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Cognitive Therapy to Prevent Depressive Relapse in Adults

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Abstract

The high prevalence, frequent relapse, and recurrence of major depressive disorder (MDD) increase its personal and societal costs. Cognitive therapy (CT) aims to decrease depressive symptoms and prevent relapse/recurrence. We review prevention evidence for acute, continuation, and maintenance CTs for patients whose depression is active, remitted, and recovered, respectively. Evidence suggests that patients relapse less often after discontinuing acute phase CT versus discontinuing pharmacotherapy. Continuation CT further decreases relapse relative to inactive controls and similarly to active pharmacotherapy. Maintenance CT may decrease recurrence but needs rigorous evaluation. Post-acute CT's preventive effects appear greater for higher-risk patients (e.g., with residual depressive symptoms, unstable acute-phase treatment response, childhood trauma, more prior depressive episodes), although risks may vary by specific CTs.

Introduction

Major depressive disorder (MDD) is a common illness with a large public health cost (e.g., Vittengl & Jarrett, 2014). A curative treatment for MDD would eliminate underlying pathology, relieve all patients' depressive symptoms rapidly, restore psychosocial functioning fully, and prevent depressive relapses and recurrences entirely. Current treatments are far from these ideals. However, cognitive and cognitive-behavioral therapy (CT) for MDD reduces depressive symptoms, improves psychosocial functioning, and lowers the probability future depression in many patients. Here we review some of the most important and most recent research on CT for adults with MDD to inform prevention of relapse and recurrence.

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What is Major Depressive Disorder?

The experience of at least one major depressive episode (MDE) defines MDD (APA, 2013). MDEs reflect disturbances in mood (e.g., subjectively depressed and/or loss of pleasure in life's activities) with attendant changes in behavior (e.g., increased or decreased sleep, eating, activity level) and cognition (e.g., reduced concentration, increased guilt, suicidality), last at least two weeks, and produce significant life interference (e.g., as a student, worker, parent, friend, romantic partner; Kessler et al., 2006). Reduced physical capacity (Wells et al., 1989) and increased mortality (Angst et al., 2002; Thomson, 2011) often accompany MDD.

Both the prevalence and recurrence of MDD are high. For example, about 5–7% of the US population has experienced MDD over the past year and 13–17% will experience MDD over the lifetime (Kessler, Berglund, et al., 2005; Kessler, Chiu, et al., 2005; Hasin et al., 2005). Although 15–25% of persons with MDD display chronic depression (Eaton et al., 2008; Satyanarayana et al., 2009), most eventually return to normal (or near-normal) mood, with or without treatment. Although a subset of persons experience only a single episode (Wakefield & Schmitz, 2014), among those who recover, perhaps 85% of patients experience a new MDE with 15 years (Solomon et al., 2000). CT aims to reduce the probability of both relapse (resurgence of an MDE that abated temporarily) and recurrence (a new MDE).

What is Cognitive Behavioral Therapy?

Cognitive behavioral therapies for depression share efforts to change patients' distress-related cognition as a means to improve mood and functioning. Beck et al.'s (1979) individual, in-person CT is prototypical. During a limited period (e.g., 16–20 one-hour sessions over 3–4 months), Beck's CT aims to increase patients' engagement with sources of reinforcement and adaptive functioning ("behavioral activation") and then to assess and restructure depressive cognition, including negative automatic thoughts (e.g., "I am a loser") and schema (broader negative views about the self, world, and future; e.g., "Being loved by all is essential for happiness"). Many delivery methods and theoretical variants of CT exist, including treatments administered to groups (e.g., Lewinsohn et al., 1984), via books (e.g., Burns, 1980), and by computer (e.g., de Graaf et al., 2010); as well as treatments using behavioral activation without cognitive restructuring (Dimidjian et al., 2006); emphasizing cognitive restructuring over behavioral activation (Ellis, 1980); monitoring and distancing reactions to negative cognition rather than changing negative cognition itself (e.g., Hayes et al., 1999; Segal et al., 2002; Wells, 2008); and emphasizing social-cognitive development and interpersonal functioning (McCullough, 2003).

