

Caring for Children with Anaphylaxis in Community Program Settings

Unified Referral and Intake System (URIS)
4th edition
2026

Anaphylaxis

This manual was developed in consultation with health care professionals in the areas of anaphylaxis and community health. The Unified Referral and Intake System (URIS) wishes to acknowledge the contribution of the following individuals.

Elinor Simons, MD PhD MSc FAAAAI

Pediatric Allergist
Children's Allergy and Asthma Education Centre
Section of Allergy and Clinical Immunology
Department of Pediatrics and Child Health, Children's Hospital of Manitoba

Lynne Warda, MD PhD FRCPC

Associate Medical Director, Children's Emergency Department
Medical Consultant, MHSAL Population and Public Health

Caroline Doucette, RN, BN, CAE

Allergy Nurse Clinician
Children's Allergy and Asthma Education Centre
Section of Allergy & Clinical Immunology
Department of Pediatrics and Child Health, Children's Hospital of Manitoba

Lenore Johnstone, RN, BN, CAE

Asthma and Allergy Nurse Educator
Children's Allergy and Asthma Education Centre
Section of Allergy & Clinical Immunology
Department of Pediatrics and Child Health, Children's Hospital of Manitoba

Nancy Ross, RN, BN, CAE

Asthma and Allergy Nurse Educator
Children's Allergy and Asthma Education Centre
Section of Allergy & Clinical Immunology
Department of Pediatrics and Child Health, Children's Hospital of Manitoba

Sandra Dalke, RN, BN

Winnipeg Regional Health Authority
URIS Provincial Coordinator

CONTENTS

INTRODUCTION	1
CLINICAL INFORMATION	2
Anaphylaxis	2
Food allergens	3
Non-food allergens	4
Risk reduction	5
Signs of anaphylaxis	9
Treatment of anaphylaxis	11
Epinephrine auto-injectors	12
Administering an epinephrine auto-injector	14
Responding to an anaphylactic reaction	16
STANDARD HEALTH CARE PLAN	17
TRAINING	17
RESOURCES	18
REFERENCES	20

INTRODUCTION

Unified Referral and Intake System (URIS) is a collaborative initiative of the provincial departments of Health, Families, and Education and Early Childhood Learning. It offers a standardized approach to classifying health care needs based on their complexity and determines the level of professional qualification required to safely support children with these health care needs.

URIS is designed to support community programs in meeting the needs of children with specific health care needs. Community programs eligible for URIS support include schools, licensed child care facilities, and publicly funded agencies that provide respite services.

This document includes standards of care for children who are at increased risk for anaphylaxis and prescribed epinephrine.

Schools and licensed child care facilities in Manitoba are required to develop and implement policy that addresses anaphylaxis in their facility. In October 2008, the *Public Schools Amendment Act – Anaphylaxis Policies* was passed to formalize a school board's obligation to develop an anaphylaxis policy. The amendment was proclaimed effective November 1, 2009. For more information about *The Public Schools Amendment Act*, go to [The Public Schools Amendment Act \(Anaphylaxis Policies\)](#).

In 2008, Manitoba passed the Child Care Safety Charter, the first legislation of its kind in Canada, which mandates safety plans and codes of conduct in child care facilities. This legislation requires them to develop comprehensive and coordinated policies and procedures to meet the needs of children who are at increased risk for anaphylaxis. The Charter was proclaimed on May 1, 2010. For more information about the Child Care Safety Charter, go to [The Child Care Safety Charter](#).

CLINICAL INFORMATION

Anaphylaxis

An allergy is the immune system's excessive reaction to a usually harmless substance, called an allergen. In individuals susceptible to an IgE-mediated allergy, exposure to an allergen results in the body creating IgE antibodies specific to that allergen. When the body is exposed to the allergen again, the IgE antibodies cause chemicals (e.g., histamine) to be released from mast cells, which are found in many areas of the body including the airway, mouth, nose, eyes, and stomach. When mast cells release these chemicals, signs such as hives, itching, and swelling can be seen. A person with a life-threatening IgE-mediated allergy is at increased risk for anaphylaxis (Fischer 2018). Allergic reactions can vary from mild to life-threatening.

Anaphylaxis is a severe allergic reaction that is typically rapid in onset and can result in death due to airway obstruction or a severe drop in blood pressure. It is an extreme total body reaction.

Studies have estimated that two per cent of Canadians are at increased risk for anaphylaxis. Foods and insect stings are common causes of anaphylaxis in children (Sampson 2003, Kim 2011, Golden 2017, Golden 2023). More recent studies suggest that six to eight per cent of the population is at increased risk for food allergies alone. Fatalities from anaphylaxis more often occur away from home and are associated with either not using or a delay in the use of epinephrine. In one study, four out of six deaths from food allergies occurred in school and none of these children had epinephrine available at the time of their reaction. Children with a food allergy and asthma are at higher risk for severe allergic reactions, especially if asthma is not well controlled (Bock 2007).

Children at increased risk for anaphylaxis must be diagnosed and prescribed an epinephrine auto-injector by a physician. It is recommended that an allergist assesses the child to confirm the diagnosis. Education for the child and parent/guardian in managing their allergy is essential.

