



CONCUSSION AWARENESS
TRAINING TOOL

Concussion Information Package for Intimate Partner Violence Responders

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The Concussion Awareness Training Tool (CATT) is a series of online educational modules and resources with the goal of standardizing concussion recognition, diagnosis, treatment, and management. Good concussion management may decrease the risk of brain damage and potentially reduce long-term health issues.

Developed by Dr. Shelina Babul, Director/Sports Injury Specialist with the BC Injury Research and Prevention Unit, BC Children's Hospital, and Clinical Professor, Department of Pediatrics, University of British Columbia, CATT is based upon the established principles of the Consensus Statement on Concussion in Sport and other evidence-based resources. The 2023 Amsterdam Concussion in Sport Group Consensus Statement builds on the principles outlined in previous concussion statements and aims to develop better understanding of sport-related concussion.

Research and evidence on concussions is evolving and the knowledge base is continually changing. As a result, this website is updated on a regular basis to provide current information, tools, and resources to support concussion recognition, diagnosis, treatment, and management.

Supporting Survivors of Abuse and Brain Injury through Research (SOAR) is a registered charity and the first organization in Canada to exclusively focus on the intersection of intimate partner violence and brain injury (IPV-BI). SOAR explores the incidence and effects of IPV-BI, educates professionals on how to recognize and respond, and empowers survivors to get the supports and services they deserve to thrive.

The information, including text and images of this package are intended for your information only, does not substitute professional medical advice, and is provided for educational purposes only. Always seek the advice of a physician or other qualified health care provider about any questions you may have regarding a medical condition.

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What You Need to Know About Concussion

This information sheet provides a brief overview on the appropriate care for an individual with a concussion. It outlines the three key steps in dealing with concussion to assist recovery from this injury: recognize, respond, and manage. Visit cattonline.com for further information, resources, or to take one of the e-learning courses tailored for healthcare professionals, workers & workplaces, coaches, athletes, youth, school professionals, parents & caregivers, and women's support workers (supporting survivors of intimate partner violence).

Recognize

A concussion is the most common form of brain injury caused by an impact or forceful motion to the head or body that causes the brain to move inside the skull. Common causes of concussion include **falls, motor vehicle crashes, and sport and recreational-related activities**.

There is no way to know for certain whether a particular event will lead to a concussion—a relatively minor impact may result in a concussion while a higher-magnitude impact may not.

The following **signs and symptoms** are consistent with concussion. Some signs and symptoms may be delayed for hours or days after an injury:

- Headache / Pressure in head
- Balance problems / Dizziness
- Nausea or vomiting
- Drowsiness
- Blurred vision
- Light / Sound sensitivity
- Fatigue or low energy
- “Don’t feel right”
- Neck pain
- More emotional
- More irritable
- Sadness
- Nervous or anxious
- Difficulty concentrating
- Difficulty remembering
- Feeling slowed down
- Feeling like “in a fog”
- Trouble falling asleep

Concussion signs to watch for in an **infant or toddler** may include:

- Crankiness and irritability (beyond their usual)
- Cannot be comforted or excessive crying
- Sudden changes in nursing, eating, sleeping or playing patterns
- Loss of balance, unsteady walking (more so than normal)
- Lack of interest in favourite toys or activities
- Listlessness or tiring easily
- Loss of ability to carry on with newly acquired skills (across any social and emotional, language, physical development domains)

Respond

Immediately:

Following a potential concussion-causing event, the individual should be removed from activity and assessed for a **medical emergency**.

If any of the **Red Flags** are present, call 911 or seek immediate medical care.

Next steps if not a medical emergency:

- Do not leave the individual alone
- Notify an emergency contact person
- Continue to monitor for Red Flags and signs and symptoms of concussion
- Do not let the individual return to their activity
- Do not give the individual any immediate medication
- Do not let the individual leave by themselves
- Do not let the individual drive or ride a bike

RED FLAGS	
	Neck pain or tenderness
	Seizure, 'fits', or convulsion
	Loss of vision or double vision
	Loss of consciousness
	Increased confusion or deteriorating conscious state (becoming less responsive, drowsy)
	Weakness or numbness/tingling in more than one arm or leg
	Repeated vomiting
	Severe or increasing headache
	Increasingly restless, agitated, or combative

Within 48 hours:

The individual should be monitored before assuming that a concussion has not occurred, including monitoring throughout the night following the initial injury. Do not wake the individual unless you have concerns about their breathing, changes in skin colour, or how they are sleeping. Call 911 or seek immediate medical care if the individual is slow to wake or shows any of the **Red Flags**.

- The individual should engage in limited physical activity that does not put them at risk for a head impact.
- If any signs or symptoms are present, seek medical attention from a doctor, nurse practitioner, or licensed healthcare professional with relevant training.
- If no signs or symptoms appear within 48 hours, the individual likely does not have a concussion, and can return to normal activities.
- If unsure, seek guidance from a doctor, nurse practitioner, or licensed healthcare professional with relevant training.

Manage

A concussion can have a significant impact on physical, cognitive, and emotional functioning. The recovery process involves managing activities in order to not worsen symptoms beyond mild and brief exacerbation*—the key is finding the balance between doing too much and too little.

The recovery process is best approached in collaboration with key individuals, such as medical or licensed healthcare professionals, family members, friends, employers, teachers and school staff, and coaches.

*Mild exacerbation (worsening) of symptoms: No more than a 2-point increase when compared with the pre-activity value on a 0-10-point symptom severity scale.**"Brief" exacerbation of symptoms: Worsening of symptoms for up to 1 hour.

**0-10 point symptom severity scale: Please see the [Visual Analog Scale](#) for an example of a 0-10 symptom severity scale.

Within 48 hours:

The first and most important step in recovery from a concussion is relative rest for a maximum of 24-48 hours.

The individual will need both physical and cognitive rest in order to allow the brain to heal. Relative rest: activities of daily living including walking and other light physical and cognitive activities are permitted as tolerated. Screen time should be limited for the first 24-48 hours following concussion.

After 48 hours:

- Gradually increase physical and cognitive activity. Continue to increase as long as symptoms remain mild and brief. Examples: Computer work, watching TV, reading, jogging, light weight training
- Goal is to increase heart rate. Start with less demanding activities before harder ones.
- Keep naps during the day to a minimum. It is unlikely to help recovery.

The individual should begin to increase activities in a step-wise process to return to regular levels of activity, including work, school, and sports.

Symptoms should decrease over time, but some symptoms may return, worsen, or new symptoms may appear as new activity levels are introduced. If this happens, return to a lower level of activity that does not worsen symptoms beyond mild and brief exacerbation. If you are worried that the individual is not improving, follow-up with a medical or licensed healthcare professional with relevant training.

REMEMBER:

Recovery is a fluctuating process.
The individual can be doing well
one day but not the next.

On average, concussions resolve within 4 weeks. However, up to 30 percent will continue to experience persisting symptoms beyond this period. Persisting symptoms have the potential to cause long-term difficulties. If there is no improvement or symptoms are worsening 2-4 weeks after a concussion, referral to interdisciplinary care is recommended.

