# Is EMDR an Evidenced-Based Treatment for Depression? A Review of the Literature

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It is not unusual for proponents of eye movement desensitization and reprocessing (EMDR) to claim it can be used to treat many mental health problems. Depression is an illness that affects the lives of millions across the world; the costs are high, economically and socially, and depression can be devastating for the individual. Despite this, depression is not well treated, so a desire to find other treatments is admirable. However, these treatments must be evidence based and although there is some evidence that EMDR may be a promising new approach, it cannot currently be described as an evidenced-based treatment for depression. There are studies under way across Europe that may produce the evidence needed to expand the recommendations for using EMDR with more than just posttraumatic stress disorder (PTSD).

Keywords: EMDR; depression; literature review, comorbid depression

epression is a common mental health disorder; at any one time, approximately 10% of people in the United Kingdom meet the criteria for a depressive episode (Singleton, Bumpstead, O'Brien, Lee, & Meltzer, 2003). Depression is thought to be the fourth leading cause of disease burden in the world (Üstün, Ayuso-Mateos, Chatterji, Mathers, & Murray, 2004). It is characterized by low or sad mood and loss of interest and pleasure for at least 2 weeks. It may be accompanied by changes in appetite, sleep, loss of energy, inability to concentrate, feelings of worthlessness and guilt, and recurrent thoughts of death (American Psychiatric Association [APA], 2003). There is an excess mortality linked to depressive disorder (Laursen, Munk-Olsen, Nordentoft, & Mortensen, 2007), and it accounts for 12% of the total years lived with disability (Üstün et al., 2004). Although depression is often considered an acute illness that will last on average of 4 months untreated (APA, 2003), around 60% of people suffering a first episode of major depressive disorder (MDD) will go on and have a second (D. A. Solomon et al., 2000), and the risk of relapse and

recurrence increases with each episode. Up to 20% of all depressed patients have a chronic course (Klein & Santiago, 2003). The economic and personal costs of chronic depression are high (Robinson, Berman, & Neimeyer, 1990). Patients with chronic depression use up to twice as many medical services as nondepressed patients and have higher rates of suicide and hospital admission than acutely depressed patients (Arnow & Constantino, 2003). People with chronic depression tend to have experienced more adversity in early life (Riso & Newman, 2003).

Eye movement desensitization and reprocessing (EMDR) is a comprehensive psychotherapy approach (F. Shapiro & Laliotis, 2011). It was developed by Francine Shapiro (1995) to treat the victims of trauma. It uses bilateral stimulation (e.g., taps, tones, or eye movements), which aims to stimulate the information processing system of the brain in combination with other methods of established psychotherapies with known effectiveness (F. Shapiro, 1995). The theoretical model behind EMDR is the adaptive information processing (AIP) model; this was developed alongside EMDR as a treatment for posttraumatic stress disorder

(PTSD). The AIP model claims that mental pathology is caused by incorrectly processed memories getting "stuck" in an emotional and vivid state. It is suggested that EMDR alleviates pathology by helping the client to reprocess these memories so they are no longer traumatic (F. Shapiro, 1995).

#### **Aim**

It is frequently posited that EMDR can be used to treat many mental health problems. This is especially true in the books designed to guide EMDR practitioners (Manfield, 1998b; F. Shapiro & Forrest, 2004; R. Shapiro, 2005, 2009b). However, although EMDR is widely accepted as an effective treatment for PTSD (National Institute for Health and Clinical Excellence [NICE], 2005), it is not officially recommended for more general usage. The aim of this literature review is to determine whether there is sufficient research evidence to support claims that EMDR can and should be used to treat depression.

#### Method

To review the literature on EMDR and depression, two databases were searched systematically. Medline was searched for the terms "EMDR OR eye movement desensiti?ation and reprocessing AND depression." The search term "desensiti?ation" was used to ensure that both the British spelling (desensitisation) and American spelling (desensitization) were included in the results. The Francine Shapiro Library maintained by the Northern Kentucky University was also searched for the term "depression." The Francine Shapiro Library is a comprehensive database of journals, grey literature publications, and conference presentations on EMDR. It contains entries in many languages. Grey literature is defined by the Luxemburg Convention as that which "is produced on all levels of government, academics, business and industry but is not controlled by commercial publishers and includes conference abstracts, research reports, book chapters, unpublished data, dissertations, policy documents and personal correspondence" (Hopewell, McDonald, Clarke, & Egger, 2007). The reference lists of relevant articles were hand-searched to ensure no publications had been missed.

