
Codex Alternus: Depression and Anxiety Spectrum Disorders

**A Research Collection of Alternative and Complementary
Treatments for Dysthymia, Major Depression, Seasonal
Affective Disorder and Anxiety Spectrum Disorders**

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Alternative Mental Health Research

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Audience. *This paper is for adults with mental health issues and their supporters. The focus is on non-drug approaches since these are often given insufficient priority and may well offer the best hope for recovery. With this paper, readers can better understand, select and enact a set of approaches with their chosen mental healthcare providers and supporters that represent their unique recovery plan.*

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Introduction

PubMed is a database of more than 23 million citations for biomedical literature from MEDLINE, life science journals, and online books. This document is a compilation of PubMed citations that meet the following criteria:

- **Time.** Citations occur between January 1950 to June 2014.
- **Alternative psychiatric therapy focus.** Citations are for studies that demonstrate or suggest the efficacy of alternative psychiatric treatments – those treatments that fall outside the domains of pharmaceuticals, counseling, and other mainstream psychiatric therapies. The citations are for clinical trials and case studies with positive outcomes. This document does not review the negative criticisms some therapies may receive in some reported clinical trials or medical literature.
- **Psychiatric diagnoses.** The studies associated with the citations address one or more of the following psychiatric diagnoses: dysthymia, major depression, seasonal affective disorder and anxiety spectrum disorders (including obsessive-compulsive disorder, social phobia, panic disorder and posttraumatic stress disorder).

For each citation, key conclusions regarding the alternative therapy are highlighted. Some therapies include acupuncture, aromatherapy massage, biofeedback, bibliotherapy, herbs, mindfulness, prayer, vitamins, meditation and many more. The document does not focus on any particular alternative and complementary therapy, but selects citations from many cultures that include Chinese traditional medicine, Japanese Kampo medicine, Ayurvedic medicine, Islamic medicine, and Western herbal medicine and orthomolecular medicine.

The paper is primarily intended for the use by clinicians and researchers due to its complex language and lack of detail on how to use these therapies. It can however be useful to those with psychiatric diagnosis and their supporters if further individual study is undertaken.

The paper offers a wide variety of psychiatric treatment options to consider – either as monotherapies or in selective combinations of polytherapies. Although many of these studies use antidepressants and complementary therapies in combination, the references are still useful for those seeking alternative treatment monotherapy.

The articles behind these citations contain much more information than is summarized herein. For further detail investigate using Google Scholar, PubMed or your local libraries. College libraries or university medical centers often offer access to many of these citations on their database for free. In many cases they are low cost for students or medical professionals.

This paper is a work in progress and will be periodically updated and made available as new research becomes available.

Dysthymia and Major Depression

Vitamins, Minerals, Amino Acids, Omega-3 Fatty Acids, Nutraceuticals and Physiologics

Acetyl-L-carnitine

Acetyl-L-carnitine for Treatment of Geriatric Depression

Pettegrew, JW. Acetyl-L-carnitine physical-chemical, metabolic, and therapeutic properties: relevance for its mode of action in Alzheimer's disease and geriatric depression. *Mol Psychiatry* 2000 Nov;5(6):616-32

- *"ALCAR is reported in double-blind controlled studies to have beneficial effects in major depressive disorders and Alzheimer's disease (AD), both of which are highly prevalent in the geriatric population."*

Bella R. Effect of acetyl-L-carnitine on geriatric patients suffering from dysthymic disorders. *Int J Clin Pharmacol Res* 1990;10(6):355-60

- *"The results showed that treatment with acetyl-L-carnitine induced a significant reduction, as compared to the placebo (p less than 0.002), in the severity of depressive symptoms and also a significant improvement (p less than 0.0027) in the items measuring quality of life."*

Tempesta E. L-acetylcarnitine in depressed elderly subjects. A cross-over study vs placebo. *Drugs Exp Clin Res* 1987;13(7):417-23

- *"In particular, it should be noted that depressive tendencies were significantly modified in mot groups, whereas general somatic symptoms as well as anxiety, asthenia and sleep disturbances proved to be little affected. Clinical evaluation, carried out by calculation of modifications in pre-and post-treatment score percentages provided clear evidence that acetylcarnitine was particularly effective in patients showing more serious clinical symptoms. The drug caused no side-effects at low doses and regimens used."*

Chromium

Chromium Potentiates Antidepressant Therapy for Dysthymic Disorder

McLeod MN. Chromium potentiation of antidepressant pharmacotherapy for dysthymic disorder in 5 patients. J Clin Psychiatry 1999 Apr;60(4):237-40

- *“Preliminary observations suggest that chromium may potentiate antidepressant pharmacotherapy for dysthymic disorder. ”*

Chromium Picolinate, antidepressant effects

Chromium Picolinate Shows Promising Antidepressant Effects in Depression

Davidson JR. Effectiveness of chromium in atypical depression: a placebo-controlled trial. Biol Psychiatry 2003 Feb 1;53(3):261-4

- *“Chromium picolinate shows promising antidepressant effects in atypical depression. Its mechanism of action may relate to 5HT2A downregulation, increased insulin sensitivity, or to other effects.”*

Chromium Picolinate, carbohydrate craving reduction

Chromium Picolinate is Reduces Carbohydrate Craving in Depressed Patients

Docherty JP. A double-blind, placebo-controlled, exploratory trial of chromium picolinate in atypical depression: effect on carbohydrate craving. J Psychiatr Pract 2005 Sep;11(5):302-14

- *“In a population of adults with atypical depression, most of whom were overweight or obese, CrPic produced improvement on the following HAM-D-29 items: appetite increase, increased eating, carbohydrate craving, and diurnal variation of feelings. In a subpopulation of patients with high carbohydrate craving, overall HAM-D-29 scores improved significantly in patients treated with CrPic compared with placebo. The results of this study suggest that the main effect of chromium was on carbohydrate craving and appetite regulation in depressed patients and that 600mg of elemental chromium may be beneficial for patients with atypical depression who also have severe carbohydrate craving. Further studies are needed to evaluate chromium in depressed patients specifically selected for symptoms of increased appetite and carbohydrate craving as well as to determine whether a higher dose of chromium would have an effect on mood.”*

Creatine Monohydrate

Creatine Monohydrate is Beneficial in the Treatment of Depression

Roitman S. Creatine monohydrate in resistant depression: a preliminary study. *Bipolar Disord* 2007 Nov;9(7):754-8

- *"This small, preliminary, open study of creatine monohydrate suggests a beneficial effect of creatine augmentation in unipolar depression, but possible precipitation of a manic switch in bipolar depression."*

