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# Eye Movement Desensitization and Reprocessing (EMDR) in the Treatment of War Veterans



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Recent practice guidelines and meta-analyses have designated eye movement desensitization and reprocessing (EMDR) as a first-line treatment for trauma. Eye movement desensitization and reprocessing is an eight-phase therapeutic approach guided by an information-processing model that addresses the combat veteran's critical incidents, current triggers, and behaviors likely to prove useful in his or her future. Two case examples of combat veterans illustrate the ability of EMDR to achieve symptom reduction in a variety of clinical domains (e.g., anxiety, depression, anger, physical pain) simultaneously without requiring the patient to carry out homework assignments or discuss the details of the event. The treatment of phantom limb pain and other somatic presentations is also reviewed. The ability of EMDR to achieve positive effects without homework indicates that it can be effectively employed on consecutive days, making it especially useful during combat situations. © 2008 Wiley Periodicals, Inc. *J Clin Psychol: In Session* 64:947–957, 2008.

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Eye movement desensitization and reprocessing (EMDR; Shapiro, 2001) is an empirically supported treatment that has been identified by numerous organizations, including the Department of Veterans Affairs & Department of Defense Practice

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Guidelines (2004), as an efficacious treatment for posttraumatic stress disorder (PTSD). The most recent Cochrane meta-analysis of PTSD treatments (Bisson & Andrew, 2007) concluded that "Trauma focused cognitive behavioral therapy and eye movement desensitization and reprocessing have the best evidence for efficacy at present and should be made available to PTSD sufferers." Other meta-analytical studies have also found EMDR as effective as cognitive-behavioral treatments (e.g., Seidler & Wagner, 2006).

In this article, we describe and illustrate the use of EMDR with combat veterans. But first, we briefly review the eight phases and treatment principles of EMDR and some of the relevant research.

### Eye Movement Desensitization and Reprocessing

Eye movement desensitization and reprocessing is an eight-phase psychotherapy designed to address past negative experiences, current triggers of the symptoms developed from those experiences, and any future blocks to effective functioning. As is true of all treatments, it is possible to find similarities to other psychotherapies in some of the EMDR methodology; however, EMDR is not derived from psychoanalysis, cognitive therapy, exposure therapy, or other families of therapy.

Shapiro describes adaptive information processing (AIP; Shapiro, 2001) as the heart of EMDR and views maladaptive behavior as the result of negative experiences not adequately processed and stored as memories. Eye movement desensitization and reprocessing procedures, including the way in which the memory is accessed and the bilateral stimulation, are seen as galvanizing the client's own neurologically based information processing, which integrates memory into the larger memory networks, thus allowing it to arrive at an adaptive resolution. The goal is not the retrieval of the trauma memory or any other particular memories, but rather a process of assimilation and accommodation of the disturbing experience with the individual's cognitive structures. Adaptive information processing sees this process as normally functioning for most life experiences; a problem arises when normal information processing becomes "blocked" or is otherwise unable to gain a resolution for an experience.

In brief, the eight phases of EMDR begin with client history gathering. The EMDR clinician works with the client to identify the earliest example of the presenting problem, the current triggers that elicit the problem in the present, and any blocks to effective functioning in the future. The current anxiety of an Iraq War veteran, for example, might be identified with an improvised explosive device (IED) attack on her vehicle. Current triggers might include cars that come too close while driving or trash by the side of the road. Future work might include negative cognitive structures that include such self-limiting beliefs as, "I can't take care of myself" or such emotions as anticipatory anxiety.

The second phase, client preparation, is primarily an educative process designed to provide the client with information on EMDR, as well as gain practice at tension reduction techniques that may be useful between treatment sessions. The EMDR clinician also ensures that the client has information useful for resolution. Although most clients have that information ("I know I did all I could but it just doesn't feel that way"), it does happen that a client might be ignorant of some things that might prove useful. The soldier who blames herself for not getting a medical evacuation helicopter quickly enough might not know how long it takes under the best of circumstances for a radioed call for help to reach a medevac aircraft, get it into the

air, and arrive at her location. The information by itself may not resolve the soldier's distress, but once understood it may be accessed and used as AIP takes place.

