Women and Chronic Pain

A RESOURCE FOR HEALTH CARE PROVIDERS SUPPORTING WOMEN VETERANS

This informational package was developed by researchers and people with lived experience, as part of a larger study on women Veterans' chronic pain and substance use. It is intended to help you learn more about women and women Veterans' chronic pain and includes strategies for pain management to support your practice.

Chronic pain is persistent or recurring pain that lasts longer than three months. Chronic pain is multifactorial: biological, psychological and social factors contribute to the pain.

> **The World Health Organization (WHO) defines chronic pain as a disease in and of itself, rather than just a symptom of something else.**

In Canada, nearly 8 million people live with chronic pain, with women experiencing higher prevalence of chronic pain compared to men. Women tend to experience more severe, recurrent, and enduring pain than men.

Determinants of health such as age, poverty, safety, social support, violence, trauma, discrimination as well as sex and gender factors interact to increase vulnerability to chronic pain. This underscores the need for increased awareness and targeted interventions to address the unique challenges faced by women in the context of chronic pain.

Sex and Gender Factors of Chronic Pain

Veterans are twice as likely to report chronic pain compared to Canadians of comparable age and gender (51% vs 22%). Women Veterans have unique conditions and symptoms. Historically, women Veterans have not had access to uniforms or equipment that fit their physiology, increasing risk for musculoskeletal injuries. High rates of military sexual trauma, gender-based discrimination, depression, trauma, and adverse childhood experiences can also influence, and worsen, women Veterans' experiences of chronic pain.

Women Veterans are more than twice as likely to develop PTSD, experience higher rates of depression, and face unique health challenges related to reproductive, pelvic, hormonal, and urogenital health. However, they are less likely to receive adequate treatment for their chronic pain conditions.

Sex refers to the biological aspects of our bodies, such as the anatomy, physiology, genetics, and hormones, which affect how our pain is experienced and the development of sex-specific chronic pain conditions.

- Hormone administration, withdrawal, or suppression can impact pain. For example, in a study by Al-Hassany et al. (2020), differences in hormonal types, levels, and processes were found to be related to sex differences in migraines.
- Physiological mechanisms differ by sex. For example, in a study by Tschon et al. (2021), higher levels of inflammatory cytokines in females with knee and hip osteoarthritis was linked to higher pain.

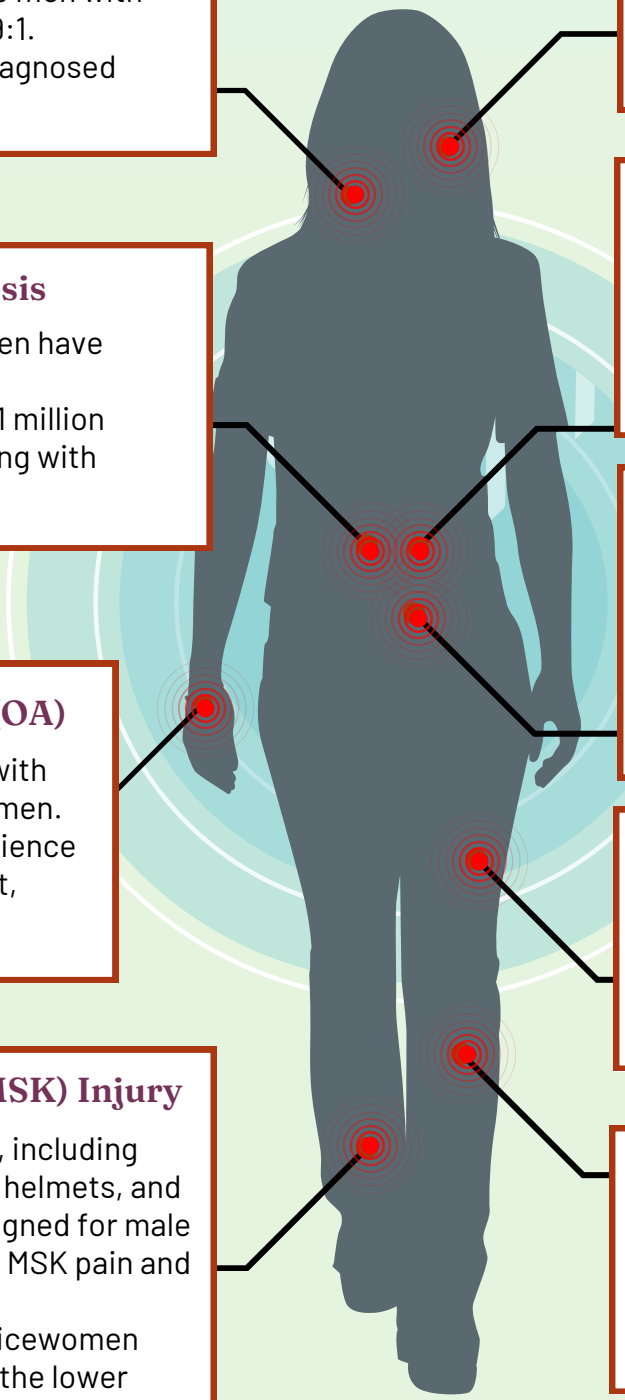
Gender refers to the socially constructed norms, roles, relations, and identities that influence individual and group experiences and responses, all of which shape our experiences and perceptions of pain.