The recovery period may be influenced by:

- Previous concussions
- History of headaches or migraines
- Learning disabilities
- Mental health issues
- ADHD
- Use of drugs or alcohol
- Returning to activities too soon
- Lack of family or social supports
- Participating in high-risk sport

Proper management of a concussion can reduce the risk of complications. It is important that the individual has successfully returned to work or school before fully returning to sport and physical recreation activities. Returning to full activity too soon may result in more severe symptoms or long-term problems. As well, returning to high risk activities (contact sports, dangerous job duties) before full recovery and medical clearance can put the individual at risk of sustaining another concussion with more severe symptoms and a longer recovery period.

REMEMBER:

CATT resources to support the recovery process include:

- Return to Work
- Return to Activity
- Return to School
- Return to Sport

Moving Ahead

Talking about brain Injury in intimate partner violence

The *HELPS Brain Injury Screening Tool can identify survivors who've experienced, or may be at risk for, a brain injury.

The HELPS Tool does not make a diagnosis. It does provide a way to talk about head injury in the context of IPV, and can help survivors identify the source of some of their challenges.

HELPS

ASK:

1. Have you ever **H**it your head, or been hit on the head or shaken roughly? Did your partner strangle or choke you?
2. Were you ever seen in the **E**mergency room, hospital, or by a doctor because of a brain injury? Have you ever felt you needed medical attention but did not seek it?
3. Did you ever **L**ose consciousness or experience a period of being dazed and confused because of an injury to your head?
4. Do you experience any of these **P**roblems since you hurt your head or neck?
5. Have you experienced any significant **S**icknesses or physical symptoms?

92%

As many as 92% of survivors of intimate partner violence (IPV) may also experience brain injury as part of the abuse.

Headaches

Dizziness

Anxiety

Depression

Difficulty concentrating

Difficulty remembering

Difficulty reading,
writing, calculating

Challenges with
problem solving

Difficulty performing
your job/school work

Change in relationships
with others

Misjudgement
(being fired from
job, arrests, fights)

If a survivor answers "Yes" to H, E, L, or S, and is experiencing at least two of the chronic problems listed under "P," the survivor may have experienced a brain injury. Remember, a positive screen is not a diagnosis. Only a licensed medical professional (such as a physician or nurse practitioner) can provide that.

If you suspect a survivor may have experienced a brain injury, refer to a local brain injury support agency. If the incident was recent, and symptoms are severe, recommend a doctor's visit.

*The HELPS tool above is an adapted version of the original, which was developed by M. Picard, D. Scarisbrick, R. Paluck, 9/91, International Center for the Disabled, TBI-NET, U.S. Department of Education, Rehabilitation Services Administration, Grant #H128A00022. The original version has been adapted for brain injury in the context of intimate partner violence.

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Return to Activity

This tool is intended for a general audience and serves as a guideline for managing an individual's return to activity following a concussion and does not replace medical advice. Timelines and activities may vary based on direction from a doctor, nurse practitioner, or healthcare professional with relevant training. **Begin Step 1 within 24 hours of injury, with progression through each subsequent step taking a minimum of 24 hours.**

STEP 1:	STEP 2:		STEP 3:	STEP 4:
Activities of daily living and relative rest* - Maximum of 24-48 hours - Activities at home such as social interactions and light walking that do not result in more than mild and brief** exacerbation (worsening) of concussion symptoms. Examples: - Preparing meals - Housework - Light walking - Minimize screen time for first 24-48 hours following concussion. - Sleep as much as your body needs while trying to maintain a regular night sleeping schedule. - Avoid driving during the first 24-48 hours after a concussion. Note: The goal for each step is to find the balance between doing too much and too little.	2A: Light effort aerobic activity - Up to approximately 55% of maximum heart rate (predicted according to age - i.e. 220-age). - In a safe and controlled environment, engage in light effort aerobic activity. Examples: - Stationary cycling - Walking at slow to brisk pace - Gardening - Dancing - Housework - Use of devices with screens may be gradually resumed.	2B: Moderate effort aerobic activity - Up to approximately 70% of maximum heart rate (predicted according to age - i.e. 220-age). Examples: - See examples in Step 2A - Exercises and activities that do not result in more than mild and brief** exacerbation (worsening) of concussion symptoms and do not have a risk of falling or head impact. - Take a break and modify activities as needed with the aim of gradually increasing tolerance and the intensity of aerobic activities.	Increase activity intensity - Participate in normal day-to-day activities, including normal physical/training activities, school gym-class, and work-related activities Examples: - Workouts - Swimming - Fast-paced walking - Shoveling - Yoga/Pilates It is important to get medical clearance before returning to activities that involve any risk of inadvertent head impact.	Return to activity Back to normal, unrestricted activity Examples: - Outdoor biking - Paddling and water activities - Normal unrestricted work-related tasks and higher risk activities - School gym class - No restrictions on physical activities Note: Returning to high-risk activities before you have recovered increases the risk of delayed recovery and for sustaining another more severe concussion or serious injury.
Activities of daily living, as tolerated	Increase heart rate		Increase intensity of aerobic activities, resume usual intensity of exercise, coordination, and activity-related cognitive skills	
After a maximum of 24-48 hours after injury, BEGIN STEP 2	If can tolerate moderate aerobic activity, BEGIN STEP 3		If can tolerate further increase in aerobic activity to pre-injury levels and have received medical clearance, BEGIN STEP 4	

Refer to the **Return to Sport Strategy** for information on returning to high-risk activities, including sports and competitive play. If more than mild exacerbation (worsening) of symptoms (i.e., more than 2 points on a 0-10 scale***) occurs during Steps 1-2, stop the activity, and attempt to exercise the next day. Individuals experiencing concussion symptoms during Steps 3-4 should return to Step 2 to establish full resolution of symptoms with exertion before engaging in at-risk activities. Written determination of medical clearance should be provided before returning to activities that involve any risk of inadvertent head impact. Driving should resume after consultation with a doctor, nurse practitioner, or healthcare professional.

*Relative rest: activities of daily living including walking and other light physical and cognitive activities are permitted as tolerated.

Mild exacerbation (worsening) of symptoms: No more than a 2-point increase when compared with the pre-activity value on a 0-10-point symptom severity scale.*"Brief" exacerbation of symptoms: Worsening of symptoms for up to 1 hour.

***0-10 point symptom severity scale: Please see the [Visual Analog Scale](#) for an example of a 0-10 symptom severity scale.

Medical determination of readiness to return to at-risk activities should occur prior to returning to any activities that pose risk of contact, collision, or fall.

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Adapted from: Zemek, R., Reed, N., Dawson, J., et al. "Living Guideline for Pediatric Concussion Care." www.pedsconcussion.com (the PedsConcussion protocol was modified with permission from the [Amsterdam International Consensus Statement on Concussion in Sport](#))
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TRAINING TOOL

BC INJURY research and prevention unit
www.injuryresearch.bc.ca

QUESTIONS TO ASK YOUR DOCTOR

(For Adults)

If you suspect that you may have a concussion, you should see a doctor, nurse practitioner, or licensed healthcare professional with relevant training right away. This is a list of questions you can take with you.

INITIAL TREATMENT AND OBSERVATION

Are you familiar with the latest guidelines on concussion management?

What kind of medication can I take?

Does someone need to be with me at all times?

What vitamins/supplements can I take?

WHAT I CAN DO

Can I eat? Will I have an upset stomach?

What kind of activities can I do at this stage of recovery?

Can I read/use the computer/play video games?

When can I go back to work?

When can I return to physical activity?

Can I drive?

SYMPTOMS

What symptoms should I be watching for?

How soon will symptoms begin to improve?

How long will these problems last?

