Depression After Spinal Cord Injury

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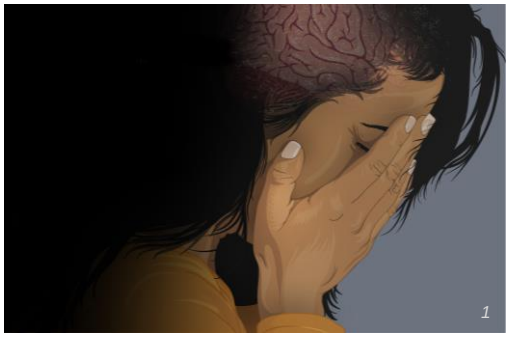
Depression is one of the most common mental health concerns among people living with spinal cord injury (SCI). This page provides an overview about what depression is and common treatments for depression after SCI.

Key points

- Depression is a psychological disorder involving a sad or depressed mood, loss of interest in activities, and many other symptoms.
- Depression is common but not universal after SCI.
- Depression is treatable. There are many effective treatments for depression, including antidepressant medications, counseling and talk therapies, and exercise programs.
- Research suggests that cognitive behavioural therapy, antidepressant medications, exercise programs, or a combination of these interventions may help to improve depression after SCI.

What is depression?

Depression (*major depressive disorder*) is a psychological disorder involving depressed mood, loss of interest in activities, and a number of other symptoms that affect the emotions, thoughts, behaviours, and body.



Depression is not simply feeling blue or the sadness that can accompany life events like the death of a loved one. It is a serious medical condition involving persistent and widespread feelings of distress that affect all aspects of a person's life.

What are the signs and symptoms of depression?

The main symptoms of depression are a depressed mood and/or a loss of interest or pleasure in activities. Other symptoms may include some or all of these physical, emotional and cognitive (thinking) symptoms:

Physical symptoms:

- Changes in weight or appetite
- Changes in sleep – either sleeping too much or too little
- Moving or speaking slowly, or being fidgety and restless
- Feeling tired or low energy

Emotional symptoms:

- Feeling down, sad, or empty
- Feeling worthless, hopeless, or guilty
- Feeling irritable or angry

Cognitive (thinking) symptoms:

- Trouble concentrating or making decisions
- Thinking about death or suicide

Symptoms have to last for at least two weeks and be severe enough to interfere with the person's life to be diagnosed as depression.

How is depression different from other emotional responses to SCI?

It is common to feel strong emotions after experiencing a serious injury like an SCI. Feelings of sadness, anger, and grief are all common responses to SCI that do not necessarily mean that someone has depression.

Emotional responses like grief tend to go away over time while the symptoms of depression are persistent. People experiencing depression are also more likely to feel negatively about themselves, such as feeling worthless or guilty. They are also prone to dwelling on negative events from their past and present, and projecting negative outcomes in the future.

Depression affects everyone differently, so its exact symptoms will be different from person to person. Depression is not always easy to recognize. If you suspect that you or a loved one may have depression, it is important to speak to a healthcare provider for more information.

How does depression affect people with SCI?

Depression is one of the most common mental health concerns after SCI. As many as 40% of people experience depression during rehabilitation and around 1 in 5 people experience depression a year after the injury.

Depression can be a serious problem after SCI. It can interfere with recovery and rehabilitation and is related to longer hospital stays, higher levels of pain, and lower quality of life after injury.

However, it is also important to keep in mind that not every person will develop depression after SCI. The majority of people adapt well to living with an SCI and depression is not a necessary part of adjustment to injury, but shows that a person is experiencing distress.

Suicide

Suicide rates are also higher among people with SCI than in the general population. If you or someone you know is thinking about suicide, contact a health provider or a crisis center immediately:

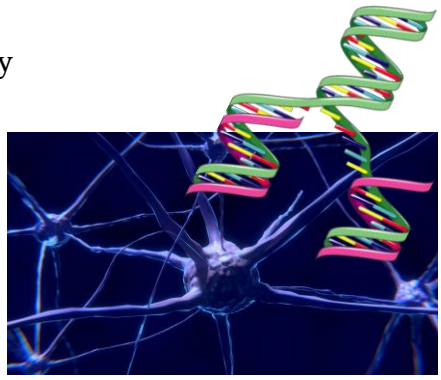
- Canada - Canadian Association for Suicide Prevention: suicideprevention.ca/im-having-thoughts-of-suicide/
- United States - National Suicide Prevention Lifeline: 988lifeline.org/
- Australia - Lifeline Australia: lifeline.org.au/
- United Kingdom - Samaritans: samaritans.org/how-we-can-help/contact-samaritan/

What causes depression?

Scientists do not know for sure what causes depression. Depression can affect anyone and happens for different reasons for each person. There are many different factors that may be related to depression, such as:

- Stressful life events, like experiencing a serious injury or losing a job
- Personal characteristics, such as personality and life experiences
- Environmental factors, such as social support and personal security
- Genetics
- Medical conditions
- Certain medications

Depression may be related to lower levels of certain brain chemicals called *neurotransmitters*. Neurotransmitters are chemicals in the brain that allow nerve cells to send messages. Lower levels of certain neurotransmitters, including serotonin, norepinephrine, and dopamine, are linked with depression. However, this is a complex relationship that scientists are still working to understand.