A life-threatening allergy may be unpredictable and rapid in onset. Anaphylaxis can occur even when a person has previously experienced only minor allergic reactions. A person may experience an anaphylactic reaction without any previous signs of an allergy. Anaphylactic reactions can be triggered by minute amounts of an allergen measured in micrograms, although some allergic individuals have higher thresholds for reaction.

Food allergens

A person can be allergic to any food. Foods that commonly cause anaphylaxis include peanuts, tree nuts, cow's milk, eggs, fish, shellfish (crustaceans, molluscs), wheat, sesame, mustard, and soy. Health Canada lists these foods as the “priority food allergens”. (Waserman 2018, Health Canada, 2025). Non-priority allergens, such as pea-protein, are also emerging as important causes of anaphylaxis to foods (Soller 2021, Hildebrand 2021).

Peanut and tree nuts

Peanuts are legumes that grow underground and are not botanically related to tree nuts. Tree nuts include almonds, brazil nuts, cashews, hazelnuts, macadamia nuts, pecans, pistachios, walnuts, chestnuts, hickory nuts, and pine nuts. Although pine nuts are a seed, they are labeled as a tree nut under Health Canada's Priority Allergen for Tree Nuts. Individuals who are allergic to peanuts may not be allergic to tree nuts, and vice versa. However, it is possible to be allergic to both. Children with peanut or tree nut allergies are generally advised to avoid both when they are away from their primary caregivers because of the risk of cross-contamination.

Allergic reactions to foods such as peanuts are triggered by specific protein in food. Food odours are caused by non-protein chemicals, so smelling peanut butter odour is different from inhaling airborne peanut particles (proteins). While a person with a peanut allergy may feel unwell from the smell of peanut butter, this is likely due to a strong psychological aversion.

Milk

When a person has a milk allergy, they are allergic to all milk products (e.g., yogurt, cheese, ice cream). Proteins in cow's milk are similar to those in goat's milk and sheep's milk, so consuming these products is also not safe for individuals with a milk allergy. Most children outgrow a milk allergy by school age, but those who remain allergic can experience severe anaphylaxis. Some children with a milk allergy may safely eat baked goods containing milk.

Egg

Most children outgrow an egg allergy by school age, but those who remain allergic to egg can experience severe anaphylaxis. Some children with an egg allergy may safely eat baked goods containing eggs. Children with egg or other food allergies may receive routine childhood immunizations, and flu and COVID shots without testing or additional precautions (Health Canada 2024).

Fish and shellfish

The term “fish” refers to all edible finned or bony fish, including both fresh and saltwater species. Shellfish include crustaceans (e.g., shrimp, crab, lobster) and molluscs (e.g., scallops, clams). Individuals with an allergy to a specific species should consult an allergist about potential allergies to other species.

Non-food allergens

Insect stings

Bees, wasps, hornets, and yellow jackets can cause anaphylaxis from their stings (Golden 2017). Large local swelling at the sting site is also common and may occur without symptoms in other parts of the body.

Medications

Certain medications, such as antibiotics, muscle relaxants, and anti-convulsants can cause anaphylaxis.

Latex

A person with a latex allergy reacts to the proteins in natural rubber latex, which comes from the sap of the rubber tree. Reactions can occur through exposure to latex products or inhalation of airborne latex particles. Children who have had multiple surgeries with exposure to latex may be at higher risk for a latex allergy.

Some individuals with a latex allergy may also be allergic to certain foods that are structurally similar to latex including: apple, avocado, banana, carrot, celery, chestnut, kiwi, melons, papaya, raw potato, and tomato.

Latex is found in many medical and dental supplies, including disposable gloves, bandages, erasers, balloons, athletic shoes, tires, rubber toys, baby bottles, teething rings, and pacifiers.

Other allergens and physical triggers

Cold-induced urticaria causes hives with exposure to cold air or water. Some children may take a daily 24-hour non-sedating antihistamine during certain times of year (e.g., winter, cold and wet weather) or before activities that may trigger hives. The highest risk for anaphylaxis is during sudden full-body immersion (e.g., jumping into a cold lake).

Although rare, vigorous exercise in a cold, wet environment alone or after eating certain foods, can cause anaphylaxis. Reactions may not occur every time the child exercises.

A person can also be diagnosed with idiopathic anaphylaxis, which means the cause is unknown or has not yet been identified.

Risk reduction

Avoidance of allergens is the only way to prevent an anaphylactic reaction. In almost all cases, serious allergic reactions happen after a person eats their food allergen (Waserman 2021). Although it can be difficult to achieve complete avoidance of an allergen, reducing the child's exposure to the allergen is possible.

It is recommended that community programs develop risk reduction strategies to promote an allergy-aware setting that supports the safety of children at increased risk for anaphylaxis who are attending the community program.

Risk reduction strategies should be flexible enough to address the safety of children at increased risk for anaphylaxis as well as the organizational and physical environment of the community program (Young 2009). Many factors should be considered when implementing risk reduction strategies such as the age of children, location of eating areas, level of adult supervision, and size of the facility. The most successful strategies enlist the support of the entire community including parents/guardians, children, and community program personnel. A culture of mutual respect is critical for the safety of children with and without an increased risk for anaphylaxis.

The community program may consider the strategies listed below to reduce exposure to allergens in their facility. If the parent/guardian requests specific risk reduction strategies for their child, the community program may consider implementation on a case-by-case basis and work collaboratively with the parent/guardian.