- Chronic pain can be influenced by external and relational experiences. For example, in a study by MacDermid et al. (2025), experiences of trauma exacerbated chronic pain among both men and women. However, women Veterans and military members disproportionately experienced sexual harassment, emotional and verbal abuse, unwanted touching or forced sexual activity, and gender discrimination.
- Gendered perceptions can influence women's access to diagnosis and management. For example, in a study by Leblanc-Huard, Le Scelleur and Fortin (2025), women Veterans' physical symptoms and pain were frequently invalidated because of the misconception that they worked less hard than men. As a result, women would endure their pain despite their injuries.

Reflection Questions:

1. **What is your role in supporting women who experience chronic pain?**
2. **How do sex- and gender-related factors inform your understanding of chronic pain?**

Sex- and- gender related factors result in women experiencing more severe and recurrent chronic pain than men. Several chronic pain conditions, such as endometriosis, vulvodynia (a type of chronic pelvic pain), and fibromyalgia often take several years for women to be diagnosed. During this time, women may be left experiencing unrelenting pain. Below, you can find chronic pain and chronic pain conditions that disproportionately affect women, including women Veterans.



Temporomandibular Joint Disorder (TMJ)

- The ratio of women to men with severe symptoms is 9:1.
- Women are usually diagnosed between age 20-40.

Migraines

- Women are 3 times more likely to have migraines than men.
- 2.6 million Canadian women experience migraines.

Endometriosis

- 10% of girls and women have endometriosis.
- There are more than 1 million women in Canada living with endometriosis.

Irritable Bowel Syndrome (IBS)

- IBS has a 7:2 ratio of female-to-male diagnosis.
- 3 in 10 women with IBS have history of chronic pelvic pain.

Chronic Pelvic Pain (CPP)

- 20% of women between the ages of 18-50 experience CPP.
- Pelvic pain can be experienced in the uterus, cervix, vagina, vulva, bladder, bowel, hips, or lower back.

Osteoarthritis (OA)

- 60% of people living with osteoarthritis are women.
- Women tend to experience OA in their hands, feet, ankles, and knees.

Fibromyalgia

- 80-90% of people diagnosed with fibromyalgia are women.
- More than half a million Canadians are diagnosed with fibromyalgia.

Musculoskeletal (MSK) Injury

- Ill-fitting equipment, including clothing, rucksacks, helmets, and boots that were designed for male bodies contribute to MSK pain and injury.
- 67.5% of active servicewomen report MSK injury to the lower limbs and legs.

