

The Cost of Healthy Eating in Saskatchewan 2012



Written by the Saskatchewan
Food Costing Task Group

Report Authors

Cathryn Abrametz, Public Health Nutritionist, Prince Albert Parkland Health Region
Darci Climenhaga, Regional Nutritionist, First Nations Inuit Health Branch
Tammy Ives, Regional Executive Director, Dietitians of Canada
Leanne McLean, Epidemiologist, Prince Albert Parkland Health Region
Tracy Sanden, Public Health Nutritionist, Regina Qu'Appelle Health Region
Stacey Wiens, Public Health Nutritionist, Prairie North Health Region
Barb Wright, Public Health Nutritionist, Sun Country Health Region

Acknowledgements

Jill Aussant, Public Health Nutritionist, Saskatoon Health Region
Patricia Erhardt, Early Childhood Programs, Policy and Design Consultant, Ministry of Education
Dana Folkersen, Executive Director, Regina Education and Action on Child Hunger
Linda Gilmour Kessler, Health Promotion Advisor, Northern Inter-Tribal Health Authority
Dr. James Irvine, Medical Health Officer, Population Health Unit, Three Northern Health Authorities
Sarah Langley, Diabetes in Pregnancy Nutritionist, First Nations Inuit Health Branch
Shlomo Levi, Senior Policy Analyst, Ministry of Social Services
Eunice Misskey, Public Health Nutrition Consultant, Ministry of Health
Naomi Shanks, Public Health Nutrition Consultant, Ministry of Health

All inquiries can be directed to regional Public Health Nutritionists.

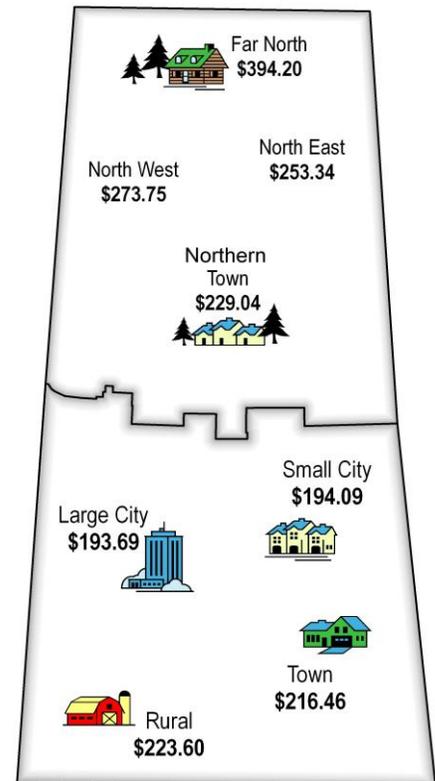
Executive Summary

Access to nutritious food is a basic human right.¹ Food and nutrition decisions are not simply a matter of individual choice. Economic and social factors, coping skills, environment and working conditions affect a person's ability to make healthy food choices.² Geography also influences a person's ability to choose healthy foods. In Saskatchewan, some people must travel long distances to access healthy foods.

Calculating food costs is one way to assess the affordability of nutritious foods. Food costs can help community and government organizations budget and allocate money for food grants and allowances. This data can also assist policy and decision makers to develop health, nutrition and social policies.

Highlights

- In Saskatchewan, the cost of the National Nutritious Food Basket for a reference family of four was \$218.24 per week. In the northern part of the province, the same family would pay \$290.37 for the same Food Basket.
- This report includes data from on-reserve communities.
- Outside of the north, the food costs for a reference family of four were lowest in large and small cities and highest in the rural areas.
- All communities in Saskatchewan saw an increase in the cost of a Food Basket from 2009 to 2012; however, communities in the northern part of the province experienced a significant increase of 15.1% compared to the Saskatchewan average of 4.9%.
- Many rural communities and First Nation reserves lack local grocery stores and appear to rely on food available at gas stations, convenience stores or local general stores.



Working Towards Food Security

"Food security exists when all people, at all times, have the physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life."³

Food security for all people will require commitment to solutions. *The Cost of Healthy Eating in Saskatchewan 2012* report provides information and tools to help all of us work toward a food secure Saskatchewan. This report identifies collaborative actions between agencies, communities, and individuals, which are needed to achieve sustainable food security.

Table of Contents

| | |
|----------------------------------------------------------------|----|
| Food Costing in Saskatchewan | 3 |
| What Can Food Costing Tell Us? | 3 |
| Who Is Affected by Food Insecurity? | 4 |
| How Does Food Insecurity Affect Health and Well-being? | 5 |
| How Were Food Costs Determined? | 6 |
| How Much Did the National Nutritious Food Basket Cost? | 7 |
| Food Costs over Time | 8 |
| Food Costs and Where You Live | 9 |
| Faces of Food Insecurity | 11 |
| How Does Pregnancy and Breastfeeding Affect Food Costs? | 12 |
| Faces of Food Insecurity | 13 |
| Is Healthy Food Accessible for Everyone in Saskatchewan? | 14 |
| Faces of Food Insecurity | 15 |
| How Can We Work Towards Food Security? | 16 |
| How Can You Help? | 18 |
| References | 19 |
| Food Cost Calculator | 21 |

Food Costing in Saskatchewan

The Cost of Healthy Eating in Saskatchewan 2012 is the fourth food costing report completed in Saskatchewan. The report examines the cost of healthy food across the province and identifies ways to work towards food security. This report also includes food costs for on-reserve communities.



What Can Food Costing Tell Us?