Additional resources are available online, including [Food Allergy Canada – Food Allergy Canada](#). The community program may contact the URIS nurse or URIS Provincial Coordinator for support in developing risk reduction strategies for children in their care.

Risk reduction strategies for food allergens

- Do not trade or share food, utensils, straws, or water bottles.
- Do not offer food to children with a known allergy without prior approval from their parent/guardian.
- Children with food allergies should only eat food that has been provided by their parent/guardian and should not eat items brought in by others.
- Perform proper hand hygiene before and after eating. Hands should be washed with soap and water or cleaned with an alcohol-based hand rub. Antibacterial hand sanitizers and water alone are less effective.
- Clean surfaces with soap and water or a grease-cutting solution where food has been eaten. Care should be taken to clean all surfaces that children may touch such as tabletops, under-hangs of tables, and chairs. Common cleaning products are effective in removing residual peanut allergens from surfaces.
- Eating on buses should not be permitted.

- Avoid craft supplies that contain allergens. Be mindful of hidden allergens in items such as play dough or pet food.
- Adapt recipes to avoid food allergens in cooking classes.

Risk of exposure to food allergens increases in new situations or when normal routines are interrupted such as field trips, birthday parties, and other special events. Precautions should be taken when changes in routines occur.

Establishing an allergen aware environment

If the community program requests items containing a food allergen not be brought into the building or be present at functions, it is recommended to use terminology such as “allergen-aware” rather than “allergen-free” or “allergen-safe” as it is not possible to guarantee the allergen will not be present. Also, restricting certain foods may affect the child’s dietary options, and some children may continue to face exposure to their allergens. For example, a child with allergies to cow’s milk and wheat who attends a community program where peanuts and tree nuts are restricted still needs to avoid milk and wheat, in addition to complying with peanut and tree nut restrictions.

Reading ingredient labels on foods and other products is an important component in maintaining an allergen-aware environment.

- Ingredients may change so labels should be read every time a product is purchased.
- Precautionary warnings such as “may contain” are used by food manufacturers at their own discretion. If a product has this type of warning it may contain trace amounts of the allergen. A person with a food allergy should not eat products with a “may contain” warning for their allergen(s) unless instructed by their allergist. These foods should not be an issue if they are consumed by non-allergic children in the presence of older children with food allergies.
- Foods from brands widely considered “safe” may still have other products that may contain allergens (e.g., peanut-free chocolate in ice cream that has a “may contain peanut” warning).
- Do not assume that all forms of an allergen-free product are safe. An allergen-free claim may only apply to a certain size or format of the brand. For example, a regular size candy bar may be considered free of an allergen while the snack size could have a “may contain” warning.
- The Canadian Food Inspection Agency requires “priority food allergens” to be identified on prepackaged food products using plain language. In Canada, these priority allergens are peanuts, tree nuts (i.e. almonds, brazil nuts, cashews, pistachios, hazelnuts, pecans, walnuts, macadamia nuts, pine nuts), sesame, wheat, egg, cow’s milk, fish (e.g. salmon, tuna), shellfish, crustaceans (e.g. shrimp, lobster, crab), molluscs (e.g. scallops, clams), soy, and mustard (Government of Canada, 2018, 2025).
- Food labeling standards differ outside Canada.
- Some community programs create “safe foods” lists that guide families in sending safe food for their child, but these lists should only be used as a guideline. Reading labels is the preferred practice.

Risk reduction strategies for specific food allergens

In addition to the recommended strategies for food, additional risk reduction strategies may be considered for specific foods. When developing strategies, it is important to consider where the food is consumed and the level of restriction needed to minimize risk of accidental consumption.

Peanuts and tree nuts

It is more common for community programs, especially where younger children are in attendance, to establish a “nut aware” policy than for other foods. Allergies to peanuts and tree nuts are prevalent in school-age children. In addition, peanut and tree nut residues are oily and persist on surfaces, increasing the risk of contact exposure and potential cross-contamination.

Milk

- Designate an eating space for children with a milk allergy where products that are more likely to spill (e.g., milk, yogurt) are not being consumed.
- Provide children with straws to put in bevel-topped milk containers and teach them to close the top after the straw is inserted.

Egg

- Designate an eating space for children with an egg allergy where eggs (e.g., hard boiled eggs, egg salad sandwiches) or food containing egg products (e.g., mayonnaise) are not being consumed.
- Use plastic or wooden eggs for crafts instead of real eggs.

Fish and shellfish

- When cooking fish or shellfish, the vapour or steam can contain protein allergens that cause anaphylaxis. Although it is rare for inhalation to cause anaphylaxis, the proximity to where the food is cooked and cooking method (frying food poses a higher risk) can increase risk of exposure.
- Do not allow fish to be microwaved. Microwaving food is less likely to cause an airborne reaction but may still pose a risk for cross contamination due to splatter.

Risk reduction strategies for non-food allergens

Stinging insects

Only honeybees leave a stinger behind. To remove a stinger, gently scrape the stinger off with your fingernail. Grabbing the stinger between your fingers will compress the sac of venom and inject more venom into the body.