How can I cope with changes in my mental health or behaviour (e.g., feeling anxious, sad, irritable) as a result of my concussion?

THE RISKS

What is the risk of a future concussion?

What is the risk of long-term complications?

FOLLOW-UP WITH THE DOCTOR

When should I come back to see you?

Under what circumstances should I call you?

Should a specialist be consulted?

Are there any resources you recommend?

ADDITIONAL QUESTIONS:

WHAT MORE CAN YOU DO?

The HELPS* Brain Injury Screening Tool can identify survivors who've experienced, or may be at risk for, brain injury.

The HELPS Tool does not make a diagnosis. It does provide a way to talk about head injury in the context of IPV, and can help survivors identify the source of some of their challenges.

HELPS

ASK:

1. Have you ever **H**it your head, or been hit on the head or shaken roughly? Did your partner strangle or choke you?
2. Were you ever seen in the **E**mergency room, hospital, or by a doctor because of a brain injury? Have you ever felt you needed medical attention but did not seek it?
3. Did you ever **L**ose consciousness or experience a period of being dazed and confused because of an injury to your head?
4. Do you experience any of these **P**roblems since you hurt your head or neck?
5. Have you experienced any significant **S**icknesses or physical symptoms?

Headaches
Dizziness
Anxiety
Depression
Difficulty concentrating
Difficulty remembering
Difficulty reading, writing, calculating
Challenges with problem solving
Difficulty performing your job/school work
Change in relationships with others
Misjudgement (being fired from job, arrests, fights)

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SOAR

SUPPORTING SURVIVORS
OF ABUSE AND BRAIN INJURY
THROUGH RESEARCH

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Moving Ahead

Worker's Guide to
Brain Injury in Intimate
Partner Violence

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SUPPORTING SURVIVORS
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THROUGH RESEARCH

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DID YOU KNOW?

As many as 92% of survivors of intimate partner violence (IPV) may also experience a brain injury.

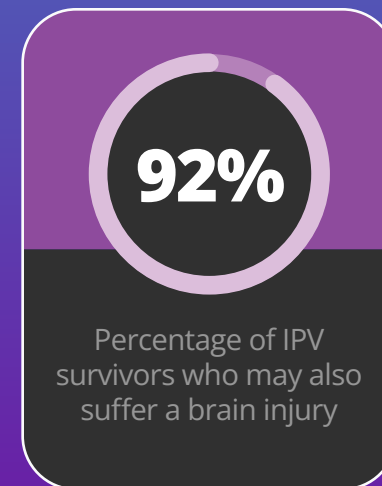
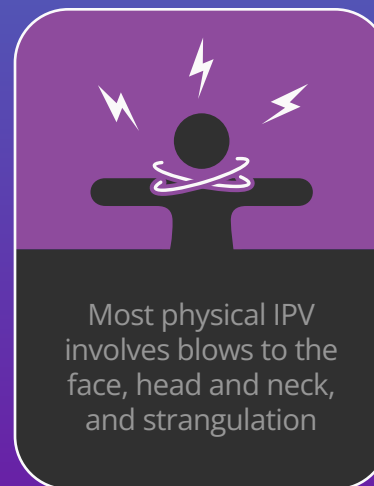
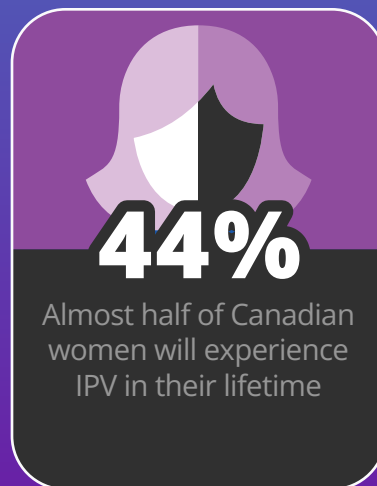
WHAT IS BRAIN INJURY?

Brain injury is defined as an insult to the brain that causes a change in how the brain functions. It includes injury from loss of oxygen to the brain, and concussion from a hard blow to the head, neck, or body that causes the head or brain to move rapidly back and forth.

BRAIN INJURY CAN HAPPEN FROM BEING:

- Punched, or hit in the head with an object.
- Violently shaken.
- Pushed down stairs.
- Thrown out of a moving vehicle.
- Strangled – Nearly ½ of survivors have been strangled.

It is one of the most lethal forms of IPV, and the top indicator of future fatality.



HOW DOES BRAIN INJURY SHOW UP?

Brain injury among survivors of IPV often goes unnoticed, is mislabelled, or misunderstood. Knowing the signs and symptoms can help you provide better support.

BRAIN INJURY CAN CAUSE:

- Headaches
- Fatigue
- Dizziness
- Difficulty sleeping
- Worries and fears
- Depression
- Sadness
- Anger
- Sensitivity to noise and light
- Communication challenges
- Reckless behaviour

SURVIVORS MAY:

- Have difficulty listening.
- Be easily distracted.
- Have difficulty learning things.
- Have trouble following instructions, and remembering appointments or chores.
- Be tired, irritated, and quick to anger.
- Become easily overwhelmed.
- Have issues adapting to life in a communal setting such as a shelter or team working environments.
- Sleep too much or too little.

HOW CAN YOU HELP?

If you suspect a survivor may have experienced a brain injury, refer them to your local brain injury support agency. If the incident was recent, and symptoms are severe, recommend they see a physician.

OTHER WAYS TO HELP INCLUDE:

- Speaking slowly and clearly.
- Taking more breaks.
- Asking them to repeat important information back.
- Dimming the lights.
- Conducting interactions in a quiet location.
- Working with them to fill out forms.
- Minimizing computer use.
- Encouraging rest.
- Helping them prioritize appointments and tasks.
- Providing earplugs to dull noise.
- Offering sunglasses or a hat to help shield light.

AFTER A BRAIN INJURY

Seek medical care right away if the injury was recent, or severe, or if any of the following red flags appear:

- Neck pain or tenderness
- Double vision
- Weakness or feelings of tingling or burning in the arms or legs
- Seizure or convulsion
- Loss of consciousness
- Deteriorating conscious state
- Vomiting
- Becoming increasingly restless, agitated or combative

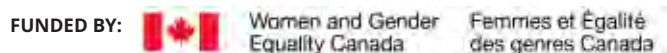
SELF CARE

Like any other injury, a brain injury needs time to heal. Here are some strategies that may help:

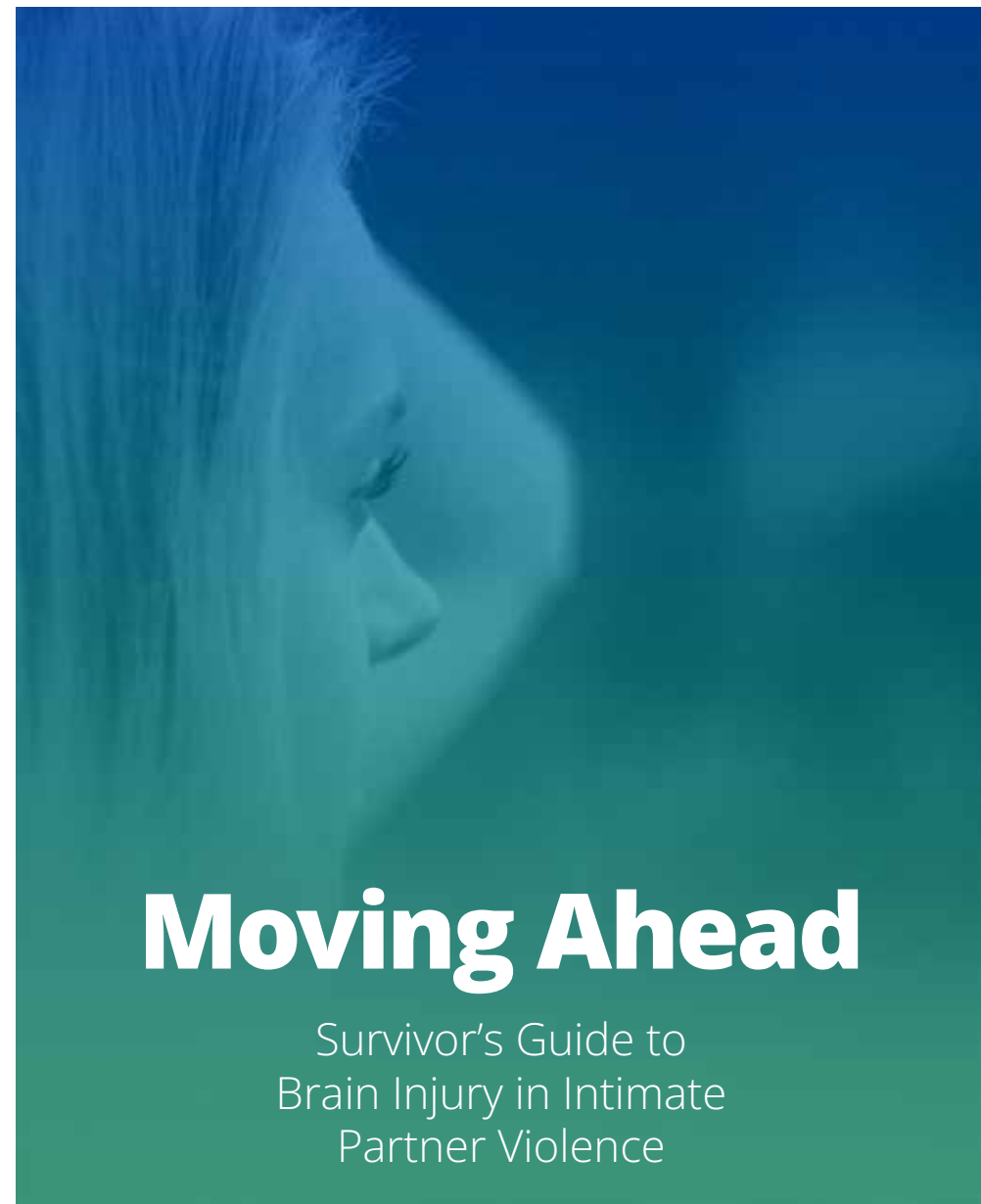
- Rest
- Minimize sensitivity to light and noise by wearing sunglasses or a baseball hat, earplugs or noise-cancelling headphones
- Seek out calm environments
- Keep lights dim
- Minimize screen time
- Eat a balanced diet and stay hydrated
- Use a calendar or lists to prioritize tasks and activities
- If the injury was recent, follow the “return to activity” guideline:

<https://cattonline.com/wp-content/uploads/2017/11/CATT-Return-to-Activity-V2-June-2019.pdf>

For more ideas and help, consult your local brain injury support agency.



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DID YOU KNOW?

Most survivors of intimate partner violence (IPV) may also suffer a brain injury as part of the abuse.

If your partner has been violent to you, your brain may be injured.

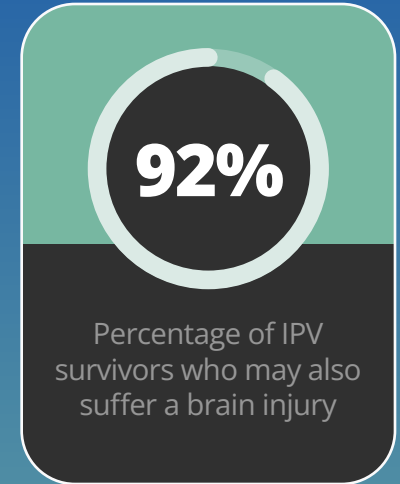
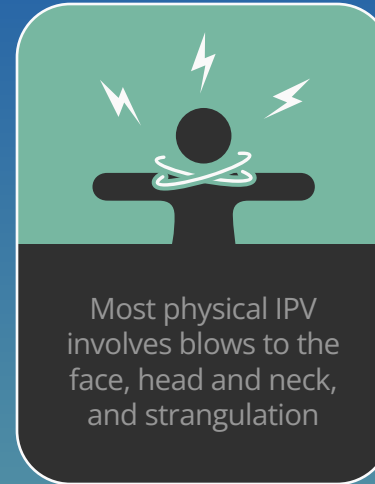
WHAT IS BRAIN INJURY?

Brain injury happens when there's a change in how your brain works because of a hard blow or jolt that causes your head or brain to move rapidly back and forth. Brain injury can also happen from loss of oxygen to the brain, which can happen when someone strangles or chokes you, making it hard for you to breathe.

WHAT CAUSES IT?

Brain injury can happen when you are:

- Punched, or hit in the head, face or neck with an object.
 - Violently shaken.
 - Pushed down stairs.
 - Thrown out of a moving vehicle.
 - Strangled/choked or suffocated. If you had trouble breathing or blacked out from something your partner did, you may have a brain injury.
- Strangulation can cause long term damage, and even death within minutes.



SIGNS AND SYMPTOMS

Brain injury is an invisible wound that often goes unnoticed, is mislabeled, or misunderstood. It can cause physical, mental, and emotional difficulties, as well as changes in behaviours that aren't your fault.

YOU MAY EXPERIENCE:

- Headaches
- Fatigue
- Dizziness or balance problems
- Sleep issues
- Worries and fears
- Depression
- Sadness
- Anger
- Sensitivity to noise and light

YOU MIGHT:

- Have trouble listening.
- Be easily distracted.
- Have difficulty learning things.
- Have trouble following instructions.
- Forget appointments or chores.
- Be tired, irritated, or anger easily.
- Have issues adapting to change.
- Experience inappropriate emotional responses.
- Sleep too much or too little.

TALKING TO SURVIVORS

Someone who's been strangled has experienced trauma. Be patient, take time, and be prepared to repeat yourself and explain things more than once. Ask:

1. Are you having, or did you have, difficulty breathing?
2. Do you have a cough or changes in your voice?
3. Did you lose consciousness, or nearly lose consciousness?
4. Did you lose control of your bowels or bladder?
5. Did you think you were going to die?