In addition, CT can be staged by depression's course (Frank et al., 1991). Patients experiencing an MDE receive *acute phase* treatment with the goal of producing an initial treatment *response* (e.g., responders experience substantive reductions in depressive symptom severity and no longer meets criteria for an MDE). Ideally, acute phase treatment would fully prevent *relapse* (resurgence of the index MDE) and *recurrence* (experience of a new MDE). However, additional treatment is often beneficial for acute phase treatment

responders with risk factors such as *residual symptoms* (sub-diagnostic but impairing depressive symptoms) and *unstable response* (transiently elevated depressive symptoms late in acute phase treatment). In particular, acute phase treatment responders may receive *continuation phase* treatment to prevent relapse and promote *remission* and *recovery* (e.g., periods of several weeks and months, respectively, with minimal or absent depressive symptoms). Patients who have recovered from their index MDE may then receive *maintenance phase* treatment to sustain recovery and prevent recurrence. Following we review evidence about CTs' effects on relapse, recurrence, remission, and recovery. We organize our review by acute, continuation, and maintenance CT, although researchers have not always followed these theoretical and terminological distinctions (e.g., some studies of "maintenance" fit our definition of "continuation" treatment).

To What Extent Does Cognitive Behavioral Therapy Reduce Relapse, Recurrence, and Residual Symptoms of Major Depressive Disorder?

Acute phase CT

Roughly 60–70% of patients no longer meet criteria for MDD after completing acute phase CT (Cuijpers et al., 2014; Vittengl & Jarrett, 2014), and average symptom levels are comparable after acute phase CT versus pharmacotherapy (Cuijpers, Berking, et al., 2013). Although CT and pharmacotherapy produce similar short-term outcomes, CT's preventive effects exceed pharmacotherapy after either acute phase treatment ends.

In an earlier meta-analysis of studies reporting follow-up data after response then discontinuation of acute phase treatment, relapse/recurrence frequency over an average of 68 weeks was 39% for CT compared to 61% for pharmacotherapy (Vittengl et al., 2007). The 22% lower frequency of relapse/recurrence after CT versus after pharmacotherapy was similar to the 23% lower frequency of relapse/recurrence after acute phase CT plus pharmacotherapy versus after pharmacotherapy alone. However, based on a small number of studies, CT did not show lower relapse/recurrence compared to other psychotherapies (interpersonal, psychodynamic, behavioral activation; Vittengl et al., 2007).

An updated meta-analysis (Cuijpers, Hollon, et al., 2013) replicated these advantages for acute phase CT. In particular, in follow-ups of 6–18 months, the odds of relapse after discontinuing pharmacotherapy were about 2.6 times higher than after discontinuing acute phase CT. Stated another way, for every 5 patients treated with CT instead of with pharmacotherapy, 1 patient's relapse will be prevented. In addition, the odds of dropping out of acute phase CT were only about 0.6 versus dropping out of acute phase pharmacotherapy. Thus, patients are more likely to stay in CT, and so respond to CT, and then less likely to relapse after CT compared to after pharmacotherapy.

Acute phase CT responders vary in their risk for relapse/recurrence, and thus perhaps also in their need for continuation treatment to prevent relapse/recurrence. Arguably the strongest and best-replicated predictors of relapse are the extent and quality of remission during acute phase treatment. These predictors include unstable response (e.g., Jarrett et al., 2001; Thase et al., 1992; Segal et al., 2010; Jarrett et al., under review) and residual symptoms (e.g., Fava, Fabbri, & Sonino, 2002; Jarrett, Vittengl, & Clark, 2008). Additional predictors of

relapse have included indicators of more severe illness, including MDD onset at younger ages, more prior depressive episodes, “double depression” (dysthymic disorder comorbid with MDD), family history of depression, more depressive cognitive content, high neuroticism, and poor social support (e.g., Burcusa & Iacono, 2007; Vittengl, Clark, & Jarrett, 2010; Jarrett et al., under review; Vittengl et al., under review).

Continuation phase CT

Although patients relapse less after acute phase CT than after discontinuing pharmacotherapy (Cuijpers, Hollon, et al., 2013), many responders do eventually relapse or recur. For example, among MDD patients who respond and then discontinue acute phase CT, roughly one-quarter relapse/recur within a year and one-half within two years (Vittengl et al., 2007). Continuation phase CT aims to prevent relapse among responders to acute phase treatments, and a growing literature supports continuation CT's efficacy (e.g., Beshai et al., 2011; Vittengl & Jarrett, 2014). Meta-analyses suggest that continuation CT reduces relapse and recurrence by roughly 25–35% compared to inactive control conditions over 10–18 months, on average (Piet & Hougaard, 2011; Vittengl et al., 2007), comparable to (if not somewhat larger than) the average benefit of continuation pharmacotherapy versus placebo (e.g., Borges et al., 2014). However, the benefits of continuation CT may be larger for patients with greater illness liabilities (e.g., more prior MDEs, unstable response or remission of the index episode, greater residual symptoms; Piet & Hougaard, 2011; Vittengl et al., 2010) and when it is preceded by acute phase treatment (Biesheuvel-Leliefeld et al., 2015).

