harvesting traditional foods, however, those households reporting traditional food activities were more food insecure than those not reporting it. The reason for this was not identified in this study, although was possibly due to the high cost of equipment for harvesting,⁶¹ or that food insecurity leads to more use of traditional foods⁶²
- many factors affected the harvesting of traditional foods, including:
 - industrial activities (e.g., mining, hydroelectricity, forestry, farming)
 - climate change
 - financial (e.g., equipment or transportation)
 - household constraints (e.g., no hunter, time, traditional knowledge, or health issues)
 - other research also identifies these barriers to traditional food access as well as restrictions on land use (e.g., hunting and fishing laws)⁶³ and environmental contamination²⁵
- 47% indicated they had experienced shortages of traditional foods
- 43% were concerned that they couldn't get more traditional foods in a timely fashion

Nutrition Services, Population and Public Health Household Food Insecurity in Alberta: A Backgrounder

Overall, the limited data on the prevalence of HFI and access to traditional foods highlights the tragic legacy of colonialism, privatization, and current policies on Indigenous food systems. These findings do not capture the critical importance of traditional practices such as gathering, feasting, and reciprocity of sharing foods. However, it does highlight the need to contextualize HFI and food security in frameworks that are shaped and voiced by Indigenous peoples. Frameworks need to reflect Indigenous relationships and outlooks on foods and the broader interconnectedness with Indigenous food systems and food sovereignty.

The [resources section](#) of this backgrounder identifies a few recommended resources for increasing understanding of traditional food systems and food sovereignty, the multi-generational impact of colonialism policies and practices on Indigenous peoples, and voices from these communities in shaping a path forward.

How Does Household Food Insecurity Impact Health?

Research shows that HFI leads to considerable negative impacts on the health and well-being of the Canadian population across all age groups. All levels of HFI, marginal, moderate, and severe, are associated with adverse health outcomes. HFI is linked with an increased risk of poor mental health and a range of chronic diseases and conditions, including diabetes, heart disease, hypertension, asthma, and arthritis.

Diet Quality

In general, food-insecure adolescents and adults appear to be at higher risk of nutrition inadequacies because they are more likely to skip meals, restrict intake, or rely on low-cost, low-quality foods in comparison to their food-secure counterparts. Canadian research has shown that HFI is a predictor of poorer diet quality among children, youth, and adults due to a higher intake of ultra-processed foods, a lower intake of protein foods in older children, and a higher intake of sodium in younger children.⁶⁴ CCHS data estimates that among food-secure youth and adults, 50% consume adequate calcium, 61% consume adequate magnesium, and 87% consume adequate zinc.⁶⁵ In contrast, only 34% of food-insecure counterparts consume enough calcium, 40% enough magnesium, and 71% enough zinc.⁶⁵ There is a need for quality, longitudinal research to better understand the real or potential risks for serious nutrition inadequacies within populations who experience HFI.

Child and Youth Development

Observational studies in Canada suggest that children and youth are more likely to face poor emotional, cognitive, and physical health outcomes if they are exposed to HFI at any point.^{8,66-68} However, the direct and unique impact of HFI on physical and neurocognitive development remains unclear, mainly because most children and youth experiencing HFI or living in low-income households simultaneously face other distressing forms of material and social deprivation.⁶⁹ Youths experiencing HFI are more likely to develop chronic conditions and asthma compared to their counterparts.⁶⁶ Research over the past two decades strongly suggests that even marginal levels of HFI are significantly linked to poorer outcomes in behavioural (e.g. hyperactivity and inattention⁶⁸), academic, emotional, and cognitive progress from infancy through adolescence within industrialized countries.⁶⁹

Nutrition Services, Population and Public Health Household Food Insecurity in Alberta: A Backgrounder

Mental Health

Canadians living in households experiencing food insecurity are at higher risk of mental health problems, as HFI can often be a chronically stressful experience, and this risk increases with the severity of HFI.^{5,70} For adults, adverse mental health outcomes (such as depressive and suicidal thoughts, major depressive episodes, and diagnosed mood or anxiety disorder) are more likely to be experienced in food-insecure households.⁷⁰ Experiencing hunger as a child can increase the risk of depression and suicidal ideation into adolescence and early adulthood.^{8,21}

Chronic Conditions

Adults who experience prolonged HFI may be at significantly higher risk for the development of chronic conditions.⁷¹ Additionally, chronic illnesses may also place adults at higher risk of experiencing HFI due to the negative impacts on their total income.^{72,73} The results of national health surveys suggest there is a significant association between HFI and particular chronic conditions, such as mood disorders, diabetes, heart disease, migraine headaches, high blood pressure, bowel disorders, and asthma.^{7,71,74–79} There is also emerging research that demonstrates a higher prevalence of HFI among client groups who struggle with specific conditions such as diabetes, HIV, and chronic kidney disease.^{80–82}

Body Weight

The relationship between HFI and obesity remains uncertain because excessive weight gain is the result of a complex web of interactions between nutrition, genetic, psychosocial, economic, and environmental factors.⁸³ There is a need for more longitudinal research to understand how HFI status affects body weight in children, youth, and adults within the Canadian context.⁸⁴ The majority of existing evidence has not uncovered a significant relationship between HFI and childhood obesity, while research on adults indicates a potential association with women but not with men.⁸³

How Does Household Food Insecurity Impact System-Level Healthcare Costs?