- Keep outdoor garbage covered and located away from play areas. Yellow jackets are attracted to garbage and food.
- Avoid eating outdoors. Insects may fly into drink containers (e.g., pop cans) and sting the child when they take a sip.
- Use straws for drinks whenever possible.
- Ensure children wear shoes instead of sandals and do not go barefoot outdoors.
- Remove nests or hives from play areas.

Latex

- Provide non-latex gloves for community program personnel and children (e.g., science class, first aid kits).
- Inflate and deflate balls outdoors and away from children. Balls that contain latex will release latex particles into the air when inflated or deflated.
- Do not use balloons that contain latex in the community program. When these balloons break, the latex particles become aerosolized.
- Avoid items that contain latex such as soft rubber balls, stretchy rubber items (e.g., rubber bands), and pink erasers.

Risk reduction strategies for younger children

Young children are at greater risk of accidental exposure without supervision of an adult who can aid with allergen avoidance and recognition of accidental exposure.

- Adult supervision while eating.
- Designate safe eating areas. If foods containing an allergen are brought into the community program, it should be eaten in a designated area where the child with the allergy is less likely to be exposed. Alternately, children with a food allergen may eat in a designated “allergen aware” location that is inclusive.
- Younger children with food allergies should be kept away from foods to which they are allergic.
- Placemats or napkins may be used on tables during meals to facilitate faster cleanup. This should not replace proper cleaning of any surfaces that may have been contaminated.

Risk reduction strategies for teenagers

Teenagers are considered at higher risk for severe allergic reactions due to increased independence, peer pressure, and reluctance to carry an epinephrine auto-injector. Managing food allergens in secondary schools requires balancing safety with the need for adolescents to develop self-management of their allergies while leading their preferred social and academic routines. Risk reduction strategies may be difficult in secondary schools because adult supervision is more limited and students move throughout the building and off campus.

In general, teenagers at increased risk for anaphylaxis are capable of taking primary responsibility for avoiding allergens. Some children may require support due to development or cognitive abilities. This may include reading food labels, carrying their epinephrine auto-injector, and taking extra precautions when purchasing meals at the community program or off site.

Signs of anaphylaxis

An anaphylactic reaction usually begins within seconds or minutes after exposure to an allergen. Most reactions occur within 30 minutes. Without treatment, anaphylaxis can progress rapidly. In severe cases, the time from first symptoms to death may be only a few minutes. Although it is rare, signs of anaphylaxis can occur up to two to four hours after exposure to the allergen. Even when signs have subsided after treatment, they can return hours after exposure. This second (biphasic) reaction may occur in up to 20% of cases (Järvinen 2008).

There is clear evidence that a delay in injecting epinephrine increases the risk of death from anaphylaxis. Immediate treatment with an epinephrine auto-injector decreases the likelihood of needing repeated doses due to prolonged or recurrent symptoms (Shaker 2020, Sicherer 2017, Hochstadter 2016, Fleming 2015, Bock 2007).

If ANY combination of signs is present and there is reason to suspect anaphylaxis, give epinephrine immediately and activate 911/EMS.

Watch for signs that appear suddenly and are obvious changes in appearance or behaviour. After exposure to an allergen, any combination of the signs may indicate the onset of anaphylaxis. Signs do not always appear in the same pattern, even in the same individual.

Use Food Allergy Canada's "Think F.A.S.T." – face, airway, stomach, total body – to remember the signs of anaphylaxis.

Face

- Red, watering eyes
- Runny nose
- Swelling of the face, lips, or tongue

- Hives (red, raised, itchy rash)
 - When the allergen is eaten, hives often appear around the mouth.

Airway

- A sensation of throat tightness
- Difficulty swallowing
- Difficulty breathing
- Coughing
- Wheezing
- Hoarseness or other change of voice
- Drooling

Stomach

- Vomiting
- Diarrhea
- Stomach cramps

Total body

- Hives (red, raised, itchy rash)
- Feeling a “sense of doom”
- Sudden change in behaviour
 - The child may say they don’t feel right, become unusually quiet or withdrawn, appear suddenly tired, scream, become very agitated, or stop eating abruptly.
- Pale or bluish skin
- Dizziness or fainting (drop in blood pressure)
- Loss of consciousness

Children may describe their experiences in unique ways, especially young or non-verbal children. Some may put their hands in their mouth, pull at, or scratch their tongue in response to an allergic reaction. The child’s voice may change (e.g., become hoarse or squeaky) or they may slur their words.

Community program personnel should be aware of words and phrases children might use to describe how they feel including:

- “This food is too spicy.”
- “My tongue (or mouth) is tingling (or burning).”

- “My tongue (or mouth) itches.”
- “My mouth feels funny.”
- “There’s something stuck in my throat.”

Treatment of anaphylaxis

Epinephrine is the first-line medicine used to treat anaphylaxis (Sicherer 2007, NAIAD 2010, Simons 2014, Sicherer 2017, Shaker 2020 Wasserman 2021). It is the same chemical that the body naturally produces under stress (adrenaline) and is responsible for the “adrenaline rush.” Epinephrine is effective in treating anaphylaxis by reversing the dangerous symptoms involved in anaphylaxis and stopping the allergic response in the body. It helps by constricting muscles around blood vessels, which raises the blood pressure, relaxing airway muscles, reducing swelling, reducing the release of chemicals that cause anaphylaxis, and stimulating the heart (Simons 2004).

