

## RANDOMIZED CONTROLLED TRIALS EVALUATING EMDR THERAPY FOR TRAUMA/PTSD IN ADULTS

- **Abbasnejad, M., Mahani, K. N., & Zamyad, A. (2007).** Efficacy of "eye movement desensitization and reprocessing" in reducing anxiety and unpleasant feelings due to earthquake experience. *Psychological Research*, 9, 104-117.

*"EMDR is effective in reducing earthquake anxiety and negative emotions (e.g. PTSD, grief, fear, intrusive thoughts, depression, etc) resulting from earthquake experience. Furthermore, results show that, improvement due to EMDR was maintained at a one month follow up."*

- **Acarturk, C., Konuk, E., Cetinkaya, M., Senay, I., Sijbrandij, M., Gulen, B., & Cuijpers, P. (2016).** The efficacy of eye movement desensitization and reprocessing for post-traumatic stress disorder and depression among Syrian refugees: results of a randomized controlled trial. *Psychological medicine*, 46(12), 2583-2593.

*All participants met the criteria for PTSD on assessment and demonstrated a significant reduction of PTSD and depression symptoms at post-treatment as well as at the 5-week follow-up. At follow-up, 49% were no longer diagnosed with PTSD.*

- **Ahmadi K, Hazrati M, Ahmadizadeh M, Noohi S. (2015).** REM desensitization as a new therapeutic method for posttraumatic stress disorder: a randomized controlled trial. *Acta Med Indones.* 47(2):111–9.

*A sleep based musical intervention was compared a version of EMD, based upon the Shapiro (1989) article. "... intrusive thoughts were significantly more likely to improve with REM Desensitization versus EMDR (P=0.03), while depression was more responsive to EMDR (p=0.03)."*

- **Arabia, E., Manca, M.L. & Solomon, R.M. (2011).** EMDR for survivors of life-threatening cardiac events: Results of a pilot study. *Journal of EMDR Practice and Research*, 5, 2-13.

*"Forty-two patients undergoing cardiac rehabilitation . . . were randomized to a 4-week treatment of EMDR or imaginal exposure (IE). . . . EMDR was effective in reducing PTSD, depressive, and anxiety symptoms and performed significantly better than IE for all variables. . . Because the standardized IE procedures used were those employed in-session during [prolonged exposure] the results are also instructive regarding the relative efficacy of both treatments without the addition of homework."*

- **Capezzani et al. (2013).** EMDR and CBT for cancer patients: Comparative study of effects on PTSD, anxiety, and depression. *Journal of EMDR Practice and Research*, 5, 2-13.

This randomized pilot study reported that after eight sessions of treatment, EMDR therapy was superior to a variety of CBT techniques. "Almost all the patients (20 out of 21, 95.2%) did not have PTSD after the EMDR treatment."

- **Carletto, S., Borghi, M., Bertino, G., Oliva, F., Cavallo, M., Hofmann, A., ... & Ostacoli, L. (2016).** Treating post-traumatic stress disorder in patients with

multiple sclerosis: A randomized controlled trial comparing the efficacy of eye movement desensitization and reprocessing and relaxation therapy. *Frontiers in Psychology*, 7.

*In the EMDR condition, measurements at posttest and follow-up revealed 85% and 100% PTSD remission, respectively.*

- **Carlson, J., Chemtob, C.M., Rusnak, K., Hedlund, N.L., & Muraoka, M.Y. (1998).** Eye movement desensitization and reprocessing (EMDR): Treatment for combat-related post-traumatic stress disorder. *Journal of Traumatic Stress*, 11, 3-24.

