Curr Psychiatry Rep (2017) 19:18
DOI 10.1007/s11920-017-0765-y

Accelerated Resolution Therapy (ART): a Review and Research to Date

Wendi Waits[1] · **Megan Marumoto**[2] · **Jennifer Weaver**[1]

Abstract
Purpose of Review To describe and summarize published research on accelerated resolution therapy (ART), a promising and relatively new psychotherapy with the potential to offer rapid and effective resolution of a wide range of psychiatric symptoms. Unlike most evidence-based psychotherapies, ART is a predominately imaginative therapy that relies upon the rescripting of distressing events and metaphors as one of its key therapeutic elements.
Recent Findings The number of studies conducted on ART is limited, primarily consisting of one randomized, controlled trial (RCT) with 57 subjects and two large cohort studies involving 80 and 117 subjects, respectively. However, a growing body of research in the neuroscience field involving the initial creation (consolidation), activation, and reconsolidation of memories may also be relevant and is summarized herein.
Summary ART appears to be an effective, efficient, and versatile form of psychotherapy. Future studies, particularly high-quality RCTs, are needed to more fully understand the potential reach of this promising therapeutic modality.

Keywords Posttraumatic stress disorder · Depression · Psychotherapy · Eye movement · Reconsolidation

This article is part of the Topical Collection on *Military Mental Health*

✉ Wendi Waits
wendi.m.waits.mil@mail.mil

[1] Fort Belvoir Community Hospital, 9300 DeWitt Loop, Fort Belvoir, VA 22060, USA

[2] Private Practice, Alexandria, VA, USA

Introduction

Accelerated resolution therapy (ART) is a brief evidence-based psychotherapy that can produce dramatic improvements in a variety of psychiatric disorders in just a few sessions. The therapy is comprised of a directive protocol in which the provider guides the patient through the therapeutic process without getting significantly involved in the patient's psychic work. The therapist directs the patient to visualize a distressing event or representative metaphor and helps the patient process his or her associated somatic sensations. Narration is not required, which may offer patients a greater sense of safety and control than in other trauma-focused therapies. The patient is then directed to rescript their visual memory, leaving their declarative memory unchanged. This technique of "image rescripting" helps to eliminate resistant memory fragments [1, 2•]. This process often provides the patient with significant psychological relief. Due to the constant forward momentum of the ART protocol, patients do not have to experience troubling memories for a protracted period of time. There is also a sense of closure with each session, so that patients are not left feeling vulnerable, with unprocessed emotions and issues lingering between sessions.

Early adopters have anecdotally reported that ART has the ability to help patients with posttraumatic stress disorder (PTSD), phobias, obsessive-compulsive disorder (OCD), addictions, anxiety, depression, grief, and other psychiatric conditions (verbal correspondence with numerous ART-trained providers). Based on the authors' experiences working in a hospital at which more than 50 providers have been trained in ART, the technique also contributes to high provider satisfaction rates due to its therapeutic effectiveness and ability to reduce compassion fatigue. It is emotionally easier than other therapies on both the patient and the therapist, as there is limited exposure to distressful memories (based on results of

Published online: 13 March 2017

an informal, unpublished study with 24 respondents). Providers report feeling more confident managing their patients' suicidal urges, flooding emotions, and abreactions. Patients report feeling empowered, relieved, more capable of managing stress, and better able to experience positive feelings.

History

ART was developed by Laney Rosenzweig in 2008 (personal correspondence with Ms. Rosenzweig). Rosenzweig combined the eye movements used in eye movement desensitization and reprocessing (EMDR) with Gestalt techniques, metaphors, and a solution-focused emphasis, and found that patients could often achieve resolution of their issues in just a few sessions. She initially trained clinicians in Connecticut, and then expanded trainings to Florida after researchers at the University of South Florida began conducting studies on the therapy in 2011. Rosenzweig and her team now train providers in national and international locations. ART therapists have treated patients in Italy, England, Scotland, Ireland, Korea, Kuwait, Canada, and the USA. There are currently over 100 clinicians trained in the United States Department of Defense [WW]. In November 2015, ART was determined by the Substance Abuse and Mental Health Services Administration (SAMHSA) to be an evidence-based treatment for trauma-related disorders, depression, and personal resilience; details of this designation appear in SAMHSA's National Registry of Evidence-Based Programs and Practices (http://nrepp.samhsa.gov).