#### **Results**

The Medical Literature Analysis and Retrieval System Online (MEDLINE) search provided 24 hits and the Shapiro Library provided 83, of which 37 were discounted because they were conference presentations

or newspaper articles. By reading the remaining titles, abstracts, and references, 37 suitable references were found. Non-English language papers were not automatically discounted, but information regarding depressive symptoms had to be included in the English abstract. One non-peer-reviewed journal (EMDR Network Newsletter) and one article (Healthyplace. com) had to be excluded because they were internet based and access was no longer available. Nineteen of the journal articles that reported interventions for PTSD considered comorbid depressive symptoms as well. One article on phantom limb pain also did. Of these 19 articles, 15 were in English, 3 in French, and 1 in Persian (Farsi). They included 6 randomized controlled trials (RCTs), 3 pilot RCTs, 1 random logged groups study, one case control study, and eight case studies (including the phantom limb pain study). Eighteen references reported interventions for depression as a primary diagnosis; 8 in journal articles and 10 in books; 15 were in English, 1 Dutch book, and 2 Chinese journal articles. The books all reported clinical anecdotes and case studies, and the journal articles contained six case studies, one RCT, and one pilot RCT.

#### PTSD With Comorbid Depression

Numerous studies reporting the use of EMDR for PTSD and phantom limb pain have noted improvements in comorbid depression scores during treatment (Korn & Leeds, 2002; Maxfield & Hyer, 2002; Schneider, Hofmann, Rost, & Shapiro, 2008; van der Kolk et al., 2007); these studies are summarized in Table 1. When treating PTSD with EMDR, comorbid depression improves in almost all cases and EMDR appears to be better at treating this than imaginal exposure (Arabia, Manca, & Solomon, 2011), waiting list controls (Hogberg et al., 2007; Rothbaum, 1997), standard care (Marcus, Marquis, & Sakai, 1997), and fluoxetine or placebo pills (van der Kolk et al., 2007). Other studies have also reported significant improvements in comorbid depression where treatment with EMDR was at least as effective as, but not significantly different from, cognitive behavioral therapy (CBT; Narimani, Ahari, & Rajabi, 2010) or prolonged exposure (Ironson, Freund, Strauss, & Williams, 2002; Lee, Gavriel, Drummond, Richards, & Greenwald, 2002; Rothbaum, Astin, & Marsteller, 2005). Only one RCT found that comorbid depression did not improve when PTSD was treated with EMDR, relaxation, or biofeedback (Silver, Brooks, & Obenchain, 1995). All of the case studies and case series found an improvement in depressive symptoms when PTSD

TABLE 1. Studies Using EMDR to Treat PTSD or Pain Which Consider Depression as Comorbid Diagnosis