Creatine Monohydrate with SSRIs

Creatine Monohydrate Augmentation of SSRIs Promotes More Rapid and Efficacious Response

Lyoo IK. A randomized, double-blind placebo-controlled trial of oral creatine monohydrate augmentation for enhanced response to selective serotonin reuptake inhibitor in women with major depressive disorder. *Am J Psychiatry* 2012 Sep;169(9):937-45

- *"In comparison to placebo augmentation group, patients receiving creatine augmentation showed significantly greater improvements in HAM-D score, as early as week 2 of treatment. This differential improvement favoring creatine was maintained at weeks 4 and 8. This current study suggests that creatine augmentation of SSRI treatment may be a promising therapeutic approach that exhibits more rapid and efficacious responses in women with major depressive disorder."*

DHEA

DHEA Improves Symptoms of Depression

Wolkowitz OM. Dehydroepiandrosterone (DHEA) treatment of depression. *Biol Psychiatry* 1997 Feb 1;41(3): 311-8

- *"One treatment-resistant patient received extended treatment with DHEA for 6 months: her depression ratings improved 48-72% and her semantic memory performance improved 63%. These measures returned to baseline after treatment ended. In both studies, improvements in depression ratings and memory performance were directly related to increases in plasma levels of DHEA and DHEA-S and to increases in their ratios with plasma cortisol levels. These preliminary data suggest DHEA may have antidepressant and promemory effects and should encourage double-blind trials in depressed patients."*

Schmidt PJ. Dehydroepiandrosterone monotherapy in midlife-onset major and minor depression. *Arch Gen Psychiatry* 2005 Feb;62(2):154-62

- *"We find DHEA to be an effective treatment for midlife-onset major and minor depression."*

Wolkowitz OM. Double-blind treatment of major depression with dehydroepiandrosterone. Am J Psychiatry 1999 Apr;156(4):646-9

- *"These results suggest that DHEA treatment may have significant antidepressant effects in some patients with major depression."*

Folinic Acid (Leucovorin)

Folinic Acid (Leucovorin) as an Adjunctive Treatment for SSRI-refractory Depression

Alpert JE. Folinic Acid (Leucovorin) as an adjunctive treatment for SSRI-refractory depression. Ann Clin Psychiatry 2002 Mar;14(1):33-8

- *"HAM-D-17 scores among the 16 completers decreased from 19.1 +/-3.9 to 12.8 +/- 7.0 ($p < 0.01$). However, only 31% of completers and 27% of the intent-to treat (ITT) sample achieved response ($\geq 50\%$ reduction in HAM-D-17 scores), and only 19% of completers and 18% of the ITT sample achieved remission (HAM-D-17 ≤ 7). Leucovorin appears to be modestly effective as an adjunct among SSRI-refractory depressed individuals with normal folate levels. The application of leucovorin as an adjunct in the setting of refractory depression deserves further study."*

Folic Acid with Prozac

Adjunctive Folic Acid is Beneficial for Those with Depression on Prozac

Venkatasubramanian R. A randomized double-blind comparison of fluoxetine augmentation by high and low dosage folic acid in patients with depressive episodes. J Affective Disord 2013 Sep 5;150(2):644-8

- *"Compared to folic acid 1.5 mg/day, augmentation with 5 mg/day may be more beneficial in female patients with depressive episodes taking fluoxetine 20 mg/day."*

Coppen A. Enhancement of the antidepressant action of fluoxetine by folic acid: a randomized, placebo controlled trial. J Affect Disord 2000 Nov; 60(2):121-30

- *"Patients receiving folate showed a significant increase in plasma folate. This was less in men than in women. Plasma homocysteine was significantly decreased in women by 20.6%, but there was no significant change in men. Overall there was a significantly greater improvement in the fluoxetine plus folic acid group. This was confined to women where the mean Hamilton Rating Scale score on completion was 6.8 (S.D. 4.1) in the*

fluoxetine plus folate group, as compared to 11.7 (S.D. 6.7) in the fluoxetine plus placebo group ($P<0.001$). A percentage of 93.9 of women, who received the folic acid supplement, showed a good response ($>50\%$ reduction in score) as compared to 61.1% of women who received placebo supplement ($P<0.005$). Eight (12.9%) patients in the fluoxetine plus folic acid group reported symptoms possibly or probably related to medication, whereas in the fluoxetine plus placebo group 19 (29.7%) patients reported such symptoms ($P<0.05$).

Papakostas GI. L-methylfolate as adjunctive therapy for SSRI-resistant major depression: results of two randomized, double-blind, parallel-sequential trials. Am J Psychiatry 2012 Dec 1;169(12):1267

- *“Adjunctive L-methylfolate at 15mg/day may constitute an effective, safe, and relatively well tolerated treatment strategy for patients with major depressive disorder who have a partial response or no response to SSRIs.”*

Inositol

Inositol is Effective in Treating Depression

Levine J. Double-blind, controlled trial of inositol treatment of depression. Am J Psychiatry 1995 May;152(5):792-4

- *“The overall improvement in scores on the Hamilton Depression Rating Scale was significantly greater for inositol than for placebo at week 4. No changes were noted in hematology or in kidney or liver function. This may be the first use of the precursor strategy for second messenger rather than a neurotransmitter in treating depression. Although inositol had a significant antidepressant effect in this study, replication is crucial.”*

L-5-HTP

L-5-HTP Has Therapeutic Efficiency Equal to Prozac

Jangid P. Comparative study of efficiency of L-5-hydroxytryptophan and fluoxetine in patients presenting with first depressive episode. Asian J Psychiatr 2013 Feb;6(1):29-34

- *“L-5-HTP has definitely got antidepressant effect in patients of depression. Antidepressant effect was seen within 2 weeks of treatment and was apparent in all degrees of depression. The therapeutic efficiency of L-5-HTP was considered as equal to that of fluoxetine.”*

L-Acetylcarnitine

L-Acetylcarnitine is as effective as Prozac in Dysthymic Disorder

Bersani G. L-Acetylcarnitine in dysthymic disorder in elderly patients: A double-blind, multicenter, controlled randomized study vs. fluoxetine. *Eur Neuropsychopharmacol* 2013 Oct;23(10):1219-25

- *“The results obtained with LAC and fluoxetine were equivalent. As the subjects in this study were of senile age, it is possible to hypothesize that the LAC positive effect on mood could be associated with improvement in subjective cognitive symptomology. The difference in the latency time of clinical response (1 week of LAC treatment, compared to 2 weeks latency time with Fluoxetine) suggests the existence of different mechanisms of action possibly in relation to activation of rapid support processes of neuronal activity.”*

