



“Psychology Works” Fact Sheet: Spinal Cord Injury

What is spinal cord injury?

Spinal cord injury (SCI) refers to damage to the spinal cord caused by trauma (for example, motor vehicle accident or fall) or disease (for example, cancer). Injury can be complete, resulting in loss of either feeling or movement below level of the injury, or incomplete, which indicates some preservation of feeling and/or movement below the level of the injury.

There is an estimated 85,000 people currently living with SCI in Canada¹. People with SCI may experience loss or changes in sensation and mobility, as well as loss or changes in their ability to control breathing, heart rate, blood pressure, bowel, or bladder.

After the initial injury or condition has been stabilized, interdisciplinary care is recommended given the range of possible conditions that may develop from this devastating injury. A rehabilitation team may include a physiatrist (a doctor specializing in physical medicine and rehabilitation), physical therapist, occupational therapist, social worker, and psychologist.

Rehabilitation goals change through the different stages of recovery. Early stages of recovery usually emphasize stabilizing the injury or condition, and improving muscle function and joints' range of motion (for example, through stretching or assisted standing)². Goal setting in later stages depends on the individual, but usually aims at independence, integrity, and overall quality of life.

How can psychology or a psychologist help?

SCI can be a life-changing event. Recovery can be challenging as people come to terms with differing physical capacity, new routines, changing relationships, and possibly evolving sense of self. While people differ in their emotional experiences, emotional reactions such as shock, anger, guilt, and grief may be normal.

Around 20-30% of people with SCI experience depression and anxiety at some point during their recovery^{3,4}. In particular, women who give birth after SCI, particularly women with high-level SCI (i.e., injury at the cervical level), are at increased risk of postpartum depression (25–37%) and anxiety (18–33%)⁵. Suicide rate is elevated, with one study finding the suicide mortality rate among people with traumatic SCI five times higher than that of the general population⁶. People with SCI may also be at higher risk of substance use dependence, especially cannabis and opioid⁷. Mental health concerns can worsen physical complications associated with SCI and impede rehabilitation^{8,9}.

In addition, co-occurring traumatic brain injury (TBI) can occur in as many as 59% of SCI cases¹⁰. The physical, emotional, and cognitive impacts of TBI, which may involve attention and learning deficits, agitation and emotional regulation difficulties, are difficult to disentangle from other SCI complications, and can further complicate the rehabilitation process¹¹.





Psychologists play a crucial role in rehabilitation for people with SCI. As trained practitioners in emotional and behavioural change management, psychologists can work collaboratively with people with SCI throughout or at any stages of their rehabilitation. That said, early psychological support is ideal, especially if a dual diagnosis of TBI and SCI is suspected: longitudinal research has shown stability in coping strategies and psychological health from as earlier as week 12 to year 10^{11 12}.

There is evidence to suggest that psychological treatments are effective for people with SCI. Cognitive behavioural therapy (CBT) has been shown to decrease symptoms of depression and anxiety, and enhance coping strategies, demonstrating equal effectiveness whether offered individually or in group, as well as in-person or online¹³. There are fewer studies on mindfulness, but current research has also showed benefits for pain and mood management¹⁴. Self-management training programs can reduce stress, improve sense of control and coping, with evidence to suggest long-lasting benefits¹⁵. Family and couples' therapy can also assist people with SCI and their loved ones in navigating shifting dynamics in their relationships. Overall, psychological interventions can complement other rehabilitation practices (for example, medications, exercises, and experimental interventions) to improve people with SCI's wellbeing.

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For More Information

You can consult with a registered psychologist to find out if psychological interventions might be of help to you. Provincial, territorial and some municipal associations of psychology often maintain referral services. For the names and coordinates of provincial and territorial associations of psychology, click <https://cpa.ca/public/whatisapsychologist/PTassociations/>.

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