

Brain Injury and Depression

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FACT SHEET



Brain injuries can cause a variety of cognitive, physical, and psychological changes that can affect a person's life. One of the most widely recognized psychological problems following brain injury is depression. Depression is characterized by feelings of sadness, loss, despair, or hopelessness that does not get better over time and is severe enough to interfere with daily life. Symptoms may include feeling down, sad, blue or hopeless, loss of interest, feeling worthless, changes in sleep and appetite, withdrawal from others, and tiredness or lack of energy. Studies have found that depression after brain injury leads to worse functional and psychological outcomes and worse quality of life (Haagsma, 2014).

Prevalence:

Depression is one of the most frequently reported psychological problems following TBI, however prevalence estimates vary widely due to methodological and sampling differences (Osborn, 2014). One study reported prevalence rates ranging from 38-61% in patients one or more years post injury (Fleminger, 2003), and as many as 42% of patients after traumatic brain injury fit the criteria for major depression disorder (Kreutzer, 2001).

Cause of Depression after Brain Injury

There are several mechanisms by which people may develop depression after brain injury including neuroanatomical pathway disruptions, neurochemical changes, and psychological and social factors. Damage to the frontal and temporal lobes can disrupt the circuitry between the prefrontal cortex, amygdala, hippocampus, basal ganglia and thalamus leading to emotional dysfunction (Norup, 2014). Psychological variables including low tolerance to frustration, impaired self-awareness, low self esteem and poor coping strategies may also contribute to depression (Osborn, 2014). Pre-injury depressive symptoms may be a risk factor for poor behavioral and mental health-related quality of life outcomes (Kumar, 2014). Social factors such as lack of social support, loss of personal relationships/friendships and unrealistic expectations have also been associated with increased depression (Osborn, 2014).



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Treatment

Treating depression may involve pharmacological, psychotherapeutic, and rehabilitative interventions. Traditional pharmacological methods include tricyclic antidepressants, monoamine oxidase inhibitors, and selective serotonin reuptake inhibitors or SSRIs (Fann, 2009). Cognitive-behavioral therapy can help people change the way they behave, think, and feel about the things that happen to them and the way they see themselves, and has been effective in treating depression in the general population. Behavioral activation therapy helps people become more active and helps them to enjoy doing pleasurable activities again. Several studies have also demonstrated the effectiveness of exercise on improving mood, stress, and depressive symptoms (Schwandt, 2014; Bellen, 2014; Fann, 2009; Driver, 2009 and Hoffman, 2010). One study even found that more patients preferred physical exercise or counseling as a treatment for depression over other treatment modalities (Fann, 2009). No one approach is superior to the others and a combination of treatments may be best in managing depression after brain injury. It is important for clinicians to be able to recognize signs and symptoms of depression and to refer to appropriate services.

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