L-Tryptophan

L-tryptophan Has Antidepressant Efficacy in Depression

Farkas T. L-tryptophan in depression. *Biol Psychiatry* 1976 Jun;11(3):295-302

- *“L-tryptophan, the amino acid precursor of serotonin, was administered to 16 depressive patients in a double-blind study of its potential antidepressant efficacy. Antidepressant responses were observed in one of ten unipolar patients and in three of six bipolar patients. These results are discussed in the context of possible interactions of amines with electrolyte systems in the etiology of affective illness.”*

Zmilacher K. L-5-hydroxytryptophan alone and in combination with a peripheral decarboxylase inhibitor in the treatment of depression. *Neuropsychobiology* 1988;20(1):28-35

- *“In an open study 25 depressed patients were treated with L-5-hydroxytryptophan (L-5-HTP) either alone or in combination with a peripheral decarboxylase inhibitor. The therapeutic efficacy of L-5-HTP was considered as equal to that of traditional antidepressants. There was no difference in efficacy between two treatments. Best results were obtained in patients with anxious-agitated depressive syndrome and in patients with an endogenous depression if the illness had been acute. The onset of action was rapid (within 3 or 5 days). Gastrointestinal side effects proved to be dose-dependent and occurred more frequently in patients receiving L-5-HTP alone, whereas psychopathological side effects (especially acute anxiety states) have been reported in patients receiving L-5-HTP in combination with peripheral decarboxylase inhibitor.”*

Melatonin, sleep improvement

Melatonin is Effective for Sleep Disturbances in Major Depression

Dolberg OT. Melatonin for the treatment of sleep disturbances in major depression. Am J Psychiatry 1998 Aug;155(8):1119-21

- *“Slow-release melatonin was effective in improving the sleep of patients with major depressive disorder. Slow-release melatonin had no effect on the rate of improvement in symptoms of major depressive disorder.”*

Melatonin, mood improvement

Melatonin Improves Mood in Major Depressive Disorder

Sarfaty MA. A randomized double-blind placebo-controlled trial of treatment as usual plus exogenous slow-release melatonin (6mg) or placebo for sleep disturbance and depressed mood. Int Clin Psychopharmacol 2010 May;25(3):132-42

- *“General Linear Modeling showed significant improvement in depression and sleep over time, but this was not specific to melatonin. However, there was a trends towards an improvement in mood with melatonin, and no adverse side effects were observed. In conclusion, melatonin may be beneficial for treating depression in people who do not wish to take antidepressants requires further evaluation.”*

Omega-3

Omega-3 Fatty Acid EPA was Associated with Symptom Remission in Treatment-resistant Depression and Structural Brain Changes

Puri BK. Eicosapentaenoic acid in the treatment-resistant depression associated with symptom remission, structural brain changes and reduced neuronal phospholipid turnover. Int J Clin Pract 2001 Oct;55(8):560-3

- *“The n-3 fatty acid eicosapentaenoic acid (EPA) was added to the conventional antidepressant treatment of a treatment-resistant severely depressed and suicidal male patient with a seven-year history of unremitting depressive symptoms. The niacin skin flush test and cerebral magnetic resonance scanning were carried out at baseline and nine month later. The addition of ethyl-EPA led to dramatic and sustained clinical improvement in all the symptoms of depression, including cessation of previously unremitting severe suicidal ideation, within one month. Symptoms of social phobia also improved dramatically. During the nine-month period the volumetric niacin response increased by 30%, the relative concentration of cerebral phosphomonoesters increased by 53% and the ratio of cerebral phosphomonoesters to phosphodiesterases increased by 79%, indicating reduced neuronal phospholipid turnover. Registered difference images showed that the EPA treatment was accompanied by structural brain changes including, in particular, a reduction in the lateral ventricular volume.”*

Omega-3 with antidepressants

Omega-3/Antidepressant Combination Therapy is More Effective than Monotherapy

Gertsik L. Omega-3 fatty acid augmentation of citalopram treatment for patients with major depressive disorder. J Clin Psychopharmacol 2012 Feb;32(1):61-4

- *“Combination therapy was more effective than monotherapy in decreasing signs and symptoms of MDD during the 8 weeks of active treatment; however, combination therapy did not seem to enhance the speed of the initial antidepressant response. These findings suggest that there may be an advantage to combining omega-3 fatty acids with a selective serotonin uptake inhibitor in the initial treatment of individuals with MDD. A larger definitive study is warranted.”*

Omega-3 with Prozac

Omega-3 Fatty Acid EPA has Equal Therapeutic Effects in Depression as Prozac and they are Superior Together

Jazayeri S. Comparison of therapeutic effects of omega-3 fatty acid eicosapentaenoic acid and fluoxetine, separately and in combination, in major depressive disorder. Aust N Z J Psychiatry 2008 Mar;42(3):192-8

- *“Fluoxetine and EPA appear to be equally effective in controlling depressive symptoms. Response rates (>or=50% decrease in baseline HDRS) were 50%, 56% and 81% in the fluoxetine, EPA and combination groups, respectively. In the present 8 week trial EPA and fluoxetine had equal therapeutic effects in major depressive disorder. EPA + fluoxetine combination was superior to either of them alone.”*

Probiotics

Probiotics as Adjunctive Therapy in Major Depressive Disorder

Logan AC. Major depressive disorder: probiotics maybe an adjuvant therapy. Med Hypotheses 2005;64(3):533-8

- *“Probiotics have the potential to lower systemic inflammatory cytokines, decrease oxidative stress, improve nutritional status, and correct SIBO. The effect of probiotics on systemic inflammatory cytokines and oxidative stress may ultimately lead to increased brain derived neurotrophic factor (BDNF). It is our contention that probiotics may be an adjuvant to standard care in MDD.”*

Magnesium

Magnesium is Effective in the Treatment of Depression

Derom ML. Magnesium and depression: a systematic review. *Nutr Neurosci* 2013 Sep;16(5):191-206

- *“Magnesium seems to be effective in the treatment of depression but data are scarce and incongruous. Disturbance in magnesium metabolism might be related to depression. Oral magnesium supplementation may prevent depression and might be used as an adjunctive therapy. However, more interventional and prospective studies are needed in order to further evaluate the benefits of magnesium intake and supplementation for depression.”*

Magnesium Chloride

Supplementation with Magnesium Chloride Solution is Effective in Treatment of Depression in Elderly Type II Diabetics

Barragan-Rodriguez L. Efficiency and safety of oral magnesium supplementation in the treatment of depression in elderly with type 2 diabetes: a randomized, equivalent trial. *Magnes Res* 2008 Dec;21(4):218-23