The third phase, assessment, focuses on a particular experience and deliberately sets out to galvanize it by having the client report on various aspects of the experience: representative imagery, the current negative cognition, the desired, but unattained positive cognition, the current emotions associated with the experience, and physical sensations. This phase also provides a baseline of the client's disturbance for comparison during the course of treatment.

The fourth phase, desensitization, utilizes forms of alternating bilateral stimulation (typically eye movements, sounds, or physical taps). The client initially is asked to bring into focus elements from the assessment phase, but from then on the therapist generally permits the client to focus on anything coming into awareness. Typically, the client reports at the end of each set of bilateral stimulation, new or changed emotions, cognitions, physical sensations, imagery, or other experiences. Subsequent sets of bilateral stimulation focus on what has come into the client's awareness at the end of the previous set. The client may report elements of resolution (e.g., a once-disturbing picture loses its disturbance or a new, positive cognitive structure appears, as in "Now that I think about it, I did the best job I could"), but bilateral stimulation continues as long as change, positive or negative, is reported. This is to avoid limiting the extent and thoroughness of a client's resolution and can be a challenge for clinicians to permit to take place.

As with most treatments, a "working through" element is a part of the desensitization phase. As disturbing elements of the experience—imagery, cognitions, emotions, physical reactions—are resolved and the client reports the resolution is stabilized, a return to the original target may reveal that new disturbing material has come into the client's awareness. This new material is targeted and followed until the client again reports a stable resolution. Once again, the clinician asks the client to return to the original experience to check whether any other disturbance remains. The process of following disturbance and returning as it is resolved is repeated as many times as needed. The desensitization phase continues until the client no longer reports any disturbance associated with the original targeted experience. The client does not have to maintain focus on the targeted experience, and may only access it for a few moments during a session, which is a major difference from psychotherapies dependent upon prolonged exposure with response prevention. Whatever comes into the client's awareness is considered a part of the problem or its resolution and is followed.

During desensitization, it is not necessary that the client describe in detail what she or he is aware of as a set of eye movements or other stimulation ends. For some clients, this is an advantage as they may lack language skills to express something just coming into awareness. Others, including many veterans, find it useful not to have to tell the clinician of the particular experience. EMDR clinicians routinely brief their clients during the preparation phase that if anything comes up that the client does not wish to discuss, all that is needed is to let the therapist know that the client is aware of something. The EMDR clinician will direct the client's attention to that "something" and resume bilateral stimulation. Another reason for discouraging lengthy descriptions of the client's awareness is to keep processing going and avoid opportunities for resistance and defenses to form. If processing is continued, resistance can often be bypassed before it has the chance to slow down or block resolution.

The fifth phase, installation, helps the client to consolidate the adoption of a desired, positive cognition. During the course of desensitization, elements of that new cognition usually have been encountered and developed as the client reports change taking place. However, desensitization's primary focus is on the resolution of any disturbance however experienced. Installation takes place only when the client has finished desensitization. The client's new positive cognition, usually represented by statements such as, "I did the best I could," is deliberately linked with the original experience and bilateral stimulations are provided with the intention of increasing the felt believability of the new positive thinking. This is continued until the new, positive cognition is fully accepted.

The sixth phase, body scan, is a method of checking the completeness of the work. While maintaining a focus on the original trauma experience and the newly integrated positive cognition, the client identifies any disturbing physical sensations. These are then focused on, and bilateral stimulation is used to dissipate the sensations and to reinforce any positive physical sensations. If new disturbing aspects emerge, they can be targeted and resolved.

The seventh phase, closure, recognizes the need for an evaluation of the client's state prior to ending a treatment session, particularly when processing is incomplete. The rapidity of EMDR processing may include rapid access to disturbing material and it is important to ensure the client is stable before leaving. Where useful, tension reduction techniques taught and practiced during the client preparation phase are used. The client is also briefed on the possibility of continued processing occurring between sessions and how that may be handled.