If the survivor answers "yes", suggest they see a doctor, even if they say they feel fine, and especially if symptoms increase or change. You can also ask:

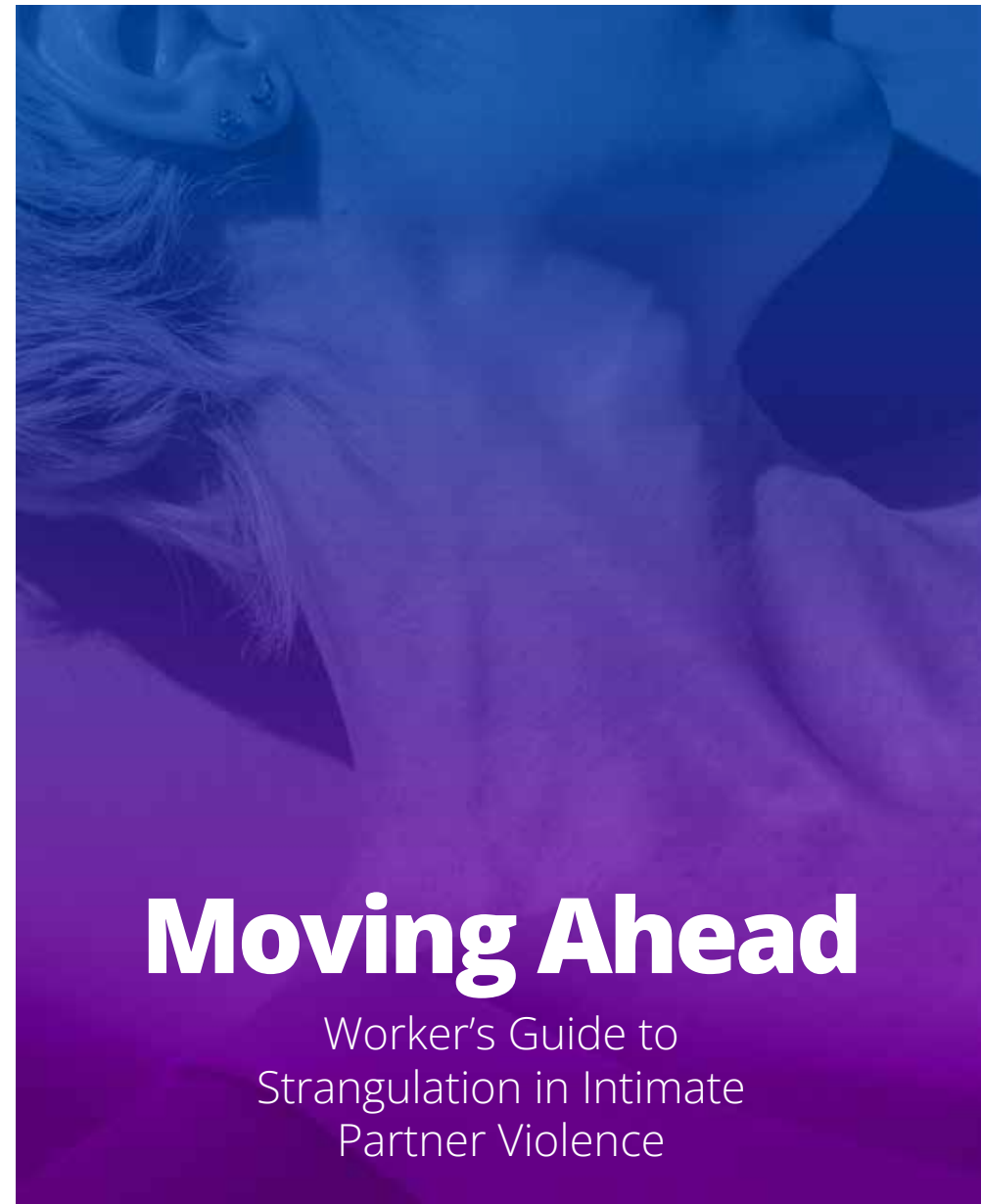
- What the abuser used to strangle or choke them.
- If they know roughly how long the attack lasted.
- If they lost control of their bowels or bladder while they were being strangled, or afterwards.
- If they're finding it hard to speak or swallow.
- If their vision or hearing doesn't seem quite the same as normal (for example, is their vision blurry, are they seeing stars, or did they lose their vision completely at any point; or do they have ringing or buzzing in their ears, do they feel pressure in their ears, or did they lose their hearing completely at any point).
- If they:
 - feel agitated or short-tempered,
 - are having problems concentrating,
 - are hallucinating,
 - are having memory problems,
 - feel dizzy or have headaches, or
 - don't feel as strong as they usually do, or find their strength dips now and again.

The information gathered through these questions is important to share with medical professionals and/or police.

ADDITIONAL RESOURCES

<https://www.strangulationtraininginstitute.com>

The Identification, Care and Advocacy of Strangulation Victims - Information for Front Line Workers and Crisis Advocates. Morag McLean RN (2009) https://www.von.ca/sites/default/files/files/strangulation_protocol_final_may_2012.pdf



Moving Ahead

Worker's Guide to
Strangulation in Intimate
Partner Violence

SOAR SUPPORTING SURVIVORS
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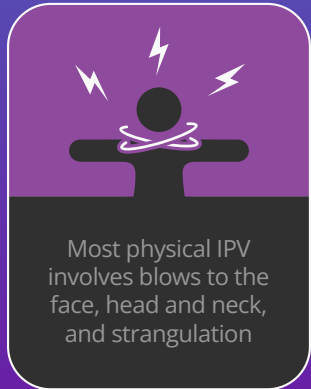
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SEEK IMMEDIATE MEDICAL HELP

Anyone who's been strangled should seek immediate medical help! Even if there are no visible signs or symptoms, and the survivor says they feel fine, they may have suffered internal injuries that could cause sudden, severe consequences, including death, in the coming months. If they're pregnant, they may miscarry.



Most physical IPV involves blows to the face, head and neck, and strangulation

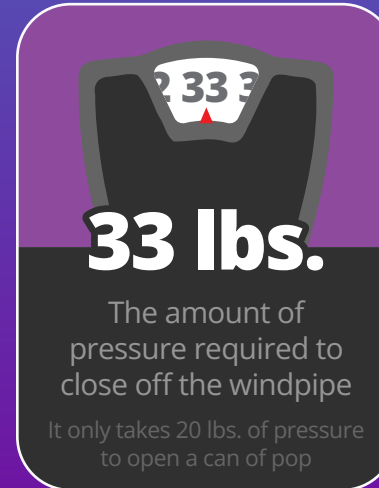
DID YOU KNOW?

More than half of those who experience intimate partner violence (IPV) are strangled.

Strangulation is one of the deadliest forms of IPV. It can cause **loss of consciousness** within seconds, and **brain injury and death** within minutes.

HOW HIGH IS THE RISK?

Someone who's been strangled is **7.5 times more likely to be murdered** in a subsequent attack. Strangulation is about power. The abuser literally holds the victim's life in their hands.



33 lbs.

The amount of pressure required to close off the windpipe

It only takes 20 lbs. of pressure to open a can of pop



7.5x

A woman who has been strangled is **750%** more likely to be murdered

WHAT IS STRANGULATION?

People often use the words "choked" and "strangled" interchangeably, but they're not the same.

When someone is choking, they have something stuck in their airway, which makes it hard or impossible to breathe. In strangulation, pressure is applied to the neck from the outside, blocking necessary blood and oxygen to the brain.

Strangulation can be **manual**, where the abuser uses hands, an arm, or a knee to squeeze or press the neck, or can be done with a **ligature**. That's when the abuser uses a tie, belt, rope or cord, or even a hard object such as a baseball bat or broom, to squeeze the neck.