Rheumatoid Arthritis (RA)

- Women are 2-3 times more likely to develop RA than men.
- Women are more likely to develop RA at younger ages than men.

Understanding chronic pain and substance use

Many people, including women Veterans, may use substances including alcohol, cannabis, and/or opioids, as a way of managing their pain. When interviewing women Veterans who used substances for pain management, some common things we heard were:

- Drinking alcohol was a way for women Veterans to fit in with their male counterparts. Some women Veterans used alcohol to numb their physical and psychological pain. For some, alcohol was more accessible than trusted, gender-informed medical advice.

- Prescription opioids were effective in reducing the pain for some women, but not for others. Servicewomen were hesitant about taking any substance that could alter their state while working. Servicewomen were also apprehensive about taking opioids due to the stigma associated. For women Veterans who continued to use opioids, there was a fear that their healthcare providers may stop prescribing their medication, even when it was the only effective part of their pain relief.

- Cannabis is widely available to Veterans. However, information about cannabis – including cannabis strains, routes of administration (e.g., smoking, vaping, topical, ingestion, etc.), dosage, and how cannabis can be used to reduce chronic pain – has not been readily available, reducing women's safety.

- Chronic pain does not occur in isolation. Many women Veterans expressed that because of co-existing chronic pain, trauma, and PTSD, it was often difficult to know if the substance was helping reduce their pain or quieting the trauma.

For more information:

- Women, Chronic Pain & Prescription Opioids
- Women & Alcohol
- Women & Cannabis
- Women, Nicotine & Tobacco

Evidence-based pain management strategies

Women's chronic pain is most effectively managed when the multifaceted nature of pain is attended to. While chronic pain may not have a cure, it is essential to offer women Veterans an array of options to empower them in making informed decisions tailored to their individual needs, abilities, and financial, physical, and psychological circumstances. Below you will find more information about each of the strategies.

Medical & Surgical Interventions

Medical and surgical interventions can include a wide range of procedures and treatments (e.g., steroid injection, botox, knee replacement, etc.) to alleviate or manage persistent pain. These interventions can improve functionality, mobility, and sleep. Long term, these interventions might also help people taper off medication. Medical and surgical interventions are most effective when paired with other biopsychosocial approaches to pain.

Pharmacotherapy

Prescribed and non-prescribed medications, including anti-inflammatories, muscle relaxants, anti-convulsants, anti-depressants and hormonal therapies, may be recommended by healthcare professionals to help manage acute or chronic pain. Some of these medications can also help address other health concerns, like depression or PTSD. The choice of medication will depend on the nature and intensity of the pain, as well as individual health considerations.

Lifestyle Interventions

Habits and self-management techniques, such as regular exercise, eating nutrient-rich foods or spending time on the land, can improve overall wellbeing, making it easier to cope with chronic pain. These strategies will differ for everyone based on affordability, interests, preferences, efficacy, and mobility, but can be beneficial in improving mental and physical health, reducing pain, improving strength and mobility, and longevity.

For example:

Exercise can help reduce pain severity, build strength, improve physical function. It also has psychological benefits, as physical activity can naturally trigger the body to release endorphins and other chemicals that help block pain. Some exercises to try might include light aerobic activities, swimming/pool walking, strength training, yoga, or pilates.

Physical and Manual Therapies

Physical and manual therapies use exercise and therapeutic interventions to enhance physical function, mobility, and overall well-being for people with chronic pain conditions.

For example:

Physiotherapy can help reduce pain, strengthen muscles, support goal setting, and provide education on pain management strategies, posture, pacing, and other helpful tools to prevent or reduce further pain or injury.

Massage and Acupuncture are hands-on, passive therapies that may be effective in reducing pain. They are often recommended in addition to other interventions for chronic pain management.