*Twelve sessions of EMDR eliminated post-traumatic stress disorder in 77.7% of the multiply traumatized combat veterans studied. There was 100% retention in the EMDR condition. Effects were maintained at follow-up. This is the only randomized study to provide a full course of treatment with combat veterans. Other studies (e.g., Boudewyns/Deville/Jensen/Pitman et al./Macklin et al.) evaluated treatment of only one or two memories, which, according to the International Society for Traumatic Stress Studies Practice Guidelines (2000), is inappropriate for multiple-trauma survivors. The VA/DoD Practice Guideline (2004) also indicates these studies (often with only two sessions) offered insufficient treatment doses for veterans. EMDR therapy is given the strongest level of recommendation in the VA/DoD Practice Guideline (2004, 2010, 2017).*

- **Cvetek, R. (2008).** EMDR treatment of distressful experiences that fail to meet the criteria for PTSD. *Journal of EMDR Practice and Research*, 2, 2-14.

*EMDR treatment of disturbing life events (small “t” trauma) was compared to active listening, and wait list. EMDR produced significantly lower scores on the Impact of Event Scale (mean reduced from “moderate” to “subclinical”) and a significantly smaller increase on the STAI after memory recall.*

- **de Bont, P. A., van den Berg, D. P., van der Vleugel, B. M., de Roos, C., de Jongh, A., van der Gaag, M., & van Minnen, A. M. (2016).** Prolonged exposure and EMDR for PTSD v. a PTSD waiting-list condition: effects on symptoms of psychosis, depression and social functioning in patients with chronic psychotic disorders. *Psychological medicine*, 1-11.

*“In patients with chronic psychotic disorders PE and EMDR not only reduced PTSD symptoms, but also paranoid thoughts. Importantly, in PE and EMDR more patients accomplished the status of their psychotic disorder in remission.” A secondary analysis reported “It is concluded that even in a population with severe mental illness, patients with the dissociative subtype of PTSD do benefit from trauma-focused treatments without a pre-phase of emotion regulation skill training and should not be excluded from these treatments.” van Minnen et al. (2016). Effectiveness of trauma-focused treatment for patients with psychosis with and without the dissociative subtype of post-traumatic stress disorder. *The British Journal of Psychiatry*, 209(4), 347-348..*

- **de Bont, P. A., van Minnen, A., & de Jongh, A. (2013).** Treating PTSD in patients with psychosis: A within-group controlled feasibility study examining the efficacy and safety of evidence-based PE and EMDR protocols. *Behavior therapy*, 44(4), 717-730.

*“An intention-to-treat analysis of the 10 patients starting treatment showed that the PTSD treatment protocols of PE and EMDR significantly reduced PTSD symptom severity”*

- **Devilley & Spence (1999).** The relative efficacy and treatment distress of EMDR and a cognitive behavioral trauma treatment protocol in the amelioration of posttraumatic stress disorder. *Journal of Anxiety Disorders*, 13, 131–157.

*EMDR was compared to Trauma Treatment Protocol (composed of prolonged imaginal exposure, in vivo exposure, stress inoculation training and additional cognitive restructuring procedures) developed by the first author (and primary research therapist). Subjects were assigned in nonrandom blocks to eight treatment sessions. TTP was reported significantly more effective.*

- **Edmond, T., Rubin, A., & Wambach, K. (1999).** The effectiveness of EMDR with adult female survivors of childhood sexual abuse. *Social Work Research*, 23, 103-116.

*EMDR treatment resulted in lower scores (fewer clinical symptoms) on all four of the outcome measures at the three-month follow-up, compared to those in the routine treatment condition. The EMDR group also improved on all standardized measures at 18 months follow up. Edmond, T., & Rubin, A. (2004). Assessing the long-term effects of EMDR: Results from an 18-month follow up study with adult female survivors of CSA. Journal of Childhood Sexual Abuse, 13, 69–86.*

- **Edmond, T., Sloan, L., & McCarty, D. (2004).** Sexual abuse survivors' perceptions of the effectiveness of EMDR and eclectic therapy: A mixed-methods study. *Research on Social Work Practice*, 14, 259-272.

*Combination of qualitative and quantitative analyses of treatment outcomes with important implications for future rigorous research. Survivors' narratives indicate that EMDR produces greater trauma resolution, while within eclectic therapy, survivors more highly value their relationship with their therapist, through whom they learn effective coping strategies.*

- **Gil-Jardiné C, Evrard G, Al Joboory S, Tortes Saint Jammes J, Masson F, Ribéreau-Gayon R, et al. (2018).** Emergency room intervention to prevent post concussion-like symptoms and post-traumatic stress disorder. A pilot randomized controlled study of a brief eye movement desensitization and reprocessing intervention versus reassurance or usual care. *J Psychiatr Res.* 103:229–36.