ART Case Examples

Case 1 A 14-year-old boy presented to an outpatient intake appointment with depression and suicidal ideations. The provider planned to immediately hospitalize him. However, he consented to participate in ART to address his urge to cut. The patient visualized a scene of self-harm, and then rescripted it with his mother intervening and stopping him. His distressing somatic sensations were processed and significantly reduced. Following the rescripting exercise, the patient could no longer see himself cutting his arm and reported feeling more positive and no longer suicidal. The provider helped him develop a safety plan and taught him a relaxing breathing technique, thus averting an acute hospitalization. The patient's suicidal ideations never returned. A few months later, when the provider brought up his history of suicidal ideations, the patient had no idea what she was talking about and reported he had no recollection of ever being suicidal.

Case 2 A 62-year-old man was grieving the recent deaths of multiple family members, including a beloved brother. He was depressed with insomnia and low energy and had started avoiding all funerals. The patient initially rated his mood as 9 out of 10 (10 = the worst depression imaginable) and agreed to a trial of ART. Using visual imagery, he selected "darkness" as a metaphor for his mood. The patient processed and decreased the unpleasant feelings he associated with this image, and then rescripted it into a scene of his lost family members, including his brother, moving into moonlight. Jesus Christ was standing in the light with his arms outstretched and embraced the patient's deceased loved ones. The patient's brother told the patient that they were all fine and said "Don't worry." He then gave the patient a scroll with spiritual powers. The patient visualized himself waking up the next morning after the therapy session with the scroll, feeling re-energized. At the end of the session, the patient felt a sense of liberation and rated his depression as 0 out of 10. He later reported being no longer distressed about the losses. Furthermore, he felt that he could attend funerals rather than avoid them as he had done previously.

Why Might ART Work?

One of the most exciting aspects of ART is the degree to which its effectiveness is supported by bench research in the field of neuroscience. Early theories regarding the pathophysiology behind PTSD emphasized the classical conditioning model made popular by Ivan Pavlov's famous dog and bell experiments. Experts postulated that similar to a dog salivating at the sound of a bell, traumatized individuals experienced increased physiological reactivity when exposed to reminders of their trauma. Treatments involved various methods of repeatedly exposing patients to real or imaginal reminders of their traumatic events, with the goal of extinguishing their fear response over time [3–7]. These methods have been effective for individuals with the emotional fortitude to endure repeated exposures. However, dropout rates in exposure therapy have been high [8–10]. Furthermore, there is evidence that extinguished hyperarousal can re-emerge over time [11].

Over the past decade, many clinical researchers have shifted their attention to examining the role that neurotransmitters and other circulating substances may plan in generating specific symptoms of PTSD, such as autonomic arousal, nightmares, emotional negativity, anger, and memory creation. Numerous trials involving pharmacological interventions, either to prevent or alleviate the symptoms of PTSD, both alone and in combination with psychotherapy, have been published [12–14]. Some have initially shown promising

results [15, 16, 17•], although overall the role of medications in treating PTSD appears to be ancillary at best, since many patients will retain their symptoms despite taking medications, and some may even get worse [18•, 19].

While most clinical researchers have been studying psychotherapies and medications for PTSD, a number of bench researchers have been examining the ways in which memories are established and retrieved. Their work has explored the ways in which we create and activate memories at the cellular level, sometimes even at the level of DNA transcription [20]. Summarizing this body of knowledge is beyond the scope of this article, but a few key findings may shed light on ART's mechanism of action and why it seems to retain is effectiveness over time.

First, research has demonstrated that our memories are more malleable than we once thought. Every time we recall (activate) a memory, we open a time-limited window of reconsolidation [21]. During this window, believed to be approximately 6 h in humans [22, 23], we may deliberately modify the activated memory before it is stored in a new state. Research has demonstrated that making such modifications within this window will decrease a subject's physiological reactivity upon re-exposure to a threat, whereas making them after the window closes will not; this difference has been shown to persist up to a year later [24•]. Furthermore, replacing a threatening stimulus with a neutral or calming one, such as occurs during ART, appears to be more effective than simply eliminating or desensitizing the patient to the threatening stimulus, such as occurs during other exposure-based therapies [25].