SIGNS AND SYMPTOMS

- Raspy voice
- Trouble swallowing/breathing
- Ringing in the ears
- Red spots (called petechiae) in eyes or on skin
- Scratches/bruising on neck, chest, or shoulders
- Swollen or cut lips/tongue
- Loss of memory
- Bloodied or broken nose, or bleeding from the ears
- Nausea and vomiting
- Trouble concentrating, or sleeping
- Loss of consciousness
- Uncontrolled urination/defecation
- No visible signs/symptoms*

- * If you've been strangled, choked or your partner has cut off your breathing in any way, you should seek immediate medical help! If you are coughing or clearing your throat a lot, or you notice small red dots on your face or in your eyes, seek medical help. Even if you feel fine, you may have suffered internal injuries that could cause sudden, severe consequences, including death, in the coming months. If you're pregnant, you could miscarry.

WHEN IT HAPPENS AGAIN

If your partner strangles you once, they're very likely to do it again.

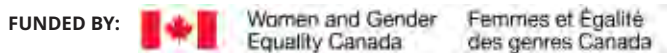
When they do:

- Try to stay calm.
- Tuck your chin and raise your shoulders to help support your neck and protect your airway. This is called the turtle shell technique.
- If you can, fall to the floor and let yourself go limp. The abuser may let go of you and either leave or give you a chance to escape.
- If the abuser releases their grip on you, run to safety and call 911.

If you belong to the deaf, deafened, hard of hearing, or speech-impaired (DHHSI) community, you might be able to register for Text with 9-1-1. It's not available everywhere in Canada yet. See <https://www.textwith911.ca> for more information about how it works and how to register.

ADDITIONAL RESOURCES

<https://www.strangulationtraininginstitute.com>



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Moving Ahead

Survivor's Guide to
Strangulation in Intimate
Partner Violence



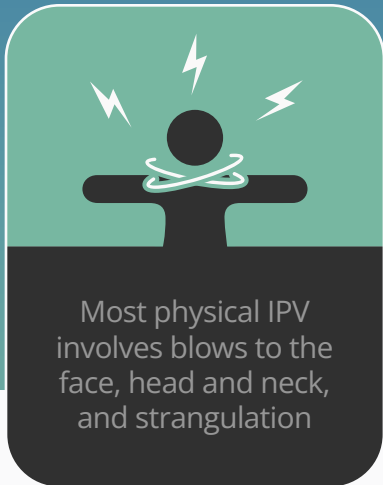
SUPPORTING SURVIVORS
OF ABUSE AND BRAIN INJURY
THROUGH RESEARCH

www.soarproject.ca

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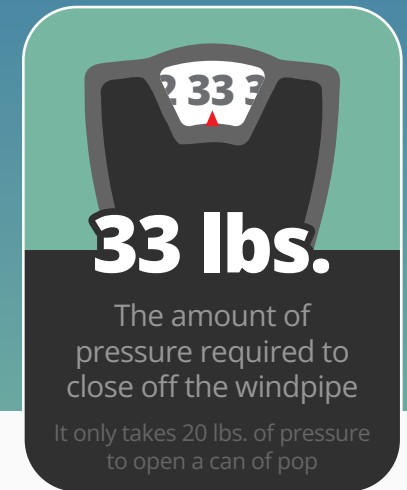
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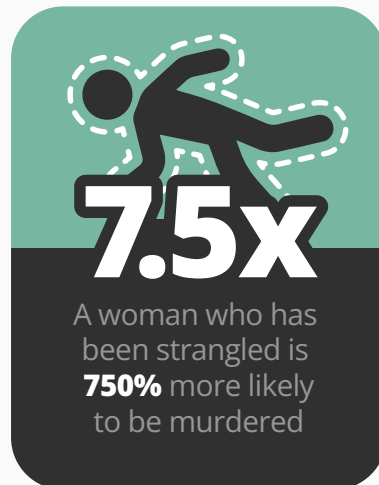
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CONSIDER THIS

Strangulation can cause brain injury, an invisible wound that is often unnoticed, mislabeled, or misunderstood. It can cause physical, mental, and emotional difficulties, as well as changes in behaviour that are not your fault.



SIGNS AND SYMPTOMS

YOU MAY EXPERIENCE:

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- Ringing in the ears.
- Red spots (called petechiae) in eyes or on skin.
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- No visible signs/symptoms.

Intimate Partner Violence and Brain Injury Fact Sheet

Intimate partner violence (IPV) is a public health crisis, with one in three women worldwide having experienced physical or sexual IPV (Devries et al., 2013). The World Health Organization defines IPV as “any behaviour within an intimate relationship that causes physical, psychological, or sexual harm to those in the relationship.” IPV encompasses multiple forms of abuse, including physical violence (such as hitting, pushing, strangulation, and assaults to the head, face, or neck); emotional or psychological abuse and coercive control (including insults, humiliation, isolation, threats, and controlling behaviours); sexual violence (including forced sexual acts and reproductive control); financial abuse (such as preventing someone from working or controlling access to money); and cultural or spiritual abuse, which involves the misuse of beliefs or traditions to exert control or cause harm (Dicola & Spaar, 2016). IPV can happen to anyone regardless of socioeconomic, religious, or cultural status.

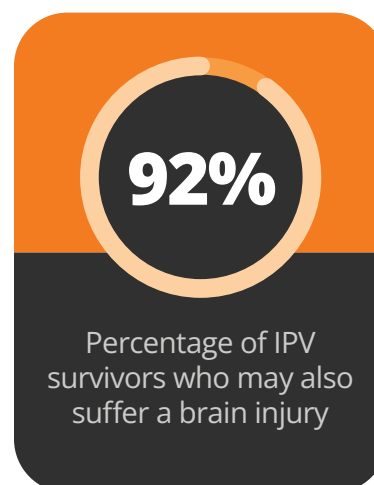
Nearly half (44%) of women in Canada experience some form of intimate partner violence in their lifetime (Statistics Canada, 2021). In 2017, nearly one-third (30%) of all police-reported violent crime in Canada was attributed to IPV, resulting in approximately 96,000 victims (Burczycka, Conroy, & Savage, 2018). Despite these figures, IPV remains widely underreported and underrecognized. Women in Canada are more likely to be victims of IPV than men: 79% of victims are women, and 70% of women report having physical force used against them (Burczycka et al., 2018; Sinha, 2013). From 2009 to 2017, more than half (54%) of IPV incidents resulted in physical injury (Ibrahim, 2019). It is further reported that 67% of

Canadians know a woman who has experienced physical or sexual abuse (“Angus Reid Omnibus Survey,” 2012).

In Canada, a woman or girl is killed violently every two days, most often by a male intimate partner or family member (Canadian Femicide Observatory for Justice and Accountability). Each night, more than 6,000 women and children seek refuge from violence in shelters across the country (“Shelters for abused women in Canada,” 2014). Indigenous women in Canada experience particularly disproportionate rates of violence and are nearly three times more likely to experience violence than non-Indigenous women (National Inquiry into Missing and Murdered Indigenous Women and Girls, 2019).

Women who experience intimate partner violence are at high risk of also sustaining a brain injury. Brain injury refers to an alteration in brain function that may be present at birth or acquired later as a result of an external force or a lack of oxygen. Research indicates that up to 92% of women survivors of IPV experience signs and symptoms consistent with brain injury

(Kwako et al., 2011). The U.S. Centers for Disease Control and Prevention estimates that 2.3% of women experience a severe episode of IPV each year. Applied to the Canadian population, this equates to more than 230,000 women annually, and if 92% of



these women sustain a brain injury, this represents approximately 212,000 women in Canada each year. By comparison, for every one National Hockey League player who sustains a brain injury, an estimated 5,500 women in Canada experience a similar injury through IPV.



lation is a particularly common and dangerous mechanism of brain injury in IPV, as it can cause both traumatic and oxygen-related brain injury. Between 30% and 74% of women who have experienced IPV report loss of consciousness due to strangulation or head trauma (Zieman et al., 2017). Survivors who have been strangled are 7.5 times more likely to be murdered in a subsequent assault, making strangulation a critical indicator of future lethality (Glass et al., 2008). Beyond its physical consequences, strangulation is fundamentally an act of power and control, in which the perpetrator quite literally holds the victim's life in their hands.