- *“In conclusion, MgC12 is as effective in the treatment of depressed elderly type 2 diabetics with hypomagnesemia as imipramine 50 mg daily.”*

Natural Polyphenols

Natural Polyphenols Possess Antidepressant-like Activity

Pathak L. Natural polyphenols in the management of major depression. *Expert Opin Investig Drugs* 2013 Jul;22(7):863-80

- *“The present review discusses the use of these natural polyphenols in the treatment of major depression. The review article discusses the antidepressant potential of some important polyphenols such as amentoflavone, apigenin, chlorogenic acid, curcumin, ferulic acid, hesperidin, rutin, quercetin, naringenin, resveratrol, ellagic acid, nobiletin and proanthocyanidins. The mechanism of action of these polyphenols in the treatment of major depression is also discussed in detail. There is an exciting prospect in the discovery of natural polyphenols as therapeutic agents in the treatment of major depression.”*

SAMe

SAMe Improves Memory-related Cognitive Symptoms in Depressed Patients

Levkovitz Y. Effects of S-adenosylethionine augmentation of serotonin-reuptake inhibitor antidepressants on cognitive symptoms of major depressive disorder. J Affect Disord 2012 Feb; 136(3):1174-8

- *“These preliminary data suggest that SAMe can improve memory-related cognitive symptoms in depressed patients, and warrant replication.”*

SAMe, intramuscular

Intramuscular S-adenosyl-L-methionine 1,4-butanedisulphonate (SAMe) is as Effective as Imipramine in Patients with Major Depressive Disorder

Pancheri P. A double-blind, randomized parallel-group, efficacy and safety study of intramuscular S-adenosyl-L-methionine 1,4-butanedisulphonate (SAMe) versus imipramine in patients with major depressive disorder. Int J Neuropsychopharmacol 2002 Dec;5(4):287-94

- *“SAMe and IM did not differ significantly on any efficacy measure, either main or secondary. Adverse events were significantly less in patients treated with SAMe compared to those treated with IMI. These data show 400mg/d i.m. SAMe to be comparable to 150 mg/d oral IMI in terms of antidepressant efficacy, but significantly better tolerated. These findings suggest interesting perspectives for the use of SAMe in depression.”*

SAMe with SSRIs or Venlafaxine

S-adenosyl-L-methionine (SAMe) Augmentation of SSRIs or Venlafaxine is Effective in Treatment Resistant Major Depression

Alpert JE. S-adenosyl-L-methionine (SAMe) as an adjunct for resistant major depressive disorder: an open trial following partial or nonresponse to selective serotonin reuptake inhibitors or venlafaxine. J Clin Psychopharmacol 2004 Dec;24(6):661-4

- *“Intent-to-treat analysis based on the Hamilton Depression Rating Scale revealed a response rate of 50% and a remission rate of 43% following augmentation with S-adenosyl-L-methionine. Gastrointestinal symptoms and headaches were the most common side effects.”*

Selenium

Selenium Supplementation Might Be an Effective Approach to Preventing Postpartum Depression

Mokhber N. Effect of supplementation with selenium on postpartum depression: a randomized double-blind placebo-controlled trial.

- *“These findings suggest that supplementation with selenium during pregnancy might be an effective approach for the prevention of postpartum depression.”*

Tryptophan with Prozac

Tryptophan plus Prozac Has a Rapid Antidepressant Effect

Levitan RD. Preliminary randomized double-blind placebo-controlled trial of tryptophan combined with fluoxetine to treat major depressive disorder: antidepressant and hypnotic effects. J Psychiatry Neurosci 2000 Sep;25(4):337-46

- *“Combining 20mg of fluoxetine with 2 g of tryptophan daily at the outset of treatment for major depressive disorder appears to be a safe protocol that may have both a rapid antidepressant effect and protective effect on slow-wave sleep.”*

Vitamin A

Vitamin A Deprivation Results in Reversible Loss of Hippocampal Synaptic Plasticity

Misner DL. Vitamin A deprivation results in reversible loss of hippocampal long-term synaptic plasticity. Proc Natl Acad Sci USA 2001 Sep 25;98(20):11714-9

- *“In aggregate, these results demonstrate that vitamin A and its active derivatives function as essential competence factors for long-term synaptic plasticity within the adult brain, and suggest that key genes required for long-term potentiation and long-term depression are retinoid dependent. These data suggest a major mental consequence for the hundreds of millions of adults and children who are vitamin A deficient.”*

Vitamin B12 with antidepressants

Adjunctive Vitamin B12 Supplementation with Antidepressant Improves Depression Symptoms

Syed EU. Vitamin B12 supplementation in treating major depressive disorder: a randomized controlled trial. Open Neuro J. 2013 Nov 15;7:44-8

- *“Vitamin B12 supplementation with antidepressants significantly improved depressive symptoms in our cohort.”*

Vitamin C, high dosage

High Dose Vitamin C Increases Intercourse Frequency and Improves Depression

Brody S. High dose ascorbic acid increases intercourse frequency and improves mood: a randomized controlled clinical trial. *Biol Psychiatry* 2002 Aug 15;52(4):371-4

- *“The AA group reported greater FSI (but, as hypothesized, not other sexual behavior) frequency, an effect most prominent in subjects not cohabiting with their sexual partner, and in women. The AA but not placebo group also experienced a decrease in Beck Depression scores. AA appears to increase FSI, and the differential benefit to noncohabitants suggest that a central activation or disinhibition, rather than peripheral mechanism may be responsible.”*

Vitamin C with Prozac

Adjunctive Vitamin C is Effective with Prozac in Pediatric Major Depressive Disorder

Amr M. Efficacy of vitamin C as an adjunct to fluoxetine therapy in pediatric major depressive disorder: a randomized, double-blind, placebo-controlled study. *Nutr J* 2013 Mar 9;12:31

- *“These preliminary results suggest that vitamin C may be an effective adjuvant agent in the treatment of MDD in pediatric patients.”*

Vitamin D, high dosage

High Dose Vitamin D Supplementation Relieves Symptoms of Depression

Jorde R. Effects of vitamin D supplementation on symptoms of depression in overweight and obese subjects: randomized double blind trial. *J Intern Med* 2008 Dec;264(6):599-609

- *“It appears to be a relation between serum levels of 25(OH)D and symptoms of depression. Supplementation with high doses of vitamin D seems to ameliorate these symptoms indicating a possible causal relationship.”*