The eighth and final phase, reevaluation, assesses progress in treatment and usually will open subsequent sessions once bilateral stimulation is used. Reevaluation seeks any newly emerging material, progress in resolving old experiences, and the presence of systemic problems such as resistance from others to a client's changing behavior. The treatment plan may be expanded to include these and other concerns.

A rich library of techniques is available for blocked processing. These techniques reflect EMDR's client-centered approach and the attempt to mimic spontaneous processing to maximize generalization of treatment effects (see Shapiro, 2001).

Eye movement desensitization and reprocessing makes use of a three-pronged approach. The procedures described above are used on the earliest conscious experiences relating to the presenting problems (e.g., grief coming from the death of a friend in combat). The second prong is processing the current triggers of the reaction (e.g., the sight of abandoned car, similar to the one in Iraq containing a bomb). The third processes any blocks to effective future functioning (e.g., anticipatory anxiety about driving). Each "prong" is addressed as the previous one is resolved. At times it is necessary to start with experiences that predate the traumatizing experience to comprehensively resolve the clinical picture.

The delivery of bilateral stimulation is most commonly provided by eye movements and this feature has stirred great interest. Research into the role of eye movements has found they reduce image vividness and emotionality (e.g., Barrowcliff, Gray, Freeman, & MacCulloch, 2004), may be associated with autonomic responses suggestive of an induced relaxation response (e.g., Wilson, Silver, Cord, & Foster, 1996) and have been linked to brain activity occurring during rapid eye movement (REM) sleep (e.g., Stickgold et al., 2002).

Eye movement desensitization and reprocessing may confer certain advantages over exposure therapies because it does not demand that the veteran verbalize details

of the event nor does it include systematic homework. In addition, as indicated in studies of combat veterans (Ironson, Freund, Strauss, & Williams, 2002), self-reported distress generally decreases during the first session of EMDR, whereas it may increase during prolonged exposure therapy. These treatment differences may be reflected in drop-out rates of 42% for exposure (Schnurr et al., 2007) and 34% for CPT (Schnurr et al., 2003) for combat patients. Both studies reached an approximately 40% remission of PTSD diagnosis. In contrast, 12 sessions of EMDR with combat veterans resulted in a 77% remission of PTSD with no dropouts (Carlson, Chemtob, Rusnak, Hedlund, & Muraoka, 1998). Positive effects were reported on multiple measures at posttest, and effects were maintained at 3- and 9-month follow-up.

An earlier, nonrandomized retrospective study of treatment outcomes for veterans receiving EMDR, biofeedback, or relaxation training, found EMDR to be superior to the other two treatments on seven of eight measures (Silver, Brooks, & Obenchain, 1995). This and the Carlson et al. (1998) studies are the only two studies of EMDR with PTSD-diagnosed combat veterans treated across multiple traumatic combat experiences using a sufficient number of sessions rather than a single session or two. The veterans in both of these studies were suffering from chronic PTSD. According to both the International Society for Traumatic Stress Studies (Chemtob, Tolin, van der Kolk, & Pitman, 2000) and the Departments of Veterans Affairs and Defense Joint Clinical Practice Guidelines for PTSD (2004), other randomized studies of EMDR with veterans are flawed because of insufficient treatment doses, offering only two sessions and/or component analyses treating only one memory.

Corroborating the need for multiple treatment sessions, a recent analysis of treatment of 63 war veterans by newly trained EMDR clinicians suggested that wounded combat veterans needed 8.5 sessions of treatment and nonwounded needed 3.8 sessions to eliminate disturbances associated with war-related traumatic memories (Russell, Silver, Rogers, & Darnell, 2007).

Given EMDR's in-session rapid effects and the lack of need for homework, it appears particularly suited for frontline treatment, for instance, as an immediate intervention for recently and severely wounded casualties shortly after evacuation (Russell, 2006).

Veterans with combat-related PTSD generally differ in a number of ways from civilians with single-source trauma. Combat veterans often suffer from multiple traumatic experiences, any one of which might be sufficient to result in a long-term reaction such as PTSD. Addressing one typically will bring others into the veteran's awareness. For EMDR, such linking of experiences is not avoided. In fact, the linked experiences are followed in the same way new or changed emotions, cognitions, physical sensations, or imagery would for a single targeted experience.