Recent studies of continuation CT bolster these conclusions. For example, among patients with recurrent MDD who showed unstable remission to acute phase CT, 8 months of continuation CT or fluoxetine reduced relapse (from 33% to 18%) and residual symptoms (by about 0.2 *SD*) compared to pill placebo (Jarrett et al., 2013; Vittengl et al., 2014). Similarly, among remitted MDD patients with a greater history of childhood trauma, 8 weeks of treatment as usual plus continuation CT reduced relapse over one year compared to treatment as usual alone (41% vs. 65%; Williams et al., 2014).

Recent studies also support the viability of different continuation treatment delivery modalities, sequences, and combinations. For example, MDD patients randomized to 10 weeks of internet-based continuation CT or control (assessment and non-specific support by email) showed less relapse during six-month (11% vs. 38%; Holländare et al., 2010) and two-year (14% vs. 61%; Holländare et al., 2013) follow-ups. In addition, after response to acute phase electro-convulsive therapy, MDD patients randomized to 6 months of continuation pharmacotherapy plus CT (77%) showed more frequent sustained response (no relapse and no drop-out) than patients receiving pharmacotherapy plus electro-convulsive therapy (40%) or pharmacotherapy alone (44%; Brakemeier et al., 2014). Moreover, acute then continuation CT plus pharmacotherapy increased recovery (defined as 1 month of remission followed by 6 months without relapse) compared to pharmacotherapy-alone overall (73% vs. 63%) and especially for the subset of participants with severe non-chronic depression (81% vs. 52%; Hollon et al., 2014). Finally, mindfulness-based CT applied

perinatally shows potential to reduce postpartum relapse/recurrence among women with a history of depression (Dimidjian et al., 2014).

The durability of continuation and maintenance CTs' preventive effects once discontinued is uncertain but may be limited. For example, Jarrett et al. (2013) found that continuation CT or continuation pharmacotherapy reduced relapse compared to pill placebo at the end of 8 months of continuation treatment but not at follow-ups 1 and 2 years later. Similarly, Kashner et al. (2007) found declining but detectable benefits of continuation CT versus assessment control for 19 weeks after ending continuation CT. In addition, Gelenberg et al. (2003) reported that the frequency of relapse/recurrence over one year did not differ significantly between patients who had received 16 weeks of continuation CT plus pharmacotherapy or pharmacotherapy alone. Finally, Paykel et al. (2005) found benefits of continuation CT plus pharmacotherapy versus pharmacotherapy alone ending 3.5 years after discontinuation.

Maintenance phase CT

Even after response to acute phase treatment, and sustained absence of major depression through continuation treatment, many patients remain vulnerable to relapse and recurrence. For example, after unstable response to acute phase CT and 8 months of continuation treatment, the proportion of patients with relapse/recurrence increased from 18% to 41% among continuation fluoxetine patients, and from 18% to 45% among continuation CT patients, from months 8 to 32 after acute phase CT (Jarrett et al., 2013). Consequently, maintenance CT has an important role in keeping patients well as long as possible. Although the research base is smaller than for continuation CT, maintenance CT applied after several earlier treatments reduces relapse/recurrence, but only among higher-risk patients in some studies.

For example, patients randomized to two years of continuation/maintenance CT or pharmacotherapy experienced similar rates of relapse/recurrence (26% vs. 31%; Blackburn & Moore, 1997). Also consistent with maintenance CT and pharmacotherapy's comparable prevention, patients with unstable remission showed less relapse/recurrence when randomized to 18 months of maintenance MBCT (28%) or pharmacotherapy (27%) compared to placebo (71%), whereas groups did not differ significantly among patients with stable remission (Segal et al., 2010). In addition, over 5.5 years of follow-up, 8 weeks of maintenance CT plus treatment as usual (chosen by patients naturalistically) reduced relapse/recurrence significantly compared to treatment as usual alone (75% vs. 95%; Bockting et al., 2009). Finally, patients with a history of 5 MDEs benefited from 8 months of maintenance CT compared to psychoeducation control (50% vs. 73% relapsed/recurred by during a follow-up year), whereas patients with fewer MDEs did not benefit significantly (51% vs. 60%; Strangier et al., 2013).