Calculating food costs is one way to measure food affordability, and in turn, monitor food security. The 2008 National Nutritious Food Basket was used to collect food cost data in Saskatchewan. The tool provides a benchmark for healthy eating for various age and gender groups. The results of this report can be used to assist:⁴

- people of all ages including pregnant and breastfeeding women to monitor the affordability of a nutritious basket of food.
- decision makers to develop health, nutrition and social policies.
- Saskatchewan individuals and families in budgeting for a nutritious diet.
- community and government organizations in budgeting and allocating for food grants and allowances.

What is Food Security?

“Food security exists when all people, at all times, have the physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life.”³

1996 World Food Summit

Who is Affected by Food Insecurity?

For many Saskatchewan individuals, families and communities, healthy food is not consistently accessible or available. The availability, acceptability and cost of food can make it difficult for some people to eat healthy foods.⁵ Decisions about how much and what foods to eat are not simply a matter of individual choice.

With the recent economic and population growth in Saskatchewan, there has been an increased demand for housing.⁶ When housing costs increase, there is less money available to spend on basic needs such as transportation, childcare and food.⁷ For many families, the grocery budget is flexible, whereas other bills, such as rent and utilities are not.

Research has shown those who are more vulnerable to experiencing food insecurity include:^{8,9}

- people with low and low-middle incomes, including those working in lower income jobs.
- people receiving social assistance, employment insurance or worker's compensation.
- people living in lone parent households.
- women who are single parents.
- men who are living on their own.
- people who are aboriginal.
- people who do not own their own accommodations.
- people with lower levels of education.¹⁰

First Nation communities are particularly vulnerable to food insecurity, which makes this an urgent issue for this population. The traditional diet of First Nations people consisted of foods harvested and gathered from the land and water around them. These foods were highly nutritious and supported the health of many First Nations people.¹¹ Substituting traditional foods with food more easily available can result in a diet low in vegetables and fruit and high in fat and sugar.¹²



How Does Food Insecurity Affect Health and Well-being?

Household food security is closely linked to an individual's health and well-being.¹³ People who experience food insecurity may not be able to afford a balanced diet, experience stress from worry about running out of food or go hungry from missing meals or in extreme cases not eating for a whole day. Food is a basic human right and need. All people at all times should have access to sufficient quality and quantities of nutritious foods to maintain good health.

Nutrition deficiencies and chronic diseases such as heart disease, diabetes, obesity, depression and high blood pressure are more common among those unable to access sufficient nutritious foods.¹³ Many First Nations people are at greater risk of chronic diseases in response to the shift from traditional foods. Access to healthy food is also particularly important for people living with other illnesses such as HIV/AIDS or cancer.¹⁰

Food insecurity affects pregnancy and early childhood growth and development.¹⁴ Vulnerable pregnant and breastfeeding women are a population of particular concern. Women who live in food insecure households during pregnancy have a greater chance of gaining too much weight. This can lead to health problems for mother and baby, such as gestational diabetes.¹⁴

Breast milk is the most readily available, affordable and nutritious food source for infants. Breast milk provides all the essential nutrients and energy an infant needs up until 6 months of age and beyond with the introduction of complementary foods.¹⁶

World Alliance for Breastfeeding Action

Food insecurity also affects breastfeeding rates. Breastfeeding initiation rates are lower and duration is shorter for mothers in food insecure households.¹⁵ The World Alliance for Breastfeeding Action notes that "breastfeeding provides total food security for infants".¹⁶ Breastfed babies tend to have fewer ear infections, lower risk of gastrointestinal infection, less allergies, eczema and respiratory diseases than non breastfed infants. There are also benefits for the breastfeeding mother such as decreased risk of certain cancers and increased likelihood of returning to pre-pregnancy weight.¹⁶ Therefore, it is important to ensure healthy foods are accessible for all women.⁹

Children and youth are especially vulnerable to food insecurity. Those who are food insecure can experience more behavioural, emotional, and academic problems than children and youth who are food secure.¹⁷ All of these factors contribute to a less healthy population.

How Were Food Costs Determined?

Food costing was performed in 107 grocery stores that were randomly selected throughout Saskatchewan. Population size was used to determine the number of stores to be surveyed. The stores selected represent urban and rural communities across the province of Saskatchewan, both on and off reserve.

The National Nutritious Food Basket tool was used for this survey. Comprised of 67 basic healthy foods, the basket meets the nutrition recommendations in *Canada's Food Guide* and includes foods commonly consumed by Canadians.⁴ The Food Basket is not meant to be used as a menu planning tool.

The items in the Nutritious Basket require some preparation; therefore, it is assumed those purchasing the food items have basic cooking skills and a location to cook and store food. Convenience and restaurant foods, cultural preferences or special dietary foods are not included. The Food Basket does not include cleaning or personal care items that are often included in a family's grocery bill. If these items were included, the food costs would have been higher.

The cost to travel to a grocery store was not included in the calculations. This can significantly increase the cost of accessing food, particularly in remote, rural, northern, and urban neighbourhoods with little or no access to public transportation. In some cases, a person might travel for hours to and from a grocery store to access healthy foods.

In order to minimize the effect of price fluctuations over time, the majority of data was collected during the month of June, 2012. The communities in the Far North were surveyed in October, 2012.



How much did the National Nutritious Food Basket Cost?

The average cost of the National Nutritious Food Basket for a reference family of four was \$218.24 per week or \$944.99 per month.

Overall, males 14 years and older, and women who are pregnant or breastfeeding can expect to pay more than the remainder of the population, because of increased calorie requirements.

To calculate your own food costs, refer to page 21 for the Food Cost Calculator.