Summary of ART-Related Research

Research on ART has been extremely promising, although somewhat limited in scope (see Table 1). All published studies to date have been completed by a dedicated research group from the University of South Florida. The first published ART study, henceforth referred to as the "civilian" study, was a prospective cohort study examining the use of ART in 80 subjects [26•] with PTSD. The participants were predominately civilians and 86% female; 80% of the participants reported an index trauma of either violent abuse/crime or loss of a loved one. In this study, 79% of subjects who initially screened positive for PTSD based on their PTSD checklist-civilian (PCL-C) scores screened negative after completing an average of only 3.8 ART sessions (81% screened negative 2 months later). No serious adverse events were reported. Minor adverse events included headache ($n = 2$), dizziness/lightheadedness ($n = 2$), lack of motivation ($n = 1$), and waking during the night ($n = 1$).

Table 1 ART research publications

Authors and year	Description	Findings
Kip et al. 2012 [26•]	Prospective cohort study evaluating ART in 80 subjects, mostly civilians (a.k.a. "civilian" study)	83% completion rate. 45% reduction in PTSD symptoms, 54% reduction in depression symptoms, and 59% reduction in guilt 2 months post-treatment ($p < 0.0001$).
Kip et al. 2013 [27]	Sub-analysis of 28 subjects from prospective cohort trial who had the most severe PTSD and depression	50% reduction in PTSD symptoms and 44% reduction in depression symptoms 4 months post-treatment ($p \leq 0.0001$). PCL-C scores improved over time, suggesting a resilience-enhancing effect of ART.
Kip et al. 2013 [28••]	RCT comparing ART to two sessions with personal trainer or career coach in military veterans (a.k.a. "military" study)	94% completion rate in intervention group. 65% PTSD response rate in ART group compared to 13% in controls ($p < 0.0001$) after average of 3.7 sessions. Also significant improvements in depression ($p < 0.0001$), cognitive anxiety ($p = 0.002$), guilt ($p = 0.0004$), and distress ($p = 0.0006$).
Kip et al. 2014 [29]	Case report of 34-year-old male veteran with PTSD from an improvised explosive device (IED)	After 2 sessions of ART, PCL-M score decreased from 50 to 19, and remained low (21) at 3-month follow-up.
Kip et al. 2014 [30]	Sub-analysis of pain pre- and post-ART in subjects from military RCT	Pain outcomes questionnaire (POQ) scores decreased by 16.9 ± 16.6 in ART group versus 0.7 ± 14.2 in control group ($p = 0.0006$).
Kip et al. 2015 [31]	Pooled analysis of civilian and military trials	Civilian and military subjects experienced substantial reductions in PTSD symptoms, with somewhat greater reductions among civilians.
Kip et al. 2016 [32•]	Prospective cohort study evaluating ART in 117 veterans (23 homeless) with PTSD and significant psychosocial impairment	83% of community vets and 74% of homeless vets reduced their PCL-M score by ≥10 points. Completion rate was 82% in community sample and 52% in homeless sample.

The next major ART study and the only randomized controlled trial evaluating ART to date, henceforth referred to as the "military" study, compared clinical outcomes in 29 combat veterans who received ART to 28 randomly assigned controls [28••]. Subjects in the active treatment arm received 2–5 sessions of ART. Those in the control arm received either 2 sessions of a counseling nature with a health fitness trainer or 2 sessions with a career coach. The researchers believed that requiring only two sessions in the control arm would optimize recruitment and retention since completers had the option of crossing over to the ART intervention once they had completed their initial intervention. Although the study relied exclusively on self-report measures, subjects in the ART group achieved a 65% PTSD response rate, compared to 13% in the comparison group ($p < 0.0001$), and these results remained unchanged 3 months following completion of treatment. Furthermore, the dropout rate among subjects receiving ART was only 6%, which is significantly lower than that seen in traditional evidence-based treatments for PTSD [10].

In 2015, the USF team published a sub-analysis of these two studies, comparing the overall response rates of civilians vs military veterans, as well as secondary sub-analyses comparing within-group rates by gender [31]. All four groups (civilian females, military females, civilian males, and military males) demonstrated statistically significant improvement in their PTSD symptoms post-treatment as measured by the PCL. All the groups except civilian males also demonstrated sustained improvement in the majority of their symptoms at 2 (civilian study) or 3 (military study) months post-treatment, suggesting that memory modification within the memory reconsolidation window may actually promote resilience over time in some patients. Of note, civilian males still demonstrated significant improvement over their baseline scores at 2 and 3 months post-treatment.