The benefit of combining maintenance CT and pharmacotherapy is uncertain and may vary by subpopulation of patient. For example, patients randomized to 80 weeks of maintenance CT with placebo, CT with pharmacotherapy, pharmacotherapy only, or placebo did not vary significantly in the frequency of recurrence during maintenance treatment (40%, on average; Petersen et al., 2010). However, a pilot study suggested that augmenting the same

pharmacotherapy dose with maintenance CT may prevent relapse/recurrence more so than increasing the pharmacotherapy dose (1/4 vs. 4/4 patients relapsed/recurred within one year), among patients who cycled between remission and relapse on pharmacotherapy previously (Fava et al., 2002).

Conclusions and Future Directions

Major depressive disorder is often recurrent and treatment with CT increases patients' periods of relative wellness, with important clinical trials ongoing (e.g., Bockting et al., 2011; Kuyken et al., 2014). Research shows that acute, continuation, and maintenance CTs have preventive effects against relapse and/or recurrence, although none is fully efficacious. Refined treatments and treatment-application protocols may profitably focus on maximizing individual-and population-level benefits of CT and on identifying mechanisms.

For example, given limited treatment resources, understanding which patients most need relapse-prevention and benefit from CT relative to clinical alternatives (e.g., watchful waiting, pharmacotherapy; Piet & Hougaard, 2011; Vittengl et al., 2010; Vittengl et al., under review), and whether some treatment sequences and combinations are more helpful (Fava & Tomba, 2010; Oestergaard & Møldrup, 2011), may provide routes to increase CT's overall benefits. Second, understanding how CT produces its preventive benefits may provide insights into improving the potency of the treatment. Past research suggests that the quality of the therapeutic relationship (Weck et al., 2013) and CT skill development (Vittengl et al., under review) may be important. Finally, reducing the cost and increasing the availability of continuation CT via computerized delivery (e.g., Boggs et al., 2014) may yield important gains in public health.

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References

- *of special interest
- **of outstanding interest
- American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. 5. Washington, DC: Author; 2013.
- Angst FF, Stassen HH, Clayton PJ, Angst JJ. Mortality of patients with mood disorders: Follow-up over 34–38 years. *Journal of Affective Disorders*. 2002; 68:167–181. [PubMed: 12063145]
- Beck, AT.; Rush, AJ.; Shaw, BF.; Emery, G. *Cognitive Therapy of Depression*. New York: Guilford Press; 1979.
- Beshai S, Dobson KS, Bockting CH, Quigley L. Relapse and recurrence prevention in depression: Current research and future prospects. *Clinical Psychology Review*. 2011; 31:1349–1360. [PubMed: 22020371]
- Biesheuvel-Leliefeld KEM, Kok GD, Bockting CLH, Cuijpers P, Hollon SD, van Marwijk HWJ, Smit F. Effectiveness of psychological interventions in preventing recurrence of depressive disorder: Meta-analysis and meta-regression. *Journal of Affective Disorders*. 2015; 174:400–410.

