



## CLINICAL NEWSLETTER

RESEARCH APPLICATIONS FOR USE WITH PAIN | VOLUME 5, ISSUE 1

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This is a monthly e-newsletter created primarily for EMDR researchers and trained clinicians. The purpose of it is to promote continued dialogue regarding the efficacy and current developments with EMDR therapy and its use with a variety of populations.

This month we are sharing with you current research focused on research applications for use with pain. We are hoping you find it useful and informative.

As the EMDR Research Foundation Board of Directors works to create more research opportunities for our community, we hope you join the conversation with your suggestions for upcoming newsletters.

Sincerely,  
*Wendy J. Freitag, Ph.D.*  
**EMDR Research Foundation**

## Research Applications for Use with Pain

The impact of pain on quality of life has been well documented. Health economists have reported the annual cost of chronic pain in the United States is as high as \$635 billion a year, which is more than the yearly costs for cancer, heart disease and diabetes. <https://www.sciencedaily.com/releases/2012/09/120911091100.htm> This cost to the country is reflective of how pain may affect the daily lives of many individuals as well. One may lose gainful employment, changing lifestyle and day to day functioning for entire families.

In addition to the economic costs, we also know that there is an extraordinary social cost of living with pain. When people have overwhelming medical issues, it is usually all-encompassing and has a significant impact on overall functioning and may even dictate how their life changes in many very real ways. It can frequently impact family, social, financial and work life to a significant degree; and usually the impact is negative, because diseases can restrict our life such that what brought us pleasure before no longer can be achieved based on physical limitations. <http://www.huffingtonpost.com/julie-chen-md/pain-affecting-behavior-b-1027659.html>.

When an individual suffers from pain it also affects the entire family-sometimes economically, but always in terms of how people interact with each other, the ability to socialize, do "normal" fun activities and overall functioning of a family system.

Research in psychological, non pharmacological interventions is needed.

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The following research was recently published in the Journal of Advanced Nursing:

**Investigating the effect of Eye Movement Desensitization and Reprocessing (EMDR) on Postoperative Pain Intensity in Adolescents Undergoing Surgery: A Randomized Controlled Trial** <http://onlinelibrary.wiley.com/doi/10.1111/jan.12985/abstract> Mohsen Maroufi MD, Shahla Zamani, MPsych (Clin), Zahra Izadikhah Ph.D. (Psychology), Maryam Marofi, MN RN, Peter O'Connor Ph.D. (Psychology).

### Abstract

**Aim:** To investigate the efficacy of Eye Movement Desensitization and Reprocessing for postoperative pain management in adolescents.

**Background:** Eye Movement Desensitization and Reprocessing is an inexpensive, non-pharmacological intervention that has successfully been used to treat chronic pain. It holds promise in the treatment of acute, postsurgical pain based on its purported effects on the brain and nervous system

**Design:** A randomized controlled trial was used.

**Methods:** Fifty-six adolescent surgical patients aged between 12-18 years were allocated to gender-balanced Eye Movement Desensitization and Reprocessing (treatment) or non-Eye Movement Desensitization and Reprocessing (control) groups. Pain was measured using the Wong-Baker FACES® Pain Rating Scale (WBFS) before and after the intervention (or non-intervention for the control group).

**Findings:** A Wilcoxon signed-rank test demonstrated that the Eye Movement Desensitization and Reprocessing group experienced a significant reduction in pain intensity after treatment intervention, whereas the control group did not. Additionally, a Mann-Whitney U-test showed that, while there was no significant difference between the two groups at time 1, there was a significant difference in pain intensity between the two groups at time 2, with the Eye Movement Desensitization and Reprocessing group experiencing lower levels of pain.

**Conclusion:** These results suggest that Eye Movement Desensitization and Reprocessing may be an effective treatment modality for postoperative pain.

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In 2014 the results of a Case Study using EMDR therapy for Complex Regional Pain was reported and published in the Journal of EMDR Research and Practice:

**EMDR as a Therapeutic Treatment for Complex Regional Pain Syndrome: A Case Report** <http://onlinelibrary.wiley.com/doi/10.1111/jan.12985/abstract> Hughes, Megan.

### Abstract

Complex regional pain syndrome (CRPS) is characterized by ongoing pain, swelling, and stiffness following an acute injury. CRPS is difficult to diagnose, significantly impacts functioning, and is frequently incurable. Current treatments are pharmacotherapy, surgery, and physiotherapy. This case report describes the use of eye movement desensitization and reprocessing (EMDR) in the psychotherapeutic treatment of a woman diagnosed with CRPS in

2009 as a result of injuries sustained during an assault in 2004. This article reports on EMDR treatment provided 1-2 years after her diagnosis. At initial assessment, the client was debilitated and suicidal, unable to work or care for her children, and dependent on her family for financial support because of CRPS. Two phases of 7 EMDR sessions were provided; the first focused on past traumatic experiences; the second addressed her pain with Grant's (2009) EMDR chronic pain protocol. At the end of treatment, the client reported decreased pain, decreased substance dependence, improved mood and outlook, and was able to resume part-time work. Results were maintained at 8-month follow-up and suggest that EMDR was helpful for this client in reducing the symptoms associated with CRPS.