Author	Year	Language	Study Type $(N =)$	Primary Diagnosis	Improvement in Depression Reported	
Arabia et al.	2011	English	Pilot RCT: EMDR PTSD cf. imaginal exposure (42 divided by 2 arms)		Yes, EMDR sig better than imaginal exposure	
Chemtob et al.	2002	English	Random lagged groups PTSD (ABA design): (32 divided by 2 arms)		Yes, significant improvement	
Hogberg et al.	2007	English	Pilot RCT: EMDR (13) PTSD cf. WL (11)		Yes, EMDR group sig better than WL	
Ironson et al.	2002	English	Pilot RCT: EMDR (10) cf. PE (12)	PTSD	Yes, sig improvement, groups not different	
Korn & Leeds	2002	English	Case studies (2)	PTSD	Yes	
Lee et al.	2002	English	RCT: EMDR (12) cf. SITPE (12)	PTSD	Yes, sig improvement, groups not different	
Lobenstine & Courtney	2013	English	Case study (1)	PTSD, depression, anxiety	Yes	
Marcus et al.	1997	English	CT: EMDR cf. SC (67 divided by 2 arms)	PTSD	Yes, EMDR group sig better than SC	
Montefiore et al.	2007	French	Case study (1)	PTSD depression	Yes	
Narimani et al.	2010	Persian	Case control: EMDR cf. CBT (51 divided by 2 arms)	PTSD	Yes, sig improvement, groups not different	
Raboni et al.	2006	English	Case studies	PTSD	Yes	
Rothbaum	1997	English	RCT: EMDR cf. WL (18 divided by 2 arms)	PTSD	Yes, EMDR group sig better than WL	
Rothbaum et al.	2005	English	RCT: EMDR (20) cf. PE (20) cf. WL (20)	PTSD	Yes, groups not different	
Schneider et al.	2008	English	Case series (5)	Phantom limb pain	Yes	
Silver et al.	1995	English	RCT: EMDR (13) cf. SC (55) cf. relaxation (9) cf. biofeedback (6)	PTSD	No, groups not different	
Silver et al.	2008	English	Case studies (2)	PTSD	Yes	
Tarquinio, Schmitt, & Tarquinio	2011	French	Case studies (5)	PTSD	Yes	
Tarquinio, Schmitt, Tarquinio, Rydberg, et al.	2011	French	Case studies (6)	PTSD	Yes	
van der Kolk et al.	2007	English	RCT: EMDR (29) cf. fluoxetine (30) cf. pill placebo (29)	PTSD	Yes, EMDR group sig better than others	

Note. RCT = randomized controlled trials; EMDR = eye movement desensitization and reprocessing; cf. = compared to; PTSD = posttraumatic stress disorder; sig = significant; ABA = applied behavior analysis; WL = waiting list control; PE = prolonged exposure; SITPE = stress inoculation training with prolonged exposure; CT = controlled trial; SC = standard care; CBT = cognitive behavioral therapy.

was successfully treated with EMDR (Chemtob, Nakashima, & Carlson, 2002; Korn & Leeds, 2002; Lobenstine & Courtney, 2013; Montefiore, Mallet, Levy, Allilaire, & Pélissolo, 2007; Raboni, Tufik, & Suchecki, 2006; Schneider et al., 2008; Silver, Rogers, & Russell, 2008; Tarquinio, Schmitt, & Tarquinio, 2011; Tarquinio, Schmitt, Tarquinio, Rydberg, & Spitz, 2011). Although each case study on its own is not generalizable because of the nature of the experimental design, the growing number of such reports adds weight to the premise that, in people with PTSD, comorbid depression can be alleviated by treatment with EMDR.

All 10 of the controlled trials, pilot RCTs, and the applied behavior analysis (ABA) controlled study were reviewed with respect to quality assessments using the critical appraisal skills program (CASP), RCT checklist, and the Cochrane Collaboration tool for assessing the risk of bias. The results of this review are summarized in Table 2.

As is often the case in EMDR research, the quality of studies varies. In a review of the controlled treatment outcome studies, Maxfield and Hyer (2002) highlight the need to maintain high standards of research to truly evaluate the EMDR method. This is necessary because there appears to be "a high correlation between methodology and outcome. As methodology became more rigorous, the treatment effect became larger" (Maxfield & Hyer, 2002).

In this review, none of the articles reported power or sample size calculations being done before the study took place to determine recruitment numbers and, as such, many could be argued to be underpowered, although only one (Lee et al., 2002) mentions this as a potential limitation. Sample sizes ranged from 18 (Rothbaum, 1997) to 88 (van der Kolk et al., 2007). Lack of power is not necessarily the case, however; Marcus et al. (1997) had 67 participants over two arms, which, considering the effect sizes expected, appears reasonable. Without a statistical sample size calculation, one cannot be sure, and the standard care treatment in that study was extremely variable. Two studies call themselves pilots (Arabia et al., 2011; Ironson et al., 2002), so here a small sample size is to expected.