Table 1: Average Weekly and Monthly Cost of a National Nutritious Food Basket by Age Group and Sex, Saskatchewan, 2012.

| Age/sex groups | Cost per week | Cost per month |
|-------------------------------------------------------------------------------------------------------|---------------|----------------|
| Family of Four Woman 31-50 years; Man 31-50 years; Boy 14-18 years; Girl 4-8 years | \$218.24 | \$944.99 |
| Males | | |
| 2 to 3 years | \$29.17 | \$126.29 |
| 4 to 8 years | \$37.57 | \$162.70 |
| 9 to 13 years | \$49.35 | \$213.69 |
| 14 to 18 years | \$69.11 | \$299.23 |
| 19 to 30 years | \$67.27 | \$291.27 |
| 31 to 50 years | \$61.10 | \$264.54 |
| 51 to 70 years | \$58.81 | \$254.64 |
| over 70 years | \$58.17 | \$251.86 |
| Females | | |
| 2 to 3 years | \$28.53 | \$123.54 |
| 4 to 8 years | \$36.30 | \$157.19 |
| 9 to 13 years | \$42.66 | \$184.71 |
| 14 to 18 years | \$50.74 | \$219.71 |
| 19 to 30 years | \$52.43 | \$227.03 |
| 31 to 50 years | \$51.74 | \$224.02 |
| 51 to 70 years | \$45.79 | \$198.27 |
| over 70 years | \$45.04 | \$195.01 |

Food Costs over Time

Food costs in Saskatchewan were higher in 2012 than 2009. The cost of a Nutritious Food Basket increased by 6.4% or \$13.22 per week for a reference family of four. This increase is slightly less than the cost of inflation as determined by the Bank of Canada inflation calculator.¹⁸

All communities surveyed showed an increase in the cost of a Nutritious Food Basket. However, communities in the northern part of the province experienced a noticeably higher increase in food costs when compared to the rest of the province. In the north, a family of four could expect to pay 15.1% or \$38.11 more each week whereas the rest of the province could expect to pay 4.9% or \$9.50 more per week.

Table 2: Weekly Cost of the National Nutritious Food Basket for a Family of Four, Changes Over Time in Saskatchewan, 2009-2012.

| Location* | 2012 | 2009 | \$ difference 2009 and 2012 | % change 2009 and 2012 |
|---------------|-----------------|-----------------|-----------------------------|------------------------|
| Saskatchewan | \$218.24 | \$205.02 | \$13.22 | 6.4% |
| North | \$290.37 | \$252.27 | \$38.11 | 15.1% |
| Far North | \$394.20 | \$349.99 | \$44.21 | 12.6% |
| North East | \$253.34 | \$227.48 | \$25.86 | 11.4% |
| North West | \$273.75 | \$256.95 | \$16.80 | 6.5% |
| Northern Town | \$229.04 | \$214.32 | \$14.72 | 6.9% |
| South | \$204.64 | \$195.14 | \$9.50 | 4.9% |
| Rural | \$223.60 | \$206.94 | \$16.67 | 8.1% |
| Town | \$216.46 | \$202.20 | \$14.26 | 7.1% |
| Small City | \$194.09 | \$188.28 | \$5.82 | 3.1% |
| Large City | \$193.69 | \$184.91 | \$8.77 | 4.7% |

*For location definitions, refer to pages 9 and 10.

Food Costs and Where You Live

Residents of Northern Saskatchewan have the highest food costs in Saskatchewan, averaging \$290.37 per week compared to \$204.64 per week in the southern half of the province. A family of four living in a large city in southern Saskatchewan pays the least for a nutritious food basket at \$193.69.

A family of four in the northern part of Saskatchewan can expect to pay 50% more for a Nutritious Food Basket than a family living in a large city and 33% more than the provincial average.

Figure 1: Weekly Cost of the National Nutritious Food Basket for a Family of Four, Saskatchewan, 2012

Far North: Low access communities with seasonal roads and air travel is the main form of transportation

North West: Moderately accessible communities with gravel or paved roads, and air access

North East: Moderately accessible communities with gravel roads and some air access

Northern Town: Highly accessible communities with paved roads and air access in all seasons

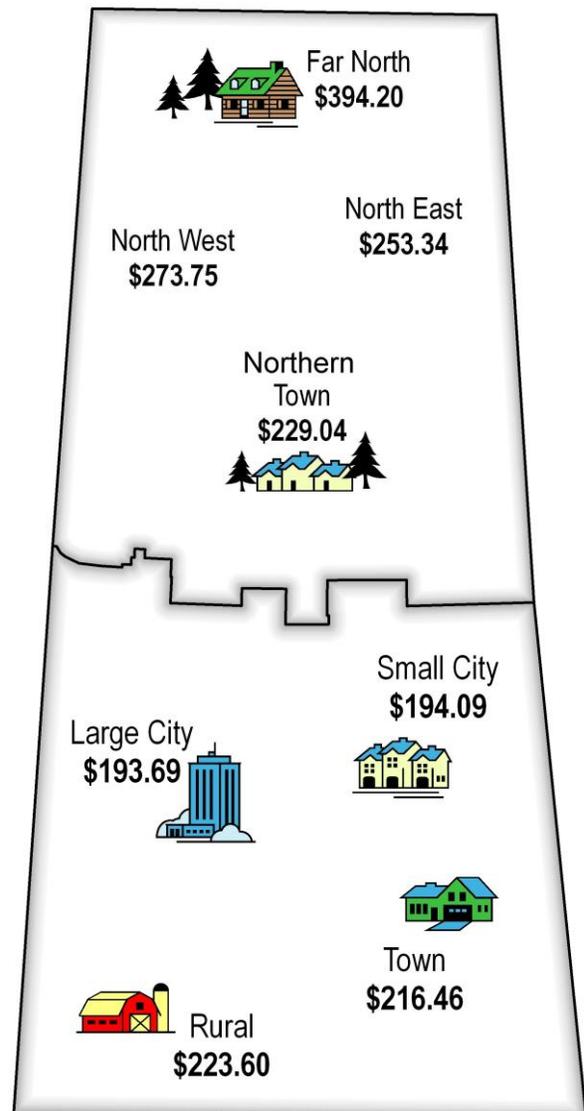
The border used in this report to differentiate between north and south lies approximately 100km north of Prince Albert.

