



# FOOD AND NUTRITION HIGHLIGHTS

Helping you maintain and improve your health

# 2019



Health  
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Canada



FOOD AND  
NUTRITION  
HIGHLIGHTS  
2019

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Helping you maintain  
and improve your health

Learn about what Health Canada is doing  
to make healthy eating the easier choice for  
Canadians, and to make food safe.

**Health Canada is the federal department responsible for helping the people of Canada maintain and improve their health.**

Health Canada is committed to improving the lives of all of Canada's people and to making this country's population among the healthiest in the world as measured by longevity, lifestyle and effective use of the public health care system.

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# WELCOME TO HEALTH CANADA'S ANNUAL HIGHLIGHTS REPORT

Health Canada helps Canadians maintain and improve their health by promoting healthy food, healthy food choices, and by keeping the food that Canadians eat as safe as possible. This is our first Food and Nutrition Highlights Report, outlining how we are promoting healthy eating and the initiatives we undertake to ensure that food is safe.

Our [Healthy Eating Strategy](#) is designed to improve the food environment in Canada and make it easier for Canadians to make the healthier choice. It involves improving healthy eating information, improving the nutrition quality of foods, and protecting vulnerable populations.

In 2019, we focused on healthy eating through the launch of the new [Canada's Food Guide](#). We also responded to key food safety issues.

Throughout the report, you will find several "Focus on..." features. These provide a closer look into our scientific work, research and analysis, which are the foundation of our evidence-based approach.

This report provides an overview of our work in 2019. For the most up-to-date information on our activities, please follow the links in the "[Healthy Clicks](#)" section. We also invite you to follow us on social media ([@GovCanHealth](#) on Twitter; [@healthycdns](#) on Instagram; and [Healthy Canadians](#) on Facebook) to learn more about healthy eating and food safety.

The work we do contributes to improved healthcare outcomes for Canadians. We hope that this report will give you a better understanding of our priorities, and help ensure you learn more about healthy eating and food safety.



Pierre Sabourin  
Assistant Deputy Minister,  
Health Canada

A blue ink signature of Pierre Sabourin.



Kendal Weber  
Associate Assistant  
Deputy Minister,  
Health Canada

A blue ink signature of Kendal Weber.

## MESSAGE FROM THE CHIEF MEDICAL ADVISOR

Put quite simply, food is central to health. Whether it is the role food and nutrition plays in development, providing energy for day-to-day activities, or reducing the risk of many chronic diseases, it touches every moment of every day. Conversely, when we are not following healthy eating practices or do not have a safe and secure supply of nutritious foods we are at risk of both acute illnesses such as food borne infections or chronic illnesses such as type 2 diabetes and heart disease.

Health Canada plays key roles in both providing healthy eating advice to make the healthy choice the easier choice, and in safeguarding Canadians' food supply.

The past year was a landmark one in nutrition as it was the culmination of years of work to update Canada's Food Guide to meet the needs of Canadians. This took into consideration how best to incorporate scientific and medical knowledge and translate that in a way that equipped Canadians to make the best nutrition decisions for themselves and their families. The launch of the Food Guide was a significant one, and is the foundation for tools for teachers, dietitians, health professionals, policy makers and all Canadians to help make decisions that nourish us all and promote good health.

While health promotion is a priority, we also take our health protection role very seriously. This year we took action to restrict the amount of alcohol in single-serve flavoured purified beverages that posed a risk, especially to youth. These beverages that contained as many as four standard alcohol drinks in one serving container were often highly sweetened or flavoured, masking the taste of that alcohol. Limiting those drinks to a maximum of 1.5 servings of alcohol per container brought them in line with Health Canada's low risk drinking guidelines.

This is the first year of sharing Health Canada's activities on nutrition and food in this format. We hope that this provides some insight on how we are continuing to work every day to promote healthy eating and support access to the safest, highest quality food for Canadians.



Supriya Sharma  
Chief Medical Advisor,  
Health Canada

# MESSAGE FROM THE CHIEF REGULATORY OFFICER

Canadian laws and regulations underpin the work we do to protect the health and safety of Canadians. Health Canada's regulations enable us to:

- set safety measures for food;
- make sure food labels give Canadians the information they need to select healthy foods, and avoid risks such as allergens;
- assess novel and special dietary foods; and
- take public health measures such as food fortification.

In 2019, we made improvements to the Food and Drugs Act (the Act) that will allow Canadian food researchers to conduct clinical trials for foods within Canada. This will enable important research for special dietary foods that are a sole source of nutrition, such as infant formulas, or food formulated to help Canadians with certain diseases or conditions. We also made a change to the Act to better support food innovation in Canada.

In 2019, we implemented new regulations to increase food safety. We put in place measures to:

- restrict the amount of alcohol in single-serve containers of flavoured purified alcoholic drinks to help protect Canadians from the risks of acute alcohol poisoning as a result of unintentional consumption; and
- enable the use of important food additives, which will increase access to new, safe and innovative foods for Canadians.

We will keep working on modernizing our food regulations to keep improving access to safe healthy, nutritious foods, and improving food labelling so Canadians can make healthy choices.



David K. Lee  
Chief Regulatory Officer,  
Health Canada

A handwritten signature in blue ink, appearing to read "D. Lee".



## FOOD AND NUTRITION: 2019 IN BRIEF

A healthy and safe food supply is essential for Canadians. Health Canada assesses the health risks and benefits of food, and provides advice and information about the safety and nutritional quality of what we eat. Health Canada also works to provide information to Canadians so they can make informed decisions about their health. To this end, the Department works to define, promote and implement evidence-based nutrition policies and standards.