Vitamin D with Prozac

Adjunctive Vitamin D plus Prozac is Superior in Controlling Depression

Khoraminy N. Therapeutic effects of vitamin D as adjunctive therapy to fluoxetine in patients with major depressive disorder. Aust N Z J Psychiatry 2012 Oct 23

- *“A two-way repeated-measures analysis of variance showed that depression severity based on HDRS and BDI decreased significantly after intervention, with a significant difference between the two groups. The vitamin D + fluoxetine combination was significantly better than fluoxetine alone from fourth week of treatment. In the present 8-week trial, the vitamin D + fluoxetine combination was superior to fluoxetine alone in controlling depressive symptoms.”*

Young Tissue Extract®

Young Tissue Extract® has an Antidepressive Effect and May be Used as an Alternative to Antidepressants

Solberg E. The effects of powdered fertilized eggs on depression. J Med Food 2011 Jul-Aug;14(7-8):870-5

- *“This 12-week, double-blind, placebo-controlled study investigated the effects of fertilized egg powder (Young Tissue Extract; YTE®) intake on outcome measures for depression. Fifty-five patients with depression were randomly assigned to receive YTE, YTE plus Melissa officinalis, or placebo for 12 weeks. At baseline, there were no significant differences in scores on the Hamilton Depression Rating Scale (HAM-D) or Beck Depression Inventory II (BD-II) among the 3 groups. At 12 weeks, the HAM-D scores in groups treated with YTE or YTE with M. officinalis were both significantly lower than those in the placebo group. In addition, both treatment groups showed a significant improvement in depression as measured by the change in HAM-D scores from baseline to 12 weeks, whereas the placebo group showed no significant change. There were no significant differences between the 2 treatment groups. The study indicates that the fertilized egg powder has an antidepressive effect and may be an alternative or adjunct to antidepressive medication for some patients, but further research is necessary.”*

Zinc

Zinc Monotherapy Increases Serum Brain-Derived Neurotrophic Factor (BDNF) Levels and Decreases Depressive Symptoms

Solati Z. Zinc monotherapy increases serum brain-derived neurotrophic factor (BDNF) levels and decreases depressive symptoms in overweight or obese subjects: A double-blind, randomized, placebo-controlled trial. Nutr Neurosci 2014 Jan 7

- *“More analysis revealed that following supplementation, BDI scores decreased in the subgroup of subjects with depressive symptoms (BDI < 10)(n=30), but did not change in*

the subgroup of nondepressed subjects (BDI<10) (n=16). Moreover, a significant inverse correlation was observed between serum BDNF levels and depression severity in all participants. Interestingly, a significant positive correlation was found between serum BDNF and zinc levels at baseline. Conclusion, Zinc monotherapy improves mood in overweight or obese subjects most likely through increasing BDNF levels.

Zinc with antidepressants

Adjunctive Zinc to Antidepressant Improves Symptoms of Depression More Efficiently

Ranjbar E. Effects of zinc supplementation in patients with major depression: a randomized clinical trial. Iran J Psychiatry 2013 Jun; 8 (2):73-9

- *“The results of the present study indicate that zinc supplementation together with SSRIs antidepressant drug improves major depressive disorders more effectively in Patients with placebo plus antidepressants (SSRIs).”*

Nowak G. Effect of zinc supplementation on antidepressant therapy in unipolar depression: a preliminary placebo-controlled study. Pol J Pharmacol 2003 Nov-Dec;55(6):1143-7

- *“Antidepressant treatment significantly reduced HDRS scores by the 2nd week of treatment in both groups, and lowered BDI scores at the 6th week in zinc-treated group. Zinc supplementation significantly reduced scores in both measures after 6-and 12-week supplementation when compared to placebo treatment. This preliminary study is the first demonstration of the benefit of zinc supplementation in antidepressant therapy. The mechanism (s) may be related to modulation of glutamatergic or immune systems by zinc ion.”*

Ranibar E. Effects of zinc supplementation on efficacy of antidepressant therapy, inflammatory cytokines, and brain-derived neurotrophic factor in patients with major depression. Nutr Neurosci 2013 Apr 19

- *“Zinc supplementation in conjunction with antidepressant drugs might be beneficial for reducing depressive symptoms. However, its effect does not appear to be mediated through impact of zinc on inflammatory processes.”*

Lai J. The efficacy of zinc supplementation in depression: systematic review of randomized controlled trials. J Affect Disord 2012 Jan;136(1-2):e31-9

- *“Evidence suggests potential benefits of zinc supplementation as a stand-alone intervention or as an adjunct to conventional antidepressant drug therapy for depression.”*

Siwek M. Zinc supplementation augments efficacy of imipramine in treatment resistant patients: a double blind, placebo-controlled study. J Affect Disord 2009 Nov;118(1-3):187-95

- *“Zinc supplementation augments the efficiency and speed of onset of therapeutic response to imipramine treatment, particularly in patients previously nonresponsive to antidepressant pharmacotherapies. These data suggest the participation of disturbed zinc/glutamatergic transmission in the pathophysiology of drug resistance.”*

Zinc with multivitamins

Multivitamin and Zinc Supplementation are Effective in Reducing Anger and Depression in Young Women

Sawada T. Effect of zinc supplementation on mood states in young women: a pilot study. Eur J Clin Nutr 2010 Mar;64(3):331-3

- *“Thirty women were placed randomly and in equal numbers into two groups, and they ingested one capsule containing multivitamins (MVs) or MV and 7mg Zn daily for 10 weeks. Women who took MV and Zn showed a significant reduction in anger-hostility score ($P=0.009$) and depression-dejection score ($P=0.011$) in the Profile of Mood State (POMS) and a significant increase in serum Zn concentration ($P=0.008$), whereas women who took only MV did not. Our results suggest that Zn supplementation may be effective in reducing anger and depression.”*

Eastern, Herbal, Essential Oils and Aromatherapy

Therapies such as Chinese Herbal Medicine, Japanese Kampo Medicine, Ayurvedic Medicine, Western Herbal Medicine, Essential Oils and Aromatherapy

Aromatherapy

Aromatherapy is a Recommended Alternative for Patients with Depression

Yim VW. A review on the effects of aromatherapy for patients with depressive symptoms. J Altern Complement Med 2009 Feb;15(2):187-95

- *“We recommend that aromatherapy could continue to be used as a complementary and alternative therapy for patients with depression and secondary depression symptoms arising from various types of chronic medical conditions. More controlled studies with sound methodology should be conducted in the future to ascertain its clinical effects and the underlying psychobiologic mechanisms.”*

Borage

Borage Dried Flower Extract May Have Antidepressant Activity in the Treatment of Mild-to-Moderate Depression

