

## Australian Guidelines for the Treatment of Acute Stress Disorder and Posttraumatic Stress Disorder

# Specific Populations and Trauma Types Motor vehicle accident and other traumatic injury survivors

This *Motor vehicle accident and other traumatic injury survivors* information sheet addresses background issues and provides presentation, assessment and treatment recommendations for practitioners working with such injury survivors. These recommendations are based on the systematic review of the international literature, and the expert opinion and advice presented in the Specific Populations and Trauma Types chapter of the *Australian Guidelines for the Treatment of Acute Stress Disorder and Posttraumatic Stress Disorder*. [www.phoenixaustralia.org/resources/ptsd-guidelines/](http://www.phoenixaustralia.org/resources/ptsd-guidelines/).

Particular issues to consider in the treatment of motor vehicle accident (MVA) and injury survivors are presented here. The information provided in this section is derived primarily from expert opinion regarding the application of the Guidelines for this population, rather than from the empirical literature.

### Background issues

With study participants recruited from hospital admissions, most of what we know about MVA and other injury survivors is based on people who have been severely injured and hospitalised, or at least admitted to a hospital emergency department. MVA survivors with less severe injuries, for example soft tissue injury, may of course also develop PTSD, and many of the issues discussed in this section are relevant to that group. The section addresses issues of PTSD in the context of physical injury and so does not necessarily relate to MVA survivors with PTSD who have sustained no physical injuries. The Guideline recommendations can be applied to that group without need for special consideration.

Approximately two per cent of all Australians every year are injured severely enough to require a hospital admission. The frequency with which severe injury occurs makes it one of the greatest causes of PTSD in Australia. MVAs are a major cause of severe injury and therefore contribute significantly to the PTSD rate in Australia. Consistent with common responses to traumatic experience, many injury survivors will display PTSD symptoms (nightmares, intrusive memories) in the initial weeks after being injured, but for most, these symptoms will resolve within three months. Approximately 10 to 15 per cent of injury survivors will go on to develop chronic PTSD.[2]

The severity of the injury in terms of its relationship to mortality does not predict the development of PTSD. That is, those with a life threatening injury are no more likely to develop PTSD than those who suffer a serious injury that is not life threatening. While rates of PTSD in those with soft tissue injury have not been established, rates for particular types of soft tissue such as whiplash appear to be similar to severe injury.[8] The relationship between injury severity and PTSD is, however, different with traumatic brain injury (TBI). Those with severe TBI are less likely to develop PTSD while those who suffer a mild TBI are just as likely to develop PTSD as those with no brain injury. This is probably associated with the high level of amnesia experienced by those with a severe TBI – those with no memory of the event are less likely to develop PTSD. For discussions of risk factors in this population, see, for example, Bryant et al. (2010) or O'Donnell et al. (2005).

## Presentation

Common presenting problems in injury survivors include distressing memories and nightmares about the accident, insomnia, irritability, elevated startle response, and concentration problems. Individuals often avoid situations that are consistent with the event in which they were injured. For example, those injured in an MVA often experience fear of driving and avoidance of traffic. In some cases individuals become avoidant of hospitals and fail to attend appointments, or do not have follow-up surgery. This may significantly impact their physical recovery. Practitioners should be aware that many injury survivors suffer mild TBI, and have no memory of some parts of the event in which they were injured. Interestingly, although these people may not be able to remember critical aspects of the event, they can still be fearful and avoidant of situations which trigger memories of the event. Depression is very commonly comorbid with PTSD in injury survivors.[7] This is especially the case with those who experience orthopaedic injuries which require long-term rehabilitation. The loss of important roles, financial difficulties and uncertainty about the future often contributes to depression. Many injury survivors also suffer chronic pain. Pain and PTSD may act to drive each other over time, with pain triggering memories of the event, and hyperarousal increasing perceptions of pain.[5] This can result in individuals avoiding situations which may cause pain to escalate such as exercise or physiotherapy.

## Assessment

There are three main issues pertaining to injury survivors with PTSD that need to be considered during assessment.