Large City: Census metropolitan area with population of 100,000 or more

Small City: Population between 5,000 and 99,999

Town: Population between 500 and 4,999

Rural: Population of less than 500

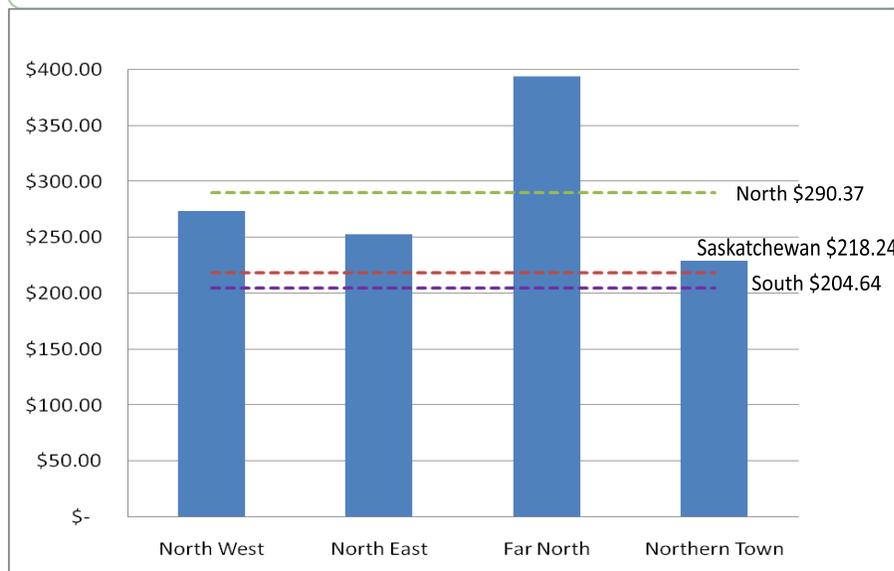


Food Costs and Where You Live

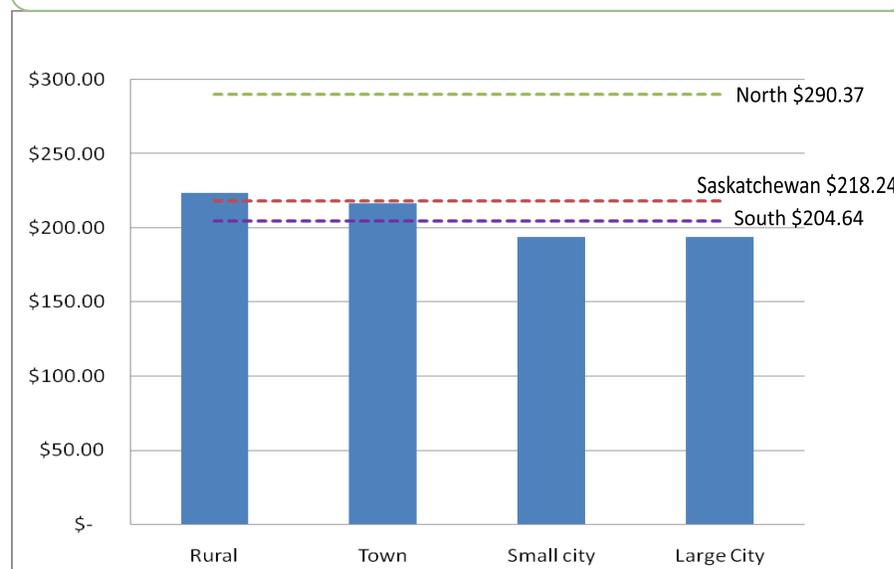
Residents in the Far North have the highest food costs at \$394.20 per week. A family in the Far North will spend \$103.83 more per week than an average family in the North, and \$189.56 more per week than an average family in the South.

A family in the North West will spend slightly more than families in the North East, by \$20.41 per week.

Graph 1: Average Weekly Cost for the National Nutritious Food Basket for a Family of Four, Northern Saskatchewan, 2012



Graph 2: Average Weekly Cost for the National Nutritious Food Basket for a Family of Four, Southern Saskatchewan, 2012



Faces of Food Insecurity

There are several ways families are affected by food insecurity in Saskatchewan:

Joseph and his wife Tammy live in a fly-in community in Northern Saskatchewan. They have two children, Raine who is 14 years old and Autumn who is seven years old. Joseph works at a mine about 500km from home and lives in a work camp. Tammy stays home with Autumn since there are no childcare spaces available. Tammy also cares for her brother's three children when he is away at work. While Tammy's brother pays her some money for the care that Tammy provides to his children, the family struggles to make ends meet. After they pay for housing, there is little left over for food, clothing, transportation and school supplies.

