Child Injury Prevention Demonstration Activities

This activity guide was developed for community leaders, educators, and other professionals to use in their work with families to help prevent child injury. The ten hands-on activities included in this guide demonstrate the risk to children and youth from common causes of injury. Each activity includes a list of the materials, the process, discussion points, and safety tips. Additional materials such as fact sheets, images, and videos are also listed for each activity. Ideas for where and when these activities can be done include, but not limited to, a health fair, community event, lunch and learn, and presentation.

For more information about child injury prevention and injury risks to children, please visit <u>https://skprevention.ca/safety/</u>. For information about the importance of injury prevention, why children are more at risk of injury, and how to develop and implement an injury prevention strategy, download the *Child Injury Prevention Programming and Action Guide* (4-008) at <u>https://skprevention.ca/resource-catalogue/safety/child-injury-prevention-programming-and-action-guide/</u>.



Activity 1: Button Battery

Materials:

- A piece of sandwich meat or a wiener
- A button battery (e.g., a battery from a small flashlight, remote control, watch, singing greeting card, hearing aid, thermometer, children's toy, calculator, flameless or tea light candle, flashing holiday decoration)
- A clear plastic re-sealable bag

Process:

- Place the button battery into the middle of the meat. Let sit for ½ hour to 3 hours in the re-sealable bag.
- Add a drop of water to simulate the liquid in a human body.
- Place the meat or wiener on a plate and let participants examine the damage done.

Discussion:

The sandwich meat symbolizes human tissue and demonstrates the burn risk. A wiener is the approximate size of a child's esophagus and can be used to demonstrate the choking risk.

What damage occurs? Saliva triggers an electrical current with the button battery. This causes a chemical reaction that can result in severe internal burns. Serious internal chemical burns to the esophagus (throat), stomach, and intestines can develop in less than two hours.

Children can also choke on the button battery, have trouble breathing (respiratory distress), and suffer serious damage to their vocal cords and windpipe. The scary part is that it may not be obvious at first that there is something wrong since many children can still breathe and may act normally after swallowing a battery. A potential sign that a child has swallowed a button battery is that they experience a sudden change in their voice.

Why would a child put a button battery in their mouth?

Children are curious and learn about the world around them by tasting and touching. Young children put things in their mouths and do not have the ability to understand that they can be seriously injured by something in their environment. It is our role as adults to make the space around the child safe.

Additional materials: Button Battery Safety Fact Sheet (4-002) <u>https://skprevention.ca/resource-catalogue/safety/button-battery-safety/</u>

Video: Button Battery Cooks a Hot Dog – demonstrates what happens when a child swallows a button battery

https://www.youtube.com/watch?v=fNZPmct4ZzM

Video: Emmett's Story – The Dangers of Swallowing a Button Battery – demonstrates a serious injury from swallowing a button battery https://www.youtube.com/watch?v=-dRs aH5Vb8&feature=youtu.be

Button Battery Safety Tips

- Know which products in your home have button batteries and check that the item has screws to secure the battery compartment. This will increase the time it takes for a child to get into the button battery compartment. If the battery compartment does not have a screw, you can use strong tape.
- Check your home for loose or spare button batteries.
- Store unused batteries out of the sight and reach of young children, and if possible, store in a locked cabinet or a container.
- Do not allow your child to play with button batteries.
- When buying new batteries, choose the child-resistant packaging that needs to be opened with scissors.
- Only adults should change batteries.
- Recycle old button batteries or throw them away carefully, in an outside bin, out of reach of children.
- When visiting family members and friends, be aware that their homes may have button batteries that are easily accessible to young children. Active supervision of young children is important.

If a child has swallowed a button battery, take the child to the nearest emergency department.

Activity 2: Hot Water

Materials:

- 8 oz. glass of water (room temperature)
- Plastic doll that sits
- Plastic container

Process:

- Place doll in plastic container.
- Pour water over doll and identify the approximate percentage of the skin that would be scalded.

Discussion:

What is the percentage of the doll's body that was covered with the water? Now imagine this is hot or scalding water, what type of injury would the child experience? It is likely that the child would experience a significant burn that would require hospitalization.

Children are at high risk for burns because their skin is thinner than an adult's skin. A child's skin burns four times more quickly and deeply than an adult's, at the same temperature.