In 2016, the USF team published a prospective cohort trial comparing ART in 23 homeless veterans with PTSD to 94 veterans with PTSD living in the community [32•]. Findings from this study were similar to previous studies, demonstrating an 83% response rate among homeless veterans compared to a response rate of 74% among veterans in the community. However, completion rates were lower than in previous studies, particularly among the homeless veterans (52%), but also among veterans in the community (82%) as compared to subjects in the initial civilian study (94%), which comprised predominately females who had experienced violence or interpersonal loss.

ART as Compared to Other Psychotherapies

Despite ART's relatively immature research base compared to other evidence-based therapies for PTSD, ART contains the key clinical elements believed to be most critical for effective trauma-focused therapy. These elements include exposure, cognitive restructuring, relaxation skills training, psychoeducation, narration, organization of memories, and explicit targeting of negative emotions [33–35].

What makes ART especially unique, however, is that ART also has the flexibility to effectively target the entire spectrum of clinical symptoms seen in PTSD, as well as other psychiatric conditions, including autonomic arousal, depression, nightmares, anger, hypervigilance, substance abuse, grief, and moral injury. Due to a growing recognition in the neuroscience community suggesting that different neurologic pathways contribute to different "types" of PTSD [18•], a versatile and adaptable therapy has significant clinical value.

While the focus of ART-related research has been on alleviating PTSD symptoms, many ART therapists have also reported using ART for other diagnoses, such as anxiety disorders, OCD, depression, and substance use disorders. ART also has some preliminary evidence for efficacy beyond PTSD, as secondary measures in the military study demonstrated a statistically significant reduction in self-reported depression, cognitive anxiety, and guilt, which were sustained at 3-month follow-up. In addition to the official evidence-based indications previously listed, SAMHSA also deemed ART to be "promising" for symptoms of phobia, panic, anxiety, sleep disorders, and disruptive and antisocial behaviors, as well as general functioning and well-being (http://nrepp.samhsa.gov).

To examine how ART may be similar to other trauma-focused and non-trauma-focused evidence-based therapies (EBTs), we distilled the major tasks of widely used EBTs into four general categories (see Table 2). We have chosen to define these categories as follows: facilitation, learning, change, and closure/sustainment.

Facilitation: This task consists of building rapport and providing tools, skills, or information that helps move the other tasks along. Preparation interventions start at the beginning of therapy to help patients get and remain engaged. They are used during therapy to manage any symptoms of distress that arise and to assist with facilitating a specific change, such as desensitizing the body to negative sensations, emotions, or thoughts. They are used near the conclusion of therapy to help the patient prepare for termination and reintegration.

Learning: This is the core of the therapy. Learning has to be accomplished in order for the next task, change, to occur. Learning includes accessing and addressing fears, maladaptive behaviors, distorted cognitions, negative emotions, and other sources of distress in some way, either directly or indirectly.

Change: This is the primary goal of all therapies. After working through their problem(s) and developing new