Joseph is able to provide some food by hunting and fishing. They struggle to get quality vegetables, fruit, and milk. Living in a fly-in community, food is brought to the local store by truck in the winter and by plane when other travel is not available. Fresh food sells quickly and Tammy often is unable to get to the store in time to purchase fresh foods.

Joseph and Tammy at times rely on friends for food and often go without food to make sure their children and her brother's children are fed first. This leaves them tired. Raine struggles to concentrate in school and is in danger of not passing his classes because he does not have regular meals, especially breakfast. The school he attends has a lunch program funded by donations; however, the quality of food can be variable.

Families come in different sizes. Multi-generational, multiple families and individual people living within one household are common throughout the province. It is not specific to Northern Saskatchewan.



How Does Pregnancy and Breastfeeding Affect Food Costs?

Women who are pregnant or breastfeeding have slightly increased food costs. These women should eat a little more food daily than non-pregnant or breastfeeding women of the same age.¹⁹

Food costs are \$4.75 more per week during pregnancy for 19 to 30 year old women than for non-pregnant women of the same age. For 19 to 30 year old women who are breastfeeding, food costs are \$7.91 more per week or \$411.32 more per year than for non-breastfeeding women of the same age.

Although the cost of food for breastfeeding mothers is slightly higher than for women who are not breastfeeding, breastfeeding is more economical than infant formula feeding. Regular cow milk-based infant formula prices were collected in one small Saskatchewan city in the spring of 2013. Based on those costs, it is estimated that feeding an infant formula made from concentrate or powder from birth to 1 year will cost between \$984.12 to \$2,481.60. This will cost between \$18.93 to \$47.72 per week. The cost increases substantially if parents use “ready-to-feed formula”.²⁰ This is one of the many reasons why breastfeeding is critical to food security for infants and their families.

Table 3: Average weekly and monthly costs of the National Nutritious Food Basket for pregnant and breastfeeding women, Saskatchewan, 2012

| Pregnancy | Cost per Week | Cost per Month |
|----------------------------|----------------------|-----------------------|
| 18 years or younger | \$56.46 | \$244.46 |
| 19 to 30 years | \$57.18 | \$247.60 |
| 31 to 50 years | \$55.76 | \$241.44 |
| Breastfeeding | | |
| 18 years or younger | \$58.68 | \$254.10 |
| 19 to 30 years | \$60.34 | \$261.29 |
| 31 to 50 years | \$58.92 | \$255.13 |

Faces of Food Insecurity

There are several ways a single parent can be affected by food insecurity in Saskatchewan:

Ellen is a single mother of a four month old baby girl, Sarah. Ellen's partner was the sole income provider, however he left just after Sarah was born. The couple had been renting a house in a large city for \$1500/month.

Ellen could not afford to pay the rent so she needed to move. In order to be able to pay rent and provide for her daughter, Ellen receives income assistance. Because Ellen is breastfeeding and a breastfeeding mother has increased nutritional needs she receives additional funding from Social Services. Ellen unfortunately does not qualify for additional housing support because there are no available rental units that meet the health and safety requirements.

Luckily, Ellen found a person who rents out rooms in a house for \$700/month including utilities. Ellen shares the rest of the house with four strangers. Each person has their own bedroom and they share the kitchen and bathroom. Often some of the food Ellen buys ends up disappearing from the shared fridge. She stops buying foods that need to be stored in the fridge like milk and fresh vegetables, and keeps all of her food in her room.

She struggles to eat healthy foods and is worried her baby isn't getting enough nutrients. The public health nurse reassures her Sarah will get enough and the best food comes from breast milk. Ellen worries about what she will do once Sarah starts eating solid foods.



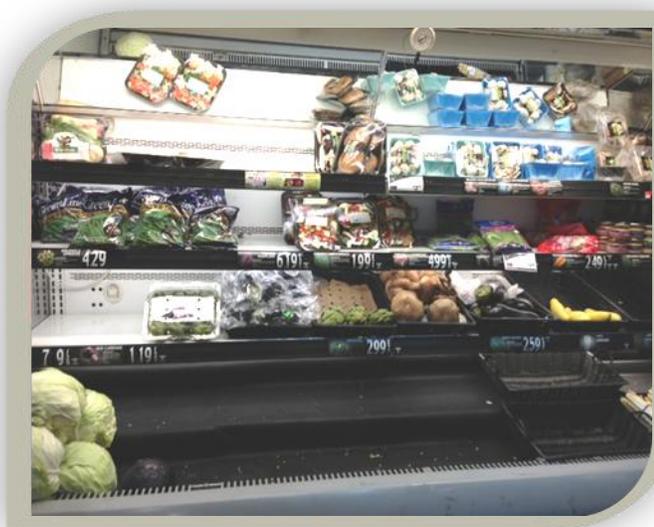
Is Healthy Food Accessible for Everyone in Saskatchewan?

Affordability of food is not the only factor affecting a family's ability to purchase healthy foods. For those living in rural or First Nation communities, and some urban neighbourhoods, the accessibility of nutritious foods can also be a challenge. This can limit the ability to buy some basic healthy food items and can potentially cause a community to be more reliant on packaged and pre-prepared foods.

Food costs for this study were only measured in grocery stores. Many rural communities and First Nation reserves do not have local grocery stores and appear to rely on food available at gas stations, convenience stores or local general stores. Even within urban centres, food is not readily available within certain neighborhoods resulting in a dependence on vehicle or public transportation. High transportation costs results in less money to spend on healthy food.

There were missing Nutritious Food Basket items in the grocery stores surveyed across Saskatchewan. Of the 107 stores surveyed, 19 stores were missing 20% of the items in the Food Basket. Half of these missing items were from the Meat and Alternatives food group of *Canada's Food Guide*. This suggests there may be fewer healthy meat and alternative selections available in stores across the province. The survey did not consider healthy meats acquired from local suppliers, fishing, or hunting.