Sayyah M. A preliminary randomized double blind clinical trial on the efficacy of aqueous extract of *Echium amoenum* in the treatment of mild to moderate major depression. *Prog Neuropsychopharmacol Biol Psychiatry*. 2006 Jan;30(1):166-9

- *"In week 4, the extract showed a significant superiority over placebo in reducing depressive symptoms. The effect on anxiety was not significant. Headache, somnolence, vomiting, dry mouth, constipation and blurred vision are the most commonly reported side effects. However, with regards to these side effects, no significant differences between placebo and drug treated groups was observed."*

Bushen Tiaogan Qingxin

Bushen Tiaogan Qingxin Recipe is Effective in Climacteric Depression

He JQ. Study on treatment of climacteric depression with bushen tiaogan qingxin recipe. *Zhongguo Zhong Xi Yi Jie He Za Zhi* 2004 Oct;24(10):889-92

- *"The total effective rate, evaluated by the HAM-D score reducing rate, in the treated group was 87.2%, and in the control group was 67.3%, showing significant difference ($P < 0.05$)."*

Chaihu-Shugan-San

Chinese Medicine Formula Chaihu-Shugan-San is Effective in the Treatment of Depression

Wang Y. Meta-analysis of the clinical effectiveness of traditional Chinese medicine formula Chaihu-Shugan-San in depression. *J Ethnopharmacol* 2012 Jun1;141(2):571-7

- *"The present work supported that CSS was effective and safe in treating depressed patients. More full-scale randomized clinical trials with reliable designs are recommended to further evaluate the clinical benefit and long-term effectiveness of CSS for the treatment of depression."*

Chaihu Xiaoyao with Paxil

Chinese Medicine Chaihu Xiaoyao Mixture Combined with Paxil is Effective in the Treatment of Major Depression

Yi ZH. Clinical observation on treatment of major depressive disorder by paroxetine combined with chaihui xiaoyao mixture. Zhongguo Zhong Xi Yi Jie He Za Zhi 2010 Dec; 30(12):1257-60

- *“Combined treatment of CXM and paroxetine is more effective than that with paroxetine alone in treating MDD, and it could enhance the clinical efficacy with higher safety.”*

Crocus Sativus L.

Crocus Sativus L. is Efficient in the Treatment of Mild-to-Moderate Depression

Moshiri E. Crocus sativus L. (petal) in the treatment of mild-to-moderate depression: a double-blind, randomized and placebo-controlled trial. Phytomedicine 2006 Nov;13(9-10):607-11

- *“In this double-blind, placebo-controlled and randomized trial, patients were randomly assigned to receive capsule of petal of C. sativus 30 mg/day (BD) (Group1) and capsule of placebo (BD) (Group 2) for a 6-week study. At 6 weeks, petal of C. sativas produced a significantly better outcome on Hamiliton Depression Rating Scale than placebo (d.f.=1, F=16.87, p<0.001). There were no significant differences in the two groups in terms of observed side effects.”*

Akhondzadeh S. Crocus sativus L. in the treatment of mild to moderate depression: a double-blind, randomized and placebo-controlled trial. Phytother Res 2005 Feb;19(2):148-51

- *“At 6weeks, Crocus sativus produced a significantly better outcome on the Hamiliton depression rating scale than placebo (d.f.=1.F=18.89,p<0.001). There were no significant differences in the two groups in terms of observed side effects. The results of this study indicate the efficacy of Crocus sativus in the treatment of mild to moderate depression.”*

Noorbala AA. Hydro-alcoholic extract of Crocus sativus L. verus fluoxetine in the treatment of mild to moderate depression: a double-blind, randomized pilot trial. J Ethnopharmacol 2005 Feb 28;97(2):281-4

- *“Saffron at this dose was found to be effective similar to fluoxetine in the treatment of mild to moderate depression (F=0.13, d.f.= 1, P=0.71). There were no significant differences in the two groups in terms of observed side effects. The results of this study indicate the efficacy of Crocus sativus in the treatment of mild to moderate depression.”*

Akhondzadeh S. Comparison of Crocus sativus L. and imipramine in the treatment of mild to moderate depression: a pilot double-blind randomized trial. BMC Complement Altern Med 2004 Sep 2;4:12

- *“The main overall finding from this study is that saffron may be of therapeutic benefit in the treatment of mild to moderate depression.”*

Akhondzadeh Basti A. Comparison of petal of *Crocus sativus* L. and fluoxetine in the treatment of depressed outpatients: a pilot double-blind randomized trial. *Prog Neuropsychopharmacol Biol Psychiatry* 2007 Mar 30; 31(2): 439-42

- *“At the end of the trial, petal of C. sativus was found to be effective similar to fluoxetine in the treatment of mild to moderate depression ($F=0.03$, d.f. =1, $P=0.84$). In addition, both treatments the remission rate was 25%. There were no significant differences in the two groups in terms of observed side-effects. The present study is supportive of the other studies which show antidepressant effect of C. sativus.”*

Curcumin

Curcumin is Effective for Treatment of Major Depression

Sanmukhani J. Efficacy and safety of curcumin in major depressive disorder: A randomized controlled trial. *Phytother Res* 2013 Jul 6

- *“The proportion of responders as measured by the HAM-D-17 scale was higher in the combination group (77.8%) than in the fluoxetine (64.7%) and in the curcumin (62.5%) groups; however, these data were not statistically significant ($P=0.58$). Interestingly, the mean change in the HAN-D-17 score at the end of six weeks was comparable in all three groups ($P=0.77$). This study provides first clinical evidence that curcumin may be used as an effective and safe modality for the treatment in patients with MDD without concurrent suicidal ideation or other psychotic disorders.”*

Danzhi Xiaoyao Powder

Danzhi Xiaoyao Powder Improves Symptoms of Depression

Li YJ. Effect of Danzhi Xiaoyao Powder on neuro-immuno-endocrine system in patients with depression. *Zhongguo Zhong Xi Yi Jie He Za Zhi* 2007 Mar;27(3):197-200

- *“DXP is effective in improving symptoms of depression by regulating the levels of 5-HT, BDNF, CORT and IL-6.”*

Luo HC. Clinical observation on effect of danzhi xiaoyao powder in treating depression. *Zhongguo Zhong Xi Yi Jie He Za Zhi* 2006 Mar;26(3):212-4

- *“DXP shows the equivalent to that of maprotiline, but with obviously less side-effect.”*

Man C. Meta-analysis of Chinese herbal Xiaoyao formula as an adjuvant treatment in relieving depression in Chinese patients. *Complement Ther Med* 2014 Apr;22(2):362-70