There is no significant harm if epinephrine is given to a child for whom it is prescribed, even if an anaphylactic reaction is not actually occurring. The lifesaving benefits of epinephrine in cases of suspected anaphylaxis outweighs any small risk of side effects. In healthy individuals, epinephrine will not cause harm if given unnecessarily.

Side effects are generally mild and subside within a few minutes. Possible side effects include:

- Rapid heart rate
- Paleness
- Dizziness
- Weakness
- Tremors
- Headache

Antihistamines are NOT first-line treatment for anaphylaxis.

Antihistamines and medications used for asthma (e.g., reliever medications) should not be used in the treatment of anaphylaxis. While they will do no harm when given as additional or secondary medication, they have not been proven to stop an anaphylactic reaction.

Some children may use antihistamines to treat hives or skin symptoms. It is safe to administer an antihistamine for a non-life-threatening allergic reaction if the child has not been exposed to their life-threatening allergy and they are monitored by an adult for signs of anaphylaxis. If the child shows one or more additional signs of anaphylaxis, epinephrine is administered and 911 is called.

For children diagnosed with both anaphylaxis and asthma, epinephrine should be used first if it is unclear whether the child is experiencing an anaphylactic reaction or an asthma episode. Epinephrine can be used to treat life-threatening asthma episodes as well as anaphylactic reactions.

Clinical experts recommend that children with life-threatening allergies wear medical alert identification. Options include bracelets, necklaces, or other forms of ID that clearly identify the allergy. [MedicAlert Foundation Canada | We Speak When You Can't](#)

Epinephrine auto-injectors

Epinephrine auto-injectors (e.g., EpiPen) are the preferred method to administer epinephrine because they are simple and fast to use. They contain a spring-loaded, self-injectable syringe with a concealed needle. Epinephrine auto-injectors should always be administered in the outer middle thigh.

Currently, the EpiPen is the only epinephrine auto-injector prescribed in Canada. In 2015, Allerject was voluntarily drawn from the Canadian market. It was relaunched in 2020, but with permanent supply constraints starting in 2024, they will no longer be available in Canada as of 2025/2026. AUVI-Q is still available in the United States.

Dosage

Epinephrine auto-injectors are available in two doses in Canada. In general, the 0.3 mg dosage is prescribed for adults and children weighing 25-30 kg or more. The 0.15 mg dosage is prescribed for children weighing less than 25-30 kg (Golden 2023, Sicherer 2017, Lieberman 2015, Simons 2014). Although the appropriate dose should be used, accidental administration of a larger dose of epinephrine to a school-age child is unlikely to cause harm.

Storage and expiry

- Keep epinephrine auto-injectors in their protective case and at room temperature (15 to 30 °C).
- Do not refrigerate or leave in extreme heat (e.g., hot car) or cold for long periods of time.
- If frozen, replace the epinephrine auto-injector.
- Replace epinephrine auto-injectors when they have expired.
 - They are stamped with an expiry date.
 - It is still safe to use an expired epinephrine auto-injector as long as the epinephrine is clear and colourless (Simons 2000). The benefit of using an expired medication is greater than no medication.
 - Epinephrine may remain clear for a long time after it has expired and its effectiveness continues to decrease over time (Simons 2000).

- Many manufacturers offer online programs to track expiration dates.
- Do not use epinephrine if the solution is brown or contains sediment.

Accessibility

It is recommended that children carry their epinephrine auto-injector on their body (e.g., fanny pack, belt bag,).

- If the child is not developmentally able to carry it, the epinephrine auto-injector should be:
 - worn by the adult responsible for them; or
 - stored in an unlocked, safe and accessible location.
- Most children can carry their own auto-injector by age 6 to 7 years (Simons 2012, Simons 2013).
- Children with stinging insect allergies should carry their epinephrine auto-injector during insect season (warmer months).
- Community program personnel must be aware of the location of the child's epinephrine auto-injector.

Responsibility and Use

- Older children and teens should be encouraged to take responsibility for preventing and managing anaphylaxis.
- Do not assume the child can determine when epinephrine is required or to safely self-inject during an anaphylactic reaction. Some signs of anaphylaxis (e.g., drop in blood pressure, feeling faint) may impair their ability to recognize anaphylaxis.
- An epinephrine auto-injector prescribed to one child cannot be administered to another child.
- If a child shows a combination of anaphylactic signs and does not have a prescribed epinephrine auto-injector, call 911 immediately.

Stock epinephrine

Stock epinephrine refers to epinephrine auto-injectors that are not prescribed to a specific person but may be used in an emergency. The purpose of stock epinephrine is to ensure that a child at risk for anaphylaxis can receive timely treatment if their own auto-injector is not available. There are many factors to consider in the use of stock epinephrine including liability, cost, and responsibilities of the community program, parents/guardian, and children.

The following guidelines are recommended for the use of stock epinephrine in community program settings. It is at the discretion of the community program to consider the use of

stock epinephrine. Additional resources are available on the Food Allergy Canada website: <https://foodallergycanada.ca/professional-resources/educators/school-k-to-12>.