The stores in northern Saskatchewan generally had more items missing than stores in southern Saskatchewan. All on-reserve stores surveyed in the central part of the province had over 20% of the food basket items missing. There were no on-reserve stores in the southern part of the province that qualified as grocery stores. This data suggests there may be a lack of accessible and affordable nutritious foods in Saskatchewan's northern, rural, and First Nation communities. It is important to investigate and continue to examine food access in these geographies and urban centres.



Faces of Food Insecurity

There are several ways older adults are affected by food insecurity in Saskatchewan:

Mary is a 75 year old woman living in rural Saskatchewan. Her husband, a farmer, died from a sudden heart attack two years ago. They had six children but all have moved from the community to larger centres. Although she loved her farmhouse and yard, Mary's children convinced her to move into the next town. The only money Mary has comes from government transfers.

Mary has diabetes. Her diabetes medications are paid for by an income supplement plan but the program does not cover all of her diabetes supplies. She is unable to test her blood sugars regularly. She now has kidney problems because of her diabetes and needs to see a kidney doctor twice a month in a city 200km away. Because Mary never learned to drive, she relies on her friends to drive her to medical appointments. This also means she has to cancel her appointments sometimes if she can't find anyone able to help her. Her dietitian and doctor remind her how important it is for her to "eat healthy". Trying to eat healthy is a challenge in general but even more so when traveling to her appointments. What little money she has for food, she saves to pay for meals when she goes to the doctor.

At home, Mary struggles to cook for herself. She misses the company of her family and often says it is such a bother to "make a big meal for little old me". Mary's community does not have a grocery store. In good weather, Mary can walk the three blocks to the hardware store to buy bread and milk. Mary's children are unaware that she struggles to access and afford food because she doesn't want to burden them or have them worry about her.



How Can We Work Towards Food Security?

In order to make healthy food available for all people we need to create system changes, build capacity in our communities, and provide short-term food insecurity relief. This will help ensure that healthy eating is accessible and affordable for all Saskatchewan residents.

Below are suggestions and common approaches for working towards food security:

1. System Change

- Invest in and promote local foods, especially in remote communities
- Encourage and enable collaboration between food producers, consumers and governments at all levels
- Explore ways to reduce the gap between food costs and income levels
- Identify and reduce barriers to produce and sell safe local foods
- Encourage innovative local farming practices such as urban market gardens
- Explore the feasibility of a living wage to address gaps between income and the cost of living
- Explore ways to address the increase in living costs over the past 10 years for vulnerable populations, particularly those currently receiving social assistance
- Ensure nutrition, food and cooking skills are part of every student's educational requirements
- Create and sustain environments and communities where healthy food choices are the easy choice
- Make unhealthy food options less accessible
- Explore the option for a separate food allowance category for income support programs
- Encourage poverty coalitions in towns and cities across Saskatchewan
- Build affordable housing
- Continue to work together toward a strategy that helps reduce poverty and increase food security for all people in Saskatchewan

What is a Living Wage?

A living wage is an amount of money you are paid for a job that is large enough to provide you with the basic things (such as food and shelter) needed to live an acceptable life.²¹

Merriam-Webster

“Many Canadians seem to be concerned that reducing poverty means more spending on people living in poverty, leaving others worse off. The growing body of research and experience, however, tells a very different story. It shows that investing to reduce poverty improves wellbeing for everyone.”²²

John Rook, Chairperson of the National Council of Welfare

2. Capacity Building

- Provide resources to support community kitchens
- Teach food, nutrition, and cooking skills in homes, schools, and within the community
- Encourage people to cook in their homes as a family
- Promote and support community gardening
- Offer information on gardening and food preservation
- Support and promote farmers markets
- Promote passing down traditional food practices in all cultures, including first nations and immigrant communities
- Support alternative food distribution systems like Good Food boxes and mobile food stores

3. Short Term Relief

- Food banks
- Community freezers
- Feeding programs

“On the surface, it may look as if those who are hungry have options but free food from the food bank alone does not relieve food insecurity. It is a concern that as long as people are fed, action to address the root causes of poverty will be delayed. While food banks are necessary to feed people today, long-term solutions must be found to end poverty.”²³

The Cost of Eating in British Columbia 2011

How Can You Help?

1. Grow your own food at home or in a community garden. Plant a seed.
2. Help to build a strong market for local food by demanding it at restaurants, grocery stores and other institutions.
3. Volunteer for and support your local food bank or food security program.
4. Learn about the food system and where your food comes from. Share this with the next generation.
5. Encourage and support a garden, nutrition or cooking program at a local school or in your neighbourhood.
6. Volunteer your time and skills with an organization that supports poverty reduction at the local or regional level.
7. Start conversations with family, friends and neighbours about food security initiatives, food systems, and possible solutions.
8. Get involved in your local food security network or start one. Check out the councils in your area for how do to so. Look to the Saskatoon, Moose Jaw, or Prince Albert food coalitions for ideas.
9. Support affordable housing.
10. Share this report with family, friends, co-workers, neighbours, and others.
11. Check out the Food Secure Saskatchewan website at www.foodsecuresaskatchewan.ca and the Poverty Free Saskatchewan website at www.povertyfreesask.ca.

What is a Food System?