Interdisciplinary Pain Programs

Interdisciplinary, or integrated, pain programs combine strategies from a range of healthcare disciplines to address the biopsychosocial nature of pain. Interdisciplinary pain management may happen in person or virtually. In addition to reducing pain, interdisciplinary programs can support individuals with their mental health, mood, functioning, and mobility.

Psychological/Psychotherapeutic Interventions

Psychosocial, psychological, and psychotherapeutic interventions use evidence-based strategies and therapeutic approaches (e.g., Cognitive Behavioural Therapy, Acceptance and Commitment Therapy, Eye Movement Desensitization and Reprocessing, etc.) to address the emotional and cognitive aspects that may be related to or emerge from living with chronic pain. There are several individual and group-based interventions that have been effective in reducing pain severity and depression, anxiety, and PTSD symptoms.

For example:

Mindfulness involves staying in the moment and observing what you feel in your body, without judgement or resistance. Mindfulness techniques might include focused breathing, body scanning, growing acceptance towards pain instead of fighting it.

Service and Companion Animals

Service and companion animals can help women Veterans with chronic pain and co-occurring mental and physical health concerns by offering mobility aid, pain management, emotional support, and/or mental health relief.

Cultural and Spiritual Practices

Cultural and spiritual practices recognize the cultural influences and understandings of pain, and culturally appropriate approaches to managing chronic pain that support women's overall health and wellbeing.

For example:

Land-Based Healing takes place when people return or reconnect to the land. For Indigenous Peoples, this may also involve utilizing supports to relearn or reclaim traditional wellness practices. Land-based healing honours local strengths, resources, and traditions, fosters connection to the land, and views Indigenous wisdom, values, and worldviews as foundational.

For a list of organizations that provide unique services for Veterans as well as those which are open to the general public:

- Veteran Resource Directory

Reflection Questions:

1. What pain management strategies have you recommended to women Veterans?
2. What additional information do you think would be beneficial to provide?
3. Do you feel comfortable discussing substance use with women Veterans who experience chronic pain?

Comprehensive Women-Centered Pain Management

A comprehensive pain management plan acknowledges the unique experiences and needs of each woman living with chronic pain. Women-centred care has been applied in several health care contexts, including in maternity care, HIV management, substance use treatment, gynecological care, and sexual assault services. Creating safety, offering holistic treatment options, and supporting self-determination and decision making are key elements of women centred care appreciated by clients/patients. Key elements of providing women with comprehensive care in chronic pain treatment and management include:

- Recognizing that women's pain is influenced by a wide range of factors. Physical, psychological, emotional, social, spiritual, economic, cultural, and structural aspects impact women's interactions with the healthcare system.
- Understanding that sex- and gender-related factors play a significant role in the development, perception, and management of pain.
- Emphasizing the importance of tailored approaches to investigation, diagnosis, prevention, and treatment through collaborative, coordinated, and interdisciplinary efforts.
- Offering a variety of pain management options, including medical, surgical, pharmacological, psychological, cultural, and lifestyle strategies, to empower women to make decisions based on their individual circumstances.
- Providing women with accurate, evidence-based information to enable them to actively participate in their own care.

Trauma-Informed Practice

It is important for health and social care providers to be aware of all the long term effects that clients with trauma histories experience. These effects can be seen across all domains of health.

Experience(s) of trauma can affect:

- physical health (e.g. chronic pain, gastrointestinal problems, sleeping disturbances)
- cognitive functioning (e.g. difficulty concentrating, memory lapses)
- emotional health (e.g. depression, anger, difficulty in relationships)
- behavioural choices (e.g. self-harm, maladaptive coping strategies)
- spiritual health (e.g. feeling damaged, questioning life's purpose)

Trauma and chronic pain are also deeply connected. For some Veterans, the trauma they experienced might also be connected to the onset of their pain. The pain can be a reminder of the trauma or vice versa.

Trauma-informed services understand and take these effects into account. Trauma informed services do not require you to discuss traumatic experiences and effects with patients and clients.