- Epinephrine auto-injectors will be purchased by the community program for use with children and staff who already have epinephrine prescribed by a physician or nurse practitioner.
- Community programs with children who are 12 years of age or younger will purchase both the 0.15 mg and 0.3 mg epinephrine auto-injectors.
- Community programs with children who are 13 years of age or older will purchase the 0.3 mg epinephrine auto-injector. The 0.15 mg epinephrine auto-injector will also be purchased if children with this dosage attend the community program.
- Epinephrine auto-injectors will be stored in a safe and accessible location where other medications in the community program are stored and staff are made aware of the location.
- Community program personnel will be informed of the policy and procedures for stock epinephrine.
- Expired and used epinephrine auto-injectors will be replaced immediately by the community program.
- When a child who is prescribed an epinephrine auto-injector exhibits a combination of anaphylactic signs and does not have their own epinephrine auto-injector available, the following steps are implemented.
 1. Administer the stock epinephrine auto-injector containing the child's prescribed dosage.
 2. Call 911/EMS.
 3. Notify the parent/guardian.
- If a child is NOT prescribed an epinephrine auto-injector and is exhibiting a combination of anaphylactic signs, the following steps are implemented.
 1. Call 911/EMS.
 2. Inform EMS personnel that stock epinephrine is available.
 3. Follow directions from the EMS personnel.
 4. Notify the parent/guardian.

Administering an epinephrine auto-injector

1. Secure the child's leg.
 - Ensure the child is sitting or lying in a position of comfort. The epinephrine auto-injector cannot be administered when the child is standing.
 - If the child is lightheaded or dizzy, place them on their back with legs raised above heart level.
 - If the child is having difficulty breathing, they may prefer to sit in an upright position.

- If the child is vomiting, place them on their side.
 - You may need to hold the child or their leg still during administration. Infants and toddlers may be held securely on an adult's lap.
2. Identify the injection area on the outer middle thigh.
 - The auto-injector can penetrate one layer of regular clothing.
 - Consider removing snow suits or other bulky clothing, if possible, without causing delay.
 - To locate the injection area:
 - To find the **middle** of the thigh, divide the space between the hip and knee into three sections and choose the middle section.
 - The **outer** portion of the thigh is between the pant's outer seam and the center crease.
 - Feel the spot with your hand to avoid seams or items in a pocket that may interfere with injecting the medication.
 3. Hold the epinephrine auto-injector correctly.
 - Grasp it firmly in your fist.
 - For the EpiPen, remember "blue to the sky, orange to the thigh".
 - Avoid placing your thumb on either end. Injecting epinephrine into your hands or feet may result in loss of blood flow to the affected area. If there is an accidental injection in these areas, call 911/EMS immediately.
 4. Remove the safety cap.
 - Pull the safety cap straight off.
 - Do not pull sideways, bend, or twist the cap. This may cause the auto-injector to activate accidentally or malfunction.
 5. Press the tip into the outer middle thigh at a 90° angle until you hear or feel a click.
 6. Hold it in place for a slow count of 5 to ensure the medication is fully delivered.
 - For infants or small children, bunch the leg muscle.
 - For children with more adipose tissue (body fat) on their leg, press the device firmly enough to ensure the needle reaches the muscle.
 - For the EpiPen, an orange cover automatically extends and locks over the needle so it is not exposed. If the cover does not extend, check that the safety cap was removed and re-administer the EpiPen, pressing firmly into the thigh.
 7. Discard the used epinephrine auto-injector.
 - Follow the community program's policy for disposal of sharps or give it to EMS personnel.

Improvements in the signs of anaphylaxis will occur within minutes.

After the epinephrine auto-injector is injected, the child may experience temporary side effects such as paleness, headache, dizziness, pounding heart, nausea, shakiness, or become unusually quiet. These effects are normal and usually pass quickly.

Posting the steps for administering an epinephrine auto-injector in key areas (e.g., classroom, office, staff room, lunchroom) can serve as a quick reference guide for community program personnel. Resources are available on the Food Allergy Canada website. [Resources and tips – Food Allergy Canada](#)

Responding to an anaphylactic reaction

1. Inject the epinephrine auto-injector into the outer middle thigh.
 - Administer the epinephrine as soon as possible.
 - Prompt administration of the first dose reduces the likelihood of needing additional doses.
2. Activate 911/EMS.
 - Ideally, this is done at the same time as administering the epinephrine by delegating the task to another responsible adult. Any child experiencing an anaphylactic reaction in a community program must be seen by a physician, even if symptoms improve after epinephrine was administered.
3. Notify the child's parent/guardian.
4. If the signs of anaphylaxis persist, administer a second dose of epinephrine as early as five minutes after giving the first dose.
 - If the first dose was administered through bulky clothing, remove them before administering the second dose.
 - Administering more than two doses of epinephrine must be determined by EMS personnel, either by phone or in person.
5. Stay with the child until EMS personnel arrive.
 - Do not leave the child alone.
 - The child should not sit up or stand immediately following a reaction as this can cause a dangerous drop in blood pressure.
 - Provide EMS personnel with key information including:
 - Signs of anaphylaxis observed
 - When symptoms began
 - Location of epinephrine (right or left thigh)
 - When the epinephrine was given
 - Child's response to the epinephrine

STANDARD HEALTH CARE PLAN

A standard health care plan is implemented in the community program as the response to anaphylactic reaction is consistent.