- Bockting CH, Spinhoven P, Wouters LF, Koeter MJ, Schene AH. Long-term effects of preventive cognitive therapy in recurrent depression: A 5.5-year follow-up study. *Journal of Clinical Psychiatry*. 2009; 70:1621–1628. [PubMed: 20141705]
- Bockting C, Elgersma H, van Rijsbergen G, de Jonge P, Ormel J, Buskens E, Hollon S. Disrupting the rhythm of depression: Design and protocol of a randomized controlled trial on preventing relapse using brief cognitive therapy with or without antidepressants. *BMC Psychiatry*. 2011; 11:8. [PubMed: 21226937]
- Boggs JM, Beck A, Felder JN, Dimidjian S, Metcalf CA, Segal ZV. Web-based intervention in mindfulness meditation for reducing residual depressive symptoms and relapse prophylaxis: A qualitative study. *Journal of Medical Internet Research*. 2014; 16:332–343.
- Borges S, Chen Y, Laughren T, Temple R, Patel H, David P, Khin N. Review of maintenance trials for major depressive disorder: a 25-year perspective from the US Food and Drug Administration. *Journal of Clinical Psychiatry*. 2014; 75:205–214. [PubMed: 24717376]
- **. Brakemeier E, Merkl A, Wilbertz G, Quante A, Regen F, Bührsch N, Bajbouj M. Cognitive-behavioral therapy as continuation treatment to sustain response after electroconvulsive therapy in depression: A randomized controlled trial. *Biological Psychiatry*. 2014; 76:194–202. [This may be the first randomized clinical trial of acute phase ECT responders comparing continuation pharmacotherapy, pharmacotherapy plus CT, and pharmacotherapy plus ECT. Patients treated with continuation CT had more frequent sustained response at both 6- (77% vs. 40% for ECT and 44% for pharmacotherapy alone) and 12-month follow-ups (65% vs. 28% for ECT and 33% for pharmacotherapy alone).]. [PubMed: 24462229]
- Burns, DD. *Feeling good: The new mood therapy*. New York: William Morrow; 1980.
- Cuijpers P, Berking M, Andersson G, Quigley L, Kleiboer A, Dobson KS. A meta-analysis of cognitive-behavioural therapy for adult depression, alone and in comparison with other treatments. *Canadian Journal of Psychiatry*. 2013; 58:376–385.
- *. Cuijpers P, Hollon S, van Straten A, Bockting C, Berking M, Andersson G. Does cognitive behaviour therapy have an enduring effect that is superior to keeping patients on continuation pharmacotherapy? A meta-analysis. *BMJ Open*. 2013; 3(4) [Results compiled from 9 prior clinical trials showed that, on average, patients treated with acute phase CT who discontinued treatment showed less relapse than patients who discontinued acute phase pharmacotherapy (odds ratio = 2.6) and even less relapse than patients who continued pharmacotherapy (odds ratio = 1.6).].
- Cuijpers P, Karyotaki E, Weitz E, Andersson G, Hollon SD, van Straten A. The effects of psychotherapies for major depression in adults on remission, recovery and improvement: A meta-analysis. *Journal of Affective Disorders*. 2014; 159:118–126. [PubMed: 24679399]
- de Graaf L, Hollon S, Huibers M. Predicting outcome in computerized cognitive behavioral therapy for depression in primary care: A randomized trial. *Journal of Consulting and Clinical Psychology*. 2010; 78:184–189. [PubMed: 20350029]
- Dimidjian S, Hollon SD, Dobson KS, Schmaling KB, Kohlenberg RJ, Addis ME, Jacobson NS. Randomized trial of behavioral activation, cognitive therapy, and antidepressant medication in the acute treatment of adults with major depression. *Journal of Consulting and Clinical Psychology*. 2006; 74:658–670. [PubMed: 16881773]
- Dimidjian S, Goodman SH, Felder JN, Gallop R, Brown AP, Beck A. An open trial of mindfulness-based cognitive therapy for the prevention of perinatal depressive relapse/recurrence. *Archives of Women's Mental Health*. 2014; 1007/s00737-014-0468-x
- Eaton WW, Shao H, Nestadt G, Lee B, Bienvenu O, Zandi P. Population-based study of first onset and chronicity in major depressive disorder. *Archives of General Psychiatry*. 2008; 65:513–520. [PubMed: 18458203]
- Ellis A. Rational-emotive therapy and cognitive behavior therapy: Similarities and differences. *Cognitive Therapy and Research*. 1980; 4:325–340.
- Fava GA, Tomba E. New modalities of assessment and treatment planning in depression: The sequential approach. *CNS Drugs*. 2010; 24:453–465. [PubMed: 20443645]
- Fava G, Fabbri S, Sonino N. Residual symptoms in depression: An emerging therapeutic target. *Progress in Neuro-Psychopharmacology & Biological Psychiatry*. 2002; 26:1019–1027. [PubMed: 12452521]