*"In the EMDR, reassurance and control groups, proportions of patients with PCLS at three months were 18%, 37% and 65% and those with PTSD were 3%, 16% and 19% respectively."*

- **Hogberg, G. et al., (2007).** On treatment with eye movement desensitization and reprocessing of chronic post-traumatic stress disorder in public transportation workers: A randomized controlled study. *Nordic Journal of Psychiatry*, 61, 54-61.

*Employees who had experienced "person-under-train accident or had been assaulted at work were recruited." Six sessions of EMDR resulted in remission of PTSD in 67% compared to 11% in the wait list control. Significant effects were documented in Global Assessment of Function (GAF) and Hamilton Depression (HAM-D) score. Follow-up: Högberg, G. et al. (2008). Treatment of post-traumatic stress disorder with eye movement desensitization and reprocessing: Outcome is stable in 35-month follow-up. Psychiatry Research. 159, 101-108.*

- **Ironson, G.I., Freund, B., Strauss, J.L., & Williams, J. (2002).** Comparison of two treatments for traumatic stress: A community-based study of EMDR and prolonged exposure. *Journal of Clinical Psychology*, 58, 113-128.

*Both EMDR and prolonged exposure produced a significant reduction in PTSD and depression symptoms. This is the only research comparing EMDR and exposure therapy that added in vivo homework to the EMDR condition. The study found that 70% of EMDR participants achieved a good outcome in three active treatment sessions, compared to 17% of persons in the prolonged exposure condition. EMDR also had fewer dropouts (0 v 30%).*

- **Jarero, I., Artigas, L., & Luber, M. (2011).** The EMDR protocol for recent critical incidents: Application in a disaster mental health continuum of care context. *Journal of EMDR Practice and Research*, 5, 82-94.

*Participants were treated two weeks following a 7.2 earthquake in Mexico. "One session of EMDR-PRECI produced significant improvement on symptoms of posttraumatic stress for both the immediate-treatment and waitlist/delayed treatment groups, with results maintained at 12-week follow-up, even though frightening aftershocks continued to occur frequently."*

- **Jarero, I., Givaudan, M., Osorio, A. (2018).** Randomized Controlled Trial on the Provision of the EMDR Integrative Group Treatment Protocol Adapted for Ongoing Traumatic Stress to Female Patients with Cancer-Related Posttraumatic Stress Disorder Symptoms. *Journal of EMDR Practice and Research*, 12(3), 94-104.

*"Data analysis by repeated measures analysis of variance (ANOVA) showed that the EMDR-IGTP-OTS was effective in significantly reducing symptoms of PTSD, anxiety, and depression, with symptoms maintained at 90-day follow-up and with large effect sizes (e.g.,  $d = 1.80$ )."*

- **Jarero, I., Uribe, S., Artigas, L., & Givaudan, M. (2015).** EMDR protocol for recent critical incidents: A randomized controlled trial in a technological disaster context. *Journal of EMDR Practice and Research*, 9, 166–173.

*Evaluation of co-workers 10 days after they witnessed seven people killed in an explosion revealed a mean of 22 on the SPRINT, indicating severe PTSD symptoms. After two consecutive-day 60-minute EMDR sessions the mean SPRINT scores for immediate and delayed treatment groups declined to equally low levels on both posttest and follow-up.*

- **Johnson, D. R., & Lubin, H. (2006).** The Counting Method: Applying the Rule of Parsimony to the Treatment of Posttraumatic Stress Disorder. *Traumatology*, 12(1), 83.