Despite a general problem of small sample sizes, the articles by the Arabia, Chemtob, Hogberg, Ironson, van der Kolk, and Lee research groups are high quality. The articles are missing the occasional piece of information such as attrition (Chemtob et al., 2002), equal treatment of the groups (Hogberg et al., 2007), homogeneity of the groups (Ironson et al., 2002), and failure to treat both groups the same during the

treatment phase (van der Kolk et al., 2007), but overall, there are few concerns about the reports. As is often the case when psychotherapy is compared to a medication regime, in the study by van der Kolk and colleagues (2007), participants in the different groups received different amounts of input from professionals. Participants in the EMDR arm had eight weekly 90-min sessions, whereas the medication and placebo groups only received 20-min sessions. However, both Rothbaum's articles suffer from a lack of homogeneity between the groups. In the early article, Rothbaum's waiting list group was significantly more depressed than the EMDR group and in the 2005 article, the EMDR group had more severe PTSD than the waiting list or prolonged exposure groups. Marcus' article from 1997 may be poorly written or maybe of low quality. Initial homogeneity of the groups is not reported, neither is attrition, although exclusion criteria are. There is no clearly focused research question reported, assessors were not blind to participant group allocation and the groups were not treated the same. Silver et al.'s (1995) article raises some serious concerns because participants choose their treatment group and there were 83 clients split unequally over four groups, with one group only containing 6 people. There is no clearly focused research question reported and the groups were not treated the same, the EMDR group had as little as one therapy session over a 3-month inpatient stay. The other two treatment groups received at least three sessions. Exclusion criteria, attrition, homogeneity, blinding of assessors, and confidence intervals and standard deviations are also not reported.

To report depression symptoms, seven articles used the Beck Depression Inventory (BDI), one used the Hamilton Rating Scale for Depression (HRSD; Hogberg et al., 2007), one used the Children's Depression Inventory (CDI; Chemtob et al., 2002), and one did not report the scales used (Silver et al., 1995).

#### Depression as a Primary Diagnosis

Of the eight journal articles that focused on the treatment of a primary diagnosis of depression, six were case studies that cover various demographics in individuals whose depression ranges widely in severity. Publications regarding the use of EMDR to treat a primary diagnosis of depression are summarized in Table 3.

A report of two case studies using EMDR with Korean adolescents with mild/moderate depression had impressive results (Bae, Kim, & Park, 2008). In Mexico, three people with mild/moderate depression had a full remission of symptoms in an average of

TABLE 2. Quality Assessment Summaries for Controlled Trials of EMDR and PTSD That Consider Comorbid Depressive Symptoms

Paper	Randomization	Allocation Concealment	Blinding of Assessors	Attrition Reported	Exclusion Reported	Selective Reporting	Clearly Focused Research Question	Group Homogeneity	Groups Treated the Same	Are Confidence Intervals (CIs) or Standard Deviations (SDs) Reported?
Arabia et al., 2011	Yes	?	?	Yes	Yes	No	Yes	Yes	Yes	Yes (CI)
Chemtob et al., 2002	Yes	?	?	No	Yes	No	Yes	Yes	Yes	Yes (SD)
Hogberg et al., 2007	Yes	No	Yes	Yes	Yes	No	Yes	Yes	?	Yes (SD)
Ironson et al., 2002	Yes	?	?	Yes	No	No	Yes	?	Yes	Yes (SD)
Lee et al., 2002	Yes	?	Self-report	Yes	Yes	No	Yes	Yes	Yes	Yes (SD)
Marcus et al., 1997	Yes	?	No	No	Yes	No	No	?	No	Yes (SD)
Rothbaum, 1997	Yes	No	Yes	Yes	Yes	No	Yes	No—WL group more depressed	Yes	Yes (SD)
Rothbaum et al., 2005	Yes	?	Yes	Yes	Yes	Possible	Yes	No—EMDR group PTSD worse	Yes	No
Silver et al., 1995	No, voluntary recruitment	No	?	No	No	No	No	?	No	No
van der Kolk et al., 2007	Yes	?	Yes	Yes	Yes	No	Yes	Yes	No	Yes (SD)

 $Note.\ EMDR = eye\ movement\ desensitization\ and\ reprocessing;\ PTSD = posttraumatic\ stress\ disorder;\ ?=\ unreported;\ WL = waiting\ list\ control.$ 