Burns and scalds can require long and extensive medical care, are very painful, and may leave permanent scarring and a loss of function. These injuries can be a result of fire or flame from candles, lighters, barbeques, or fireplaces; hot appliances such as kettles, toasters, or curling irons; and hot liquids such as a bottle of milk, bath water, tea, or coffee.

Between 2004 and 2013, fire and burns were responsible for the second longest average length of stay for injury-related hospitalizations of Saskatchewan children. In Saskatchewan, the children most likely to be hospitalized due to fire and burn-related injuries were those between the ages of 1 and 4 years (121 hospitalizations between 2004 and 2013).

Additional materials:

Fire and Burn-Related Hospitalizations Summary (4-405)

https://skprevention.ca/resource-catalogue/safety/fire-and-burn-related-hospitalizationssummary/

Hot Water Safety Tips

- While cooking, turn the handles of any pots and pans to the inside of the stove to avoid children pulling hot liquids on them. Use a back burner if possible. This is important because young children will want to see what you are doing. It only takes a second for a curious child to pull a pot of boiling water or other hot food down on them.
- Keep young children safely out of the way when you are cooking. Give them an interesting activity to do nearby so you can still supervise them.
- Remove tablecloths from tables so children cannot pull down on them and end up with hot liquids or food on them.
- Put your coffee or tea in a spill-free container such as a travel mug.
- Put the kettle away right after the water is done boiling. Keep the cord away from the edge of the counter.
- Reduce the hot water temperature in your home. Children's bath water should be no hotter than 38° C even though the recommended standard temperature for household hot water is 49° C.

Activity 3: Toilet Paper Tube

Injury risk: Choking

Materials:

- Wiener
- Grapes in a re-sealable bag
- Toilet paper tube
- A variety of small toys (e.g., Lego, marbles, figurines, balls) in a plastic container with a lid

Process:

- Hold out a pointed finger to explain the diameter of an adult esophagus.
- Have items (e.g., toilet paper tube, wiener, grapes, small toys) available for demonstration.
- Place the items through the tube to identify which items pose a choking hazard to young children.

Discussion:

Choking – the interruption of breathing by an internal obstruction of the airway, usually a food item or small object. Children who survive may suffer brain damage because they have been deprived of oxygen for a period of time. Choking on food is one of the major threats to breathing for young children. The adult esophagus is 2 cm wide, approximately the same width as an adult's finger. A child's esophagus is smaller than an adult's. Wieners and grapes are the two most common foods that children choke on. Any item that is small enough to pass through the toilet paper tube poses a choking risk to young children. These items should be out of reach of young children because they tend to put everything in their mouths.

Additional materials:

Choking Infographic

https://skprevention.ca/safety/choking-strangulation-and-suffocation/

Choking Prevention Safety Tips

- Keep foods such as grapes, hot dogs, raw carrots, or peanuts away from babies and toddlers.
- Cut food into small pieces (no larger than one-half inch).
- Encourage children to chew food well and sit down while eating. Children should never run, walk, play, or lie down with food in their mouths.
- Supervise mealtimes.
- Be aware of older children's actions. Many choking incidents are caused when an older child gives a dangerous toy or food to a younger child.
- Use containers with tight-fitting lids for small items, and place on a high shelf where babies and toddlers cannot access them.
- Teach older children to play with small toys away from younger children, and to put the toys away every time.

Activity 4: Can You Tell the Difference?

Injury risk: Poisoning

Materials:

• Images below printed out in colour or presented on a screen



Additional images can be accessed from:

https://blog.northernhealth.ca/health-awareness/poison-prevention-can-you-spot-thedifference

Process:

• Show the images and ask the following questions.

Can You Tell the Difference?

- 1. Just by looking at these items, can you tell if the item is safe to eat?
- 2. Which one is candy, and which one contains cannabis?
- 3. Do these items look tasty?
- 4. Do you think a child would put these items in their mouth?

Activated Charcoal or Coated Licorice

- Can you tell which one is the charcoal and which one is the licorice? Activated charcoal tablets are on the right and the licorice is on the left.
- 2. If a child found these items, would he/she know what it was or think it was candy?