*Reported the effects of 10 sessions of PE (plus homework) versus 6 sessions of EMDR versus 6 sessions of CM with nine participants in each condition who were also receiving on-going supportive individual psychotherapy. Results indicated equal positive effects on trauma symptoms.*

- **Karatzias et al. (2011).** A Controlled Comparison of the Effectiveness and Efficiency of Two Psychological Therapies for Posttraumatic Stress Disorder: Eye Movement Desensitization and Reprocessing vs. Emotional Freedom Techniques. *The Journal of Nervous and Mental Disease*, 199, 372-78.

*"Regarding clinical significant changes, a slightly higher proportion of patients in the EMDR group produced substantial clinical changes compared with the EFT group."*

- **Laugharne, J., Kullack, C., Lee, C. W., McGuire, T., Brockman, S., Drummond, P. D., et al. (2016).** Amygdala volumetric change following psychotherapy for posttraumatic stress disorder. *J. Neuropsychiatry Clin. Neurosci.* 28, 312–318.

*"Patients were randomly allocated to either EMDR or PE. Volumes were assessed before and after treatment via magnetic resonance imaging (MRI). Both groups showed significant improvements in PTSD symptoms. Left amygdala mean volume increased significantly following EMDR treatment only."*

- **Lee, C., Gavriel, H., Drummond, P., Richards, J. & Greenwald, R. (2002).** Treatment of post-traumatic stress disorder: A comparison of stress inoculation training with prolonged exposure and eye movement desensitization and reprocessing. *Journal of Clinical Psychology*, 58, 1071-1089.

*Both EMDR and stress inoculation therapy plus prolonged exposure (SITPE) produced significant improvement, with EMDR achieving greater improvement on PTSD intrusive symptoms. Participants in the EMDR condition showed greater gains at three-month follow-up. EMDR condition used three hours of homework compared to 28 hours for SITPE.*

- **Marcus, S., Marquis, P. & Sakai, C. (1997).** Controlled study of treatment of PTSD using EMDR in an HMO setting. *Psychotherapy*, 34, 307-315.

*Funded by Kaiser Permanente. Results show that 100% of single-trauma and 77% of multiple-trauma survivors were no longer diagnosed with post-traumatic stress disorder after six 50-minute sessions.*

- **Marcus, S., Marquis, P. & Sakai, C. (2004).** Three- and 6-month follow-up of EMDR treatment of PTSD in an HMO setting. *International Journal of Stress Management*, 11, 195-208.

*Funded by Kaiser Permanente, follow-up evaluation indicates that a relatively small number of EMDR sessions result in substantial benefits that are maintained over time.*

- **Nijdam, M.J., Gersons, B.P.R, Reitsma, J.B., de Jongh, A. & Olf, M. (2012).** Brief eclectic psychotherapy v. eye movement desensitisation and reprocessing therapy in the treatment of post-traumatic stress disorder: Randomised controlled trial. *British Journal of Psychiatry*, 200, 224-231.

*A comparison of "the efficacy and response pattern of a trauma-focused CBT modality, brief eclectic psychotherapy for PTSD, with EMDR . . . Although both treatments are effective, EMDR results in a faster recovery compared with the more gradual improvement with brief eclectic psychotherapy."*

- **Novo, P. et al. (2014).** Eye movement desensitization and reprocessing therapy in subsyndromal bipolar patients with a history of traumatic events: A randomized, controlled pilot-study. *Psychiatry Research*, 219, 122-128.

*"Although preliminary, our findings support the utility of this treatment approach and suggest that Eye Movement Desensitization and Reprocessing therapy could be a promising and safe therapeutic strategy to reduce trauma symptoms and stabilize mood in traumatized bipolar patients with subsyndromal symptoms."*

- **Osorio, A., Pérez, M., Tirado, G., Jarero, I., Givaudan, M. (2018).** Randomized Controlled Trial on the EMDR Integrative Group Treatment Protocol for Ongoing

Traumatic Stress with Adolescents and Young Adults Patients with Cancer.  
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*Data analysis by repeated measures ANOVA showed that the EMDR-IGTP-OTS was effective in significantly reducing symptoms of PTSD, anxiety, and depression, with symptoms maintained at 90-day follow-up and with large effect sizes (e.g.,  $d=1.17$ ).*

- **Power, K.G., McGoldrick, T., Brown, K., et al. (2002).** A controlled comparison of eye movement desensitization and reprocessing versus exposure plus cognitive restructuring, versus waiting list in the treatment of post-traumatic stress disorder. *Journal of Clinical Psychology and Psychotherapy*, 9, 299-318.

