[1] King's College London, UK

[2] Ministry of Defence, UK

Correspondence to N Greenberg, neil.greenberg@kcl.ac.uk

Cite this as: *BMJ* 2023;380:e071851
http://dx.doi.org/10.1136/bmj-2022-071851
Published: 08 February 2023

PRACTICE POINTER

Immediate management of acute psychological trauma in conflict zones

Neil Greenberg, [1] Darren Minshall, [2] Amos Simms[2]

What you need to know

- Most people exposed to traumatic situations will cope well
- Individuals with acute stress reaction symptoms can be readily identified
- Effective management strategies are swift and simple; they include rapidly connecting with and reorienting affected individuals

After witnessing a roadside bomb explosion, an experienced conflict journalist becomes mildly distressed but manages, calmly, to ensure the aftermath is filmed for the next news broadcast. However, a young mother, who had chosen that moment to flee to safety with her family, experiences the same incident as being severely threatening and consequentially experiences high levels of distress, including being highly vigilant, having recurrent distressing thoughts of the explosion, and finding it very difficult to sleep.

Immediate management of acute psychological trauma (acute stress reactions) in conflict zones can help reduce the risks of prolonged short term distress (acute stress disorder) and of developing post-traumatic stress disorder or other mental illness.

We present approaches to managing acute psychological trauma that require no specialist equipment or lengthy training; ie they can be used in all resource settings. Although these techniques have been developed mostly for military, media, and charity groups, they can be applied in any environment (although with adults only).

How do people respond after threatening or traumatic situations?

Experiencing and/or witnessing incidents such as natural or human made disasters, combat, serious accidents, sexual violence, and assault[1] can prompt immediate post-trauma arousal. The nature and degree of someone's acute reaction depends on many factors, including previous trauma experience, genetic risk, training, level of personal threat, and health status before the exposure. Most people will not develop an acute or chronic mental illness. However, some may develop an acute transient condition, known as an acute stress reaction, which is the main focus of this article.

Acute stress reactions

Acute stress reaction is defined by the ICD-11 as transient emotional, somatic, cognitive, or behavioural symptoms (box 1) that occur after exposure to an extremely threatening or horrific situation (either short or long lasting); symptoms usually start within minutes of the exposure and subside a few days after the event or following removal from the threatening situation.[1]

Box 1: Signs and symptoms that might indicate an acute stress reaction[1]

- Autonomic signs of anxiety (eg, tachycardia, sweating, flushing)
- Being in a daze
- Confusion
- Sadness
- Anxiety
- Fear
- Anger
- Aggression
- Despair
- Overactivity
- Inactivity
- Social withdrawal
- Stupor

A 2022 quantitative study found that 17.2% of 1823 US soldiers self-reported having experienced an acute stress reaction while deployed to a combat zone,[2] and a telephone survey of 250 adult residents two days after a bombing in Dimona suggested that one third of civilians experienced acute stress reaction.[3]

Longer term reactions

Acute stress disorder is defined in DSM-5 as a short term reaction to a traumatic event that occurs between three days and one month after a trauma.[4]

Post-traumatic stress disorder is diagnosed if the person displays clinically significant, persistent, post-trauma reactions that last longer than one month.[5] Data from meta-analyses[5 6] show that some cognitive and social factors can increase the risk of individuals developing post-traumatic stress disorder; however, such data are lacking for acute stress reactions and acute stress disorder. A systematic review of 12 prospective studies carried out between 1998 and 2005 found that up to 75% of people who develop acute stress disorder will subsequently develop post-traumatic stress disorder.[7]

Post-traumatic stress disorder can also develop in individuals who witness, or provide immediate care for, someone with an acute stress reaction. A quantitative study of 673 previously deployed US

soldiers found that witnessing a fellow soldier having an acute stress reaction made it more than eight times more likely that they would subsequently develop post-traumatic stress disorder themselves.[8]

Why is immediate management important?

Acute stress reactions often resolve without care from a healthcare professional; however, immediate management using the strategies outlined below, is important for the following reasons:

- Impulsive, disorganised, or other erratic behaviour can directly affect the safety of the individual or others nearby.
- It is likely that many people who have acute stress disorder will have had an acute stress reaction and, as mentioned above, systematic review data suggest that people who experience acute stress disorder after exposure to trauma or threat are at increased risk of developing post-traumatic stress disorder.[7] Post-traumatic stress disorder and other longer term mental illnesses are likely to impair an individual's ability to cope with future adversity.
- These approaches help people to become functional in looking after their own safety and in contributing to their team's work. Poor function is a key symptom of post-traumatic stress disorder.[5]
- Immediate action can help the person delivering this management by reducing their sense of powerlessness during an event that might also be traumatic for them.

Strategies for immediate management

Management is often provided at, or very near, the location of the trauma, within minutes or hours of the event. This is when acute stress reactions pose the greatest risk to life.