- *“XYF as an adjuvant treatment appeared to have benefits on depressive patients. In addition, XYP appeared to reduce insomnia and constipation related to antidepressants.”*

Yu GH. Study on Modified Xiaoyao Decoction combining Clomipramine treating depression. Zhongguo Zhong Xi Yi Jie He Za Zhi 2007 Apr;27(4):318-20

- *“MXD combining clomipramine has the efficacy on depression similar to clomipramine, but has less adverse reactions.”*

Yang ZY. Comparative study of Modified Xiaoyao Pill combining amitriptyline on therapeutic effect and compliance in treating patients with depression. Zhongguo Zhong Xi Yi Jie He Za Zhi 2007 Jul;27(7):642-4

- *“MXP-At shows a curative effect similar to fluoxetine on depression but with less adverse reaction, and is not expensive.”*

Ganmai Dazao Decoction

Chinese Medicine Ganmai Dazao Decoction Enhances the Efficacy of Antidepressants for Depression

Yeung WF. A meta-analysis of the efficacy and safety of traditional Chinese medicine formula Ganmai Dazao decoction for depression. J Ethnopharmacol 2014 Apr 28;153(2):309-17

- *“The overall results suggest that GMDZ has few side effects and the potential as an antidepressant. Adding GMDZ to antidepressants reduces side effects and enhances efficacy of antidepressants. However, due to the small number of studies and their limitations, further studies with better methodological quality and more comprehensive safety assessment are needed to determine the benefits and risks of GMDZ in the treatment of depression.”*

Herbal Free and Easy Wanderer Plus

Herbal Free and Easy Wanderer Plus is Effective Monotherapy of as Adjunctive Add-on to Antidepressants

Qin F. Meta-analysis of randomized controlled trials to assess the effectiveness of Free and Easy Wanderer Plus, a polyherbal preparation for depressive disorders. J Psychiatr Res 2011 Nov;45(11):1518-24

- *“Statistically greater treatment effects were found in FEWP monotherapy compared to placebo and in FEWP combined with conventional anti-depressants (CADs) compared to CADs alone. Patients taking FEWP alone and combined with CADs experienced fewer adverse events of dizziness, headache, dry mouth, nausea, and constipation compared to CADs alone. These data suggest that FEWP may be an effective herbal agent in treating depressive symptoms. The addition of FEWP also enhances antidepressant effects of CADs. FEWP may have a higher safety profile compared to CADs.”*

Jieyu Granule with Paxil

Chinese Medicine Jieyu Granule Combined with Paxil is Effective at Treating Refractory Depression

Liu J. Treatment of refractory depression patients of yin deficiency inner heat syndrome by jieyu granule combined paroxetine: and efficacy observation. Zhongguo Zhong Xi Yi Jie He Za Zhi 2013 Apr; 33 (4):462-5

- *“The efficacy of JG combined Paroxetine for treating RD patients of YDIHS was superior to that of using Paroxetine alone.”*

Jieyu Pill

Chinese Medicine Jieyu Pill in Depression is as Effective as an Antidepressant but with Less Adverse Reaction

Shen ZM. Comparative observation on efficacy of jieyu pill and maprotiline in treating depression. Zhongguo Zhong Xi Yi Jie He Za Zhi 2004 May;24(5):415-7

- *“JYP in treating depression shows the efficacy corresponded to that of Map and with less adverse reaction.”*

Kamiuntanto

Herbal Kamiuntanto Relieves Dysthymia, Fatigue and Sleeplessness

Kogure T. Four cases of dysthymic disorder and general malaise successfully treated with traditional herbal (kampo) medicines: kamiuntanto. Integr Med Insights 2010;5:1-6

- *“Treatment with KUT relieved depressive status, fatigue and sleeplessness in these patients. As a result, their QOL (quality of life) was considerably improved. KUT may be useful as an additional or alternative treatment for dysthymia, especially in the field of primary health care.”*

Kushmanda Ghrita

Kushmanda Ghrita is Effective in the Management of Depressive Illness

Chandre R. Clinical evaluation of Kushmanda Ghrita in the management of depressive illness. Ayu 2011 Apr;32(2):230-3

- *“All patients were given 20 ml of Kushmanda Ghrita in two divided doses morning and evening with 40 ml of lukewarm water for a period of one month. It has been shown statistically significant results with psychometric parameters-Hamilton depression rating scale ($t=24.36$, $P<0.001$), Hamilton anxiety rating scale ($t=26.20$, $P<0.001$), immediate memory span direct ($t=4.35$, $P<0.001$), and indirect test ($t=3.43$, $P<0.01$) along with clinical symptoms.”*

Lavandula Angustifolia Mill infusion

Adjunctive Lavandula Angustifolia Mill Infusion is Effective in Depression with Antidepressants

Nikfarjam M. The effects of Lavandula Angustifolia Mill Infusion on depression in patients using Citalopram. Iran Red Crescent Med J 2013 Aug;15(8):734-9

- *“Considering the results of this study, Lavandula angustifolia infusion has some positive therapeutic effects on depressed patients most importantly decreases mean depression score and might be used alone or as an adjunct to other antidepressant drugs.”*

Akondzadeh S. Comparison of Lavandula angustifolia Mill. Tincture and imipramine in treatment of mild to moderate depression: a double-blind, randomized trial. Prog Neuropsychopharmacol Biol Psychiatry 2003 Feb;27(1):123-7

- *“A combination of imipramine and lavandula tincture was more effective than imipramine alone ($F=20.83$, $df=1$, $P<0.0001$). As this study indicates, one of the advantages of this combination is a better and earlier improvement. The main overall finding from this study is that lavandula tincture may be of therapeutic benefit in the management of mild to moderate depression as adjuvant therapy.”*

Passion Flower with St. John's Wort

Passion Flower Significantly Enhances the Pharmacological Potency of St. John's Wort

Fiebich BL. Pharmacological studies in an herbal drug combination of St. John's Wort (Hypericum perforatum) and passion flower (Passiflora incarnate): in vitro and vivo of synergy between Hypericum and Passiflora in antidepressant pharmacological models. Fitoterapia 2011 Apr;82(3):474-80

- *“We were interested whether a combination of Hypericum and Passiflora exerts comparable effects to Hypericum alone. We used two well-established models for investigating extracts for their anti-depressant activity, namely the effects on synaptic uptake of serotonin and the force-swimming-test. We show for the first time, that Passiflora significantly enhances the pharmacological potency of Hypericum in both models. Our data suggest that anti-depressive therapeutic effects of Hypericum are*

possible with lower doses, when it is combined with Passiflora, than with mono-preparations of Hypericum.”