First, be aware of the timing of the assessment. Many PTSD-type reactions that occur in the initial two months will subside in the following period. Intense reactions in this period are less likely to subside without intervention and may need immediate attention. Less severe reactions, however, which are common in this period, are more likely to be transient and resolve without treatment.

Second, injury survivors are characterised by comorbid presentations that have implications for treatment planning. As discussed, depression, mild TBI, and chronic pain are the major problems that co-exist with PTSD after severe injury. It is important to ask specifically about each of these problems to determine the primary presenting problem. Often patients will focus on pain because of its highly intrusive and aversive nature, and the clinician needs to focus interview questions specifically on PTSD or depression in order to avoid missing important information. In the case of mild TBI, it should be noted that people can meet the re-experiencing criteria for PTSD if they are distressed by reminders of the injury-causing event (e.g., returning to driving) even if they cannot recall some critical aspects of the accident. Motivational issues are often a problem for patients who have experienced moderate to severe TBI and should be assessed, as these issues may have an impact on engagement in therapy.

Third, many injury survivors are involved in litigation for criminal or civil purposes. This issue can complicate treatment planning because it can confound the motivational stance of the patient, especially if legal advice is suggesting a particular view about PTSD and its treatment. Assessment should explicitly enquire about litigation status.

## Treatment

There were sufficient studies identified in the systematic review that included MVA and injury survivors to allow a subgroup analysis within the systematic review. This analysis confirmed that the general treatment recommendations are applicable to this group. The key recommendations, graded A through D depending upon the strength of the evidence, are:

### Psychological interventions for adults

- For adults exposed to a potentially traumatic event, a one-session, structured, psychological intervention in the acute phase, such as psychological debriefing, should not be offered on a routine basis for the prevention of PTSD. **Grade B**
- For adults displaying symptoms consistent with acute stress disorder (ASD) or PTSD in the initial four weeks after a potentially traumatic event, individual trauma-focussed cognitive behavioural therapy, including exposure and/or cognitive therapy, should be considered if indicated by a thorough clinical assessment. **Grade C**
- Adults with PTSD should be offered trauma-focussed cognitive behavioural interventions or eye movement desensitisation and reprocessing. **Grade A**

### Pharmacological interventions for adults

- For adults exposed to a potentially traumatic event, drug treatments should not be used for all those exposed as a preventive intervention. **Grade D**
- The routine use of pharmacotherapy to treat ASD or early PTSD (i.e., within four weeks of symptom onset) in adults is not recommended. **Grade C**

- Drug treatments for PTSD should not be preferentially used as a routine first treatment for adults, over trauma-focussed cognitive behavioural therapy or eye movement desensitisation and reprocessing. **Grade B**
- Where medication is considered for the treatment of PTSD in adults, selective serotonin reuptake inhibitor antidepressants should be considered the first choice. **Grade C**

Injury survivors may be entitled to treatment for mental health conditions arising from their accident through third party insurers or other individual state-based authorities. This is especially the case for MVAs and work place accidents. Practitioners should be familiar with entitlements and procedures in the state in which they work.

Treating injury survivors should follow standard guidelines, with particular attention to several possible modifications that are dependent on comorbid presentations.

Chronic pain is a major obstacle to treating PTSD because it can actively interfere with attention on therapy tasks. Also, pain can act as a reminder of the trauma which complicates treatment for both the pain and PTSD. Depending on the severity of the pain, it may be preferable to achieve adequate pain management prior to the commencement of PTSD treatment. Equally, there is also evidence to suggest PTSD symptoms play a causal role in the development and persistence of pain,[5] implying that pain may improve following successful PTSD treatment.

Depression that is comorbid with PTSD typically leads to a more severe clinical presentation. As outlined in the Guideline recommendations, suicidal ideation requires careful assessment and management prior to commencement of exposure therapy.