Brain injuries are prevalent among survivors of IPV because the head, face, and neck are among the most frequently targeted areas during assaults (Sheridan & Nash, 2007). A concussion is a form of brain injury caused by a hard blow or jolt to the head, neck, or body that causes the brain to move rapidly back and forth within the skull. This movement can stretch and sometimes damage neurons, disrupting communication between cells in the brain. Brain injury can also occur as a result of oxygen deprivation. Hypoxic or anoxic brain injury occurs when the brain's critical supply of blood and oxygen is reduced or cut off, such as through strangulation or suffocation. Strangu-

Survivors of IPV who sustain a brain injury are also at high risk of repeated and cumulative brain injuries. Unlike athletes or individuals injured in accidents, women experiencing IPV often do not have the opportunity for their brain to heal between injuries due to ongoing violence. Repeated injuries sustained over time can exacerbate symptom severity, prolong recovery, and contribute to chronic neurological, cognitive, and psychological impairments. Over time, multiple brain injuries may increase the risk of long-term and potentially neurodegenerative conditions, compounding the already profound impacts of IPV on women's health and wellbeing.

Resources in Canada

Women's Shelters Canada – A national organization supporting women and children fleeing violence by providing resources, advocacy, and a directory of shelters and transition houses across Canada. Their website also offers information on safety planning and supports for survivors of gender-based violence. Visit <https://endvaw.ca/> to learn more and find services in your area.

Brain Injury Canada – A national organization dedicated to supporting people living with brain injury through education, advocacy, and connection to provincial and local brain injury associations. Their website provides information on brain injury, recovery, and available supports across Canada. Visit <https://braininjurycanada.ca/en/> for resources and support.

Parachute – A national injury prevention organization focused on reducing serious injuries, including brain injury, through research, education, and advocacy. Parachute offers evidence-based resources on concussion, head injury, and safety across the lifespan. Visit <https://parachute.ca/en/> for more information.

Intimate Partner Violence and Trauma Informed Practice

Intimate Partner Violence

Intimate partner violence (IPV), also referred to as domestic violence, family violence, and gender-based violence, consists of single incidents or ongoing patterns of controlling, coercive, threatening, degrading, and violent behaviour. IPV can take many forms, including physical violence (such as hitting, pushing, strangulation, or assaults to the head, face, and neck); emotional or psychological abuse and coercive control (including insults, humiliation, isolation, threats, and controlling behaviours); sexual violence (including forced sexual acts or reproductive control); financial abuse (such as preventing someone from working or controlling access to money); and cultural or spiritual abuse, which involves the misuse of beliefs or traditions to control or harm.

IPV and abuse can occur in all settings and among all socioeconomic, religious, and cultural groups. While this document focuses primarily on male-female heterosexual relationships, it is important to recognize that people who are 2SLGBTQIA+ experience some



of the highest rates of gender-based violence compared to any other population. Nearly half of LGB+ women and LGB+ men (47%) report experiencing physical assault since age 15, compared to 26% of heterosexual women and 33% of heterosexual men.



Violence and abuse also occur within LGBTQ2+ relationships and across other family and caregiving relationships.

One-third of women worldwide have experienced physical or sexual IPV. IPV is a global public health crisis. In Canada,

every two days, a woman or girl is killed violently, most often by a male intimate partner or family member, and each night more than 6,000 women and children seek refuge from violence in shelters. IPV is extremely underreported and underrecognized for a range of reasons, including shame and stigma, fear of retaliation or consequences, dependence on the abuser, and a lack of recognition of what constitutes abuse.

Because IPV often occurs behind closed doors, there may be few visible signs to those outside the immediate household. Survivors are often highly capable, effective, and resilient individuals who have learned how to manage, adapt, and put on a good face. Many do not disclose the abuse to anyone.

That said, becoming familiar with the cycle of abuse, which describes how violence escalates and repeats over time, as well as the possible signs of abuse, can help increase awareness and responsiveness.

Possible Signs a Person May Be Experiencing Intimate Violence

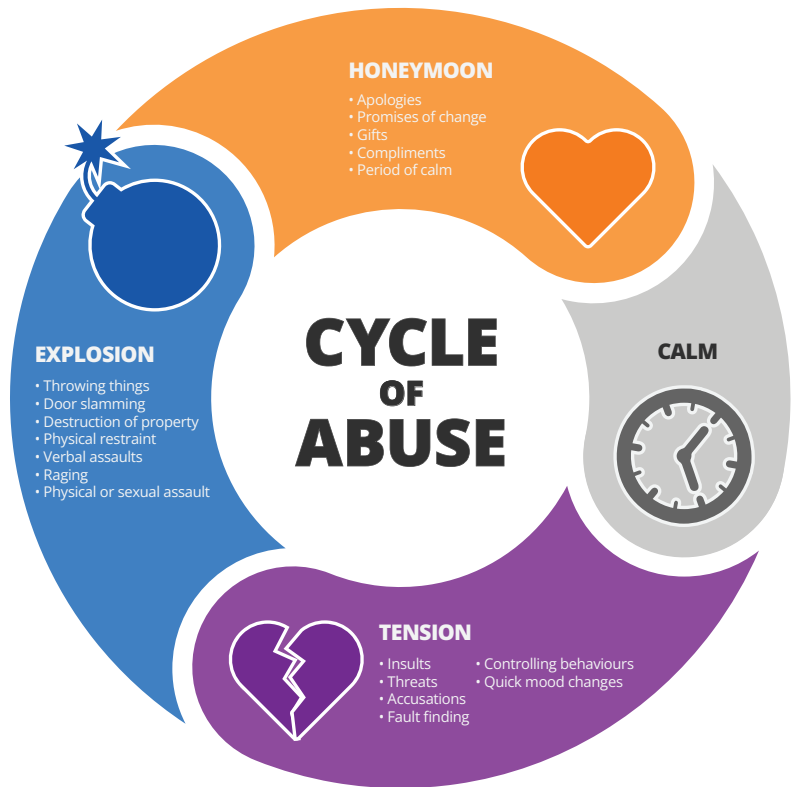
Abuse rarely presents in a single, isolated way. Physical, psychological, and emotional impacts often overlap, and individuals experiencing physical violence may also show signs commonly associated with psychological abuse.

Possible physical, cognitive, and behavioural signs may include:

- Frequent injuries explained away as “accidents.”
- Bruises, welts, cuts, burns, or wounds; blood on clothing or personal belongings.
- Painful or restricted movement (e.g., limping, difficulty sitting or standing).
- Headaches, dizziness, fatigue, confusion, difficulty concentrating, or memory problems.
- Nausea, vomiting, or sleep disturbances.
- Raspy or hoarse voice; trouble swallowing or breathing.
- Scratches or bruising on the neck, chest, or shoulders; red spots in the eyes or on the skin.
- Loss of consciousness or gaps in memory.
- Internal injuries, including fractures, sprains, or muscle injuries.