Table 2 ART compared to other evidence-based psychotherapies

Therapy	Facilitation	Learning	Change	Closure/sustainment
ART [29]	Eye movements Processing Mindfulness Gestalt Metaphors	Visualize the trauma scene twice (verbalizing trauma event not required)	Desensitize the negative sensations and emotions, "positize" images via voluntary image replacement	Target trigger times Bridge/fountain imagery Use of self-eye-movements
CPT [4]	Psychoeducation	Written impact statement Written trauma account	Modify cognitions to correct erroneous beliefs	Homework
CPT-C [36]	Psychoeducation	Written impact statement Socratic questioning	Modify cognitions to correct erroneous beliefs	Homework
CT for PTSD [37]	Case formulation	Accessing the worst memories of the trauma and their threatening meanings	Update the trauma memory via cognitive restructuring Linking new meanings	Discrimination training for triggers Reclaiming your life assignments
EMDR [5]	Eye movements Processing Deep breathing Mindfulness	Focus on an image, negative emotion, and negative cognition/belief about the trauma	Desensitize (change in affective, cognitive, and sensory response) Installation of positive cognition with high validity	Process triggers and future events Teach skills for appropriate social interactions
PE [3]	Processing (discussing changes in experience)	Repeated imaginal exposure	Disconfirmation of negative cognitions Desensitization/fear extinction	In vivo exposures
CBT [38]	Orient patient to CBT Case conceptualization Goal setting	Identify maladaptive automatic thoughts Identify core beliefs Identify antecedents and consequences of behavior	Challenge and change dysfunctional thoughts and beliefs Behavioral activation	Homework between sessions Review of cognitive and behavior skills, learn, and keep list of skills Maintain homework for reference
IPT [39]	Develop interpersonal formulation Develop interpersonal inventory Establish rapport	Non-directive exploration Direct elicitation Engagement of affect Communication analysis Identify communication patterns and the client's contribution	Problem-solving Role play Using therapist as role model	Establishment of more functional support networks Planning for future problems Give patients credit for gains, review strengths and skills
PST [40]	Select a changeable problem Open mind to solutions	Generate multiple solutions List pros and cons of each solution Verify best solution	Implement the solution Evaluate the outcome	Provide positive reinforcement if plan worked or return to SOLVED technique
DBT [41]	Use of: Mindfulness Wise Mind Distress Tolerance	Acceptance Eliminating therapy interfering behaviors Maintaining therapeutic balance	Emotional regulation skills Interpersonal Effectiveness Skills	Between session coaching Restructuring environment Ensuring generalization of change

The therapies are used for a wide variety of diagnoses, including trauma-related disorders, depression, anxiety, and personality disorders

CPT cognitive processing therapy, *CPT-C* CPT-cognitive, cognitive therapy (CT) for PTSD, *EMDR* eye movement desensitization and reprocessing, *PE* prolonged exposure, *CBT* cognitive behavior therapy, interpersonal therapy, *PST* problem-solving therapy, *DBT* dialectical behavior therapy

insights, patients are better able to recognize past distortions, identify alternative solutions, increase their hope for the future, and minimize or eliminate negative sensations, feelings, and thoughts.

Closure/sustainment: This final task wraps up the course of therapy, summarizes the work accomplished, and empowers the patient to successfully manage future challenges in order to maintain symptom relief and to reintegrate back into their community.

Discussion

ART accomplishes the four basic tasks common to all therapies and also has other advantages that may make it more likely to be successful for certain patients. For example, ART offers the benefit of relieving symptoms with a minimal number of sessions. Shorter treatment courses are more convenient and cost-effective, and improve access to care for other patients. ART is also delivered in stand-alone sessions that do not have to occur at a frequent or fixed interval, ART does not involve homework, and it does not necessarily require the same therapist for additional sessions, making it a potentially useful intervention for transient populations such as military personnel, refugees, or homeless patients. ART does not require a detailed verbal or written account of traumatic memories or distressful experiences, making it potentially preferable to certain patient populations, such as those with security clearances, law enforcement officials, and patients who have witnessed crimes and do not wish to report them. Additionally, ART has demonstrated superior dropout rates, perhaps because of its tolerability, brevity, and lack of need for narration. ART is easy to learn and implement, and at our institution, has been preferred by the vast majority of therapists who have been trained in both ART and other EBTs. Anecdotally, it also appears to improve clinician satisfaction and therefore may have a role in decreasing therapist burnout.

Despite these noteworthy attributes and preliminary evidence of efficacy beyond PTSD, ART remains a largely understudied and unrecognized therapy in the mental health community. The only clinical trial to date evaluating ART

against a non-clinical control condition was a relatively small study with fairly liberal enrollment criteria that relied upon self-report outcome measures. Although the study yielded extremely promising results, it lacked the degree of scientific rigor that has been applied to many other EBTs, particularly trauma-focused therapies. Future research on ART should include RCTs with larger sample sizes, stricter entrance criteria, clinician-rated outcome measures, and clinical control interventions. Trials evaluating ART for different conditions in different populations would also be of value, as would functional studies evaluating pre/post changes in physiological parameters and deconstructing studies examining the relative significance of different components of the ART protocol.