Potential sources of depression include your DNA and various factors in the brain.[6,7]

Unique challenges to coping after SCI

Experiencing an SCI can cause additional challenges which may contribute to depression:

- Sensory deprivation (e.g., limited exposure to natural light) during the acute period
- Health problems like pain, fatigue, and sleep problems
- Grieving the loss of physical abilities and independence
- Stresses of being in the hospital, such as being away from home for a long time and lack of privacy
- Changes in self-image
- Symptoms of other medical conditions like brain injuries and concussions
- Uncertainty about what will happen in the future

How is depression diagnosed?

Depression is diagnosed through interviews with a health provider such as a doctor or psychologist. The health provider will ask questions about mood and a number of other symptoms, and may have you complete questionnaires about your symptoms.

There is no lab test that can diagnose depression, but lab testing may be done to rule out other conditions that may have similar symptoms, such as thyroid problems.

How is depression after SCI treated?

There are many different ways of treating depression. The first treatments are usually counseling and talk therapies and antidepressant medications. Other treatments for depression may include exercise and a number of other medical, alternative, and self-help therapies.

Counseling and Talk therapies

Counseling and talk therapies involve talking with a mental health provider such as a psychologist, counselor, or social worker. There are many different types of talk therapies. Research done on depression after SCI has focused primarily on one type of therapy called *cognitive behavioural therapy* or *CBT.*

Cognitive behavioural therapy is a type of therapy that addresses how thoughts, feelings, and behaviours can contribute to mental health problems. It focuses on developing practical skills to help manage these conditions and can be done in many different formats, including one-to-one counseling, group therapy, and computer programs.

There is moderate evidence that cognitive behavioural therapy can help to improve depression symptoms after SCI. However, we do not know whether these effects last long-term.

For a review of how we assess evidence at SCIRE Community and advice on making decisions, please see SCIRE Community Evidence.

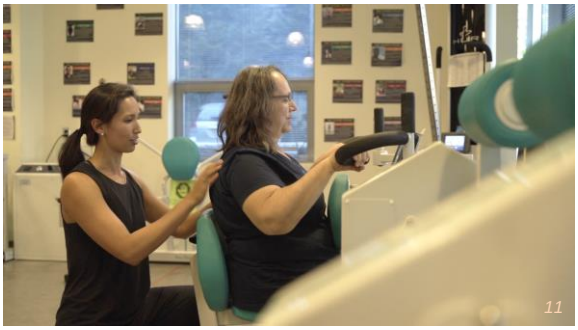
Antidepressant medications

Antidepressant medications (antidepressants) are another common treatment option for depression. There is a wide range of different antidepressants that may be used. Some antidepressant medications can treat sleep, nerve pain and mood simultaneously, and these are often used in people with SCI. Antidepressants are prescribed by medical doctors.

The use of antidepressants to treat depression after SCI is mostly based on research studies done in the general population because there are not many studies done among people with SCI. However, there is weak evidence that

combined antidepressant medications and talk therapies may help to improve the symptoms of depression among people with SCI.

Exercise



Exercise is now becoming more widely known as a treatment option for depression. Exercise may help treat depression because it helps to reduce pain and stress, cause the release of "feel-good" chemicals like endorphins, and helps to maintain mobility and quality of life.

A number of different exercise-based programs have been studied for their effects on depression, after SCI. There is strong evidence that exercise helps to reduce the symptoms of depression after SCI.

Other treatments and strategies for depression

There are many other treatments used for depression. These treatments have not been studied extensively among people with SCI, so we do not know how effective they are for depression after SCI:

- Organized wellness and health promotion programs
- Living a healthy lifestyle (getting enough rest, eating healthy, and staying active)
- Participating in enjoyable activities
- Meditation and mindfulness training
- Massage therapy
- Acupuncture
- Light therapy
- Herbal and dietary supplements
- Brain stimulation therapies such as Transcranial Magnetic Stimulation (TMS)

Addressing other medical problems

There are a number of factors related to spinal cord injury that may contribute to depression, such as chronic pain, fatigue, sleep problems, medication side effects, and health problems like repeated infections. Treating these problems may be another strategy that can help manage depression.

The bottom line

Depression is a psychological disorder involving depressed mood, loss of interest in activities, and a number of other symptoms. Depression is one of the most common mental health concerns after SCI.

The research evidence suggests that cognitive behavioural therapy, combined medication and talk therapy, and exercise programs help to improve the symptoms of depression after SCI. Further research specific to people with SCI is needed to better understand which treatments are most effective.

If you are concerned that you or a loved one has depression, it is important to speak to a healthcare provider for more information and to determine the best treatment options for you.

For a list of included studies, please see the Reference List. For a review of how we assess evidence at SCIRE Community and advice on making decisions, please see SCIRE Community Evidence.

Reference list

Parts of this page have been adapted from the SCIRE Professional "Depression Following Spinal Cord Injury" Module:

Orenczuk S, Mehta S, Slivinski J, Teasell RW (2014). Depression Following Spinal Cord Injury. In Eng JJ, Teasell RW, Miller WC, Wolfe DL, Townson AF, Hsieh JTC, Connolly SJ, Noonan VK, Loh E, McIntyre A, editors. Spinal Cord Injury Rehabilitation Evidence. Version 5.0: p 1-35.
Available from: scireproject.com/evidence/mental-health/depression/

Full reference list available from: community.scireproject.com/topic/depression/#reference-list
Glossary terms available from: community.scireproject.com/topics/glossary/

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