Possible emotional and psychological signs may include:

- Anxiety, hypervigilance, fearfulness, or being easily startled.
- A sense of resignation, hopelessness, or emotional withdrawal.
- Self-blame for the abuse or partner’s behaviour.
- Making excuses for a partner’s moods or actions.
- Sudden isolation from friends, family, or activities.
- Depression, post-traumatic stress symptoms, or significant changes in mood or behaviour.



Possible signs of neglect or exploitation, financial abuse, coercion, and control may include:

- Unclean or unsafe living conditions.
 - Lack of adequate food, utilities, or access to medications.
 - Confusion about finances, missing belongings, or lack of access to money.
 - Someone else monitoring visits, calls, finances, or daily activities.
 - A partner or former partner showing up unannounced at work or other locations.
- (Bass et al., 2001)

Trauma Informed Practice

A common question that arises in discussions of IPV is, “Why doesn’t she just leave?” A more appropriate question is, “Why does he hurt her?” There are many complex and overlapping reasons a woman may stay in, return to, or have difficulty leaving an abusive relationship.

These reasons may include fear (as the risk of serious injury or death often increases when leaving), guilt, stigma, financial dependence, concern for children, lack of support, and love. The abusive partner is not always violent, and survivors often hold onto hope that things will change.

- **Fear** – A woman is most at risk for physical harm and death at the time of leaving an abusive partner or in the period after she leaves. On some level, then, she may in fact be safer by remaining in the relationship.
- **Guilt** – Having committed to her partner, and their life together, a woman will often feel a strong sense of guilt at the idea of leaving. She may also believe things he’s said about the abuse being her fault, and feel she has a responsibility to stay, and try to make things better.
- **Stigma** – It’s a difficult thing to admit the person you love is hurting you. Many women fear the stigma and victim-blaming that often accompany acknowledgement of abuse.
- **Finances** – A woman may have chosen to stay home and raise her children fulltime, and would now find it difficult to secure meaningful employment to support herself and her family if she leaves. She may also be a victim of financial abuse, and have no access to any of the family’s financial resources in order to plan, and make, her escape.
- **Children** – A woman may stay in a violent relationship for the sake of her children, believing they are better off with both parents than in a so-called “broken” home.
- **Lack of support** – Being in an abusive relationship can be very isolating, and a woman may not feel she has the necessary support from family or friends to take steps to leave.
- **Love** – While the relationship may be abusive, he’s not always violent, and this is the man she loves. Understanding the reasons a woman may stay with, or return to, her abuser is critical in being able to offer support. Those who work with survivors of IPV focus on having empathy and being trauma informed.

Survivors of IPV frequently experience overlapping physical, emotional, and cognitive challenges. Trauma and brain injury can both affect mental health, behaviour, memory, and emotional regulation. Survivors are too often misdiagnosed, blamed for their symptoms, or denied appropriate care. Responding in a way that is trauma and violence informed helps shift interactions from judgment to compassion.

A trauma-informed practice:

- Recognizes the wide-ranging and long-term effects of trauma, including PTSD, complex PTSD, anxiety, depression, hypervigilance, emotional dysregulation, and memory difficulties.
- Prioritizes physical, psychological, and emotional safety.
- Supports survivors in rebuilding a sense of control, agency, and empowerment.
- Meets women where they are at, without judgment, and offers consistent support regardless of how many times they leave or return to an abusive partner.

Taking a Trauma-Informed Approach in Practice

- Believe them: "I believe you." "You are not alone."
- Acknowledge the harm: "This was not your fault." "You didn't deserve this." "I'm sorry this happened to you."
- Ensure safety: "How safe do you feel right now?" "What would help you feel safer?"
- Respect autonomy: Offer choices and options. Avoid telling someone what they should do.
- Create safer spaces: Offer privacy when possible and avoid judgment or unsolicited problem-solving.
- Rely on policy: Follow organizational policies related to safety, access, and responding to violence.

Language matters, particularly when interacting with survivors of violence and abuse. Here are some ideas on what to say to a survivor:

- "You didn't deserve this. It's not your fault."
- "I'm sorry this happened to you."
- "I'm concerned about you."
- "How can I help?"
- "It sounds like you're doing the best you can."
- "I'm here to listen."

Here are some ideas on what not to say to a survivor:

- "You should leave him."
- "Why haven't you left him?"
- "You have to call the police."
- "You should go to marriage counselling."
- "Why didn't you go to the hospital?"
- "Maybe you're over-reacting."
- "I always thought he was such a great guy."

Language matters. More examples:

- Instead of: "They are non-compliant."
- Try: "They are doing their best to cope right now."
- Instead of: "They refused services."
- Try: "They weren't ready or able to engage today."

Educating yourself about the dynamics of abuse and coercive control, and becoming familiar with local resources, strengthens your ability to respond in ways that are supportive, respectful, and effective.

Resources in Canada

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Canada Women's Foundation – A national public foundation advancing gender justice and equality in Canada by funding and supporting programs that help women, girls, and gender-diverse people move out of violence and poverty and into confidence, leadership, and economic security. They partner with grassroots organizations, engage in research and advocacy, and provide resources to address the root causes of gender inequality and support systemic change. Visit <https://canadianwomen.org/> to learn more and get involved.

Additional Resources

Acquired Brain Injury (ABI) Research Lab, University of Toronto – Brain Injury 101, Abused and Brain Injured Toolkit
<https://www.abitoolkit.ca/traumatic-brain-injury/brain-injury-basics/>

Brain Injury Canada – Find a Canadian brain injury support organization near you
<https://braininjurycanada.ca/en/brain-injury-associations>

Canadian Femicide Observatory for Justice and Accountability – Learn about femicide in Canada
<https://femicideincanada.ca/>

Canadian Women’s Foundation – The Facts About Gender-Based Violence I
<https://canadianwomen.org/the-facts/gender-based-violence/>

Canadian Centre for Intimate Partner-Violence Brain Injury (IPV-BI) – A national IPV-BI hub
<http://www.ipvbicentre.ca>

Concussion Awareness Training Tool – Managing Mental Health Symptoms
<https://resources.cattonline.com/files/catt---managing-mental-health-symptoms>

Ohio Domestic Violence Network – When your Head is Hurt
https://www.odvn.org/wp-content/uploads/2020/04/ODVN_Resource_InvisibleInjuries_web.pdf

Shelter Safe – Find a safe place to stay in Canada
<https://sheltersafe.ca/>

Training Institute on Strangulation Prevention, Alliance for Hope International – Strangulation: A concerning type of domestic abuse
<https://www.strangulationtraininginstitute.com/strangulation-concerning-type-domestic-abuse/>

University of Georgia -Driving After Concussion: Is it Safe to get Behind the Wheel?
<https://resources.cattonline.com/files/driving-after-concussion-is-it-safe-to-get-behind-the-wheel>

Women’s Shelters Canada – Connect with a Canadian shelter near you
<https://endvaw.ca/>

For more information and resources on concussion, please visit cattonline.com.

The Concussion Legacy Foundation Canada HelpLine supports patients and families struggling with the outcomes of brain injury. If you or a loved one are seeking guidance on how to choose the right doctor, struggling with lingering concussion symptoms, or have any other specific questions, submit a HelpLine request and a dedicated member of the Concussion Legacy Foundation Canada team will assist you:
<https://www.concussionfoundation.ca/helpline>