Our policies, standards, regulations and guidelines are grounded in scientific evidence. We conduct research and keep up with the latest findings on nutrition and food safety to ensure that our work reflects the strongest evidence. Recognizing the global nature of nutrition evidence and the food system, we also work closely with our partners inside and outside Canada to share information and set international standards.

One of our biggest accomplishments in 2019 was the launch of the new Canada's Food Guide, a key initiative under the Healthy Eating Strategy. The new Food Guide is now a mobile-friendly web application that provides Canadians with easier access to information about healthy eating, where they live, work, and play.

In terms of food safety and the nutritional quality of all food sold in Canada, we work with other levels of government, consumers, and academics, as well as our health and food industry stakeholders, to establish policies, regulations and standards. Any product that is found to be unsafe will not be approved for sale. To do our part in ensuring that Canadians enjoy a safe and nutritious food supply, as well as to provide more choice and options to Canadians, in 2019 Health Canada approved [3 Novel Foods](#), [16 Food Additives](#) and [27 infant formulas](#) following a thorough pre-market safety assessment. For a list and description of these foods please go to the [Foods Approved in 2019](#)

[section](#). We also make the food supply safer by setting limits on naturally occurring chemical contaminants in food and respond to emerging risks, such as alcohol-related harms associated with highly sweetened alcoholic beverages.

We are committed to being open and transparent with Canadians about our work. For example, in 2019, we published information updates on various food safety issues, and continued reporting on meetings and correspondence with stakeholders regarding the Healthy Eating Strategy initiatives, so Canadians can see who we work with and how we arrive at our conclusions.

The "[Key Accomplishments](#)" section of the Highlights report gives you a brief overview about our work in 2019. For up-to-date information about our activities, see the "[Healthy Clicks](#)" section.



Alfred Aziz  
Director General, Office of  
Nutrition Policy and Promotion,  
Health Canada



Karen McIntyre  
Director General, Food  
Directorate, Health Canada





# FOODS APPROVED IN 2019

## Approved Food Additives

Health Canada approved the use of 16 food additives in 2019 after completing detailed safety assessments for each of them. They include the following:

- ▶ **[Maltogenic alpha-amylase from \*Bacillus licheniformis\* MDT06-221](#)**  
The *List of Permitted Food Enzymes* was modified to extend the use of maltogenic alpha-amylase from *Bacillus licheniformis* MDT06-221 in bread, flour, whole wheat flour, unstandardized bakery products, and pasta.
- ▶ **[Potassium pyrophosphate, tetrabasic](#)**  
The *Lists of permitted food additives* were modified to extend the use of potassium pyrophosphate, tetrabasic in unstandardized foods.
- ▶ **[Ground limestone](#)**  
The *List of Permitted Colouring Agents* was modified to enable the use of ground limestone in unstandardized confectionery.
- ▶ **[Protein-glutaminase from \*Chryseobacterium proteolyticum\* AE-PG](#)**  
The *List of Permitted Food Enzymes* was modified to enable the use of protein-glutaminase from *Chryseobacterium proteolyticum* AE-PG in various standardized and unstandardized Foods.
- ▶ **[Steviol Glycosides from \*Stevia rebaudiana\* Bertoni](#)**  
The *List of Permitted Sweeteners* was modified to enable the use of steviol glycosides from *stevia rebaudiana bertoni* in canned fruit products.
- ▶ **[Steviol Glycosides from \*Saccharomyces cerevisiae\* CD15380 and CD15407](#)**  
The *List of Permitted Sweeteners* was modified to enable the use of steviol glycosides from *Saccharomyces cerevisiae* CD15380 and CD15407 in a Variety of Foods.
- ▶ **[Acesulfame Potassium, Sucralose, Steviol Glycosides as Sweeteners, and Potassium Phosphate, dibasic](#)**  
The *Lists of Permitted Food Additives* were modified to enable the use of acesulfame potassium, sucralose, steviol glycosides as sweeteners, and potassium phosphate, dibasic as a stabilizer, in certain standardized flavoured milks.
- ▶ **[Lipase from \*Trichoderma reesei\* Morph Lip3](#)**  
The *List of Permitted Food Enzymes* was modified to enable the use of lipase from *Trichoderma reesei* Morph Lip3 in bread, flour, whole wheat flour, unstandardized bakery products, and pasta.
- ▶ **[Cellulose, Powdered](#)**  
The *List of Permitted Food Additives* with other accepted uses was modified to enable the use of cellulose, powdered as a bulking and texturizing agent in horseradish and mustard powder (Wasabi-like Powder).



- ▶ **[Tocopherols](#)**  
The *List of Permitted Preservatives* was modified to enable the use of tocopherols in dehydrated fish broth and dehydrated mollusc broth.
- ▶ **[Potassium Phosphate, dibasic](#)**  
The *List of Permitted Sequestering Agents* was modified to enable the use of potassium phosphate, dibasic in infant cereal products.
- ▶ **[Sodium Potassium Hexametaphosphate](#)**  
The *List of Permitted Sequestering Agents* was modified to enable the use of sodium potassium hexametaphosphate in whey products for use in infant formula.
- ▶ **[Polysorbate 80](#)**  
The *List of Permitted Food Additives* with other accepted uses was modified to enable the use of polysorbate 80 in the manufacture of spray-dried bacterial culture preparations for use in infant formula powders, dried infant cereal products and nutritional supplement powders.
- ▶ **[Glutaminase from \*Bacillus amyloliquefaciens\* GT2](#)**  
The *List of Permitted Food Enzymes* was modified to enable the use of glutaminase from *Bacillus amyloliquefaciens* GT2 in various unstandardized foods.
- ▶ **[L-Lysine Monohydrochloride](#)**  
The *List of Permitted Food Additives* with other accepted uses was modified to enable the use of L-lysine monohydrochloride in certain processed snack foods to inhibit acrylamide formation during their manufacture.
- ▶ **[Xylanase from \*Trichoderma reesei\* \(LOVxInA#568.4\)](#)**  
The *List of Permitted Food Enzymes* was modified to enable the use of xylanase from *Trichoderma reesei* (LOVxInA#568.4) in bread, flour, whole wheat flour and unstandardized bakery products.