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The following is the report of a study on treatment of chronic phantom limb pain in Pain Research and Management:

**Treatment of Chronic Phantom Limb Pain Using a Trauma-Focused Psychological Approach** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2886995/> C de Roos, MA, AC Veenstra, MA, Prof A de Jongh, Ph.D., ME den Hollander-Gijsman, MA, NJA van der Wee, Ph.D., Prof FG Zitman, Ph.D., and YR van Rood, Ph.D.

### Abstract

**Background:** Chronic phantom limb pain (PLP) is a disabling chronic pain syndrome for which regular pain treatment is seldom effective. Pain memories resulting from long-lasting preamputation pain or pain flashbacks, which are part of a traumatic memory, are reported to be powerful elicitors of PLP.

**Objective:** To investigate whether a psychological treatment directed at processing the emotional and somatosensory memories associated with amputation reduces PLP.

**Methods:** Ten consecutive participants (six men and four women) with chronic PLP after leg amputation were treated with eye movement desensitization and reprocessing (EMDR). Pain intensity was assessed during a two-week period before and after treatment (mean number of sessions = 5.9), and at short- (three months) and long-term (mean 2.8 years) follow-up.

**Results:** Multivariate ANOVA for repeated measures revealed an overall time effect ( $F[2, 8]=6.7$ ;  $P<0.02$ ) for pain intensity. Pairwise comparison showed a significant decrease in mean pain score before and after treatment ( $P=0.00$ ), which was maintained three months later. All but two participants improved and four were considered to be completely pain free at three months follow-up. Of the six participants available at long-term follow-up (mean 2.8 years), three were pain free and two had reduced pain intensity.

**Conclusions:** These preliminary results suggest that, following a psychological intervention focused on trauma or pain-related memories, substantial long-term reduction of chronic PLP can be achieved. However, larger outcome studies are required.

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A review article, published in Pain Magazine in 2013 concluded that although results were promising insufficient studies of high quality were available to be conclusive.

### Effects of Eye Movement Desensitization and Reprocessing (EMDR) Treatment in Chronic Pain

**Patients: A Systematic Review** <http://onlinelibrary.wiley.com/doi/10.1111/pme.12303/full>  
Jonas Tesarz MD, Sabine Leisner MSc, Andreas Gerhardt MSc, Susanne Janke MD, Günter H. Seidler MD, Ph.D., Wolfgang Eich MD, Ph.D., Mechthild Hartmann MSc.

### Abstract

**Objective:** This study systematically reviewed the evidence regarding the effects of eye movement desensitization and reprocessing (EMDR) therapy for treating chronic pain.

**Design:** We screened MEDLINE, EMBASE, the Cochrane Library, CINHAL Plus, Web of Science, PsycINFO, PSYINDEX, the Francine Shapiro Library, and citations of original studies and reviews. All studies using EMDR for treating chronic pain were eligible for inclusion in the present study. The main outcomes were pain intensity, disability, and negative mood (depression and anxiety). The effects were described as standardized mean differences.

**Results:** Two controlled trials with a total of 80 subjects and 10 observational studies with 116 subjects met the inclusion criteria. All of these studies assessed pain intensity. In addition, five studies measured disability, eight studies depression, and five studies anxiety. Controlled trials demonstrated significant improvements in pain intensity with high effect sizes (Hedges' g:  $-6.87$  [95% confidence interval (CI<sub>95</sub>):  $-8.51, -5.23$ ] and  $-1.12$  [CI<sub>95</sub>:  $-1.82, -0.42$ ]). The pretreatment/posttreatment effect size calculations of the observational studies revealed that the effect sizes varied considerably, ranging from Hedges' g values of  $-0.24$  (CI<sub>95</sub>:  $-0.88, 0.40$ ) to  $-5.86$  (CI<sub>95</sub>:  $-10.12, -1.60$ ) for reductions in pain intensity,  $-0.34$  (CI<sub>95</sub>:  $-1.27, 0.59$ ) to  $-3.69$  (CI<sub>95</sub>:  $-24.66, 17.28$ ) for improvements in disability,  $-0.57$  (CI<sub>95</sub>:  $-1.47, 0.32$ ) to  $-1.47$  (CI<sub>95</sub>:  $-3.18, 0.25$ ) for improvements in depressive symptoms, and  $-0.59$  (CI<sub>95</sub>:  $-1.05, 0.13$ ) to  $-1.10$  (CI<sub>95</sub>:  $-2.68, 0.48$ ) for anxiety. Follow-up assessments showed maintained improvements. No adverse events were reported.

**Conclusions:** Although the results of our study suggest that EMDR may be a safe and promising treatment option in chronic pain conditions, the small number of high-quality studies leads to insufficient evidence for definite treatment recommendations.

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Further research in EMDR therapy for use with patients suffering from pain is needed.

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