Strategies aimed at alleviating acute distress that have been introduced and tested by military teams include iCOVER[9 10] (table 1) and YaHaLOM.[11 12] Aim to act within one minute of recognising an acute psychological response, but these approaches can be taken with someone experiencing acute stress reaction symptoms at any point, ie, in the first few minutes to the first few days after the incident.

Table 1 | Six stages of the iCOVER peer delivered intervention, developed by military forces[9 10]

Stage	Why	How
Identify	Identify who needs your help	Look for signs and symptoms of acute stress reaction (box 1) Consider mental health triage/prioritisation for mass casualty situations
Connect	Make the individual aware of your presence	Move to eye level, speak to get the individual's attention (eg, use their name and or job title), touch them (eg, on the arm) with firm pressure
Offer commitment	Reduce the individual's sense of isolation	Tell them that they are not alone and that you are with them
Verify facts	Focus the individual's attention	Ask the individual 2-3 short fact-based questions (eg, ask them to tell you where they are, who they are with, what their role is, etc)
Establish order of events	Reorient and ground the individual in the present moment	Tell the individual what happened, what is happening, and what will happen
Request action	Re-engage in purposeful action and re-establish a sense of mastery	Give the individual a specific task (eg, to move somewhere, get something out, look at a specific item or area)

At the time of writing, iCOVER has been trialled only with military personnel, and results show that it is well received, reduces stigma, and potentially provides individuals with greater confidence in their ability to manage acute stress reactions to future incidents.[10 12] Longer term impacts are yet unproven.

Short term management in the hours to days after a traumatic event

UK military survey data show that personnel who perceive their immediate supervisor as being supportive are less likely to develop mental illness, including post-traumatic stress disorder,[13] and are more likely to seek help if they do develop these illnesses.[14]

The National Institute for Health and Care Excellence (NICE) recommends regular monitoring[15] of individuals exposed to trauma during the first month after the incident. This refers to being watchful for signs that someone is either not recovering from initial distress symptoms, or developing delayed post-incident symptoms. This can be done using one of the strategies below.

The PIES principles

Community healthcare professionals, family members, and occupational supervisors can provide effective short term support by following the four PIES (proximity, immediacy, expectancy, simplicity) principles (table 2). These principles are helpful in preventing short and longer term mental ill health. For instance, a 2017 quantitative study of 729 UK military personnel found that 75% of those who received mental healthcare based on PIES while deployed returned to duty on the same deployment.[16] Also, a longitudinal study of military personnel who had acute stress reactions during the 1982 Lebanon war suggests that, when more PIES principles are applied after someone experiences an acute stress reaction, they have fewer post-traumatic and psychiatric symptoms and better social functioning after 20 years.[17]

Table 2 | The PIES principles[16]

Principle	Action
Proximity	Optimise support from colleagues and supervisors within the deployed environment and temporarily reduce pressure by reassigning the individual's duties
Immediacy	Make active efforts to speak with individuals as soon as possible after they develop symptoms: inquire about how they are feeling; ask about what you can help them with
Expectancy	Focus on likely positive outcomes. Reassure individuals that most people recover with support within a few days or weeks and that if they do not recover in that time, you will ensure they get the right assistance
Simplicity	Ensure that basic needs (sleep, food, safety) are met; ensure they can connect with those they trust; and provide mentoring and supervision

Trauma risk management (TRiM)

TRiM (trauma risk management) is a peer support system established in the UK military in the late 1990s.[18] It has since been used by numerous organisations operating in high threat environments, such as media, charity, and security companies. TRiM practitioners, trained over two to four days, acquire the skills to have structured, psychologically focused conversations with colleagues who have been exposed to trauma, focusing on identifying individuals at increased risk of developing a post-trauma mental illness (box 2). Those identified as at higher risk are re-interviewed around a month later, and if still at increased risk are assisted to access professional help.

Box 2: Risk factors for trauma exposed individuals developing a short or long term post-trauma mental illness, as outlined by TRiM[21]

- Feeling that they had little or no control over their behaviour or reactions during the event
- Feeling that they had faced serious injury or death during the event
- Blaming or feeling angry towards others about aspect(s) of the event
- Expressing shame or guilt about their behaviour relating to the event
- Having experienced acute stress following the event
- Having experienced substantial life stressors (eg, problems with work, home, or health) since the event
- Currently having problems with day-to-day activities
- Having had difficulties dealing with previous traumatic events
- Reporting problems accessing social support
- Drinking alcohol excessively to cope with distress

A range of studies, including a randomised controlled trial, have shown that deployed military personnel with mental health problems are around three times more likely to seek professional help if they have received TRiM support.[19] Military units that used TRiM were more likely to support team members, who were in turn more likely to comply with accepted policies, rules, and procedures.[20]

Psychological first aid (PFA)

This approach, supported by the World Health Organization,[21] offers "humane, supportive, and practical help to fellow human beings suffering traumatic events" and is based on the following:

- Non-intrusive practical care and support
- Assessing needs and concerns
- Addressing basic needs (eg, food, water, information)
- Listening without pressuring people to talk
- Offering comfort and a sense of calm
- Connecting people to information, services, and social supports
- Offering protection from further harm.