Patients with brain injury who are amnesic of the accident (or part of it) may benefit more from in vivo exposure to situations that elicit anxiety than imaginal exposure. This approach can be beneficial because imaginal exposure can be limited when there are few memories of the trauma and when attentional deficits interfere with focus on trauma memories for prolonged periods. Those with brain injuries which impact on their ability to engage with therapy may benefit from motivational interviewing strategies.[3]

Although exposure therapy is the treatment of choice for people who develop PTSD following injury, clinicians should be aware that any therapy that actively addresses trauma memories has the potential to alter memory and, therefore, may be subjected to scrutiny in court. Some courts are particularly concerned about the use of hypnosis and eye movement desensitisation and reprocessing as techniques that have the potential to modify trauma-related memories. Thus the use of these treatments may lead to a client's evidence being inadmissible in court. It is advisable to avoid these treatments in cases that are subject to litigation. If such approaches are adopted, the practitioner would be advised to videotape all sessions.

## Working with children

PTSD is common in children following a traumatic injury, with a prevalence of approximately 20 per cent.[4] Emergency department staff should inform parents or guardians of the risk of their child developing PTSD following emergency attendance for a traumatic injury and advise them on what action to take if symptoms develop. Injured children and young people with PTSD should be offered a course of trauma-focussed cognitive behavioural therapy adapted appropriately to suit their age, circumstances and level of development.

## Source and contributors

This information was taken from the Motor vehicle accident and other traumatic injury survivors section (p.155-156) of the Specific Populations and Trauma Types chapter of the *Australian Guidelines for the Treatment of Acute Stress Disorder and Posttraumatic Stress Disorder*, [www.phoenixaustralia.org/resources/ptsd-guidelines/](http://www.phoenixaustralia.org/resources/ptsd-guidelines/). The section was developed by Phoenix Australia in collaboration with Professor Richard Bryant, Clinical Psychologist, University of New South Wales.

## References

1. American Psychiatric Association, (2000). *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision*. American Psychiatric Association, Washington DC.
2. Bryant, R. A., O'Donnell, M. L., Creamer, M., McFarlane, A. C., Clark, C. R., & Silove, D., (2010). The psychiatric sequelae of traumatic injury. *American Journal of Psychiatry*, 167, 312-320.
3. Hsieh, M. Y., Ponsford, J., Wong, D., Schonberger, M., Taffe, J., & McKay, A., (2012). Motivational interviewing and cognitive behaviour therapy for anxiety following traumatic brain injury: A pilot randomised controlled trial. *Neuropsychological rehabilitation*, 22, 585-608.
4. Kahana, S. Y., Feeny, N. C., Youngstrom, E. A., & Drotar, D., (2006). Posttraumatic stress in youth experiencing illnesses and injuries: An exploratory meta-analysis. *Traumatology*, 12, 148-161.
5. Liedl, A., O'Donnell, M., Creamer, M., Silove, D., McFarlane, A., Knaevelsrud, C., & Bryant, R. A., (2009). Support for the mutual maintenance of pain and post-traumatic stress disorder symptoms. *Psychological Medicine First View*, 1-9.
6. O'Donnell, M. L., Creamer, M., Elliott, P., Atkin, C., & Kossmann, T., (2005). Determinants of quality of life and role-related disability after injury: Impact of acute psychological responses. *Journal of Trauma-Injury Infection and Critical Care* 59, 1328-1334.
7. O'Donnell, M. L., Creamer, M., & Pattison, P., (2004). Posttraumatic stress disorder and depression following trauma: Understanding comorbidity. *American Journal of Psychiatry*, 161, 1390-1396.
8. Sterling, M., Hendrikz, J., & Kenardy, J., (2011). Similar factors predict disability and posttraumatic stress disorder trajectories after whiplash injury. *Pain*, 152(6), 1272-8.
9. Terr, L. C. (1991). Acute responses to external events and posttraumatic stress disorders. In M. Lewis (Ed.), *Child and adolescent psychiatry: A comprehensive textbook* (pp. 755-763). Baltimore, MD: Williams and Wilkins.
10. van der Kolk, B. A., Pelcovitz, D., Roth, S., Mandel, F. S., McFarlane, A., & Herman, J. L., (1996). Dissociation, somatization, and affect dysregulation: The complexity of adaption to trauma. *American Journal of Psychiatry*, 153, 83-93.