

## EMDR And The Military In Action

A monthly newsletter to keep you informed.

This is a monthly e-newsletter created primarily for our colleagues trained in Eye Movement Desensitization and Reprocessing Therapy (EMDR) who work with military, veterans, and their families. The purpose of **EMDR And The Military In Action** is to promote continued dialogue regarding the efficacy and current developments with EMDR and its use with these special populations.

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### Citations of the Month- Mechanism of Action

El Khoury-Malhame, M., Lanteaume, L., Beetz, E. M., Roques, J., Reynaud, E., Samuelian, J.-C., Blin, O., Garcia, R., & Khalfa, S. (2011, September). [Attentional bias in post-traumatic stress disorder diminishes after symptom amelioration.](#) *Behavior Research and Therapy*, 49(11), 796-801. doi:10.1016/j.brat.2011.08.006.



**Background:** Avoidance and hypervigilance to reminders of a traumatic event are among the main characteristics of post-traumatic stress disorder (PTSD). Attentional bias toward aversive cues in PTSD has been hypothesized as being part of the dysfunction causing etiology and maintenance of PTSD. The aim of the present study was to investigate the cognitive strategy underlying attentional bias in PTSD and whether normal cognitive processing is restored after a treatment suppressing core PTSD symptoms.

**Methods:** Nineteen healthy controls were matched for age, sex and education to 19 PTSD patients. We used the emotional stroop and detection of target tasks, before and after an average of 4.1 sessions of eye movement desensitization and reprocessing (EMDR) therapy.

**Results:** We found that on both tasks, patients were slower than controls in responding in the presence of emotionally negative words compared to neutral ones. After symptoms removal, patients no longer had attentional bias, and responded similarly to controls.

**Conclusion:** These results support the existence of an attentional bias in PTSD

patients due to a disengagement difficulty. There was also preliminary evidence that the disengagement was linked to PTSD symptomatology. It should be further explored whether attentional bias and PTSD involve common brain mechanisms.

**Leer, A., Engelhard, I. M., & van den Hout, M. A. (2014, April). How eye movements in EMDR work: Changes in memory vividness and emotionality. *Journal of Behavior Therapy and Experimental Psychiatry*, 45 (3), 396-401. doi:10.1016/j.jbtep.2014.04.004.**

**Background and objectives:** Eye movements (EM) during recall of an aversive memory is a treatment element unique to Eye Movement Desensitization and Reprocessing (EMDR). Experimental studies have shown that EM reduce memory vividness and/or emotionality shortly after the intervention. However, it is unclear whether the immediate effects of the intervention reflect actual changes in memory. The aim of this study was to test whether immediate reductions in memory vividness and emotionality persist at a 24 h follow up and whether the magnitude of these effects is related to the duration of the intervention.

**Methods:** Seventy-three undergraduates recalled two negative autobiographical memories, one with EM ("recall with EM") and one without ("recall only"). Half of participants recalled each memory for four periods of 24 s, the other half for eight periods of 24 s. Memory vividness/emotionality were self-rated at a pre-test, an immediate post-test, and a 24 h follow-up test.

**Results:** In both duration groups, recall with EM, but not recall only, caused an immediate decrease in memory vividness. There were no immediate reductions in memory emotionality. Furthermore, only the 'eight periods' group showed that recall with EM, but not recall only, caused a decrease in both memory emotionality and memory vividness from the pre-test to the follow-up.

**Limitations:** Only self-report measures were used.

**Conclusions:** The findings suggest that recall with EM causes 24-h changes in memory vividness/emotionality, which may explain part of the EMDR treatment effect, and these effects are related to intervention duration.

**Sack, M., Hofmann, A., Wizelman, L., & Lempa, W. (2008). Psychophysiological changes during EMDR and treatment outcome. *Journal of EMDR Practice and Research*, 2(4), 239-246. doi:10.1891/1933-3196.2.4.239.**

This study was designed to investigate the question of whether psychophysiological changes during EMDR sessions are related to subjective and objective reduction of PTSD symptoms. During-session changes in autonomic tone in relation to session-to-session changes of subjective stress, trauma-related symptoms, and psychophysiological reactions during a traumatic reminder were investigated in 10 patients suffering from single-trauma PTSD. Treatment duration followed each patient's individual needs and ranged between 1 and 4 sessions, resulting in a total of 24 EMDR treatment sessions from which psychophysiological data were completely recorded. Treatment with EMDR was followed by a significant reduction of trauma-related symptoms, elimination of the PTSD diagnosis in 8 of the 10 participants, as well as by significantly reduced

psychophysiological reactivity to an individualized trauma script. Psychophysiological dearousal in sessions correlated significantly with decrease in script-related reactions in heart rate and parasympathetic tone, and with changes in subjective disturbance. Our results indicate that information processing during EMDR is followed by during-session decrease in psychophysiological activity, reduced subjective disturbance and reduced stress reactivity to traumatic memory.

**Stickgold, R. (2008).** [Sleep-dependent memory processing and EMDR action.](#) *Journal of EMDR Practice and Research*, 2(4), 289-299. doi:10.1891/1933-3196.2.4.289.

The unique efficacy of eye movement desensitization and reprocessing (EMDR) in the treatment of posttraumatic stress disorder is thought to result from changes in the brain/mind state induced by bilateral sensory stimulation, but the nature and specific consequences of these changes remain unknown. The possibility that bilateral stimulation induces a brain/mind state similar to that of rapid eye movement sleep is supported by studies showing that sleep facilitates forms of memory processing arguably necessary for the resolution of trauma. Such studies, along with direct studies of the impact of bilateral stimulation on memory and emotional processing, and dismantling studies identifying the requisite features of such bilateral stimulation for effective trauma processing, will eventually lead to an understanding of the neurobiological basis of EMDR.

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## EMDR in the News

Souter, E. (2013, January 23). [Surviving PTSD: Helping your military loved ones get the help they need.](#)The Stir. NOTE: The Soldier Center is an outpatient center located in Clarksville, Tennessee.

For additional citations of EMDR therapy and Neurobiology, refer to Military Archives at [emdrresearchfoundation.org](http://emdrresearchfoundation.org).

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## Special Notes

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(note that there are quite a few relevant entries with links to articles)

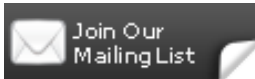
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