For many people with acute stress reactions, practical, pragmatic support provided in an empathic manner by non-health professionals and informed by the principles of PFA, is likely to be helpful. However, a 2021 scoping review on PFA, conducted by academics in China and the UK, found that guidance on how PFA training should be applied and adapted was inadequate; the review also identified shortcomings in PFA training delivery, limited training evaluation, and unclear training outcomes.[22]

Post-trauma management strategies for which there is no evidence of benefit

- Formal psychologically focused debriefing ("trauma counselling" or immediate formal mental health care) following traumatic events is not recommended by NICE, as quantitative studies have suggested that this approach is ineffective, and potentially increases the likelihood of developing a mental illness[14]
- A randomised controlled trial involving around 9000 troops returning from deployment found that mental health screening, using standardised measures to identify potential mental health conditions, was not associated with any beneficial effects on mental health or seeking help after deployment[23]

We believe these strategies may provide false reassurance and hinder more positive practices.

Further hypothetical case

A team member in a non-governmental organisation operating in a conflict zone experiences acute stress reaction symptoms within minutes of finding a mass grave of civilians who have been executed. When their supervisor tries to speak with them, the team member appears dazed, with tears streaming from their eyes. The supervisor uses the iCOVER principles as immediate management and then organises for the distressed individual to work where they will have colleagues around them while carrying out less stressful duties. Later in the day, the supervisor reassures the individual that their distress is not unexpected and is likely to resolve. The supervisor also ensures that they have access to the satellite phone to speak to their family, and, over the next few days, actively helps the person resolve work difficulties to minimise the impact of their ongoing acute stress reaction symptoms as they resolve.

Education into practice

- How might you acquire the skills to carry out the six simple stages of the iCOVER intervention?
- How do you follow up with people who have experienced acute stress reactions?

How patients were involved in the creation of this article

Feedback from a reviewer with recent war zone experience helped develop the final manuscript, including by recommending more detail about how to identify individuals with acute stress reactions and more clarity about how the described interventions could be delivered.

How this article was made

The authors have been deployed on military operations and provided direct advice, support, and briefings to teams of personnel who work in conflict zones. They have also delivered mental health care to military personnel who have experienced acute stress reactions and subsequently developed post-traumatic stress disorder from combat operations; that experience has been incorporated into this article. We are UK based authors but, throughout our careers, and for this article, we have drawn upon the expertise of trauma experts in many other nations—including all NATO nations, the five eyes alliance, the 20 countries in the Partnership for Peace programme, the International and European Societies for Traumatic Stress Studies, and the World Health Organization—with whom we regularly liaise. We have used our personal archive of references. This article has also been externally reviewed and revised considering comments from specialist reviewers in Ukraine, Syria, Wales, the US, and Luxembourg.

Competing interests: *The BMJ* has judged that there are no disqualifying financial ties to commercial companies. The authors declare the following other interests: DM and AS are full time members of the UK Armed Forces. NG is the Royal College of Psychiatrists lead for trauma and the military and runs March on Stress, a psychological health consultancy that provides TRiM training for non-military organisations.

Patient consent: The cases in this article are fictitious and therefore no consent was needed.

Contributorship and the guarantor**:** NG conceived the original article and is the guarantor. All three authors made substantial contributions to the design of the article and contributed to the drafting and revised it critically for important intellectual content, as well as approving the final version to be published and agreeing to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Provenance and peer review: commissioned and peer reviewed.

1 International Classification of Diseases. *Eleventh Revision (ICD-11), World Health Organization.* WHO, 2019.

2 Adler AB, Gutierrez IA. Acute stress reaction in combat: Emerging evidence and peer-based interventions. *Curr Psychiatry Rep* 2022;24:-84. doi: 10.1007/s11920-022-01335-2 pmid: 35353322

3 Amital D, Amital H, Shohat G, Soffer Y, Bar-Dayan Y. Resilience emotions and acute stress reactions in the population of Dimona and the general population of Israel two days after the first suicide bombing attack in Dimona. *Isr Med Assoc J* 2012;14:-5.pmid: 22799057

4 American Psychiatric Association. *Diagnostic and statistical manual of mental disorders.* 5th ed. 2022, doi: 10.1176/appi.books.9780890425787.