Calcium Supplement or Gummy Candy

1. Which one is the calcium supplement, and which one is the gummy candy? *Calcium supplement is on the left, and candy is on the right.*

Powdered Candy vs. Cold and Flu Medication

1. Which one is the candy, and which one is cold and flu medication? *Blue is candy, and pink is flu medication.*

Dishwasher soap or Marshmallow

1. Which one is the marshmallow, and which one is the dishwasher soap? *Left is the marshmallow, and right is the dishwasher soap.*

Discussion:

If an adult cannot tell the difference, it is important to remember that children will not be able to tell the difference either. Children will not know just by looking at an item if it is candy, a vitamin, medicine, or contains cannabis. This is why it is so important that potentially harmful items are stored out of the sight and reach of children. Children often explore the world around them by putting things in their mouths. Children are more sensitive than adults to harmful

substances and many everyday items that are found in our homes are dangerous to children in very small doses.

Additional materials: Unintentional Poisoning Summary and Prevention Tips (4-401) <u>https://skprevention.ca/resource-catalogue/safety/unintentional-poisoning-summary-and-prevention-tips/</u>

See Poisoning Prevention Tips at the end of Activity 5.

Activity 5: Child-resistant?

Materials:

- A variety of emptied and cleaned containers (e.g., pharmacy pill bottle, cough medicine, aspirin, toilet bowl cleaner, mouthwash)
- A stopwatch

Process:

- Set out the empty/clean containers.
- Time the individual for 1 minute as they try to open each container. After the minute is over, stop the stopwatch and ask the person to put the container down. Repeat up to five times if unable to open within 1 minute.
- Demonstrate how to open the various containers. Each container will have a unique way of opening. This requires a person to do two tasks at once. Most children under five are unable to do this. Child-resistant packages have the following features:
 - Line up the triangles and open
 - Push the tab down and turn
 - Squeeze the sides and turn
 - Push the cap down and turn

Discussion:

What is the difference between child proof and child-resistant? Child proof means to recognize what hazards are in the environment and remove the hazards. For example, removing anything that is breakable or valuable; securing an item that a toddler could pull down on themselves, such as a bookcase; and putting away items like medications and poisons.

Child-resistant packaging is designed to slow down access for children under 5 years old. Childresistant packaging is designed to be significantly difficult to open to protect children and save lives. It is required by regulation for prescriptions, over-the-counter drugs, pesticides, and household chemicals.

There is no such thing as child proof packaging. Think of packaging as an additional measure to slow children down from accessing potentially harmful items.

How easy or difficult was it to open the various containers? With enough time and persistence, children can and will open these containers. Sometimes, children seem to be able to open these more easily than adults! Child-resistant caps are not a substitute for supervision. Supervision of children, especially young children, is an important way to prevent unintentional poisoning. It can be difficult to keep children in view at all times. This is why it is important that potential poisons are always kept out of sight and reach of children.

Curiosity is a good thing, but it can also lead to trouble. As parents and caregivers, it is our job to balance children's desire to explore with the need to keep them safe. It only takes a minute for a child to get into something. At each stage of development, children learn new skills (e.g., reaching, crawling, climbing, and imitating the actions of others). It is important to look for the possible risks with each stage and actively supervise to keep potential poisons out of reach.

Infants and young children explore their world by putting objects in their mouths. Their skin is thin compared to older children and adults, making poisoning through skin contact more possible. Due to their small body size, even small doses of medication and poisons can be very dangerous.

Additional materials: Protect children from medication poisoning information card Saskatchewan Poison Centre Magnet <u>https://skprevention.ca/safety/poisoning/</u>

Video: How do Child Proof Caps Work? https://youtu.be/EG8XTxus-Tw

Poison Prevention Safety Tips

- Identify potential poisons in and around your home (e.g., medications, cleaning products, pesticides, products that contain alcohol, certain plants, cosmetics, soaps, detergents, e-cigarettes).
- Teach your older children to recognize warning labels on products and what they mean.
- Avoid using potentially poisonous cleaning products when you are in the same room as children.
- Always keep products in their original package or properly labelled. This will allow you to quickly identify the product and its ingredients if your child gets into it. Do not re-use chemical containers and follow directions on container for proper disposal.
- Remember: many children can open "child-resistant" containers. Potential poisons should always be kept out of sight and out of reach of children.
- Drugs and medications are the leading cause of unintentional poisoning. Store all medications out of sight and reach of children. If possible, keep medications in a locked box.
- Take your medications when you are out of the sight of children. Children often copy the actions of the adults in their lives.
- Keep visitors' bags and coats out of sight and out of reach of children. Some people carry medications and other potential poisons with them.
- Talk with children about what is a poison and what is not a poison. Download activity sheets for children at <u>https://skprevention.ca/safety/poisoning/</u>.
- Have the Saskatchewan Poison Control Centre phone number (1-866-454-1212) posted in your home and saved in your phone.