Combat veterans with PTSD may report large amounts of survivor guilt, perpetrator guilt, grief, and anger. Eye movement desensitization and reprocessing generally has no more difficulty with these emotions than any other emotion, or cognitions, or physical sensations. Indeed, EMDR has been found to reduce symptoms of mourning on behavioral and psychosocial measures in a multisite study (Sprang, 2001). For veterans, this translates into the ability to access positive memories of the dead where once they may have feared that reduction of their grief might equate to a loss of the memories of the dead.

Combat veterans are often reluctant to discuss their experiences for reasons ranging from fear of appearing weak to admitting to perpetrator behavior to

difficulty articulating complex experiences affecting them in many different ways. An advantage of EMDR is the lack of a requirement for specific descriptions of disturbing experiences. Indeed, this aspect is routinely noted during the preparation phase so that a client understands that all a clinician needs to know is whether or not change is occurring. The lack of a need for detailed disclosure may mean, of course, less vicarious traumatization of the therapist by repeated going over of the experience. We should note that our clinical experience has shown that however minimally a combat veteran refers to an experience during treatment, once an experience is fully realized it is common for that veteran to describe the entire event (Silver & Rogers, 2002).

The following case, selected for its typical nature, illustrates the efficiency of EMDR with combat veterans in terms of speed and thoroughness.

### Case Illustration: Posttraumatic Stress Disorder

#### *Presenting Problem/Client Description*

The client, George, was a 22-year-old veteran who completed two tours in Iraq. He had been honorably discharged from the service following a suicide attempt. After his discharge, George became increasingly isolated. Many of his friends became estranged in response to his explosive anger and his fiancée broke off their engagement. He had been psychiatrically hospitalized twice, both times following suicide attempts. After George's second attempt and stabilization, he was diagnosed with PTSD, and he was referred for an evaluation by a residential Veterans Administration PTSD inpatient treatment program. The evaluation found George to be suffering from moderate to severe PTSD, and he was admitted to the program.

#### *Case Formulation*

His life prior to military service was unremarkable. He was a high school graduate with no prior mental health problems or treatment. George's development and family life essentially were normal, and he described himself as socially active with his peers. He had enjoyed his military service prior to his combat experiences and still spoke positively of the service.

As noted, George had been diagnosed as suffering from PTSD. Particularly disturbing symptoms included sleep disturbances that he said were due to almost nightly nightmares, intrusive memories of his war experiences, avoidance of anything that reminded him of the war such as the television news, isolation from other people including his family, and powerful feelings of guilt.

History-taking revealed four potential memories for processing: shooting an Iraqi combatant, the death of a friend who was well-liked, being injured by shrapnel during a mortar attack, and when he was told by his fiancée that she was ending the relationship.

#### *Course of Treatment*

Because the residential PTSD program had a limited length of stay, George was seen for EMDR sessions twice a week. Following the client history phase, he was seen for a preparation phase. At this time, he was able to access a relaxing image and used it in a tension-reduction exercise. He was curious about EMDR. We emphasized that processing would be under his control rather than the therapist's.

After discussing where to begin, George decided to start with the most recent experience, the memory of his fiancée terminating their engagement. He stated he wanted to work on this memory first because he had emotional distress at the approaching anniversary of what would have been their wedding day. As might be expected, several emotions were involved in this reaction, including grief, guilt, and anger. This memory was reprocessed using eye movements to a minimal level of distress in one desensitization session. George was surprised at the speed of the resolution. The therapist pointed out EMDR did not always work that rapidly. Nonetheless, George was encouraged and stated he wanted to try it on his other traumatic experiences.

The second desensitization session focused on the memory George identified as his most disturbing: the memory of shooting an Iraqi who fired on his convoy. At the beginning of this session he reported a subjective unit of distress (SUD) level of 9–10 and a negative cognition of “I’m a monster.” During the initial portion of the session, he said several times after sets of eye movements that he had a sense that he was missing something. Later in the session, he reported that he was able to recall the missing detail. This was the voice of his friend, Joe, calling for help. Joe was located in an exposed position at the back of the vehicle.