TABLE 3. Publications That Report the Use of EMDR to Treat a Primary Diagnosis of Depression

Author	Year	Journal/Book	Language	Study Type $(N =)$	Primary Diagnosis	Improvt in Depression Reported
Bae et al.	2008	Journal	English	Case studies (2)	Depression	Yes
Broad & Wheeler	2006	Journal	English	Case study (1)	Depression ADHD	Yes
Grey	2011	Journal	English	Case study (1)	Depression	Yes
Hogan	2001	Unpub thesis	English	Pilot RCT: EMDR (15) cf. CBT (15)	Depression	Yes, significant improvement, groups not different
Knipe	2009	Book ch	English	Anecdotes (2)	Depression	Yes
Manfield	1998a	Book ch	English	Anecdote (1)	Depression	Yes
Manfield	1998c	Book ch	English	Ancedote (1)	Depression	Yes
Oppenheim	2009	Book ch	Dutch	Case study (1)	Depression	Yes
Rosas Uribe et al.	2010	Journal	English	Case studies (3)	Depression	Yes
Servan-Schreiber	2004	Book	English	Case study (1)	Depression	Yes
R. Shapiro	2009a	Book ch	English	Anecdotes (2)	Depression	Yes
R. Shapiro	2009b	Book ch	English	Anecdotes (2)	Depression	Yes
R. Shapiro	2009c	Book ch	English	Anecdote (1)	Depression	Yes
R. Shapiro	2009d	Book ch	English	Anecdote (1)	Depression	Yes
F. Shapiro & Forrest	2004	Book	English	Anecdote (1)	Depression	Yes
Song & Wang	2007	Journal	Chinese	RCT: sertraline + EMDR (32) cf. sertraline (32)	Depression	Yes, significant improvement, groups not different
Srivastava & Mukhopadhyay	2008	Journal	English	Case study (1)	Depression	Yes
Sun et al.	2004	Journal	Chinese	Case study (1): EMDR + mindfulness	Depression	Yes

*Note.* sig improvt = significant improvement; ADHD = attention deficit hyperactivity disorder; Unpub thesis = unpublished PhD thesis; Book ch = book chapter; RCT = randomized controlled trial; EMDR = eye movement desensitization and reprocessing; cf. = compared with; CBT = cognitive behavioral therapy.

12 sessions. As expected, the negative images, beliefs, emotions, and sensations associated with traumatic events ceased to be distressing and the participants recovered from their depression. EMDR was also reported to have a positive effect on the cognitive processing of emotional material and on conceptual organization in long-term memory storage (Rosas Uribe, López Ramírez, & Jarero Mena, 2010). In the United States, an adult patient with severe depression was treated successfully over 3 months with

EMDR (Grey, 2011) and an adult with depression and attention deficit hyperactivity disorder (ADHD) since childhood recovered enough to stop taking his medication for both conditions (Broad & Wheeler, 2006). An elderly Chinese man with depression because of physical health problems and a fear of surgery was successfully treated with an intensive combination of EMDR to address his fear and mindfulness meditation over a 2-week inpatient stay (Sun, Wu, & Chiu, 2004). All these examples focused on acute phase depression

and, because they are case studies, could not control for the passage of time or other factors associated with recovery.

Only one study has reported the treatment of a client with chronic depression. Chronic depression is usually treatment-resistant, 10%–20% of adequately treated patients with acute depression will continue to have symptoms for at least 2 years (National Collaborating Centre for Mental Health [NCCMH], 2010), and there is evidence to suggest that some forms of psychotherapy may be less affective at treating this form of the illness (Cuijpers et al., 2010). A severely and chronically depressed woman in India was treated with EMDR after she experienced strong negative reactions to antidepressant medication. After nine treatment sessions, her depression was reported to be "completely cured" and this was maintained at 6-month follow-up (Srivastava & Mukhopadhyay, 2008).