- Fava G, Ruini C, Rafanelli C, Grandi S. Cognitive behavior approach to loss of clinical effect during long-term antidepressant treatment: A pilot study. *American Journal of Psychiatry*. 2002; 159:2094–2095. [PubMed: 12450962]
- Frank E, Prien RF, Jarrett RB, Keller MB. Conceptualization and rationale for consensus definitions of terms in major depressive disorder: Remission, recovery, relapse, and recurrence. *Archives of General Psychiatry*. 1991; 48:851–855. [PubMed: 1929776]
- Hasin DS, Goodwin RD, Stinson FS, Grant BF. Epidemiology of major depressive disorder: Results from the National Epidemiologic Survey on Alcoholism and Related Conditions. *Archives of General Psychiatry*. 2005; 62:1097–1106. [PubMed: 16203955]
- Hayes, SC.; Strosahl, KD.; Wilson, KG. Acceptance and commitment therapy: An experiential approach to behavior change. New York, NY: Guilford Press; 1999.
- Holländare FF, Johnsson SS, Randestad MM, Tillfors MM, Carlbring PP, Andersson GG, Engström II. Randomized trial of internet-based relapse prevention for partially remitted depression. *Acta Psychiatrica Scandinavica*. 2011; 124:285–294. [PubMed: 21401534]
- **. Holländare F, Anthony SA, Randestad M, Tillfors M, Carlbring P, Andersson G, Engström I. Two-year outcome of internet-based relapse prevention for partially remitted depression. *Behaviour Research and Therapy*. 2013; 51:719–722. [This report follows up on possibly the first randomized clinical trial of internet-based continuation CT for MDD (Holländare et al., 2011). Patients in partial remission randomized to 10 weeks of internet CT or control (non-specific support) showed less relapse through both 6 (11 vs. 38%) and 24 (14 vs. 61%) months.]. [PubMed: 24021360]
- Hollon SD, DeRubeis RJ, Shelton RC, Amsterdam JD, Salomon RM, O'Reardon JP, Gallop R. Prevention of relapse following cognitive therapy vs medications in moderate to severe depression. *Archives of General Psychiatry*. 2005; 62:417–422. [PubMed: 15809409]
- **. Hollon S, DeRubeis R, Fawcett J, Amsterdam J, Shelton R, Zajecka J, Gallop R. Effect of cognitive therapy with antidepressant medications vs antidepressants alone on the rate of recovery in major depressive disorder: A randomized clinical trial. *JAMA Psychiatry*. 2014; 71:1157–1164. [Treatment focused on achieving longer-term symptom reduction by personalizing treatment duration. Patients with MDD were randomized to pharmacotherapy or pharmacotherapy plus CT. They received acute phase treatment until 1 month of remission and the same continuation treatment until recovery (6 months without relapse), up to 42 months. The addition of CT to pharmacotherapy produced more recovery (10% difference), fewer serious adverse events (9% difference), and less drop-out (8% difference).]. [PubMed: 25142196]
- Jarrett RB, Kraft D, Doyle J, Foster BM, Eaves GG, Silver PC. Preventing recurrent depression using cognitive therapy with and without a continuation phase. *Archives of General Psychiatry*. 2001; 58:381–388. [PubMed: 11296099]
- **. Jarrett RB, Minhajuddin A, Gershenfeld H, Friedman ES, Thase ME. Preventing depressive relapse and recurrence in higher-risk cognitive therapy responders: A randomized trial of continuation phase cognitive therapy, fluoxetine, or matched pill placebo. *JAMA Psychiatry*. 2013; 70:1152–1160. [This is the first randomized clinical trial comparing 8 months of continuation CT, pharmacotherapy, and pill placebo after patients showed unstable remission in acute phase CT. At the end of continuation treatment, CT and pharmacotherapy cells (both 18%) had less relapse than pill placebo (33%).]. [PubMed: 24005123]
- Jarrett RB, Vittengl JR, Clark L. How much cognitive therapy, for which patients, will prevent depressive relapse? *Journal of Affective Disorders*. 2008; 111:185–192. [PubMed: 18358541]
- Jarrett RB, Minhajuddin A, Vittengl JR, Clark LA, Thase ME. Quantifying and qualifying the preventive effects of acute phase cognitive therapy: Pathways to personalizing care. under review. Manuscript submitted for publication.
- Kashner T, Henley SS, Golden RM, Rush A, Jarrett RB. Assessing the preventive effects of cognitive therapy following relief of depression: A methodological innovation. *Journal of Affective Disorders*. 2007; 104:251–261. [PubMed: 17509693]
- Kessler RC, Akiskal HS, Ames M, Birnbaum H, Greenberg P, Hirschfeld RA, Wang PS. Prevalence and effects of mood disorders on work performance in a nationally representative sample of U.S. workers. *American Journal of Psychiatry*. 2006; 163:1561–1568. [PubMed: 16946181]