After another set of eye movements, George recalled he had seen pictures of Joe’s daughter and had the thought that he would never be able to forgive himself if Joe died. At that point, George stated, “I didn’t do it just because it was my job or because I enjoyed it; I did it to help a friend.” At the end of this session, he reported feeling no distress about the incident; the emotions of fear and guilt were eliminated and the negative cognitive structure in which George viewed himself as a “monster” was replaced by greater understanding and appreciation of himself and his values.

The third desensitization session focused on the death of a friend who had died when the soldier’s vehicle was destroyed. The course of the processing was notable, as it went first through anger at politicians and lobbyists before George encountered feelings of sadness about his loss. This incident was processed to a low level of distress, and George reported feeling fatigued at the end of the session.

During the next session, George reported that he had started dating again during the intervening weekend and had told his girlfriend and his mother about his war traumas with minimal distress. A reevaluation of the previously targeted memories revealed some residual distress about the death of his friend, which was resolved with approximately 10 more minutes of processing. A body scan found no residual disturbance. The memory of being wounded, though not directly targeted, generated no distress, a generalization of treatment effects common with EMDR.

The remainder of the session was focused on the veteran’s continuing discomfort in public places. George reported that being looked at was the most distressing aspect of this situation and associated that with the idea “I don’t fit in.” A future template of going to the mall was processed, with George first imagining going with a friend, then going alone, and finally being alone while having other people look at him without distress.

### *Outcome and Prognosis*

Due to the time-limited nature of the inpatient program, shortly after this last session George was discharged from the hospital. A 3-month follow-up showed lasting desensitization of the memories treated with EMDR. George reported that he was doing well with no disturbance associated with the targeted experiences. His memory

of the killing of the Iraqi insurgent, previously rated at a 9 to 10 SUD, continued to rate at zero.

The case of George illustrates several points. Eye movement desensitization and reprocessing tends to be quick in resolving traumatic experiences and can be efficient by resolving those traumas simultaneously. Speed and efficiency provide encouragement for veterans to keep working, as in George's case where the quick success of the work on his lost relationship provided encouragement to target his worst experience, and full resolution was achieved within 2 weeks of treatment.

#### Another Case Example

Given the possibility of wounds and injuries being associated with combat trauma, EMDR's application to chronic pain has an obvious application to veterans. Researchers have recently begun to focus on the overlap between PTSD and chronic pain states among veterans (e.g., Geuze et al., 2007). Recent reports have found EMDR to be effective at relieving chronic pain (Grant & Threlfo, 2002), including phantom limb pain (Wilensky, 2006).

The impact of EMDR on the physical manifestations of traumatic experiences extends beyond pain and can include such conditions as myoclonic movements. The following brief case summary illustrates this.

A 73-year-old Vietnam War veteran, Bob, presented with previously diagnosed PTSD, anxiety, depression, and chronic and combat-related medically unexplained symptoms of frequent myoclonic movements that began in 1968. He described an upper-body "shaking" occurring at least 20 times a day and "over 50–60 times a day" when in social situations. Thorough electroencephalogram (EEG) and medical evaluations found no physical reason for his jerking. Bob noted an increase in symptoms with the start of the Iraq War in 2003. Bob reported suicidal ideation over the increasing severity of his symptoms and his inability to find relief. In the past, he had responded to his symptoms with medication and alcohol abuse to the extent he was diagnosed as alcohol dependent and had lost his marriage. Initial testing revealed an Impact of Events Scale (IES; Horowitz et al., 1979) score of 72 (severe range), Beck Depression Inventory (BDI; Beck et al., 1961) score of 22 (moderate range), and a Beck Hopelessness Scale (BHS; Beck & Steer, 1988) score of 12 (moderate range). Based on the advice of his daughter, Bob requested EMDR.

