

# Depression after Traumatic Brain Injury

This copy provided by the Brain Injury Association of Virginia (BIAV). For more information on resources in Virginia, call 800-444-6443 or visit [www.biav.net](http://www.biav.net)

For more information, contact your nearest TBI Model Systems. For a list of TBI Model Systems go to: [http://msktc.washington.edu/tbi/tbi\\_model\\_systems.htm](http://msktc.washington.edu/tbi/tbi_model_systems.htm)

This publication was produced by the TBI Model Systems in collaboration with the Model Systems Knowledge Translation Center (<http://msktc.washington.edu>) with funding from the National Institute on Disability and Rehabilitation Research in the U.S. Department of Education, grant no. H133A060070.

## What is depression?

Depression is a feeling of sadness, loss, despair or hopelessness that does not get better over time and is overwhelming enough to interfere with daily life. There is cause for concern when feeling depressed or losing interest in usual activities occurs at least several days per week and lasts for more than two weeks.

## Symptoms of depression include:

- Feeling down, sad, blue or hopeless.
- Loss of interest or pleasure in usual activities.
- Feeling worthless, guilty, or that you are a failure.
- Changes in sleep or appetite.
- Difficulty concentrating.
- Withdrawing from others.
- Tiredness or lack of energy.
- Moving or speaking more slowly, or feeling restless or fidgety.
- Thoughts of death or suicide.

Feeling sad is a normal response to the losses and changes a person faces after TBI. However, prolonged feelings of sadness or not enjoying the things you used to enjoy are often key signs of depression, especially if you also have some of the other symptoms listed above.

## How common is depression after TBI?

Depression is a common problem after TBI. About half of all people with TBI are affected by depression within the first year after injury. Even more (nearly two-thirds) are affected within seven years after injury. In the general population, the rate of depression is much lower, affecting fewer than one person in 10 over a one-year period. More than half of the people with TBI who are depressed also have significant anxiety.

## What causes depression after TBI?

Many different factors contribute to depression after TBI, and these vary a great deal from person to person.

- **Physical changes in the brain due to injury.**  
Depression may result from injury to the areas of the brain that control emotions. Changes in the levels of certain natural chemicals in the brain, called neurotransmitters, can cause depression.
- **Emotional response to injury.**  
Depression can also arise as a person struggles to adjust to temporary or lasting disability, losses or role changes within the family and society.
- **Factors unrelated to injury.**  
Some people have a higher risk for depression due to inherited genes, personal or family history, and other influences that were present before the brain injury.

## What can be done about depression after TBI?

If you have symptoms of depression, it is important to seek professional help as soon as possible, preferably with a health care provider who is familiar with TBI. Depression is not a sign of weakness, and it is not anyone’s fault. Depression can be a medical problem, just like high blood pressure or diabetes. You cannot get over depression by simply wishing it away, using more willpower or “toughening up.” It is best to get treatment early to prevent needless suffering and worsening symptoms.

If you have thoughts of suicide, get help right away. **If you have strong thoughts of suicide and a suicide plan, call a local crisis line, 911, the 24-hour National Crisis Hotline at 800-273-8255, or go to an emergency room immediately.**

The good news is that certain antidepressant medications and psychotherapy (counseling) treatments, or a combination of the two, can help most people who have depression.

### Medications

Antidepressant medications work by helping to re-balance the natural chemicals (called neu-

rotransmitters) in the brain. Antidepressants are not “addictive.”

It is also important to know that even if antidepressants help with depression, they usually do not have to be taken forever. Sometimes a medication can help re-balance the brain’s chemistry and can eventually be discontinued (for example, after 6-12 months). However, each person’s situation is unique, and both taking and discontinuing antidepressants should always be done under a doctor’s supervision.

In addition to helping with mood, antidepressants can also help with the other symptoms of depression, such as low energy, poor concentration, poor sleep and low appetite. Some antidepressants can also help with anxiety symptoms.

There are many different types or “classes” of antidepressant medications. Studies of depression in TBI have found that some classes may work better than others.

- **Selective serotonin reuptake inhibitors, commonly called SSRIs**, have been found to be the most effective antidepressants for people with TBI. Specifically, sertraline (Zoloft®) and citalopram (Celexa®) may have the fewest side effects and may even improve cognition (thinking ability).
- **Serotonin-norepinephrine reuptake inhibitors, or SNRIs**, such as venlafaxine (Effexor®) are newer drugs that also may be a good option for people with TBI.
- Some types of antidepressants should be **avoided** in most cases because they have side effects that can cause problems in people with TBI. These include monoamine oxidase inhibitors (MAOIs). Tricyclic antidepressants (TCAs) are often used safely at low doses for sleep or pain, but may cause side effects at higher doses.

After starting antidepressants, it can take a few weeks to feel better. Sometimes your physician will need to change the dose over time or switch to a different medication if one doesn’t work well enough. In some cases, two different antidepressants can be used together if a single medication is not effective.

It is important to take antidepressant medication every day, even if you are feeling better. Do not stop it abruptly. In most cases, your physician will recommend taking the medication for at least several months.

### Psychotherapeutic (counseling) approaches

There are many different kinds of psychotherapy and counseling. For people with depression, the most effective types of therapy are those that focus on day-to-day behavior and thinking.

**Cognitive-behavioral therapy or CBT** helps people learn how to change the way they behave, think and feel about things that happen to them, and the way they see themselves. CBT has reduced depression in the general population and is currently being tested to determine the best ways to adapt it for people who have the types of thinking and memory problems that can happen with TBI.

**Behavioral activation therapy** helps people with depression become more active and begin to enjoy doing pleasurable activities again. This increased activity helps to improve mood. A professional counselor can help you set up a routine of pleasurable activity and evaluate the effects on your mood.

Remember, many people do best with a combination of approaches, such as antidepressant medication plus sessions with a trained counselor to work on changing behavior.

### Other treatment approaches

Other approaches such as exercise, acupuncture and biofeedback have been shown to be helpful in treating depression in the general population. Some people with TBI also find them helpful. A professional specializing in TBI should be consulted about these treatments. Treating anxiety and pain can also help to reduce depression. Brain injury support groups may be a good source of additional information and support for depression and other challenges following a TBI.

### How to find help

- Many mental health professionals are qualified to treat depression. Psychiatrists have special-

ized training in medication management and counseling for depression, and psychologists are trained to provide counseling for depression. Some social workers and licensed professional counselors are also trained to provide counseling for depression.

- Physicians—such as primary care physicians, neurologists and psychiatrists—and nurse practitioners with experience in treating depression can often get treatment started.
- When available, it is best to get treatment from a comprehensive brain injury rehabilitation program that can address all aspects of TBI recovery.
- For more general information about depression, contact the National Institute of Mental Health at 1-866-615-6464 (toll-free) or online at <http://www.nimh.nih.gov/health/topics/depression/index.shtml>.

### References

Fann, J.R., Hart, T., Schomer, K.G.. Treatment for Depression after Traumatic Brain Injury: A Systematic Review. *Journal of Neurotrauma* 26:2383-2402, 2009

### Disclaimer

This information is not meant to replace the advice from a medical professional. You should consult your health care provider regarding specific medical concerns or treatment.

### Source

Our health information content is based on research evidence whenever available and represents the consensus of expert opinion of the TBI Model System directors.

### Authorship

*Depression after Traumatic Brain Injury* was developed by Jesse Fann, MD, MPH, and Tessa Hart, PhD, in collaboration with the Model Systems Knowledge Translation Center.