5 Brewin CR, Andrews B, Valentine JD. Meta-analysis of risk factors for posttraumatic stress disorder in trauma-exposed adults. *J Consult Clin Psychol* 2000;68:-66. doi: 10.1037/0022-006X.68.5.748 pmid: 11068961

6 Ozer EJ, Best SR, Lipsey TL, Weiss DS. Predictors of posttraumatic stress disorder and symptoms in adults: a meta-analysis. *Psychol Bull* 2003;129:-73. doi: 10.1037/0033-2909.129.1.52 pmid: 12555794

7 Bryant RA. Predicting posttraumatic stress disorder from acute reactions. *J Trauma Dissociation* 2005;6:-15. doi: 10.1300/J229v06n02_02 pmid: 16150665

8 Adler AB, Svetlitzky V, Gutierrez IA. Post-traumatic stress disorder risk and witnessing team members in acute psychological stress during combat. *BJPsych Open* 2020;6:e98. doi: 10.1192/bjo.2020.81 pmid: 32878671

9 Adler AB, Start AR, Milham L, etal. Rapid response to acute stress reaction: Pilot test of iCOVER training for military units. *Psychol Trauma* 2020;12:-5. doi: 10.1037/tra0000487 pmid: 31328939

10 Adler AB, Gutierrez IA. Preparing soldiers to manage acute stress in combat: acceptability, knowledge and attitudes. *Psychiatry* 2022;85:-7. doi: 10.1080/00332747.2021.2021598 pmid: 35138988

11 Svetlitzky V, Farchi M, Ben Yehuda A, Adler AB. YaHaLOM: a rapid intervention for acute stress reactions in high-risk occupations. *Mil Behav Health* 2020;8:-42doi: 10.1080/21635781.2019.1664356.

12 Svetlitzky V, Farchi M, Ben Yehuda A, Start AR, Levi O, Adler AB. YaHaLOM training in the military: Assessing knowledge, confidence, and stigma. *Psychol Serv* 2020;17:-9. doi: 10.1037/ser0000360 pmid: 31120293

13 Jones N, Seddon R, Fear NT, McAllister P, Wessely S, Greenberg N. Leadership, cohesion, morale, and the mental health of UK Armed Forces in Afghanistan. *Psychiatry* 2012;75:-59. doi: 10.1521/psyc.2012.75.1.49 pmid: 22397541

14 Jones N, Campion B, Keeling M, Greenberg N. Cohesion, leadership, mental health stigmatisation and perceived barriers to care in UK military personnel. *J Ment Health* 2018;27:-8. doi: 10.3109/09638237.2016.1139063 pmid: 27319607

15 National Institute for Health and Care Excellence. Post-traumatic stress disorder. NG116. 2018. https://www.nice.org.uk/guidance/ng116

16 Jones N, Fear NT, Wessely S, Thandi G, Greenberg N. Forward psychiatry - early intervention for mental health problems among UK armed forces in Afghanistan. *Eur Psychiatry* 2017;39:-72. doi: 10.1016/j.eurpsy.2016.05.009 pmid: 27816610

17 Solomon Z, Shklar R, Mikulincer M. Frontline treatment of combat stress reaction: a 20-year longitudinal evaluation study. *Am J Psychiatry* 2005;162:-14. doi: 10.1176/appi.ajp.162.12.2309 pmid: 16330595

18 Greenberg N, Langston V, Iversen AC, Wessely S. The acceptability of trauma risk management within the UK armed forces. *Occup Med (Lond)* 2011;61:-9. doi: 10.1093/occmed/kqr022 pmid: 21467245

19 Jones N, Burdett H, Green K, Greenberg N. Trauma Risk Management (TRiM): Promoting help seeking for mental health problems among combat-exposed UK military personnel. *Psychiatry* 2017;80:-51. doi: 10.1080/00332747.2017.1286894 pmid: 29087252

20 Greenberg N, Langston V, Everitt B, etal. A cluster randomized controlled trial to determine the efficacy of Trauma Risk Management (TRiM) in a military population. *J Trauma Stress* 2010;23:-6. doi: 10.1002/jts.20538 pmid: 20690168

21 World Health Organization. War Trauma Foundation and World Vision International. Psychological first aid: Guide for fieldworkers. WHO: Geneva, Switzerland, 2011. https://www.who.int/publications/i/item/9789241548205.

22 Wang L, Norman I, Xiao T, Li Y, Leamy M. Psychological first aid training: a scoping review of its application, outcomes and implementation. *Int J Environ Res Public Health* 2021;18:. doi: 10.3390/ijerph18094594 pmid: 33926108

23 Rona RJ, Burdett H, Khondoker M, etal. Post-deployment screening for mental disorders and tailored advice about help-seeking in the UK military: a cluster randomised controlled trial. *Lancet* 2017;389:-23. doi: 10.1016/S0140-6736(16)32398-4 pmid: 28215661