*Both EMDR and exposure therapy plus cognitive restructuring (with daily homework) produced significant improvement. EMDR was more beneficial for depression, and social functioning, and required fewer treatment sessions. Subsequent reevaluation of the data indicated that "For pre- to post-treatment IES mean change score, EMDR patients also appeared to have had better treatment outcome than E+CR patients" and EMDR therapy was a predictor of positive outcome: Karatzias, A., Power, K., McGoldrick, T., Brown, K., Buchanan, R., Sharp, D. & Swanson, V. (2006). Predicting treatment outcome on three measures for post-traumatic stress disorder. Eur Arch Psychiatry Clin Neuroscience, 20, 1-7.*

- **Rothbaum, B. O. (1997).** A controlled study of eye movement desensitization and reprocessing in the treatment of post-traumatic stress disorder sexual assault victims. *Bulletin of the Menninger Clinic*, 61, 317-334.

*Three 90-minute sessions of EMDR eliminated post-traumatic stress disorder in 90% of rape victims.*

- **Rothbaum, B.O., Astin, M.C., & Marsteller, F. (2005).** Prolonged exposure versus eye movement desensitization (EMDR) for PTSD rape victims. *Journal of Traumatic Stress*, 18, 607-616.

*In this NIMH funded study both treatments were effective: "An interesting potential clinical implication is that EMDR seemed to do equally well in the main despite less exposure and no homework. It will be important for future research to explore these issues." (p. 614)*

- **Scheck, M., Schaeffer, J.A., & Gillette, C. (1998).** Brief psychological intervention with traumatized young women: The efficacy of eye movement desensitization and reprocessing. *Journal of Traumatic Stress*, 11, 25-44.

*Two sessions of EMDR reduced psychological distress in traumatized adolescents/ young women and brought scores within one standard deviation of the norm.*

- **Shapiro, E., Laub, B. (2015).** Early EMDR intervention following a community critical incident: A randomized clinical trial. *Journal of EMDR Practice and Research*, 9, 17-27.

*"At 1 week posttreatment, the scores of the immediate treatment group were significantly improved on the IES-R compared to the waitlist/delayed treatment group, who showed no improvement prior to their treatment. At 3 months follow-up, results on the IES-R were maintained and there was a significant improvement on PHQ-9 scores."*

- **Shapiro, F. (1989).** Efficacy of the eye movement desensitization procedure in the treatment of traumatic memories. *Journal of Traumatic Stress*, 2, 199–223.

*Seminal study appeared the same year as first controlled studies of CBT treatments. Three-month follow-up indicated substantial effects on distress and behavioral reports. Marred by lack of standardized measures and the originator serving as sole therapist.*

- **Tarquinio, C., Rotonda, C., Houllé, W. A., Montel, S., Rydberg, J. A., Minary, L., ... & Alla, F. (2016).** Early psychological preventive intervention for workplace violence: A randomized controlled explorative and comparative study between EMDR-recent event and critical incident stress debriefing. *Issues in Mental Health Nursing*, 37(11), 787-799.

*Evaluated one session treatment 48 and 96 hours post event. "Results showed that after 3 months PCLS and SUDS scores were significantly lower with EMDR-RE and delayed EMDR-RE compared to CISD. After 48 hours and 3 months, none of the EMDR-RE-treated victims showed PTSD symptoms."*

- **Taylor, S. et al. (2003).** Comparative efficacy, speed, and adverse effects of three PTSD treatments: Exposure therapy, EMDR, and relaxation training. *Journal of Consulting and Clinical Psychology*, 71, 330-338.