## Approved Novel Foods

In 2019, Health Canada approved three novel food after completing detailed safety assessments for each:

- ▶ **[Imidazolinone Herbicide Tolerant Rice RTC1](#)**  
This rice was developed to be herbicide tolerant
  - ▶ **[Insect-resistant sugarcane CTC91087-6](#)**  
This sugar cane was developed to be insect resistant
  - ▶ **[EPA+DHA Herbicide Tolerant Canola Event LBFLFK](#)**  
This canola was developed to have an improved fatty acid profile and to be herbicide tolerant
- Health Canada maintains a list of [completed safety assessments](#), which is regularly updated.



# FOODS APPROVED IN 2019

## Approved Infant Formulas

As part of Health Canada's commitment to making sure Canadians can enjoy a safe and nutritious food supply, we conduct scientific, pre-market safety assessments of infant formulas before they can be sold in Canada. In 2019, we approved 27 infant formulas:

- ▶ **Nestlé Good Start Probiotic with Omega 3 & 6**  
Infant formula for use from birth with omega 3 and omega 6 and probiotic *B. lactis* in powdered format, 600g
- ▶ **Nestlé Good Start 2 Probiotic with Omega 3 & 6**  
Infant formula for use from 6 months of age with omega 3 and omega 6 and probiotic *B. lactis* in powdered format, 600g
- ▶ **Nestlé Good Start 1 Probiotic with Omega 3 & 6**  
Infant formula for use from birth with omega 3 and omega 6 and probiotic *B. lactis* in powdered format, 1.02kg
- ▶ **Nestlé Good Start 2 Probiotic with Omega 3 & 6**  
Infant formula for use from 6 months of age with omega 3 and omega 6 and probiotic *B. lactis* in powdered format, 1.02kg
- ▶ **Nestlé Good Start 1 GOS with Omega 3 & 6**  
Infant formula for use from birth with omega 3, omega 6 and fibre (GOS: galacto-oligosaccharides) in a ready to feed format, 89mL glass nurser
- ▶ **Nestlé Good Start 1 GOS with Omega 3 & 6**  
Infant formula for use from birth with omega 3, omega 6 and fibre (GOS: galacto-oligosaccharides) in a ready to feed format, 250mL tetra prisma
- ▶ **Nestlé Good Start 1 GOS with Omega 3 & 6**  
Infant formula for use from birth with omega 3, omega 6 and fibre (GOS: galacto-oligosaccharides) in concentrate format, 240mL tetra brik
- ▶ **Nestlé Good Start 2 GOS with Omega 3 & 6**  
Infant formula for use from 6 months of age with omega 3 and omega 6, and fibre (GOS: galacto-oligosaccharides) in a ready to feed format, 250mL tetra prisma
- ▶ **Nestlé Good Start 2 GOS with Omega 3 & 6**  
Infant formula for use from 6 months of age with omega 3, omega 6, and fibre (GOS: galacto-oligosaccharides) in concentrate format, 240mL tetra brik
- ▶ **Nestlé Good Start 1**  
Infant formula for use from birth concentrate format, 240mL tetra brik
- ▶ **Abbott Similac Specialized Infant Formulas for Term Infants**  
Addition of lutein to Similac 24 kcal, Similac Isomil with omega 3 & omega 6 and Similac Sensitive for Lactose Sensitivity term infant formulas in a ready to feed format, 59mL plastic bottle
- ▶ **Mead Johnson Nutrition Nutramigen A+**  
Infant formula for use from birth with extensively hydrolysed protein for the dietary management of cow's milk protein allergy for use under the supervision of a physician in a ready to feed format, 59mL plastic bottle
- ▶ **Mead Johnson Nutrition Pregestimil A+**  
Infant formula for use from birth with extensively hydrolyzed protein for feeding babies who experience fat malabsorption or may be sensitive to intact protein in a ready to feed format, 59mL plastic bottle
- ▶ **Mead Johnson Nutrition Enfamil A+ Premature High Protein 24 kcal**  
Infant formula for premature infants with high protein 24 kcal in a ready to feed format, 59mL plastic bottle