Materials:

- Electronic cigarette (not charged)
- E-cigarette liquid container, empty and cleaned
- Electronic Cigarettes (e-cigarettes) and Risks to Children fact sheet (resource 4-301), downloaded from <u>https://skprevention.ca/resource-catalogue/safety/electronic-</u> <u>cigarettes-e-cigarettes-and-risks-to-children/</u>
- Review About Vaping information at https://www.canada.ca/en/health-canada/services/smoking-tobacco/vaping.html#a2 previous to presentation

Process:

- Place the electronic cigarette and liquid container on the table. Using the Electronic Cigarettes (e-cigarettes) and Risks to Children fact sheet (resource 4-301), identify the parts of the e-cigarette as you go through the following discussion points.
- If you are familiar with electronic cigarettes, demonstrate taking apart an e-cigarette to identify the parts.

Discussion:

E-cigarettes may pose health and safety risks to children. These include poisoning, choking, burns, and effects from inhaling second-hand vapour. Children can be poisoned by the liquid in e-cigarette cartridges if they swallow the liquid, or if the liquid is absorbed through the skin or eyes. The liquid is easily absorbed through young children's skin because their skin is thinner than an older child or adult. E-cigarettes have many different flavours and are designed to smell good. Children may be attracted by the scent and may confuse the liquid with a candy or drink. If the liquid contains nicotine, the risk of poisoning increases. There is currently no legislation requiring warning labels, child-resistant packaging, or labelling for the amounts of chemicals in the liquid. The sale of e-cigarette liquid with nicotine is illegal in Canada, yet it is available for purchase.

E-cigarettes are made up of several small parts. Young children will often put non-food items in their mouths. This puts them at an increased risk of choking.

An e-cigarette is an electronic device that can overheat, short out, and explode. The explosions can cause a fire, resulting in burns to skin and damage to property. Blast injuries from an explosion may result in deeper tissue damage. The liquid may cause a chemical burn to the skin.

These injuries can occur while the device is in use or while the device is being held in a hand, backpack, or pocket.

Second-hand vapour from e-cigarettes may irritate the lungs, making it harder for children to breathe, especially those who have asthma or other lung conditions. Inhaling the vapour can also irritate the mouth, throat, and eyes. It can cause allergic reactions. The chemicals used in the liquid can cause lung damage when inhaled.

Additional materials: E-Cigarettes (Saskatchewan Prevention Institute) <u>https://skprevention.ca/smoking-and-tobacco/e-cigarettes/</u>

Video: E-Cigarettes: To Vape or Not to Vape? https://youtu.be/ wAM3ql4HWs

Video: The Mechanics of Vaping (Healthy Canadians) <u>https://www.youtube.com/watch?time_continue=64&v=vbNrlsR-pnl</u>

E-Cigarette Safety Tips

To prevent children from choking on, being poisoned, or burned by an electronic cigarette:

- Keep all parts of e-cigarettes out of the reach of children.
- Dispose of e-cigarette batteries and liquid cartridges by putting them in a garbage can that children cannot open.
- Reduce your use of e-cigarettes in front of your children.
- Talk with your children about the health and safety risks of e-cigarettes.

Activity 7: Bicycle Helmet Safety

Materials:

• A variety of sizes and styles of bicycle helmets

Process:

- Have participants identify the Consumer Product Safety Commission (CPSC) sticker in each helmet.
- Place a bicycle helmet on your head and do up the strap. Use the **2V1 Rule** to properly fit your helmet.

2 The front of the helmet should be 2 fingers above your eyebrows.

V The side straps should form a "V" around the ear.

1 Only one finger-width between the chin and the chin strap.



Discussion:

Wearing a helmet that fits well will help to protect your face and head from injuries like skull fractures, cuts, and bruises. A helmet can protect your brain from an injury that may last throughout your life. Bike helmets are so important that the government has created safety rules for them. Your helmet should have a sticker that says it meets the rules set by the CPSC. If your helmet does not have a CPSC sticker, see if you can get one that does.

