EMDR Therapy: Trauma Research

International Treatment Guidelines

- **American Psychiatric Association (2004).** *Practice Guideline for the Treatment of Patients with Acute Stress Disorder and Posttraumatic Stress Disorder.* Arlington, VA: American Psychiatric Association Practice Guidelines.

  EMDR is recommended as an effective treatment for trauma.

- **Bleich, A., Kotler, M., Kutz, I., & Shalev, A. (2002).** A position paper of the (Israeli) National Council for Mental Health: *Guidelines for the assessment and professional intervention with terror victims in the hospital and in the community.* Jerusalem, Israel.

  EMDR is one of three methods recommended for treatment of terror victims.

- **California Evidence-Based Clearinghouse for Child Welfare (2010).** Trauma Treatment for Children. http://www.cebc4cw.org.

  EMDR and Trauma-focused CBT are considered "Well-Supported by Research Evidence."

- **Chambless, D.L. et al. (1998).** Update of empirically validated therapies, II. *The Clinical Psychologist, 51,* 3-16.

  According to a taskforce of the Clinical Division of the American Psychological Association, the only methods empirically supported ("probably efficacious") for the treatment of any post-traumatic stress disorder population were EMDR, exposure therapy, and stress inoculation therapy. Note that this evaluation does not cover the last decade of research.

- **CREST (2003).** *The management of post traumatic stress disorder in adults.* A publication of the Clinical Resource Efficiency Support Team of the Northern Ireland Department of Health, Social Services and Public Safety, Belfast.

  EMDR and CBT were stated to be the treatments of choice.

- **Department of Veterans Affairs & Department of Defense (2010).** *VA/DoD Clinical Practice Guideline for the Management of Post-Traumatic Stress.* Washington, DC: Veterans Health Administration, Department of Veterans Affairs and Health Affairs, Department of Defense.

  EMDR was placed in the category of the most effective PTSD psychotherapies. This "A" category is described as "A strong recommendation that clinicians provide the intervention to eligible patients. Good evidence was found that the intervention improves important health outcomes and concludes that benefits substantially outweigh harm."

- **Dutch National Steering Committee Guidelines Mental Health Care (2003).** Multidisciplinary Guideline Anxiety Disorders. Quality Institute Heath Care CBO/Trimbos Intitute. Utrecht, Netherlands.

EMDR and CBT both designated as treatments of choice for PTSD

- **Foa, E.B., Keane, T.M., Friedman, M.J., & Cohen, J.A. (2009)**. *Effective treatments for PTSD: Practice Guidelines of the International Society for Traumatic Stress Studies* New York: Guilford Press.

  EMDR was listed as an effective and empirically supported treatment for PTSD, and was given an AHCPR "A" rating for adult PTSD. This guideline specifically rejected the findings of the previous Institute of Medicine report, which stated that more research was needed to judge EMDR effective for adult PTSD. With regard to the application of EMDR to children, an AHCPR rating of Level B was assigned. Since the time of this publication, two additional randomized studies on EMDR have been completed (see below).

- **INSERM (2004).** *Psychotherapy: An evaluation of three approaches.* French National Institute of Health and Medical Research, Paris, France.

  EMDR and CBT were stated to be the treatments of choice for trauma victims.

- **National Collaborating Centre for Mental Health (2005).** *Post traumatic stress disorder (PTSD): The management of adults and children in primary and secondary care.* London: National Institute for Clinical Excellence.

  Trauma-focused CBT and EMDR were stated to be empirically supported treatments for choice for adult PTSD.

- **SAMHSA's National Registry of Evidence-based Programs and Practices (2011)** http://nrepp.samhsa.gov/ViewIntervention.aspx?id=199

  *The Substance Abuse and Mental Health Services Administration (**SAMHSA**) is an agency of the U.S. Department of Health and Human Services (HHS). This national registry (NREPP) cites EMDR as evidence based practice for treatment of PTSD, anxiety, and depression symptoms. Their review of the evidence also indicated that EMDR leads to an improvement in mental health functioning.*

- **Therapy Advisor (2004-11): http://www.therapyadvisor.com**

  An NIMH sponsored website listing empirically supported methods for a variety of disorders. EMDR is one of three treatments listed for PTSD.