- ▶ **Mead Johnson Nutrition Enfamil A+ Premature 24 kcal**  
 Infant formula for premature infants 24 kcal in a ready to feed format, 59mL plastic bottle
- ▶ **Mead Johnson Nutrition Enfamil A+ Premature 20 kcal**  
 Infant formula for premature infants 20 kcal in a ready to feed format, 59mL plastic bottle
- ▶ **Mead Johnson Nutrition Enfamil A+ Soy**  
 Infant formula for use from birth based on soy protein isolate in a ready to feed format, 59mL plastic bottle
- ▶ **Mead Johnson Nutrition Enfamil A+ Enficare**  
 Post-discharge infant formula for premature or low birth weight infants in a ready to feed format, 59mL plastic bottle
- ▶ **Mead Johnson Nutrition Enfamil A+ Lactose Free**  
 Infant formula (lactose free) for use from birth in a ready to feed format, 59mL plastic bottle
- ▶ **Mead Johnson Nutrition Enfamil A+**  
 Infant formula for use from birth in a ready to feed format, 237mL, plastic bottle
- ▶ **Mead Johnson Nutrition Enfamil A+ Gentlease**  
 Infant formula for use from birth with partially hydrolyzed whey and casein protein and reduced lactose in a ready to feed format, 237mL, plastic bottle
- ▶ **Mead Johnson Nutrition Enfamil A+ 2**  
 Infant formula for infants from 6 months of age in a ready to feed format, 237mL, plastic bottle
- ▶ **Mead Johnson Nutrition Nutramigen A+**  
 Infant formula for use from birth with extensively hydrolysed protein for the dietary management of cow's milk protein allergy for use under the supervision of a physician in a ready to feed format, 946 mL, plastic bottle
- ▶ **Dairy Goat Co-Operative Ltd. Capricare Goat Milk Based Infant Formulas**  
 Infant formula and follow up formula based on goat milk in powdered format, 800g
- ▶ **Abbott Similac Special Care and Neosure Formulas for Preterm Babies**  
 Preterm formulas (Similac Special Care 20 kcal, Similac Special Care 24 kcal, Similac Special Care 24 kcal High Protein and Similac Neosure (post-discharge formula) with Lutein for preterm babies in a ready-to-feed format, 59mL plastic bottle
- ▶ **Nestlé Good Start L. Reuteri**  
 Infant formula for use from birth with probiotics (L. reuteri) in powdered format, 550g and 942g
- ▶ **Sobeys Compliments with Iron, Omega 3 & 6 and GOS**  
 Infant formula for use from birth with iron, omega 3 and omega 6, and fibre (GOS: galacto-oligosaccharides) in powdered format, 658g



## KEY ACCOMPLISHMENTS

### PROMOTING HEALTHY EATING

There are many factors influencing our ability to make healthy food choices and eat healthily. The food in our homes, schools, grocery stores and restaurants, coupled with the influence of social media and advertising, has a major impact on our choices. These factors make healthy eating a challenge for many of us. There is a constant flow of changing and often conflicting messages, which creates a lot of confusion about what to eat.

We know that an unhealthy diet is a major risk factor for chronic diseases, so the promotion of healthier eating is fundamental to the good health of Canadians.

Our [Healthy Eating Strategy](#) aims to make it easier for Canadians to make healthier food choices. The Strategy's approach includes:

- improving healthy eating information;
- improving nutrition quality of foods; and
- protecting vulnerable populations.

As part of this approach, Canada's Food Guide is a key tool and resource.

### CANADA'S FOOD GUIDE

[Canada's Food Guide](#) has been a trusted source of nutrition information for over 75 years. The new Food Guide was launched in January 2019, with a focus on

eating habits and recommended food choices. The Guide encourages Canadians to eat a variety of healthy foods each day, be mindful of their eating habits, cook more often, enjoy their food, and eat meals with others.

The new Food Guide is a mobile-friendly web application that provides Canadians with easier access to information about healthy eating, wherever they are, at any time. It includes many resources, such as [Canada's Dietary Guidelines for Health Professionals and Policymakers](#), and [Canada's Healthy Eating Recommendations](#). It also features the [Food Guide Snapshot](#), which communicates guidance on food choices and eating habits in the form of a handy visual.

Canada's [Dietary Guidelines for Health Professionals and Policy Makers](#) provide advice on:

- foods that are the basis for healthy eating;
- foods that can have a negative impact on health when consumed on a regular basis;
- food skills to support healthy eating; and
- understanding and acting on the barriers that make it challenging for Canadians to make healthy food choices.

In addition to these resources, the Food Guide includes [recipes](#), videos, and advice that will help Canadians apply dietary guidance in their daily lives. For example, the Guide has tips on topics such as healthy eating on a budget, and recipes, and video demonstrations

featuring inexpensive and commonly available ingredients.

## EVIDENCE BASE

Health Canada's recommendations are supported by research, analysis, and consultations. We base our work on the best available scientific evidence from credible scientific bodies to support our dietary guidance, and keep it up to date as new information become available.

As part of the launch of the Food Guide, we also released the [Food, Nutrients and Health: Interim Evidence Update](#). This report is part of our ongoing approach to gathering, assessing, and analyzing scientific evidence. The process keeps our dietary guidance scientifically sound, current, relevant, and useful.

## PROMOTION AND ENGAGEMENT

Since the launch, our promotional activities have been raising awareness about the Food Guide, and helping Canadians apply its advice.

Between February and March 2019, we hosted a series of public webinars to explain the development process, share the many new resources, provide advice of how to use the materials, and address questions. More than 1,500 health professionals, provincial and territorial officials, educators, industry, academia, and members of the general public participated in these webinars.

To engage with Canadians in an ongoing way, we launched the Canada's Food Guide [e-newsletter in April 2019](#). The e-newsletter offers monthly healthy eating highlights and tips from the Food Guide, as well as recipes and resources to help subscribers eat well and live well. If you are interested in subscribing, see our [Healthy Clicks](#) section.

The Food Guide Snapshot is available in [31 languages](#), including nine Indigenous languages. With more than 37 million people in Canada, we have many residents whose first language is neither English nor French. Providing the Snapshot in multiple languages will help more people in Canada access and benefit from Canada's Food Guide's key recommendations.