A food system includes all processes involved in feeding a population, such as: growing, harvesting, processing, packaging, transporting, marketing, consuming, and disposing of food. When we change one piece, it will impact the others.²⁴

American Public Health Association

References

1. United Nations Human Rights. (1966). International Covenant on Economic, Social and Cultural Rights [Online]. [cited 2013 April 11]; Available from URL: <http://www.ohchr.org/EN/ProfessionalInterest/Pages/ICESCR.aspx>
2. Joint Steering Committee, Health Canada. (1996). Nutrition for Health an Agenda for Action. Ottawa: Government of Canada.
3. Food and Agriculture Organization of the United Nations. (1996). Rome declaration on world food security and world food summit plan of action. World Food Summit November 13-17. Rome: FAO.
4. Health Canada. (2009 Feb 2). Questions and Answers on the 2008 National Nutritious Food Basket. [Online]. [cited 2012 May 1]; Available from URL: <http://www.hc-sc.gc.ca/fn-an/surveill/basket-panier/ga-gr-eng.php>
5. Public Health Nutritionists of Saskatchewan. (2010). The Cost of Healthy Eating in Saskatchewan 2009: Impact on Food Security.
6. Canadian Mortgage and Housing Corporation. (2012). Rental Market Report: Saskatchewan Highlights. [Online]. [cited 2013 June 12]; Available from URL: <http://publications.gc.ca/site/eng/268929/publication.html>
7. Alberta Public/Community Food Security Subcommittee and Dietitians of Canada, Alberta and the Territories Region. (2008). Cost of Eating in Alberta 2008. [Online]. [cited 2013 April 11]; Available from: URL: <http://www.dietitians.ca/Dietitians-Views/Food-Security/Community-Food-Security.aspx>
8. Office of Nutrition Policy and Promotion. (2007). Canadian Community Health Survey Cycle 2.2, Nutrition (2004): Income-Related Household Food Insecurity in Canada. Ottawa: Health Canada.
9. The First Nations Information Governance Centre. (2012). National Report on Adults, Youth and Children Living in First Nations Communities (2008/10). Ottawa: Government of Canada.
10. Department of Human Nutritional Sciences, University of Manitoba. (January 2012), HIV/AIDS and Food Security in Resource Rich Settings, *Purple Paper* (35).
11. Damman, S., Eide, W.B., Kuhnlein, H.V. (2008) Indigenous peoples' nutrition transition in a right to food perspective *Food Policy* 33(2):135-155.
12. Willows, N.D. (2005), Determinants of Healthy Eating in Aboriginal Peoples in Canada. *Canada Journal of Public Health*, 96, (3).
13. Tarasuk, V., Mitchell, A., Dachner, N. (2013). Household food insecurity in Canada 2011. [On-line]. [cited 2013 August 15]; Available from URL: <http://nutritionalsciences.lamp.utoronto.ca/annual-report/>
14. Laraia, B., Siega-Riz, A., Gundersen, C. (2010). Household food insecurity is associated with self-reported pregravid weight status, gestational weight gain and pregnancy complications. *Journal of the American Dietetic Association*, 110, (5).
15. Cool, J., Frank, D. (2008). Food Security, Poverty, and Human Development in the United States. *Annals of the New York Academy of Sciences* 1136: 193–20.
16. Van Esterik, P. (no date). Breastfeeding and Food Security. *World Alliance for Breastfeeding Action* [On-line]. [cited 2013 August 15]; Available from URL: <http://www.waba.org.my/resources/activitiesheet/acsh10.htm>
17. Mikkonen, J., Raphael, D. (2011). Social Determinants of Health: The Canadian Facts. [Online] .[cited 2013 April 11]; Available from: URL <http://www.thecanadianfacts.org/index.html>
18. Bank of Canada, (no date). Inflation Calculator [On-line]. [cited 2013 May 7]; Available from URL: <http://www.bankofcanada.ca/rates/related/inflation-calculator/>
19. Health Canada. (2007). Eating Well with Canada's Food Guide. Ottawa; Health Canada. [On-line]. [cited 2013 August 15]; Available from URL: <http://www.hc-sc.gc.ca/fn-an/food-guide-aliment/index-eng.php>
20. Sunrise Regional Health Authority. (2013). Infant Formula Product Cost and Cost of Feeding Analysis for Professional Reference Only.
21. Merriam-Webster. (No date). Learner's Dictionary. [On-line]. [cited 2013 August 15]; Available from URL:

<http://www.learnersdictionary.com/>

22. National Council on Welfare. (2001). Dollars and Sense of Solving Poverty. Ottawa: Government of Canada.
23. Dietitians of Canada, BC Region. (2012). The Cost of Healthy Eating BC 2011. Dietitians of Canada. [On-line]. [cited 2013 August 15]; Available from URL: <http://www.dietitians.ca/Secondary-Pages/Public/The-Cost-of-Eating-in-British-Columbia.aspx>
24. American Public Health Association. (2007). Toward a healthy, sustainable food system. Washington, DC: American Public Health Association.