The parent/guardian provides child-specific information to the community program including:

- Life-threatening allergy/allergies
- Name and dose of the prescribed epinephrine auto-injector
- Location of the epinephrine auto-injector(s) during attendance at the community program

The community program should also obtain written consent from the parent/guardian to administer epinephrine to their child.

A template that includes this information is available by contacting the URIS Provincial Coordinator.

TRAINING

Annual training is provided by a registered nurse to community program personnel on the care of children at increased risk for anaphylaxis. Training includes:

- Information on recognizing and responding to signs of anaphylaxis.
- Demonstration of the administration of an epinephrine auto-injector using a training device.
- Community program personnel practice the administration of an epinephrine auto-injector using a training device.

Information on training devices is included on the manufacturers' website: [Homepage | Epipen.ca](https://www.epipen.ca). Training devices may also be obtained through a pharmaceutical representative.

Training resources are available by contacting the URIS Provincial Coordinator.

RESOURCES

The following list includes resources that may be relevant to community programs in the care of children at increased risk for anaphylaxis. The purpose and content of these resources may not be consistent with this document.

Children’s Allergy and Asthma Education (CAAEC) at Health Sciences Centre in Winnipeg

Asthma and food allergy education programs for parents, school age children and teens

- YouTube channel “Allergy and Asthma Education”
[Allergy & Asthma Education – YouTube](#)
- Phone: 204-787-2551 Toll Free: 1-888-554-1141

Food Allergy Canada

<https://foodallergycanada.ca/>

Resources for community programs and families

- [Anaphylaxis in schools & other settings – Food Allergy Canada](#)
- Online allergy aware course for educators and child care workers –
www.allergyaware.ca/en/courses
- [Registration: All About Food Allergy student program – Food Allergy Canada](#)
- [Resources for teachers – Food Allergy Canada](#)
- [School \(K to 12\) – Food Allergy Canada](#)

Allergic Living Magazine

Resources for community programs and families

www.allergicliving.com

Canadian Food Inspection Agency

www.inspection.gc.ca

Food labeling, recalls and alerts

- Food Allergy Labeling Information and Fact Sheets – <http://www.inspection.gc.ca/food/information-for-consumers/fact-sheets-and-infographics/food-allergies/eng/1332442914456/1332442980290> Food Recalls/Allergy Alerts
- Food Recalls and Alerts – Canada.ca

www.epipen.ca

- How to use EpiPen – Online video
- Expiration Reminder service

F.A.R.E. Food Allergy Research and Education (U.S.)

www.foodallergy.org

Health Canada

www.healthcanada.gc.ca/foodallergies

- Advisories, Warnings and Recalls
www.hc-sc.gc.ca/ahc-asc/media/advisories-avis/index_e.html
- Food Labeling
www.hc-sc.gc.ca/fn-an/label-etiquet/index_e.html
[Food Allergen Labelling – Canada.ca](http://www.hc-sc.gc.ca/fn-an/label-etiquet/index_e.html)

Kids with Food Allergies Foundation

<https://kidswithfoodallergies.org/>

REFERENCES

- Anaphylaxis in Schools & Other Settings (3rd Edition Revised). Canadian Society of Allergy and Clinical Immunology 2016.
- Bock, S.A., Munoz-Furlong, A., Sampson, H.A. Further fatalities caused by anaphylactic reactions to food, 2001-2006. *J Allergy Clin Immunol* 2007;119:1016-8.
- Fleming JT, Clark S, Camargo CA, Jr., Rudders SA. Early treatment of food-induced anaphylaxis with epinephrine is associated with a lower risk of hospitalization. *J Allergy Clin Immunol Pract* 2015;3:57-62.
- Fischer, D., Vander Leek, T., Ellis, A., Kim, H. Anaphylaxis. *Allergy Asthma & Clinical Immunology* 14(Suppl 2):54 2018. <https://doi.org/10.1186/s13223-018-0283-4>
- Golden, D., Wang, J., Wasserman, S., Adkin, C., Campbell, R.L., et al. Anaphylaxis: A 2023 practice parameter update. *Ann Allergy Asthma Immunol* 2024; 132: 124-176.
- Golden, D., Demain, J., Freeman, T., Graft, D., Tankersley, M., et al. Stinging insect hypersensitivity: A practice parameter update 2016. *Annals of Allergy Asthma & Immunology*, 2017; 118, 28e54.
- Government of Canada (2018, May 14). Common Food Allergens. Retrieved from <https://www.canada.ca/en/health-canada/services/food-nutrition/food-safety/food-allergies-intolerances/food-allergies.html>
- Government of Canada (2025, August 22). Retrieved from [Before you shop: food allergies and allergen labelling – inspection.canada.ca](https://www.inspection.canada.ca/before-you-shop-food-allergies-and-allergen-labelling)
- Government of Canada (2024, September 10) Retrieved from [Contraindications and precautions: Canadian Immunization Guide – Canada.ca](https://www.canada.ca/en/health-canada/services/immunization/canadian-immunization-guide-contraindications-and-precautions)
- Hildebrand, H., Arias, A., Simons, E., Gerdt, J., Povolo, B., Rothney, J., Protudjer, J.L.P. Adult and Pediatric Food Allergy to Chickpea, Pea, Lentil, and Lupine: A Scoping Review. *J Allergy Clin Immunol Pract*. 2021 Jan;9(1):290-301.e2. doi: 10.1016/j.jaip.2020.10.046. Epub 2020 Nov 6.
- Hochstadter, E., Clarke, A., De Schryver, S., LaVieille, S., Alizadehfar, R., Joseph, L., et al. Increasing visits for anaphylaxis and the benefits of early epinephrine administration: A 4-year study at a pediatric emergency department in Montreal, Canada. *J Allergy Clin Immunol* 2016;137:1888-90.e4.
- Järvinen, K.M., Sicherer, S.H., Sampson, H.A., Nowak-Wegrzyn, A. Use of multiple doses of epinephrine in food-induced anaphylaxis in children. *The Journal of Allergy and Clinical Immunology* 2008; 122(1): 133-138.
- Kim, H., & Fischer, D. Anaphylaxis: Allergy, Asthma & Clinical Immunology. 2011 7(Supplement 1) S6, <http://www.aacjournal.com/content/7/S1/S6>
- Lieberman, P., Nicklas, R.A., Randolph, C., Oppenheimer, J., Bernstein, D., Bernstein, J., et al. Anaphylaxis--a practice parameter update 2015. *Ann Allergy Asthma Immunol* 2015;115:341-84.