In spring 2019, Health Canada ran a digital public awareness campaign to promote tips for eating on a budget. We continue to promote the Food Guide through Health Canada's social media channels, including Facebook, Twitter, Instagram and LinkedIn. Further, throughout the development and promotion of the Food Guide, Provincial and Territorial members of the Federal-Provincial-Territorial Group on Nutrition have played key roles.

## RECONCILIATION

As part of reconciliation, the Government of Canada acknowledges that program and policy making must support self-determination, and recognize the distinct nature and lived experiences of First Nations, Inuit and Métis. As such, the revised Food Guide was developed to be relevant to all Canadians, as well as be inclusive of Indigenous Peoples. Furthermore, to complement the Food Guide, Health Canada and Indigenous Services Canada are committed to working with Indigenous peoples to support the development of healthy eating tools for and by First Nations, Inuit and Métis.

### CANADA'S FOOD GUIDE BY THE NUMBERS

#### Number of:

- Food Guide Snapshots accessed\*: **2.1 million**
- Translated snapshots accessed\*: **over 65,000**
- e-newsletter subscribers: **over 40,000**
- Website Visits: **4.5 million**
- Times content displayed on social media: **2.3 million**
- Times Food Guide recipes accessed\*: **1.6 million**

\*accessed = ordered+downloaded+viewed



## THE MOST POPULAR RECIPE IN 2019

Home cooks across the country are being inspired by the healthy and delicious recipes in Canada's new Food Guide. The favourite so far is the Guide's version of mac and cheese, which freshens up an old favourite by adding bite-sized vegetables into the creamy sauce.

### MAC AND CHEESE WITH A VEGGIE TWIST

**Prep Time:** 20 minutes

**Cook Time:** 20 minutes

**Servings:** 4

#### Ingredients

- 375 mL (1 ½ cups) whole grain macaroni or fusilli
- 10 mL (2 tsp) soft non-hydrogenated margarine
- 1 small onion, finely chopped
- 2 cloves garlic, minced
- 1 carrot, finely chopped
- 125 mL (½ cup) finely chopped red bell pepper
- 125 mL (½ cup) grated zucchini
- 30 mL (2 tbsp) all purpose flour
- 500 mL (2 cups) skim milk
- 5 mL (1 tsp) chopped fresh thyme or 2 mL (½ tsp) dried thyme leaves
- 250 mL (1 cup) shredded light old Cheddar cheese
- 5 mL (1 tsp) Dijon mustard
- Pinch fresh ground pepper

#### Directions

1. In a pot, bring water to boil. Add macaroni and cook for about 6 minutes or until pasta is tender but firm. Drain well and set aside.
2. In a large saucepan, heat margarine over medium heat and cook onion and garlic for 1 minute. Add carrot, red pepper and zucchini and cook, stirring for about 5 minutes or until softened. Stir in flour and cook, stirring until flour is absorbed. Slowly pour in milk and stir until smooth. Add thyme. Cook, stirring for about 5 minutes or until starting to bubble. Stir in cheese, mustard and pepper. Remove from heat and stir until melted and smooth. Stir in cooked macaroni until well coated.

## ENSURING THE SAFETY OF THE CANADIAN FOOD SUPPLY

Canada's food safety system is one of the best in the world. We work with governments, industry and consumers to establish policies, regulations and standards related to the safety and nutritional quality of all food sold in Canada. Health Canada's role is to protect Canadians from risks to health and the spread of disease. We achieve this by:

- setting food safety standards and addressing emerging risks;
- conducting health risk assessments in support of food safety investigations; and
- providing information to Canadians about food safety.

The Canadian Food Inspection Agency (CFIA) plays the equally important role of monitoring the food industry's compliance to the regulations and taking enforcement action when necessary, as well as conducting food safety investigations and food recalls.

Canadians are also important players in ensuring a safe food system. Each of us can contribute by:

- Using good [food handling practices](#) and following [cooking instructions](#); and
- [Reporting](#) a food safety or labelling concern.

## SETTING SAFETY STANDARDS: ADDRESSING CONTAMINANTS

Food contaminants and other unwanted substances are chemicals that may be present in foods at levels that could have an impact on the overall safety or quality of foods. These substances can be present in foods inadvertently (as the result of their presence in the environment, for example).

Health Canada and the CFIA conduct regular surveillance of the levels of chemical contaminants in the Canadian food supply. When a potential safety concern is identified, appropriate risk management measures are taken to protect the health of Canadians.

### Focus on... ALTERNATIVES TO ANIMAL TESTING

One of our priorities is reducing our use of animal testing, while still providing the scientific evidence needed to make regulatory decisions. In 2019, we published a series of studies designed to include a range of alternatives to animal testing when we examined the hazards associated with exposure to a chemical flame retardant. This was done through a combination of mathematical modelling together with more data from a range of other sources. We hope this comprehensive approach will modernize our risk assessment process and allow us to use fewer test animals.

One risk management measure that can be taken is the development of maximum levels for chemical contaminants, which are established in an effort to reduce Canadians exposure to a particular contaminant from retail foods.

Health Canada is committed to ensuring that dietary exposure to food contaminants is as low as reasonably achievable. In 2019, Health Canada established or proposed regulatory maximum levels for a number of chemical contaminants in food. For example:

#### Arsenic in rice

Arsenic occurs naturally in the environment. It can be found at very low levels in various foods, such as rice. Rice represents a significant source of exposure to inorganic arsenic in the diet of Canadians.