Photo Credits

Page 3: REACH, Regina Education and Action on Child Hunger



Pages 4, 7, 11: Northern Healthy Communities Partnership, Partnered Project



Page 13: Prince Albert Parkland Health Region



Page 15: Sun Country Health Region



Food Cost Calculator

To calculate the price of a nutritious food basket for an individual, family or group, use the following Food Costing Worksheet. This will help you estimate how much it would cost to feed your family healthy meals for a week or a month.

| Food Costing Worksheet | | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|-----------------------------------------------------------------------------------------------------------------------------|
| <p>Step 1 Write down the age and sex of all the people you are feeding. Then write down the cost per week based on where you live.</p> | Age (years) | Sex | Cost per week (\$) based on where you live Refer to Table 1 on the following page. |
| | | | |
| | | | |
| | | | |
| | | | |
| <p>Step 2 Add the costs.</p> | Subtotal = | | _____ |
| <p>Step 3 Multiply your subtotal by an adjustment factor.</p> | <p>It costs slightly more per person to feed a small group of people and less to feed a large group.</p> <p>1 person – multiply by 1.15 2 people – multiply by 1.10 3 people – multiply by 1.05 4 people – multiply by 0 (no change) 5 people – multiply by 0.95 6+ people – multiply by 0.90</p> | | <p>_____ X _____</p> <p>Subtotal Adjustment Factor</p> <p>= _____</p> <p>Total Weekly Food Cost</p> |
| <p>Step 4 Multiply your total weekly food cost by 4.33 to show cost per month.</p> | | | <p>_____ X 4.33</p> <p>Total Weekly Food Cost</p> <p>= _____</p> <p>Total Monthly Food Cost</p> |

Table 1: Average weekly cost of the National Nutritious Food Basket, by age, sex, and location, Saskatchewan, 2012.

| | Rural | Town | Small City | Large City | North West | North East | Far North | North Town |
|--------------------------------|---------|---------|------------|------------|------------|------------|-----------|------------|
| Males Age (yrs) | | | | | | | | |
| 2 to 3 | \$29.58 | \$29.28 | \$25.92 | \$25.30 | \$36.17 | \$35.64 | \$53.42 | \$30.72 |
| 4 to 8 | \$38.11 | \$37.62 | 33.36 | \$32.74 | \$46.77 | \$45.39 | \$68.90 | \$39.56 |
| 9 to 13 | \$50.15 | \$49.27 | 43.84 | \$43.42 | \$61.20 | \$58.34 | \$89.68 | \$51.70 |
| 14 to 18 | \$70.88 | \$68.44 | 61.50 | \$61.78 | \$86.33 | \$78.92 | \$123.90 | \$72.15 |
| 19 to 30 | \$69.17 | \$66.47 | 59.86 | \$60.05 | \$84.78 | \$77.02 | \$120.99 | \$70.63 |
| 31 to 50 | \$62.70 | \$60.46 | 54.41 | \$54.38 | \$76.94 | \$70.34 | \$109.80 | \$64.32 |
| 51 to 70 | \$60.49 | \$58.30 | 52.36 | \$52.32 | \$73.75 | \$67.72 | \$105.36 | \$61.70 |
| over 70 | \$59.80 | \$57.66 | 51.80 | \$51.79 | \$73.03 | \$66.91 | \$104.23 | \$60.91 |
| Females Age (yrs) | | | | | | | | |
| 2 to 3 | \$28.98 | \$28.64 | 25.32 | \$24.74 | \$35.39 | \$34.94 | \$52.44 | \$30.02 |
| 4 to 8 | \$36.90 | \$36.33 | 32.16 | \$31.61 | \$45.22 | \$44.00 | \$66.94 | \$38.16 |
| 9 to 13 | \$43.28 | \$42.65 | 37.91 | \$37.31 | \$53.06 | \$51.03 | \$77.78 | \$44.92 |
| 14 to 18 | \$51.76 | \$50.56 | 45.04 | \$44.62 | \$63.41 | \$60.02 | \$92.51 | \$53.30 |
| 19 to 30 | \$53.92 | \$51.87 | 46.61 | \$46.52 | \$66.37 | \$60.92 | \$94.97 | \$55.22 |
| 31 to 50 | \$53.12 | \$51.23 | 46.02 | \$45.92 | \$65.26 | \$60.08 | \$93.56 | \$54.41 |
| 51 to 70 | \$46.70 | \$45.59 | 40.72 | \$40.40 | \$57.24 | \$53.86 | \$83.03 | \$48.02 |
| over 70 | \$46.01 | \$44.88 | 40.10 | \$39.73 | \$56.21 | \$52.89 | \$81.16 | \$47.23 |
| Pregnancy Age (yrs) | | | | | | | | |
| 18 and younger | \$57.82 | \$56.13 | \$50.16 | \$49.89 | \$70.59 | \$66.00 | \$102.19 | \$59.31 |
| 19-30 | \$58.50 | \$56.75 | \$50.83 | \$50.58 | \$71.74 | \$66.73 | \$103.55 | \$60.25 |
| 31-50 | \$57.00 | \$55.36 | \$49.62 | \$49.37 | \$69.88 | \$64.92 | \$100.65 | \$58.67 |
| Breastfeeding Age (yrs) | | | | | | | | |
| 18 and younger | \$59.90 | \$58.39 | \$52.11 | \$51.82 | \$73.17 | \$68.75 | \$106.55 | \$61.60 |
| 19-30 | \$61.89 | \$59.78 | \$53.71 | \$53.69 | \$75.68 | \$69.58 | \$108.55 | \$63.38 |
| 31-50 | \$60.38 | \$58.39 | \$52.49 | \$52.48 | \$73.82 | \$67.77 | \$105.65 | \$61.81 |

Large City: Census metropolitan area with population of 100,000 or more.

Small City: Population between 5,000 and 99,999.

Town: Population between 500 and 4,999.

Rural: Population of less than 500.

The border used in this report to differentiate between north and south lies approximately 100km north of Prince Albert.

Far North: Low access communities with seasonal roads and air travel is the main form of transportation

North West: Moderately accessible communities with gravel or paved roads, and air access

North East: Moderately accessible communities with gravel roads and some air access

Northern Town: Highly accessible communities with paved roads and air access in all seasons