- **United Kingdom Department of Health (2001).** Treatment choice in psychological therapies and counselling evidence based clinical practice guideline. London, England.

  Best evidence of efficacy was reported for EMDR, exposure, and stress inoculation

- **World Health Organization (2013).** *Guidelines for the management of conditions specifically related to stress.* Geneva, Switzerland: Author.

Trauma-focused CBT and EMDR are the only psychotherapies recommended for children, adolescents and adults with PTSD. "Like CBT with a trauma focus, EMDR aims to reduce subjective distress and strengthen adaptive cognitions related to the traumatic event. Unlike CBT with a trauma focus, EMDR does not involve (a) detailed descriptions of the event, (b) direct challenging of beliefs, (c) extended exposure, or (d) homework." (p.1)

Meta-analyses

EMDR therapy has been compared to numerous exposure therapy protocols, with and without CT techniques. It should be noted that exposure therapy uses one to two hours of daily homework and EMDR uses none. The most recent meta-analyses are listed here.

- **Bisson, J., Roberts, N.P., Andrew, M., Cooper, R. & Lewis, C. (2013).** Psychological therapies for chronic post-traumatic stress disorder (PTSD) in adults. *Cochrane Database of Systematic Reviews* 2013, DOI: 10.1002/14651858.CD003388.pub4

  Research indicates that CBT and EMDR therapy are superior to all other treatments.

- **Bradley, R., Greene, J., Russ, E., Dutra, L., & Westen, D. (2005).** A multidimensional meta-analysis of psychotherapy for PTSD. *American Journal of Psychiatry, 162,* 214-227.

  EMDR is equivalent to exposure and other cognitive behavioral treatments and all "are highly efficacious in reducing PTSD symptoms."

- ***Davidson, P.R., & Parker, K.C.H. (2001*)**. Eye movement desensitization and reprocessing (EMDR): A meta-analysis*. Journal of Consulting and Clinical Psychology, 69, 305-316.*

  EMDR therapy is equivalent to exposure and other cognitive behavioral treatments.

- **Lee, C.W. & Cuijpers, P. (2013).** A meta-analysis of the contribution of eye movements in processing emotional memories. *Journal of Behavior Therapy & Experimental Psychiatry, 44,* 231-239.

  "The effect size for the additive effect of eye movements in EMDR treatment studies was moderate and significant (Cohen's d = 0.41). For the second group of laboratory studies the effect size was large and significant (d = 0.74)."

- **Maxfield, L., & Hyer, L.A. (2002).** The relationship between efficacy and methodology in studies investigating EMDR treatment of PTSD. *Journal of Clinical Psychology, 58, 23-41.*

  A comprehensive meta-analysis reported the more rigorous the study, the larger the effect.

- **Rodenburg, R., Benjamin, A., de Roos, C, Meijer, A.M., & Stams, G.J. (2009).** Efficacy of EMDR in children: A meta – analysis. *Clinical Psychology Review, 29*, 599-606*.*

"Results indicate efficacy of EMDR when effect sizes are based on comparisons between EMDR and non-established trauma treatment or no-treatment control groups, and incremental efficacy when effect sizes are based on comparisons between EMDR and established (CBT) trauma treatment."

- **Seidler, G.H., & Wagner, F.E. (2006).** Comparing the efficacy of EMDR and trauma-focused cognitive-behavioral therapy in the treatment of PTSD: a meta-analytic study. *Psychological Medicine, 36,* 1515-1522.

  "Results suggest that in the treatment of PTSD, both therapy methods tend to be equally efficacious."

- **Watts, B.V. et al. (2013).** Meta-analysis of the efficacy of treatments for posttraumatic stress disorder. *Journal of Clinical Psychiatry*, 74, e541-550. doi: 10.4088/JCP.12r08225

  "CBT and eye movement desensitization and reprocessing were the most often-studied types of psychotherapy. Both were effective."

Randomized Clinical Trials

- **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."

- **Ahmad A, Larsson B, & Sundelin-Wahlsten V. (2007).** EMDR treatment for children with PTSD: Results of a randomized controlled trial. *Nord J Psychiatry, 61,* 349-54.

  "Post-treatment scores of the EMDR group were significantly lower than the WLC indicating improvement in total PTSS-C scores, PTSD-related symptom scale, and the subscales re-experiencing and avoidance among subjects in the EMDR group, while untreated children improved in PTSD-non-related symptom scale."