In June 2019, Health Canada consulted with Canadians and our international food chemical safety partners on a [proposal](#) to add new maximum levels for inorganic arsenic in white and brown rice.

## Lead in infant formula

The existing Canadian maximum levels for lead in infant formula were established when there were sources of lead contamination of foods that are no longer relevant in Canada. These maximum levels do not reflect the concentrations of lead typically found in these types of foods today.

In June 2019, Health Canada consulted with Canadians and our international partners on its proposal to establish a single lower maximum level for lead in all types of infant formula.

## Cyanide in Apricot Kernels

Apricot kernels are the seeds found inside the pits (stones) of fresh apricots. They resemble small almonds and have an almond-like taste. Typically sold in health food stores or speciality grocery stores, apricot kernels can also be used as an ingredient in foods and beverages.

Apricot kernels naturally contain cyanogenic glycosides, primarily amygdalin, which has the potential to release cyanide after being eaten. Although the human body can eliminate small amounts of cyanide, high exposures over a short duration can result in cyanide poisoning. Symptoms of acute cyanide poisoning include weakness and confusion, anxiety, restlessness, headache, nausea, difficulty breathing, and shortness of breath, loss of consciousness, seizures, and cardiac arrest.

To protect Canadians from the potential risk of cyanide poisoning from eating apricot kernels, in July 2019 Health Canada established a [maximum level](#) for total extractable cyanide in apricot kernels sold as a food in

Canada. The maximum level also applies to apricot kernels used as an ingredient in other foods. The new regulation came into effect on January 25, 2020. This maximum level allows Canadians to safely eat apricot kernels in a manner similar to other types of seeds and nuts.

## ADDRESSING EMERGING RISKS

Food safety issues can lead to serious health risks for Canadians. Health Canada proactively conducts food monitoring and surveillance and undertakes scientific research to identify, characterize and respond to new food safety risks. Despite these efforts, new and unexpected risks and harms emerge that require mitigating measures. In 2019, we took the following action:

### Flavoured purified alcohol beverages

Flavoured purified alcoholic beverages are highly sweetened drinks that mask the taste of alcohol, but could contain as many as four standard alcoholic drinks in a single-serve container.

This can result in the consumption of large amounts of alcohol in a very short period of time, which can lead to serious alcohol-related harms such as acute alcohol poisoning.

On May 23, 2019, Health Canada [announced new regulations](#) to protect Canadians from the immediate risks posed by these beverages. Under the new regulations, single-serve flavoured purified alcoholic beverages are restricted to 25.6 mL of alcohol (representing 1.5 standard drinks) when they are packaged in containers of a volume of 1000 mL or less. This is consistent with [Canada's Low-Risk Alcohol Drinking Guidelines](#), which recommends consumption of no more than two standard drinks per day for women, and no more than three standard drinks per day for men.

### Preventing E. coli in flour

Flour was once thought to be too dry to harbour E. coli bacteria, but outbreaks in 2016-2017 in both the U.S. and Canada challenged that assumption. In 2019, Health Canada scientists worked to improve our understanding of the causes of the outbreak, and

## Focus on...

### APRICOT KERNEL TESTING

Apricot kernels naturally contain amygdalin, which can release cyanide when digested. Health Canada scientists developed a method to measure this substance in apricot kernels. The method is being used by CFIA to enforce the new maximum level for apricot kernels.

the potential of the bacteria to survive and spread in flour. They determined that the bacteria could survive in stored flour for up to two years. The scientists are now focused on reducing E. coli illness by developing improved methods for testing food, and for decontaminating it.

## FOOD-RELATED HEALTH RISK ASSESSMENTS

Despite having a strong food safety system, food safety events can result in illness. One in eight (or 4 million) Canadians get sick each year from eating contaminated food. Health Canada has responded quickly to each serious incident by working closely with our partners and taking measures to minimize risk to public health.

Certain substances or microorganisms in food pose a potential health risk to consumers. Chemical contaminants, natural toxins, allergens, unapproved food additives, bacteria, viruses, or parasites are areas where we carry out health risk assessments to determine if the presence of a certain substance or microorganism in food poses a potential health risk to consumers.

The purpose of a health risk assessment is to determine if exposure to a foodborne chemical or substance presents a risk to human health. In 2019, at the request of CFIA, Health Canada conducted 99 food-related health risk assessments. Health Canada's assessments help inform CFIA's risk

## Focus on... DETECTING BISPHENOL A

Bisphenol A (BPA) is an industrial chemical used to make a hard, clear plastic, and epoxy resins which can be used to line metal-based food and beverage cans, including infant formula. Current dietary exposure to BPA through food packaging uses is not expected to pose a health concern. However, given uncertainty around BPA effects in experimental animal studies, Health Canada has committed to limiting the exposure of infants and newborns to BPA from food packaging applications. In 2019, Health Canada conducted a survey to confirm that industry had phased out the use of BPA-containing packaging for liquid infant formula. BPA was not detected in any of the food samples that were analysed.

management actions. For example, appropriate risk management may involve removing the food from retail shelves.

A food recall is an action taken by a company to remove potentially unsafe food products or products from the market that do not comply with relevant laws and regulations. It is the responsibility of industry to remove the product from sale or distribution.



## Focus on... OUT OF THIS WORLD TESTING DEVICE

Health Canada researchers collaborated with other federal government colleagues to develop a new technology to test for foodborne pathogens. They developed a credit-card size cartridge that channels samples into a device to test for *E. coli*. The lab-on-a-chip cartridge is now being adapted to test for other foodborne pathogens, and other government scientists are looking to modify the technology to use it as a diagnostic tool for astronauts in space. BPA was not detected in any of the food samples that were analysed.