HFI is linked to poorer health status on an individual level and at a systems level. It is also a robust predictor of healthcare utilization and costs incurred by working-age adults, independent of other social determinants of health.⁸⁵ Canadian data found that marginally, moderately, and severely food-insecure adults presented 26%, 41%, and 69% higher odds of acute care admission respectively compared with fully food-secure adults.⁸⁶ Adults experiencing HFI stayed between 1.48 to 2.08 more days in the hospital and incurred \$400–\$565 more per person, per year in acute care costs compared to those not experiencing HFI. This excess cost amounts to 4.4% of total acute care costs.⁸⁶ In summary, HFI is associated with greater healthcare use and spending in a dose-response relationship with higher healthcare use and costs being associated with more severe HFI.⁸⁶

Nutrition Services, Population and Public Health Household Food Insecurity in Alberta: A Backgrounder

For More Information

Introduction—Provides basic information

[PROOF Food Policy Research Fact Sheets](#)

This series of fact sheets provide basic information about HFI from a Canadian research perspective. Common questions are answered in a user-friendly short fact sheet approach.

[PROOF How to tackle food insecurity in Canada Whiteboard Video](#)

This short YouTube video outlines the basics of food insecurity and recommendations based on evidence on how to best tackle food insecurity in Canada.

[Household Food Insecurity and Food Access: Conversations with Community Groups. A Discussion Guide for Health Care Professionals](#)

This document helps guide conversations with community groups about HFI and food access. It provides answers to frequently asked questions and reviews common misconceptions about food insecurity.

Indigenous-Specific Resources

Alberta

- [AHS Nutrition Services Evidence Review: Food, Nutrition and Indigenous Peoples in Alberta](#)
- [Alberta First Nations Food Sovereignty Declaration](#)

Canada

- [Food is Our Medicine Course](#)
- [First Nations households living on-reserve experience food insecurity: prevalence and predictors among ninety-two First Nations communities across Canada \(Batal et al, 2021\)](#)

International

- [United Nations Declaration on the Rights of Indigenous Peoples](#)

Dip—Goes a Little Deeper

[Alberta Health Services Food Insecurity Resources](#)

This website includes all Alberta Health Services resources related to household food insecurity, such as the Household Food Insecurity Evidence Review and Nutrition Guideline.

[What is a Living Wage? | Living Wage Alberta](#)

The Alberta Living Wage Network calculates living wages across the province. A living wage is an hourly wage a worker needs to earn to cover their basic expenses and participate in their community.

[PROOF Food Insecurity Policy Research Reports and Resources](#)

These reports examine HFI within Canada

Nutrition Services, Population and Public Health Household Food Insecurity in Alberta: A Backgrounder

Statistics Canada Resources

- [Determining Food Security Status](#)
- [Household Food Security Survey Module](#)

Dive–Explores in Greater Depth

The resources below examine Statistics Canada’s Poverty Reduction Strategy which uses 12 indicators to track progress on poverty reduction for Canadians and their households.

- [Canada’s First Poverty Reduction Strategy](#)
- [Statistics Canada Dimensions of Poverty Hub](#)
- [Canada’s Official Poverty Dashboard of Indicators](#)

Statistics Canada Household Food Insecurity:

- [Household food insecurity by living arrangement](#)
Statistical data from the Canadian community health survey data
- [Canadian Income Survey: Food insecurity and unmet healthcare needs](#)
This paper is about food insecurity and unmet health needs using the Canadian Income Survey.
- This search for “[Food Insecurity](#)” on the Statistics Canada page provides many reports, statistics, and further information on food insecurity.

Dietitians of Canada–Addressing Household Food Insecurity in Canada:
Position Statement and Recommendations from Dietitians of Canada position paper
<https://www.pennutrition.com/docviewer.aspx?id=12448>

Subscription-Based Resources

PEN: Practice-based Evidence in Nutrition® - Food Insecurity Resources
<https://www.pennutrition.com/searchresult.aspx?terms=food%20insecurity>

Nutrition Services, Population and Public Health Household Food Insecurity in Alberta: A Background

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Nutrition Services, Population and Public Health

Household Food Insecurity in Alberta: A Backgrounder

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