- **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."

- **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/Devilly/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 listed as an "A" level treatment in the VA/DoD Practice Guideline (2004, 2010).

- **Chemtob, C.M., Nakashima, J., & Carlson, J.G. (2002).** Brief-treatment for elementary school children with disaster-related PTSD: A field study*. Journal of Clinical Psychology, 58,* 99-112.

  EMDR was found to be an effective treatment for children with disaster-related PTSD who had not responded to another intervention.

- **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 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*, 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; PE and EMDR were equally effective and safe. . . . Seven of the 10 patients (70%) no longer met the diagnostic criteria for PTSD at follow-up."

- **Diehle, J., Opmeer, B. C., Boer, F., Mannarino, A. P., & Lindauer, R. J. (2014).** Trauma-focused cognitive behavioral therapy or eye movement desensitization and reprocessing: What works in children with posttraumatic stress symptoms? A randomized controlled trial. *European Child & Adolescent Psychiatry*, 1-10.

  A mixed sample of full and partial PTSD was evaluated. "[B]oth treatments are effective in children with PTSS in an outpatient setting. Results on both child and parent measures support this conclusion."

- **de Roos, C. Greenwald, R., den Hollander-Gijsman, M, Noorthoorn, E., van Buuren, S. & de Jongh, A. (2011).** A randomised comparison of cognitive behavioural therapy (CBT) and eye movement desensitisation and reprocessing (EMDR) in disaster exposed children. *European Journal of Psychotraumatology, 2:* 5694 - DOI: 10.3402/ejpt.v2i0.5694

  "Children (n=52, aged 4-18) were randomly allocated to either CBT (n=26) or EMDR (n=26) in a disaster mental health after-care setting after an explosion of a fireworks factory. . . Both treatment approaches produced significant reductions on all measures and results were maintained at follow-up. Treatment gains of EMDR were reached in fewer sessions."

- **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.

- **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%).

- **Jaberghaderi, N., Greenwald, R., Rubin, A., Dolatabadim S., & Zand, S.O. (2004).** A comparison of CBT and EMDR for sexually abused Iranian girls. *Clinical Psychology and Psychotherapy, 11,* 358-368.

  Both EMDR and CBT produced significant reduction in PTSD and behavior problems. EMDR was significantly more efficient, using approximately half the number of sessions to achieve results.

- **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."

- **Kemp M., Drummond P., & McDermott B. (2010).** A wait-list controlled pilot study of eye movement desensitization and reprocessing (EMDR) for children with post-traumatic stress disorder (PTSD) symptoms from motor vehicle accidents. *Clinical Child Psychology and Psychiatry, 15,* 5-25.

  "An effect for EMDR was identified on primary outcome and process measures including the Child Post-Traumatic Stress – Reaction Index, clinician rated diagnostic criteria for PTSD, Subjective Units of Disturbance and Validity of Cognition scales. All participants initially met two or more PTSD criteria. After EMDR treatment, this decreased to 25% in the EMDR group but remained at 100% in the wait-list group."

- **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, Gersons, B.P.R, Reitsma, J.B., de Jongh, A. & Olff, 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."

- **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 disordered 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, 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.

- **Soberman, G. B., Greenwald, R., & Rule, D. L. (2002).** A controlled study of eye movement desensitization and reprocessing (EMDR) for boys with conduct problems. *Journal of Aggression, Maltreatment, and Trauma, 6,* 217-236.

  The addition of three sessions of EMDR resulted in large and significant reductions of memory-related distress, and problem behaviors at 2-month follow-up.

- **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.*

  The only randomized study to show exposure 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.

- **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.

- **Wanders, F., Serra, M., & de Jongh, A. (2008).** EMDR Versus CBT for children with self-esteem and behavioral problems: A randomized controlled trial. *Journal of EMDR Practice and Research, 2,* 180-189.

  Twenty-six children (average age 10.4 years) with behavioral problems were randomly assigned to receive either 4 sessions of EMDR or CBT. Both were found to have significant positive effects on behavioral and self-esteem problems, with the EMDR group showing significantly larger changes in target behaviors.

- **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.

A more comprehensive list of relevant research can be found at the EMDR Institute website:
http://www.emdr.com/general-information/research-overview.html