- NIAID-Sponsored Expert Panel Guidelines for the Diagnosis and Management of Food Allergy in the United States: Report of the NIAID-Sponsored Expert Panel. *The Journal of Allergy and Clinical Immunology* 2010; 126(6) Supplement: S1-S58.
- Perry, T.T., Conover-Walker, M.K., Pomes, Chapman, A.M.D., Wood, R.A. Distribution of peanut allergen in the environment. *J Allergy Clin Immunol* 2004;113:973-6.)
- Sampson, H.A.. Anaphylaxis and Emergency Treatment. *Pediatrics* 2003; 111: 1601.
- Shaker M, Wallace D, Golden D, Oppenheimer, J., Bernstein, J., Campbell, R., Dinakar, C., Ellis, A., Greenhawt, M., Khan, D., Lang, D., Lang, E., Lieberman, J., Portnoy, J., Rank, M., Stukus, D., Wang, J. Anaphylaxis—a 2020 practice parameter update, systematic review, and Grading of Recommendations, Assessment, Development and Evaluation (GRADE) analysis. *The Journal of Allergy and Clinical Immunology* 2020; 145, 1082-1123.
- Sicherer, S.H., Simons, F.E.R. Self-injectable Epinephrine for First-Aid Management of Anaphylaxis. *Pediatrics* 2007 119(3), 638-646.
- Sicherer, S., Simons, F.E.R. Epinephrine for first-aid management of anaphylaxis. *Pediatrics* 2017;139.e20164006.
- Simons, E., Sicherer, S.H., Weiss, C., Simons, F.E.R. Caregivers' perspectives on timing the transfer of responsibilities for anaphylaxis recognition and treatment from adults to children and teenagers. *J Allergy Clin Immunol Pract* 2013; 1:309-11. PMID: 24565494
- Simons, E., Sicherer, S.H., Simons, F.E.R. Gradual transfer of responsibilities: At what age should an at-risk child or teenager be able to recognize anaphylaxis and self-inject epinephrine? *Annals Allergy Asthma Immunol* 2012; 108:321-5. PMID: 22541402
- Simons, F.E.R. First-aid treatment of anaphylaxis to food: Focus on epinephrine. *The Journal of Allergy and Clinical Immunology* 2004; 113(5): 837-844.
- Simons, F.E.R., Arduoso, L.R., Bilo, M.B., et al. World Allergy Organization anaphylaxis guidelines: summary. *World Allergy Organization Journal* 2014; 7:9.
- Simons, F.E.R., Xiaochen & Simons, K.J. Outdated EpiPen and EpiPen Jr auto injectors: Past their prime? *Journal of Allergy and Clinical Immunology* 2000; 105(5): 1025-1030.
- Soller, L., La Vieille, S., Cameron, S.B., Mak, R., Cook, V.E., Gerdts, J., Chan, E.S. Allergic reactions to emergency food allergens in Canadian children. *Allergy Asthma Clin Immunol*. 2021 Jul 13;17:71. doi:
- Waserman, S., Bégin, P., Watson, W. IgE mediated Food Allergy: *Allergy Asthma Clinical Immunology* 2018; 14(Supplement 2):55.
- Waserman S, Cruickshank H, Hildebrand KJ, Mack D, Bantock L, Bingemann T, Chu DK, Cuello-Garcia C, Ebisawa M, Fahmy D, Fleischer DM, Galloway L, Gartrell G, Greenhawt M, Hamilton N, Hourihane J, Langlois M, Loh R, Muraro A, Rosenfield L, Schoessler S, Tang MLK, Weitzner B, Wang J, Brozek JL. Prevention and management of allergic reactions to food in child care centers and schools: Practice guidelines. *J Allergy Clin Immunol*. 2021 May;147(5):1561-1578. doi: 10.1016/j.jaci.2021.01.034. PMID: 33965093.
- Young, M.C., Munoz-Furlong, A., Sicherer, S.H. Management of food allergies in schools: A perspective for allergists. *The Journal of Allergy and Clinical Immunology* 2009; 124(2): 175-182.