His five traumatic memories of combat were treated in a chronological fashion. Processing the first experience, being left alone and unarmed in the field at night, linked to several other experiences, including being asked to escort the remains of his younger cousin home after Bob's return from Vietnam. He experienced an abreaction that faded with two sets of eye movements and, by the end of the first session, he reported "feeling joy at being alive." Before the next session his daughter reported his jerking motions were down to no more than three a day.

The second session began with a reevaluation of the first experience and Bob reported a SUDs of 1. Eye movements were begun and again Bob linked to other combat experiences, including those previously identified in his history. When he reported no disturbance, an inventory of his combat experiences discovered that all were at a SUDs of 0. Later in the week, Bob's daughter again called and reported that Bob had accompanied his family mall shopping and had experienced no myoclonic movements where she expected him to have "50 or more." Bob corroborated this change at his next session, noting that in the past week he had had no movements—his previous longest time without jerks, documented in his medical

records, was 5 h. Subsequent testing with the IES, BDI, and BHS resulted scores of "0." At 1-month and 6-month follow-ups Bob reported no incidents of shaking and all other symptoms were in remission.

The case of Bob illustrates the comprehensive nature of EMDR resolution. His treatment resolved his PTSD, associated depression and anxiety, and chronic combat-related symptoms of myoclonic jerking.

### Clinical Issues and Summary

Operationally, EMDR has been found to be effective in the immediate aftermath of traumatic events and in a wide variety of clinical environments. Treatment can be provided on consecutive days (Russell, 2006; Silver, Rogers, Knipe, & Colelli, 2005). In the "real world" of veterans' services, a critical and growing concern is that of efficiency. A therapy such as EMDR that can rapidly resolve simultaneously multiple aspects of an experience, such as depression, anxiety, and anger, is useful in these circumstances. Efficiency also includes, of course, the amount of work that clinician and client must do both in and out of session. In this regard, EMDR is efficient in not requiring homework.

As clinicians, we have noted the need of many combat veterans to attain clear therapeutic gains quickly. Their behavioral orientation often has military-style elements including a demand to get the job done quickly and correctly. A failure to meet this demand often leads to an increase in frustration and, in turn, to discontinuing psychotherapy. This danger is particularly acute when disturbing material is encountered. Abreaction, for example, may be interpreted as an indication that the veteran is regressing unless it is quickly followed by therapeutic progress. Not only does EMDR appear to assist in moving through abreaction quickly, it appears to process the intense material and rapidly take the veteran to a position of increased resolution (Silver & Rogers, 2005).

Eye movement desensitization and reprocessing, of course, is not magic. It is a psychological treatment; conditions that result from genetics or biology are not good targets for EMDR processing. As with any treatment with the potential of tapping into powerful, unresolved memories, client selection is important. For example, can the client currently tolerate abreaction or should work be done to build up the client's ego strength before proceeding? Client motivation for change, current suicidal or homicidal ideation, ongoing substance abuse, and similar problems need to be taken into account and worked with.

Eye movement desensitization and reprocessing integrates well into a comprehensive therapeutic milieu. Group therapy, for example, can serve to provide a client with information useful in resolution—the classic example of this among war veterans is learning that fear in combat is a common reaction. EMDR processing may then make use of this information as part of the client's resolution. A program or treatment may assist in breaking down isolation, provide additional skill training, support in vivo testing of new behaviors, and provide access to other treatments as the client might need.

Eye movement desensitization and reprocessing appears to be well suited for use with combat veterans. When considering the cases of George and Bob, an important similarity is the efficiency of treatment. For a population that may feel overwhelmed by their experiences, EMDR provides rapid encouragement to remain in treatment by often providing symptom relief in the first or second session of desensitization. The client-centered nature of EMDR is empowering while not requiring details of

the event, sustained disturbance or focus on the event, homework, or other tasks. This is particularly salient, as veterans in crisis may not be able to complete in vivo exposure or homework. Finally, EMDR encourages the resolution of disturbances manifested physically, emotionally, and cognitively, and does so even when the disturbance is generated from several different experiences. For war veterans whose traumatic events are usually multiple, this is an effective tool.

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