*Exposure therapy was statistically superior to EMDR on some measures. This study used therapist assisted "in vivo" exposure, where the therapist takes the person to previously avoided areas, in addition to imaginal exposure and one hour of daily homework (@ 50 hours). The EMDR group used only standard sessions and no homework.*

- **ter Heide, F. J. J., Mooren, T. M., van de Schoot, R., de Jongh, A., & Kleber, R. J. (2016).** Eye movement desensitisation and reprocessing therapy v. stabilisation as usual for refugees: Randomised controlled trial. *The British Journal of Psychiatry*, 209(4), 311-318.

*Six EMDR processing sessions were used to treat participants with unstable living conditions and a mean of 14 traumatic memories: "Intention-to-treat analyses found no differences in safety (one severe adverse event in the stabilisation condition only) or efficacy."*

- **van den Berg, D.P.G., et al. (2015).** Prolonged exposure versus eye movement desensitization and reprocessing versus waiting list for posttraumatic stress disorder in patients with a psychotic disorder: A randomized clinical trial. *JAMA Psychiatry*, 72(3):259-267.

*Standard PE and EMDR therapy protocols are effective, safe, and feasible in patients with PTSD and severe psychotic disorders, including current symptoms. Additional evaluation Indicated trauma-focused treatment was associated with significantly less exacerbation, less adverse events, and reduced revictimization compared with the WL condition: **van den Berg D.P.G., et al. (2016).** Trauma-focused treatment in PTSD-patients with psychosis: Symptom exacerbation, adverse events, and revictimization. *Schizophrenia Bulletin*, 43, 693-702.*

- **Van der Kolk, B., Spinazzola, J. Blaustein, M., Hopper, J. Hopper, E., Korn, D., & Simpson, W. (2007).** A randomized clinical trial of EMDR, fluoxetine and pill placebo in the treatment of PTSD: Treatment effects and long-term maintenance. *Journal of Clinical Psychiatry*, 68, 37-46. EMDR was superior to both control conditions in the amelioration of both PTSD symptoms and depression. Upon termination of therapy, the EMDR group

*continued to improve while Fluoxetine participants again became symptomatic.*

- **Vaughan, K., Armstrong, M.F., Gold, R., O'Connor, N., Jenneke, W., & Tarrier, N. (1994).** A trial of eye movement desensitization compared to image habituation training and applied muscle relaxation in post-traumatic stress disorder. *Journal of Behavior Therapy & Experimental Psychiatry*, 25, 283-291.

*All treatments led to significant decreases in PTSD symptoms for subjects in the treatment groups as compared to those on a waiting list, with a greater (albeit non-significant) reduction in the EMDR group, particularly with respect to intrusive symptoms. In the 2-3 weeks of the study, 40-60 additional minutes of daily homework were part of the treatment in the other two conditions.*

- **Wilson, S., Becker, L.A., & Tinker, R.H. (1995).** Eye movement desensitization and reprocessing (EMDR): Treatment for psychologically traumatized individuals. *Journal of Consulting and Clinical Psychology*, 63, 928-937.

*Three sessions of EMDR produced clinically significant change in traumatized civilians on multiple measures.*

- **Wilson, S., Becker, L.A., & Tinker, R.H. (1997).** Fifteen-month follow-up of eye movement desensitization and reprocessing (EMDR) treatment of post-traumatic stress disorder and psychological trauma. *Journal of Consulting and Clinical Psychology*, 65, 1047-1056.

*Follow-up at 15 months showed maintenance of positive treatment effects with 84% remission of PTSD diagnosis.*

- **Yurtsever, A., Konuk, E., Akyüz, T., Zat, Z., Tükel, F., Çetinkaya, M., . . . Shapiro, E. (2018).** An eye movement desensitization and reprocessing (EMDR) group intervention for Syrian refugees with post traumatic stress symptoms. *Frontiers in Psychology*, 9, 493.

*“The percentage of PTSD diagnosis decreased from 100 to 38.9% in the EMDR G-TEP group and was unchanged in the control group. Following the EMDR G-TEP intervention 61.1% of the experimental group no longer had a PTSD diagnosis; this decrease was maintained at 4 weeks follow-up.”*