How can we act towards ourselves in a trauma-informed way?

Realize

Trauma-informed practice begins with understanding our own assumptions and beliefs.

Recognize

How important it is to identify our emotional reactions when we interact with patients.

Respond

Pause, regulate, and tune in so we can respond to ourselves, and our patients, with intention and care.

Resist Re-Traumatization

Practicing self-compassion, rather than self-criticism, so we do not re-traumatize ourselves.

How can we integrate trauma-informed principles in our practice?

There are many trauma-informed approaches that you might be interested in adopting:

Enlisting Ideas to Create Safety & Trust

- Ask patients/clients what the signs of feeling overwhelmed or distressed are for them, and what can help them recentre.
- If these signs emerge, stop the interaction and find opportunities for recentering in the moment or continue the appointment at another time.
- Discuss what topics or procedures are planned and your patient/client's ideas of what is important to know in advance. Check in for consent through the appointment process. Discuss the process and next steps together.

Affirming and Building Upon Strengths and Skills

Experiences of trauma are overwhelming. It can be reparative to have choice and control in healthcare provider interactions.

- Offer opportunities for learning and practicing new pain management and grounding skills.
- Connect your patients/clients with community services, e.g., walking groups, yoga, meditation, etc. that might meet their goals.

Offering Choice & Collaboration

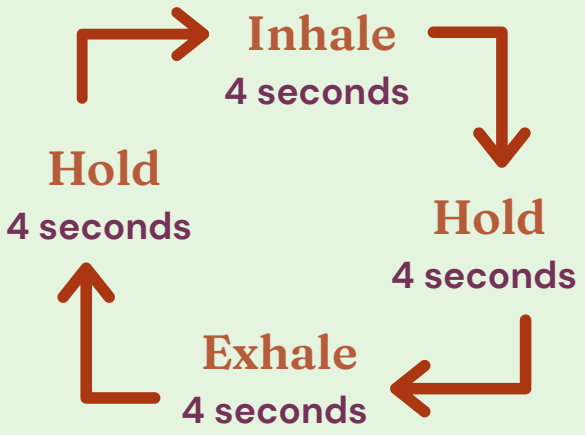
- Ask patients/clients for their preferences – about diagnostic processes, pain management options, and who to add to the care team – so they feel empowered when accessing care.
- Collaboration across care teams can demonstrate respectful relationships and a more holistic response to pain management.

Supporting Relational Connection

- A positive relationship with a provider who is curious and open to patient/client experiences is an important component of recovery. Being listened to, understood, accepted and respected without judgement frees patients/clients to grow and heal.
- Know that a respectful and positive connection is important part of care. It is in this way that trauma-informed support can be reparative of prior unsafe and overwhelming experiences.

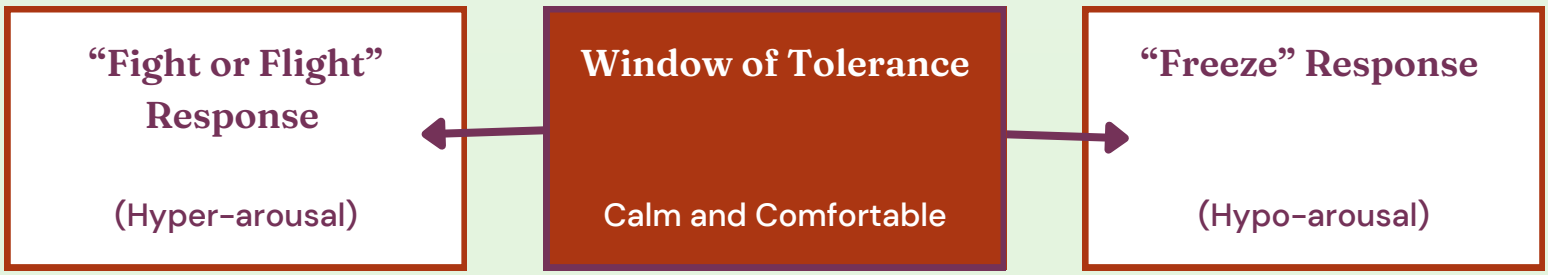
It can also be beneficial to recognize in-the-moment trauma responses, and to stop the interaction to help your patient/client use grounding skills to recentre. On the next page, you'll find a graphic on "in-the-moment" trauma responses.