The CFIA's role in this regard is to inform the public, oversee implementation of the recall, and verify that industry has removed recalled products from store shelves and taken any necessary corrective actions to address the problem.

In addition to regular health risk assessments that are conducted when there is an outbreak of foodborne illness or other concerning incidents, Health Canada also conducts long-term risk assessments to help guide the development of policy or interventions to reduce the risk of human illness due to pathogens in the food supply.

The following is an example of a risk assessment we conducted in 2019:

### **Salmonella in poultry**

Raw turkey and raw chicken products carrying *Salmonella* may look, smell and taste normal. For this reason, it is important to always follow [safe food-handling tips](#) if you are buying, chilling, thawing, cleaning, cooking and storing any type of raw poultry food products. Anyone can become sick with a *Salmonella* infection, but infants, children, seniors and those with weakened immune systems are at

higher risk of serious illness because their immune systems are more fragile. Health Canada has been working toward reducing the risk of exposure to *Salmonella* in poultry.

In October 2019, Health Canada completed a [Quantitative Microbial Risk Assessment](#) (QMRA) of *Salmonella* in broiler chicken meat to provide the evidence to guide next steps for governments and industry as they look at solutions to address this problem. Using this type of detailed, mathematical model allows us to determine where the risks of contamination are for the chicken meat as it makes its way from the farm to the dinner plate.

## KEEPING YOU INFORMED

Canadians need access to information on food safety, nutrition and healthy eating, and to be informed about food-related health risks and benefits.

### **Food allergens**

One food-related health risk concern is the exposure to food allergens. Allergic reactions occur when the body's immune system reacts adversely to a particular allergen. These reactions may be caused by food, insect stings, latex, medications and other substances. Health Canada has worked with the medical community, allergy associations, and the food industry to enhance labelling requirements for [priority allergens](#) (for example, peanuts, milk, eggs), gluten sources, and sulphite in prepackaged foods sold in Canada.

When the CFIA becomes aware of a potential serious hazard associated with a food, such as undeclared allergens, the food product is recalled from the marketplace and a public warning is issued. Allergy alerts are posted on the [CFIA website](#).

Health Canada's [Recalls and Safety Alerts](#) page communicates information regarding this type of food-related health risk — and others — to the public. Here are some examples:

### **Safe food handling for chicken products**

[Uncooked breaded chicken](#), in the form of chicken nuggets, fingers, strips or burgers, pose a risk of *Salmonella* infection. Despite education and outreach



efforts, as well as mandatory and voluntary labelling measures, these products continue to be associated with Salmonella outbreaks in Canada.

In April 2019, the CFIA developed a [new directive](#), requiring industry to ensure that frozen raw breaded chicken products have no detectable Salmonella levels. Health Canada developed a food safety marketing campaign to communicate the importance of safe food handling and safe cooking temperatures to two key target audiences: young adults, 18 to 24 years of age, and parents, 18 to 54 years of age.

### Food safety alerts

[Safety alerts](#) (e.g., recalls, information updates for consumers) are issued when we have important information to share with Canadians.

In 2019, Health Canada published the following Information Updates:

- [Farmer's market food safety](#)
- [Apricot kernels](#)
- [Summer food safety](#)
- [Staying safe on Halloween](#)

## PRE-MARKET OVERSIGHT

Companies that wish to sell a novel food, a new infant formula, or a food containing a new food additive must first seek approval from Health Canada to sell the product in Canada. As part of Health Canada's commitment to making sure Canadians can enjoy a safe and nutritious food supply, we conduct scientific, pre-market safety assessments of these products. Any product that is found to be unsafe will not be approved for sale. Here are some examples of our pre-market oversight work conducted in 2019:

### Novel foods

Change is nothing new, especially when it comes to food. The globalization of the world's food supply and the rapid advances in food science and technology have resulted in the introduction of foods not previously available in the Canadian marketplace. In addition, advances in genetics have meant that crop breeders are offering farmers new seeds with different traits.

These products can all be considered as novel foods. Examples include foods that have been produced through new processes or that have been modified by genetic manipulation. [All approved novel foods](#) have undergone a thorough pre-market safety assessment prior to their sale and advertisement in Canada.

In 2019, Health Canada approved [three novel foods](#).

### Food additives

A food additive is a substance that is used for a technical function in manufacturing a food, and that becomes part of the food or affects the food's characteristics. Examples include food colouring agents, low-calorie sweeteners, and preservatives.

Health Canada's Lists of [Permitted Food Additives](#) show which additives are permitted, the foods they can be used in, and the maximum amount that can be used. There are 15 lists. In general, they are organized in according to technical function (e.g., food colourings are in the List of Permitted Colouring Agents). Health Canada thoroughly assesses the safety of both new additives and of new uses of already permitted additives before adding them to the lists.

In 2019, Health Canada enabled [16 food additives uses](#), of which four were for new food additives.



### **Infant formula**

Health Canada recommends breastfeeding infants and young children for up to 2 years and more. For babies who are not being breastfed or receiving breastmilk, commercial infant formula is recommended by Health Canada as a healthy and safe breast milk alternative. All infant formula sold in Canada undergoes a rigorous safety assessment by Health Canada.

In 2019, Health Canada approved [27 infant formulas](#) for sale in the Canadian market.