- Kessler RC, Berglund P, Demler O, Jin R, Merikangas KR, Walters EE. Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry*. 2005; 62:593–602. [PubMed: 15939837]
- Kessler RC, Chiu W, Demler O, Walters EE. Prevalence, severity, and comorbidity of 12-month DSM-IV disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry*. 2005; 62:617–627. [PubMed: 15939839]
- *. Kuyken W, Byford S, Byng R, Dalgleish T, Lewis G, Taylor R, Evans A. Update to the study protocol for a randomized controlled trial comparing mindfulness-based cognitive therapy with maintenance anti-depressant treatment depressive relapse/recurrence: the PREVENT trial. *Trials*. 2014; 15:217. [In this large, ongoing clinical trial, recurrent MDD patients receiving pharmacotherapy and currently in remission are randomly assigned to mindfulness-based CT (an 8-week group treatment with support to taper/discontinue pharmacotherapy) or to maintenance pharmacotherapy. The primary outcome variable is relapse/recurrence over 24 months, but additional analyses will address secondary outcomes including depression-free days, quality of life, and cost effectiveness.]. [PubMed: 24916319]
- Lewinsohn, PM.; Antonuccio, D.; Stemmetz, J.; Teri, L. The coping with depression course: A psychoeducational intervention for unipolar depression. Eugene, OR: Castalia; 1984.
- McCullough JP. Treatment for chronic depression: Cognitive behavioral analysis system of psychotherapy (CBASP). *Journal of Psychotherapy Integration*. 2003; 13:241–263.
- Oestergaard S, Møldrup C. Optimal duration of combined psychotherapy and pharmacotherapy for patients with moderate and severe depression: A meta-analysis. *Journal of Affective Disorders*. 2011; 131:24–36. [PubMed: 20950863]
- Paykel ES, Scott JJ, Cornwall PL, Abbott RR, Crane CC, Pope MM, Johnson AL. Duration of relapse prevention after cognitive therapy in residual depression: Follow-up of controlled trial. *Psychological Medicine*. 2005; 35:59–68. [PubMed: 15842029]
- Petersen TJ, Pava JA, Buchin J, Matthews JD, Papakostas GI, Nierenberg AA, Fava M. The role of cognitive-behavioral therapy and fluoxetine in prevention of recurrence of major depressive disorder. *Cognitive Therapy and Research*. 2010; 34:13–23.
- Piet J, Hougaard E. The effect of mindfulness-based cognitive therapy for prevention of relapse in recurrent major depressive disorder: A systematic review and meta-analysis. *Clinical Psychology Review*. 2011; 31:1032–1040. [PubMed: 21802618]
- Satyanarayana S, Enns MW, Cox BJ, Sareen J. Prevalence and correlates of chronic depression in the Canadian Community Health Survey: Mental health and well-being. *Canadian Journal of Psychiatry*. 2009; 54:389–398.
- Segal, ZV.; Williams, JMG.; Teasdale, JD. Mindfulness-based cognitive therapy for depression: A new approach to preventing relapse. New York: Guilford; 2002.
- Segal ZV, Bieling P, Young T, MacQueen G, Cooke R, Martin L, Levitan RD. Antidepressant monotherapy vs sequential pharmacotherapy and mindfulness-based cognitive therapy, or placebo, for relapse prophylaxis in recurrent depression. *Archives of General Psychiatry*. 2010; 67:1256–1264. [PubMed: 21135325]
- Solomon DA, Keller MB, Leon AC, Mueller TI, Lavori PW, Shea M, Endicott J. Multiple recurrences of major depressive disorder. *American Journal of Psychiatry*. 2000; 157:229–233. [PubMed: 10671391]
- **. Stangier U, Hilling C, Heidenreich T, Risch A, Barocka A, Schlösser R, Hautzinger M. Maintenance cognitive-behavioral therapy and manualized psychoeducation in the treatment of recurrent depression: A multicenter prospective randomized controlled trial. *American Journal of Psychiatry*. 2013; 170:624–632. [Patients with recurrent MDD in remission for at least 2 months were randomized to 16 sessions of CT or psycho-education control over 8 months and then followed 12 additional months. Compared to control, CT did not show significant relapse-prevention overall (51% in CT vs. 60% in control relapsed), but CT did reduce relapse for the subset of patients with a history of at least 5 depressive episodes (38% reduction in risk)]. [PubMed: 23732968]
- Thase ME, Simons AD, McGeary J, Cahalane JF. Relapse after cognitive behavior therapy of depression: Potential implications for longer courses of treatment. *American Journal of Psychiatry*. 1992; 149:1046–1052. [PubMed: 1636804]