This box breathing exercise can be used by you or your patients/clients when there is an "in-the-moment" response.



Recognizing and Responding to "In-the-Moment" Responses

Our brains and bodies often respond with a "Fight or Flight" or "Freeze" response if we feel threatened. These responses can result in us feeling stuck or trapped, being or feeling harmed (physically, emotionally, psychologically, spiritually), being ignored or not taken seriously, being treated unfairly, or reminded of previous harm. This sheet can be used with patients/clients if an "in-the-moment" response occurs.



If we are experiencing a fight/flight response, we might:

- Feel anxious, angry, or overwhelmed
- Want to yell or fight
- Have obsessive thoughts that we can't "turn off"
- Have a hard time concentrating or finding the right words
- Be over-reactive to what is happening around us

If we are experiencing a freeze response we might:

- Feel "zoned out" or numb
- Feel unmotivated
- Have a hard time remembering things
- Seem emotionless
- Feel disconnected from ourselves
- Disassociate

Finding our Window of Tolerance

Fight/Flight

To feel calmer again, we can:

- Move our body to let out excess energy
  - Dance it out!
  - Squeeze a stress ball
  - Go for a walk/run
- Take deep breaths, focusing the exhale
- Name our fears, concerns, and frustrations
- Remove ourselves from the situation

Freeze

To feel calmer again, we can:

- Press our hands together or on our arms/legs
- Count to 20 and then back down to 0
- Describe the things around you
- Colour/paint a picture
- Drink a cool glass of water
- Take deep breaths, focusing on the exhale
- Smell something pleasant

For More Information

The Centre of Excellence for Women's Health has a free online Educational Guide tailored to service providers. This guide is structured into three comprehensive sections: 1) Women and Chronic Pain, 2) Women and Prescription Opioids, and 3) Women and Chronic Pain Management. The guide delves deeper into each topic offering new information about the barriers women face in their care and treatment. It also offers insights into effective strategies for providing women+ centered comprehensive care as well as various approaches to care.

Chronic Pain Centre of Excellence for Canadian Veterans (CPCoE) is a research centre dedicated to improving the lives of the Canadian Armed Forces, Veterans, and their families living with chronic pain. The CPCoE shares research findings and hosts events, webinars, and the Most Painful Podcast, which explores a wide range of issues related to chronic pain among Veterans, including several episodes focusing specifically on the experiences of women Veterans with chronic pain.

Power Over Pain Portal is a pan-Canadian platform supporting individuals, including Veterans, managing chronic pain. It offers a variety of free resources, including information, courses and workshops, peer support, counselling, crisis help, and user stories. While designed for a broad audience, many of the resources may be useful for women Veterans with chronic pain.

Atlas Institute for Veterans and Families works with Veterans, families, service providers and researchers to increase access to safe, meaningful mental health care. The organization works to ensure that all Veterans and families can navigate and have access to benefits, resources, and supports that protect dignity and identity and improve health and wellbeing.

Invisible No More. The Experiences of Canadian Women Veterans was a report prepared for the Standing Committee on Veterans Affairs. It offers information on Canadian women Veterans, the impact of military service on women's body and mind, and recommendations for future research and action.

Organizations supporting women veterans with chronic pain:

- True Patriot Love
- The Pepper Pod
- Women Warriors' Healing Garden
- Veterans for Healing

Service maps and resources:

- True Patriot Love - Veteran Hub
- Veteran Resource Directory
- Respect Map

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centre of excellence for women's health

University of Saskatchewan

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