Conclusions

ART has multiple potential advantages when compared to other EBTs, which may increase its attractiveness to patients in need of psychotherapy. ART also contains the most critical elements of evidence-based trauma-focused therapies and bears structural and procedural similarities to many other EBTs. Emerging evidence of ART's efficacy in treating trauma and other psychiatric diagnoses is consistent with the first-hand experience of many ART therapists, who frequently applaud the therapy's effectiveness, versatility, and ease of administration. Although more research is needed, the available literature and the similarity ART bears to other EBTs suggest that this modality is a safe and reasonable therapy option for many patients.

Compliance with Ethical Standards

Conflict of Interest The authors declare that they have no conflict of interest.

Human and Animal Rights and Informed Consent This article does not contain any studies with human or animal subjects performed by any of the authors.

Disclosures The views expressed in this article are those of the authors and do not reflect the official policy of the Department of the Army/Navy/Air Force, Department of Defense, or the U.S. Government. The authors have no financial or ethical conflicts of interest to disclose.

References

Papers of particular interest, published recently, have been highlighted as:
- • Of importance
- •• Of major importance

1. Hackmann A. Imagery rescripting in posttraumatic stress disorder. Cogn Behav Pract. 2011;18:424–32.
2.• Kip K et al. Case report and theoretical description of accelerated resolution therapy (ART) for military-related post-traumatic stress disorder. Mil Med. 2014;179:31–7. **Provides the best summary of the ART protocol currently available in the medical literature**.
3. Foa E, Hembree E, Rothbaum B. Prolonged exposure therapy for PTSD: emotional processing of traumatic experiences (therapist guide). New York: Oxford University Press; 2007.
4. Resick P, Schnicke M. Cognitive processing therapy for sexual assault victims. J Consult Clin Psychol. 1992;60(5):748–56.
5. Shapiro F. Eye movement desensitization and reprocessing: basic principles, protocols, and procedures. 2nd ed. New York: Guilford Press; 2001.
6. Schauer M. Narrative exposure therapy. A short-term treatment for traumatic stress disorders. 2nd ed. Gottingen: Hogrefe Press; 2011.
7. Gersons B, Schnyder U. Learning from traumatic experiences with brief eclectic psychotherapy for PTSD. Eur J Psychol Assess. 2013;4:21369–74.
8. Hembree E et al. Do patients drop out prematurely from exposure therapy for PTSD? J Trauma Stress. 2003;16:555–62.
9. Schottenbauer M et al. Nonresponse and dropout rates in outcome studies on PTSD: review and methodological considerations. Psychiatry. 2008;71:134–69.
10. Tran U, Gregor B. The relative efficacy of bona fide psychotherapies for post-traumatic stress disorder: a meta-analytical evaluation of randomized controlled trials. BMC Psychiatry. 2016;16:266–87.
11. Quirk G. Erasing fear memories with extinction training. J Neurosci. 2010;30(45):14993–97.
12. Hoskins M et al. Pharmacotherapy for post-traumatic stress disorder: systematic review and meta-analysis. Br J Psychiatry. 2015;206(2):93–100.
13. Gu W et al. Pharmacotherapies for posttraumatic stress disorder: a meta-analysis. J Nerv Ment Dis. 2016;204(5):331–8.
14. Lee D et al. Psychotherapy versus pharmacotherapy for posttraumatic stress disorder: systemic review and meta-analyses to determine first-line treatments. Depress Anxiety. 2016;33(9):792–806.
15. Raskind M et al. Reduction of nightmares and other PTSD symptoms in combat veterans by prazosin: a placebo-controlled study. Am J Psychiatry. 2003;160(2):371–73.
16. Davis M et al. Effects of D-cycloserine on extinction: translation from preclinical to clinical work. Biol Psychiatry. 2006;60:369–75.
17.• Kindt M, van Emmerik A. New avenues for treating emotional memory disorders: towards a reconsolidation intervention for posttraumatic stress disorder. Adv Psychopharmacol. 2016;6(4):283–95. **Discusses a novel way of using propranolol to treat anxiety that exploits the memory reconsolidation window in a way similar to ART**.
18.• LeDoux J, Pine D. Using neuroscience to help understand fear and anxiety: a two-system framework. Am J Psychiatry. 2016;173(11):1083–93. **Opinion paper by leading neuroscience experts proposing that fearful/anxious feeling states arise from different neurologic pathways than threat-induced physiological arousal and defensive behaviors**.
19. Guina J et al. Benzodiazepines for PTSD: a systematic review and meta-analysis. J Psychiatr Pract. 2015;21(4):281–303.
20. Maddox S et al. DNA methyltransferase activity is required for memory-related neural plasticity in the lateral amygdala. Neurobiol Learn Mem. 2014;107:93–100.
21. Nader K, Schafe GE, Le Doux J. Fear memories require protein synthesis in the amygdala for reconsolidation after retrieval. Nature. 2000;406:722–26.
22. Duvarci S, Nader K. Characterization of fear memory reconsolidation. J Neurosci. 2004;24:9269–75.
23. Walker M et al. Dissociable stages of human memory consolidation and reconsolidation. Nature. 2003;425:616–20.