- Thomson W. Lifting the shroud on depression and premature mortality: A 49-year follow-up study. *Journal of Affective Disorders*. 2011; 130:60–65. [PubMed: 20952074]
- Vittengl JR, Clark LA, Jarrett RB. Moderators of continuation phase cognitive therapy's effects on relapse, recurrence, remission, and recovery from depression. *Behaviour Research and Therapy*. 2010; 48:449–458. [PubMed: 20163785]
- Vittengl JR, Clark L, Dunn TW, Jarrett RB. Reducing relapse and recurrence in unipolar depression: A comparative meta-analysis of cognitive-behavioral therapy's effects. *Journal of Consulting and Clinical Psychology*. 2007; 75:475–488. [PubMed: 17563164]
- Vittengl JR, Clark L, Thase ME, Jarrett RB. Predictors of longitudinal outcomes after unstable response acute phase cognitive therapy for major depressive disorder. under review. Manuscript submitted for publication.
- *. Vittengl JR, Clark L, Thase ME, Jarrett RB. Stable remission and recovery after acute-phase cognitive therapy for recurrent major depressive disorder. *Journal of Consulting and Clinical Psychology*. 2014; 82:1049–1059. [In this extension of analyses of the Jarrett et al. (2013) randomized clinical trial, 8 months of continuation CT ($d = 0.21$) and FLX ($d = 0.25$) reduced residual symptoms compared to pill placebo. CT and FLX did not increase the probability of rigorously-defined stable remission and recovery (6 weeks and 8 months of continuously minimal or absent depressive symptoms, respectively) over 32 months, however, perhaps because stable remission (97%) and recovery (94%) were common overall among the acute phase CT responders studied.]. [PubMed: 25045908]
- Wakefield JC, Schmitz MF. Predictive validation of single-episode uncomplicated depression as a benign subtype of unipolar major depression. *Acta Psychiatrica Scandinavica*. 2014; 129:445–457. [PubMed: 23952635]
- Weck F, Rudari V, Hilling C, Hautzinger M, Heidenreich T, Schermelleh-Engel K, Stangier U. Relapses in recurrent depression 1 year after maintenance cognitive-behavioral therapy: The role of therapist adherence, competence, and the therapeutic alliance. *Psychiatry Research*. 2013; 210:140–145. [PubMed: 23806623]
- Wells A. Metacognitive therapy: Cognition applied to regulating cognition. *Behavioural and Cognitive Psychotherapy*. 2008; 36:651–658.
- Wells K, Stewart A, Hays R, Burnam M, Rogers W, Daniels M, Ware J. The functioning and well-being of depressed patients. Results from the Medical Outcomes Study. *JAMA*. 1989; 262:914–919. [PubMed: 2754791]
- **. Williams JG, Crane C, Barnhofer T, Brennan K, Duggan DS, Fennell MV, Russell IT. Mindfulness-based cognitive therapy for preventing relapse in recurrent depression: A randomized dismantling trial. *Journal of Consulting and Clinical Psychology*. 2014; 82:275–286. [This trial compared treatment as usual alone with treatment as usual plus 8 weeks of mindfulness-based continuation CT or cognitive psychoeducation (the same continuation CT without meditation, which is a defining component of “mindfulness” CT). Patients had recurrent MDD in remission for 8 weeks before randomization. Through 12 months of follow-up, relapse did not differ significantly among experimental conditions, overall. However, the subset of patients with higher childhood trauma (e.g., abuse and neglect) showed less relapse in mindfulness CT (41%) than in treatment as usual alone (65%), with cognitive psychoeducation (54%) differing significantly from neither.]. [PubMed: 24294837]

Highlights

- Several cognitive therapies reduce relapse compared to no additional treatment.
- Patients relapse less after acute phase cognitive therapy versus after medication.
- After acute symptom reduction, cognitive therapy can be used to prevent relapse.
- We review prevention evidence for acute, continuation, and maintenance therapies.
- Relapse-prevention appears greater for higher-risk patient populations.