## **PARTNERSHIP AND COLLABORATION**

There are many players in the food safety system. Our operating environment cuts across multiple jurisdictions, and has players in a wide range of sectors. Collaboration with partners significantly reduces duplication of labour, and improves information available on which to base decisions. We foster partnerships and collaborations to advance mutual interests in ensuring that food products meet Canadian standards for food safety and nutrition.

During 2019, Health Canada reached out to our stakeholders and partners through a number of channels, including the following:

### **Stakeholder collaboration**

On May 7, 2019, we welcomed food and nutrition stakeholders to discuss the future of food, including the challenges and opportunities presented by innovation in the food system.

Over 100 participants from industry associations, academia, consumer groups, non-governmental organizations, and other government partners took part in-person, while many others participated via webcast. Participants provided information and advice on how we can better respond and adapt to emerging trends and enable innovative solutions to improve the food environment in Canada, and help Canadians to make safe and healthier choices.

The event was also an opportunity to discuss the Government of Canada's efforts to modernize our food regulations to make them more adaptable, transparent and responsive.

### **International activity**

Established in 1963 by the World Health Organization, and the Food and Agriculture Organization of the United Nations, the [Codex Alimentarius Commission](#) (Codex) develops international food standards to protect consumer health and to ensure fair practices in the food trade.

As one of Codex's 189 member countries, Health Canada continues to work with partners across the globe to ensure that federal guidance and regulations on food are based on the best science available.

In May 2019, Canada hosted the 45th Session of the Codex Committee on Food Labelling. This year's agenda included draft guidelines for front-of-pack nutrition labelling, and consideration of new work on allergen labelling and on internet sales and e-commerce.

Health Canada also led a number of Canadian delegations to various meetings held by the Codex Committees and the Codex Alimentarius Commission throughout the year.

Participation in the international food standard setting work of Codex Committees is an important component of Canada's international food regulatory cooperation. Through its participation in the work of Codex, Health Canada has the opportunity to influence and advance Canadian interests and contribute to the health and safety of Canadians by ensuring that the international standards are appropriate to the Canadian context and that the global food supply is safe.

### **Federal, Provincial and Territorial collaboration**

Health Canada hosted the annual meeting of the Federal-Provincial-Territorial Food Safety Committee in November 2019. The meeting focused on food safety issues that were common for all regions of Canada.

## **OPENNESS, TRANSPARENCY AND EXPERT ADVICE**

### **Healthy Eating Strategy**

To help improve our openness and transparency around stakeholder engagement activities related to the [Healthy Eating Strategy](#), Health Canada began [publishing all correspondence and meetings with stakeholders](#) where views, opinions and information are relayed with the intent to inform the development of policies, guidance or regulations. In 2019, there were 31 meetings and 50 pieces of correspondence on the strategy.

## **Focus on... BEHAVIOURAL AND SOCIAL SCIENCES**

In 2019, Health Canada collaborated with the University of Toronto to explore the effectiveness of our proposed food labelling strategies. Not only will the research findings strengthen our food labelling strategies to keep Canadians informed about their nutrition, they will also support our education and outreach activities to increase consumer understanding about the nutritional quality of the foods they are eating.

### **Nutrition Science Advisory Committee**

In July 2019, Health Canada announced that it would be establishing a new external advisory committee, the [Nutrition Science Advisory Committee](#), to provide timely and independent scientific and technical advice related to nutrition. To ensure objectivity of the advice and to maintain trust in the scientific integrity of Health Canada's nutrition-related work, a rigorous selection process is in place, including engaging an external conflict of interest expert to advise the selection committee.



## HEALTHY CLICKS FOOD AND NUTRITION AT A GLANCE

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Find other Health-related information on the  
**Government of Canada website**  
[canada.ca/en/services/health.html](https://canada.ca/en/services/health.html)

**Find more information on healthy eating on our Food and Nutrition page**  
<https://www.canada.ca/en/services/health/food-nutrition.html>

**Sign up to our Stakeholder Registry**  
[canada.ca/en/health-canada/corporate/about-health-canada/public-engagement/stakeholder-registry.html](https://canada.ca/en/health-canada/corporate/about-health-canada/public-engagement/stakeholder-registry.html)

### EMBRACE HEALTHY EATING

Consult Canada's Food Guide  
[food-guide.canada.ca/en](https://food-guide.canada.ca/en)

Take inspiration from the Food Guide Snapshot  
[food-guide.canada.ca/en/food-guide-snapshot](https://food-guide.canada.ca/en/food-guide-snapshot)

Check out Canada's Dietary Guidelines  
[food-guide.canada.ca/en/guidelines](https://food-guide.canada.ca/en/guidelines)

Subscribe to the Food Guide's e-newsletter  
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Try one of our Recipes  
[canada.ca/en/health-canada/services/canada-food-guide/tips-healthy-eating/meal-planning-cooking-healthy-choices/recipes.html](https://canada.ca/en/health-canada/services/canada-food-guide/tips-healthy-eating/meal-planning-cooking-healthy-choices/recipes.html)

### SEEK OUT OUR FOOD SAFETY ADVICE

Protect yourself with our food safety tips  
[canada.ca/en/health-canada/services/general-food-safety-tips.html](https://canada.ca/en/health-canada/services/general-food-safety-tips.html)

Refer to our safe cooking temperatures  
[canada.ca/en/health-canada/services/general-food-safety-tips/safe-internal-cooking-temperatures.html](https://canada.ca/en/health-canada/services/general-food-safety-tips/safe-internal-cooking-temperatures.html)



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