No randomized controlled studies could be found that were published in full English looking at using EMDR with a primary diagnosis of depression. Hogan (2001) conducted a small-scale trial for a doctor of philosophy (PhD) thesis but the full report does not appear to have been published. From the abstract, it appears that in the first four sessions of treatment, adult participants with a diagnosis of depression received one session of either CBT or EMDR. There were only 15 participants per arm and the abstract does not indicate what was done in the other three sessions. There was no statistically significant difference in the responses of the two groups, although it is reported that four of the EMDR group reported "near complete remission of symptoms" and that participants perceived EMDR to be "less negative than CBT" (Hogan, 2001). It is difficult to make a judgment of quality because only the abstract is available for this study, but it makes no mention of randomization methods and the study was probably very underpowered with only 15 people per treatment arm. The method is specific about the amount of therapeutic intervention that both arms received and it seems unlikely that only one session of either treatment would cause large changes in symptoms, especially because many of the case studies report time scales of 3–6 months (Bae et al., 2008; Grey, 2011; Rosas Uribe et al., 2010).

A larger trial was conducted in China comparing clients with depression who were taking sertraline to those who were taking sertraline and had additional treatments of EMDR (Song & Wang, 2007). Here, 64 patients (32 per arm) were randomly allocated to treatment group for a 6-week period. At the end of this period, both groups had improved significantly

but there was no significant difference between the two. In earlier weeks in the trial, there was significant difference with the EMDR and sertraline group doing better than the sertraline alone group. The authors conclude that "sertraline combined with EMDR takes effect faster and has higher safety and better compliance in the treatment of depression (Song & Wang, 2007)." However, only the abstract is available in English and adverse effects and compliance issues are not sufficiently addressed. Again, the lack of a full article makes a judgment with regard to the quality of the research difficult.

Several books and book chapters are devoted to how EMDR can be expanded beyond just a treatment for PTSD. These are often written by EMDR professionals using examples from their clinical experience. Five books, containing 10 relevant chapters, have been published between 1998 and 2013 that report examples of EMDR being used to treat depression (Knipe, 2009; Manfield, 1998a, 1998c; Oppenheim, 2009; Servan-Schreiber, 2004; F. Shapiro & Forrest, 2004; R. Shapiro, 2009a, 2009c, 2009d, 2009e). All except one (which describes the process and how it can help depression without the need for medication or other psychotherapies [Servan-Schreiber, 2004]) demonstrate the treatment of depression by clinical example. This is helpful to EMDR practitioners and these chapters provide additional examples of clinical case studies to suggest that EMDR may indeed be an effective treatment option for depression. However, unlike the case studies in journals, the grey literature does not commonly report standardized symptom scales to demonstrate efficacy. It, instead, relies on process measures during EMDR (i.e., subjective units of disturbance [SUDs] and validity of cognition [VOC]). This makes it more difficult to compare the case studies in books to the ones in the peer-reviewed literature. In addition, some of these books fail to give a scientific rationale for the treatment. Others, which do give a rationale, have not been peer-reviewed, so its relevance and accuracy may be in doubt. Knipe (2009) outlines the way the AIP (F. Shapiro & Forrest, 2004; R. M. Solomon & Shapiro, 2008) relates not just to PTSD but also to depression and gives examples of using EMDR to treat shame-based depression. R. Shapiro (2009c) goes further and links the AIP model to the vagus nerve theory. However, this link appears tenuous. Although she uses six publications to portray the vagus nerve theory as a near certainty, only one of these has been peer reviewed. She makes no attempt to explain how AIP, which is in essence a cognitive learning theory, relates to the vagus nerve theory.

At the EMDR UK&I National Workshop in 2012, Hofmann presented work he and his colleagues are currently undertaking in Germany. Hofmann presented a pilot study using a matched pairs design of German inpatients (14 recurrent depression, 12 single episode) compared treatment as usual (TAU—psychodynamic therapy and medication) to TAU plus four or five sessions of EMDR. That study found that the TAU + EMDR group did significantly better than the TAU group. A second pilot study on German outpatients with depression (12 recurrent, 12 single episode) comparing CBT with CBT + five sessions of EMDR is still running. Currently, none of this work has been published (Hofmann, 2012). Although this work has been reported at conferences, the lack of publications in peer-reviewed journals means that tests of quality cannot be undertaken.