24.• Schiller D et al. Preventing the return of fear in humans using reconsolidation update mechanisms. Nature. 2010;463(7277):49–53. **Research study demonstrating non-reemergence of fear response in humans up to 1 year after extinguishing the response within the memory reconsolidation window**.

25. Dunsmoor JE et al. Novelty-facilitated extinction: providing a novel outcome in place of an expected threat diminishes recovery of defensive responses. Biol Psychiatry. 2015;78(3):203–09.

26.• Kip K et al. Brief treatment of symptoms of posttraumatic stress disorder (PTSD) by use of accelerated resolution therapy (ART). Behav Sci. 2012;2(2):115–34. **First major ART publication; demonstrated impressive results in a cohort study of 80 subjects with PTSD**.

27. Kip K et al. Brief treatment of co-occurring post-traumatic stress and depressive symptoms by use of accelerated resolution therapy. Front Psychol. 2013;4(11):1–12.

28.•• Kip K et al. Randomized controlled trial of accelerated resolution therapy (ART) for symptoms of combat-related post-traumatic stress disorder (PTSD). Mil Med. 2013;178:1298–309. **Only randomized controlled trial completed to date on ART, a.k.a. the "military" study**.

29. Kip K et al. Case report and theoretical description of accelerated resolution therapy (ART) for military-related post-traumatic stress disorder. Mil Med. 2014;179(1):31–7.

30. Kip K et al. Accelerated resolution therapy for treatment of pain secondary to symptoms of combat-related posttraumatic stress disorder. Eur J Psychol Assess. 2014;5:1–12.

31. Kip KE et al. Comparison of accelerated resolution therapy (ART) for treatment of symptoms of PTSD and sexual trauma between civilian and military adults. Mil Med. 2015;180(9):964–71.

32.• Kip KE et al. Evaluation of brief treatment of symptoms of psychological trauma among veterans residing in a homeless shelter by use of accelerated resolution therapy. Nurs Outlook. 2016;64(5):411–23. **Large cohort study evaluating the use of ART in veterans exposed to "real life" conditions (i.e., living in the community vs. homeless)**.

33. The Management of Post-Traumatic Stress Working Group. 2010 VA/DoD clinical practice guideline for the management of post-traumatic stress. Department of Veteran's Affairs and Health Affairs, Department of Defense. 2010.

34. Hoge C. Interventions for war-related posttraumatic stress disorder: meeting veterans where they are. JAMA. 2011;306(5):549–51.

35. Schnyder U et al. Psychotherapies for PTSD: what do they have in common? Eur J Psychol Assess. 2015;6:1–10.

36. Resick P et al. A randomized clinical trial to dismantle components of cognitive processing therapy for posttraumatic stress disorder in female victims of interpersonal violence. J Consult Clin Psychol. 2008;76:243–58.

37. Ehlers A, Clark D. Post-traumatic stress disorder: the development of effective psychological treatments. Nord J Psychiatry. 2008;62 Suppl 47:11–8.

38. Beck J, Beck A. Cognitive behavior therapy: basics and beyond. 2nd ed. New York: The Guilford Press; 2011.

39. Weissman M, Markowitz J, Klerman G. Clinician's quick guide to interpersonal psychotherapy. 2nd ed. New York: Oxford University Press; 2007.

40. Haley J. Problem solving therapy. 2nd ed. San Francisco: Jossey-Bass, Inc.; 1987.

41. Linehan M. DBT skills training manual. 2nd ed. New York: The Guilford Press; 2014.