Additional materials:

Videos: **Kindergarten to Grade 2** Always Wear A Helmet, WonderGrove Kids <u>https://www.youtube.com/watch?v=NF8CiNXEmcU</u>

Grade 3 – 4 Connecting Kids – Helmets Protect Your Brain https://www.youtube.com/watch?v=KRqsRV8pqe0

Grade 5 - 6 Bike Helmet - Manitoba Government https://www.youtube.com/watch?v=b6r3f7M_XOY&feature=youtu.be

2V1 Bookmark (4-221) https://skprevention.ca/resource-catalogue/safety/2v1-bookmark/

2V1 Poster (4-222) https://skprevention.ca/resource-catalogue/safety/2v1-poster/

Bicycle Helmet Safety Tips

- Wear a bike helmet on every ride.
- Use the 2V1 Rule to make sure your helmet fits properly.
- Your helmet should fit snuggly on top of your head, with little movement in any direction when the chin strap is done up.
- To get a good fit, tie your hair back below the helmet.
- Do not wear anything under the helmet, such as a toque or hat.

Activity 8: Hand Signals

Injury risk: Cycling-related Injury

Materials:

- Your arm
- *Optional:* The images below printed in colour or shown on a screen



Process:

- Demonstrate the correct hand signals for turning and stopping, using your left arm to signal.
 - > To show others a left turn, put your LEFT arm straight out.
 - > To show others a right turn, make an L shape with your arm.
 - > To show others you are stopping, make an upside-down L shape with your arm.
- Pretend you are riding your bicycle (or bring your bicycle into the classroom). Pretend to hold on to the handlebar with your right hand and use your left arm to signal. Put your back to participants at first so they can copy the signals. Practice several times by calling out the signal you want them to demonstrate.

Discussion:

Use arm signals to show others where you are going and when you are going to stop. If other cyclists, pedestrians, and drivers know what your intentions are, you will be safer.

Additional materials: Bike Safety Arm Signals Bookmark (4-223) <u>https://skprevention.ca/resource-catalogue/safety/bike-safety-arm-signals-bookmark/</u>

Bike and Wheel Safety www.saskbikesafety.ca

Cycling Safety Tips

When you ride on the road, stay alert and aware of what is around you, and follow the rules of the road:

- Ride on the right in the same direction as traffic. Never ride against traffic.
- Stop at all stop signs and obey traffic lights and signs, just as cars do.
- Always stop and check for traffic in both directions when leaving your driveway, an alley, or a curb.
- When you come to a crossing, get off your bike, walk your bike across the intersection, and follow the traffic signals. Let pedestrians cross in front of you before you move through an intersection or a crosswalk.
- Always ride with your hands on the handlebars.
- Ride in a straight line. Never turn or swerve your bike without looking behind you first.
- Ride about one metre from the curb or parked cars. This makes it easier for drivers to see you and for you to avoid hazards like potholes. This helps you avoid car doors that are being opened or cars that suddenly pull out of parking spots.
- Use a bell or horn to alert pedestrians and other cyclists that you are coming up behind them or going around them. You can also say in a loud voice "Bike coming to your left." After letting others know that you are going to pass, shoulder check and pass on the left when the path is clear.

Injury risk: Drowning

Activity 9: Lifejacket Fit

Materials:

- A variety of lifejackets and/or personal floatation devices (PFDs)
- Child volunteers

Process:

- Put a lifejacket on a child volunteer. Do up all the straps and buckles. Make sure you hear a click. Re-do if you do not hear the click as it might indicate that material got caught in the buckle.
- The lifejacket should fit snugly and not ride up over the chin or ears.
- Place two fingers between the lifejacket and the child's shoulders. There should not be more than 3 fingers' width.
- Identify the following safety features on the lifejackets:
 - Canada's Safety Standards label
 - > Large collar for head support on lifejackets for younger children
 - > Waist ties or elastic gathers at the front and back
 - Safety strap that goes between the legs, on life jackets for younger children, so that the lifejacket does not slip over the child's head
 - Reflective tape or brighter colours that makes the lifejacket more visible in darker conditions
 - A plastic whistle

Discussion:

What is the difference between a lifejacket and a personal flotation device (PFD)? A lifejacket holds a child upright. It can turn the child over from face-down to face-up. A PFD will keep a person floating, but not necessarily face-up. A PFD is lighter and less bulky than a lifejacket. Lifejackets and PFDs must fit snugly and must be buckled up to prevent the child from slipping out. Remember that inflatable toys such as water wings and blow-up rings are not safety devices. Ensure that children are wearing lifejackets or PFDs when they are taking part in water activities like boating, canoeing, and kayaking. Lifejackets and PFDs are also important for children while swimming, particularly if they are not strong swimmers. Active adult supervision is extremely important, even if a child is wearing a lifejacket or PFD. Young children under 3 years old can drown in less than 5 cm (2 in.) of water. This means that young children can drown in a backyard pool, bathtub, large puddle, rain barrel, pond, lake, public swimming pool, creek, river, or any other body of water. Young children are not able to understand the danger of water. Children see water as fun. Do not leave young children alone to play near water. In the yard, cover hazards like water barrels and paddling pools, and place fencing around swimming pools.

It is important that caregivers are directly supervising children whenever they are around open water. A good rule to remember is to be within an arm's reach, especially for children aged 5 and younger. Whenever older children are in water, caregivers should be watching closely, should be physically close to the water, and should not be distracted by things like cell phones or visiting. It is important to know that drowning can happen in seconds.

In the summer, families tend to spend time in the water including swimming pools, paddling pools, and lakes. Children should have an opportunity to play in water as it is a great way to beat the heat! Although drowning is not a leading cause of death or injury in Saskatchewan, it is important to understand the prevention tips because of the seriousness of the outcome when such an injury does occur. Adults must be aware of how drowning injuries occur and take action to prevent a drowning. Contrary to popular belief, children do not yell and call out for help when they are drowning. Children drown quickly and quietly.

Additional materials:

Video: How to choose life jackets for kids (Canadian Red Cross) https://youtu.be/2xbw6-GMlww

Water Safety Tips

- Ensure that the lifejacket fits snugly, and all straps and buckles are done up.
- Pay attention. While children are near water, actively supervise. Active supervision
 means the right combination of physical closeness to the child and attention to what the
 child is doing. Children under 5 years of age should be within an arm's length of an
 adult. Older children also need supervision; take turns being the adult responsible for
 supervision when children are in or around water. Do not expect older children to
 supervise younger children.
- Teach children not to play near open water, to not enter without an adult nearby, to tread water, and to swim with a buddy.
- Enroll children in swimming lessons to help ensure that they are comfortable and skilled in and around water.

Activity 10: Seat Belt Fit Injury risk: Motor-vehicle related injury

Materials:

- Chair or back seat of car
- Seat belt (if available) or wide strap
- Child or adult volunteer
- Optional: image below printed out or shown on a screen



Process:

- Have the volunteer sit on chair and buckle up or pretend to buckle up a seat belt.
- Point out where the seat belt rests on the body and how the volunteer is sitting. Identify the correct position of the seat belt and how to sit on the seat for the proper fit using the following safety tips.

Discussion:

Injury and death to children in motor vehicle collisions is of significant concern in Saskatchewan. When transporting children, it is important to use a child restraint correctly and consistently. Children should use a booster seat until they fit a seat belt properly. If the seat belt does not fit correctly, the child must continue to use a booster seat for a little while longer. The law in Saskatchewan states that children must remain in a booster seat until age 7 or weigh 36 kgs (80 lbs.) and stand 145 cm (4'9") tall.

To determine when a child is ready for a seat belt without a booster seat, use the 5-step test.

Seat Belt Safety Tips

- 1. Pull the shoulder part of the seat belt across the chest. It should cross between the shoulder and neck. Ideally, it should pass between the breasts. The shoulder belt goes across the chest bone and NOT across the neck and NEVER behind the back.
- 2. Ensure the volunteer has good posture. The volunteer should be sitting tall, not slouching, and sitting all the way back against the back of the vehicle seat.
- 2. Pull the lap belt low across the hips, touching the thighs.
- 3. The knees should bend comfortably over the edge of the vehicle seat without the volunteer slouching or sliding his/her back off the back of the vehicle seat.
- 5. The volunteer should be able to sit with good posture for the entire trip.