The latest project starting in 2012 is the European Depression and EMDR Network (EDEN) RCT, which will involve patients from six European countries with recurrent depression randomly assigned to medication alone, EMDR and medication, or CBT and medication. This study has a recruitment target of 350 participants. The study will use the standard EMDR protocol and will measure improvement using the BDI II (Beck, Steer, & Brown, 1996) and social functioning scores. Clients will also be followed up at 5 years to look at long-term gains and relapse prevention.

The present author is currently engaged in an intensive clinical replication series treating people with long-term depression with EMDR. The Sheffield EMDR and Depression Investigation (SEDI) aims to see if these clients respond to EMDR not only with an improvement in depressive symptoms but also in social functioning. The study will also investigate whether the participants respond in the same ways that PTSD patients have responded, with changes in memory narrative, heart rate variability, and skin conductance response. Finally, SEDI will interview participants to elicit information about the experience of having EMDR for depression (Wood, 2012).

#### **Summary**

In summary, the PTSD studies that have been reported have usually found that EMDR significantly reduces comorbid depression along with PTSD symptoms. However, this does not tell us if EMDR is directly responsible for the reduction in depression or if it is merely a byproduct of the reduction in PTSD. Because no study has attempted to answer this question, it cannot be claimed that EMDR treats

depression, however, the case does seem strong to claim that EMDR is effective in treating depression when it is found comorbidly with PTSD.

Studies on the use of EMDR with clients with a primary diagnosis of depression are lacking. To date, there is no full RCT published in English. Case studies abound in the peer-reviewed and grey literature, and they suggest EMDR may be a useful approach to add to standard treatments for depression. At most, it can be concluded that EMDR has the potential to treat cases of primary depression, but it is not currently an evidenced-based treatment.

There is also a lack of explanation to link the AIP model to the treatment of depression. The AIP model considers negative behaviors and thoughts to be the result of dysfunctionally held information (R. M. Solomon & Shapiro, 2008). This is consistent with cognitive theories of depression, but much of the language of the AIP is centered on the pathology of PTSD because the AIP model developed alongside EMDR. As it initially developed as a theory on the causes and treatment of traumatic stress.

#### **Conclusions**

The research on EMDR is highly variable; there are case studies and RCTs of differing levels of quality from all over the world, in different settings, and with vastly different patient groups of all ethnicities and age groups. From the accumulated case studies and unpublished pilot studies that have taken place, it would appear that it is possible to use EMDR to treat depression successfully, but its specific efficacy is unknown. The practice-based evidence suggests that EMDR has the potential to be an evidenced-based treatment for depression. EMDR has been reported to reduce rumination in patients with traumatic grief (Sprang, 2001), however, further research is required to determine if EMDR can add anything to the current psychotherapeutic approaches and to investigate the theoretical processes behind EMDR as a treatment for any psychiatric distress. More work is also required on how EMDR works so that the AIP model can be confidently expanded beyond PTSD. Some of the work currently underway may be able to shed light on these questions. The SEDI project aims to intensely study a few participants to not only see if their depression responds to treatment with EMDR but also in what way, and to uncover more information about the patient experience. The work of the EDEN trial should bring some insight into the comparative efficacy of EMDR, CBT, and medication. If it can recruit to its target, it will be a very large trial that has the

potential to produce conclusive results with regards to the efficacy of EMDR as a treatment for long-term depression. This remains an important issue because although medication and CBT are the recommended treatments for depression, CBT only has a recovery rate of around 50% (Ekers, Richards, & Gilbody, 2008) and the relapse rate among those treated with anti-depressants is high (Gloaguen, Cottraux, Cucherat, & Blackburn, 1998). Any additional treatment that can be effective in treating depression will bring significant health and social benefits because it is such a widespread and costly illness (Arnow & Constantino, 2003). EMDR may be such a treatment.

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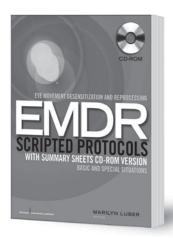
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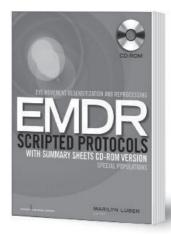
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