Rhodiola Rosea

Rhodiola Rosea Extract Shows Potency in Mild-to-Moderate Depression

Darbinyan V. Clinical trial of Rhodiola rosea L. extract SHR-5 in the treatment of mild to moderate depression. Nord J Psychiatry 2007;61(5):343-8

- *“Patients with initial HAMD scores between 21 and 31 were randomized into three groups, one of which (group A: 31 patients) received two tablets daily of SHR-5 (340 mg/day), a second (group B: 29 patients) received two tablets twice per day of SHR-5 (680 mg/day), and a third (group C: 29 patients) received two placebo tablets daily. For individuals in groups A and B, overall depression, together with insomnia, emotional instability and somatization, but not self-esteem, improved significantly following medication, whilst the placebo group did not show such improvements. No serious side effects were reported in any of groups A-C. It is concluded that the standardized extract SHR-5 shows antidepressive potency in patients with mild to moderate depression when administered in dosages of either 340 or 680 mg/day over a 6-week period.”*

Rokumigan and Hachimijiogan

Rokumigan and Hachimijiogan Herbal Medicine Successfully Treat Fatigue or Loss of Energy in Patients with Major Depression

Yamanda K. Effectiveness of herbal medicine (Rokumigan and Hachimijiogan) for fatigue or loss of energy in patients with partial remitted major depressive disorder. Psychiatry Clin Neurosci 2005 Oct;59(5):610-2

- *“We investigated the efficacy of Rokumigan (TJ-87) and Hachimijiogan (TJ-7) in 20 patients, TJ-7 or TJ-87 was added to the previous regimen for 4 weeks. Six patients were ‘much improved’ six were ‘minimally improved’ (responders), and eight showed ‘no change’ (non-responders), on the Clinical Global Impression Improvement scale. All responders had Shofuku-fujin (tenderness or weakness of the lower abdomen). In conclusion, we experienced 12 outpatients with prolonged partial remitted MDD with fatigue or loss of energy, which was successfully treated with TJ-87 or TJ-7.”*

Rose Oil

Rose Oil has a Calming Effect Causing Relief of Depression and Stress

Hongratanaworakit T. Relaxing effect of rose oil on humans. Nat Prod Commun 2009 Feb;4(2):291-6

- *“Compared to placebo, rose oil caused a significant decreases of breathing rate, blood oxygen saturation and systolic blood pressure, which indicate a decrease of autonomic arousal. At the emotional level, subjects in the rose oil group rated themselves as more calm, more relaxed and less alert than subjects in the control group. These findings are likely to represent a relaxing effect of the rose oil and provide some evidence for the use of rose oil in aromatherapy, such as causing relief of depression and stress in humans.”*

Shuganjieyu

Shuganjieyu Capsule for Major Depressive Disorder

Zhang X. Shuganjieyu capsule for major depressive disorder (MDD) in adults: a systematic review. Aging Ment Health 2014 Apr 4

- *“Shuganjieyu capsule is superior to placebo in terms of overall treatment effectiveness and safety. Both response rate and remission rate among patients treated with the combination of Shuganjieyu plus venlafaxine were significantly higher than those treated with venlafaxine alone. Due to the considerable risk of bias in majority of trials, recommendations for practice should be cautious, and additional, well designed RCT's are needed in next step.”*

Sideritis Scardica Extracts

Sideritis Scardica Extracts as Triple Monoamine Reuptake Inhibitors

Knorle R. Extracts of Sideritis scardica as triple monoamine reuptake inhibitors. J Neural Transm 2012 Dec;119(12):1477-82

- *“Sideritis species are traditionally used within the Mediterranean as teas, flavoring agents or therapeutical purposes. The aim of this study was to investigate the effects of Sideritis scardica extracts on the monoamine transporters and to derive and explain possible medicinal applications from the pharmacological profile of the extracts. We have studied the effect of various S. scardica extracts on serotonin, noradrenaline and dopamine uptake in rat brain synaptosomes and serotonin uptake in human JAR cells. All extracts inhibited the uptake of all three monoamines into rat synaptosomes by their respective transporters, the alcoholic extracts being more effective than the water extract. EC(50) values were in the range of 30-40 ug/ml. Inhibition of the human serotonin transporter by methanol extract was even more effective (EC(50) 1.4 ug/ml). Combining Sideritis ethanol extract and fluvoxamine resulted in a leftward shift of the fluvoxamine concentration-response curve. The pharmacological profile of S. scardica extracts as triple monoamine reuptake inhibitors suggests their use in the phytochemical*

therapy of mental disorders associated with malfunctioning monoaminergic neurotransmission, such as anxiety disorders, major depression, attention-deficit hyperactivity disorder, mental impairment or neurodegenerative diseases.”

St. John's Wort

St. John's Wort Extract is Effective in Treating Mild-to-Moderate Depression

Lecrubier Y. Efficacy of St. John's wort extract WS 5570 in major depression: a double-blind, placebo-controlled trial. Am J Psychiatry 2002 Aug;159(8):1361-6

- *“H. perforatum extract WS 5570 was found to be safe and more effective than placebo for the treatment of mild to moderate depression.”*

Tokishakuyakusan

Kampo Medicine Formula Tokishakuyakusan is Effective on Headaches and Concomitant Depression

Terauchi M. Effects of the kampo formula tokishakuyakusan on headaches and concomitant depression in middle-aged women. Evid Based Complement Alternat Med 2014;2014:593560

- *“Compared to women treated with HT, women treated with TJ-23 reported relief from headaches(65% versus 29%) and concomitant depression (60% versus 24%) more frequently. Improvement in the scores of headaches and depression correlated significantly with TJ-23 treatment. Conclusions. Headache in middle-aged women is significantly associated with depression; TJ-23 could be effective for treating both these symptoms.”*

Xiao-yao-san

Chinese Herbal Formula Xiao-yao-san is Effective at Improving Symptoms of Depression

Zhang Y. Chinese herbal formula xiao yao san for treatment of depression: a systematic review of randomized controlled trials. Evid Based Complement Alternat Med 2012;2012:931636

- *“Conclusions. Xiaoyaosan appears to be effective on improving symptoms in patients with depression. However, due to poor methodological quality in the majority of included trials, the potential benefit from Xiaoyaosan need to be confirmed in rigorous trials and the design and reporting of trials should follow international standards.”*

Xiong-gui-tiao-xue-yin, postpartum depression

Herbal Kampo Medicine Xiong-Gui-Tiao-Xue-Yin (Kyuki-chouketsu-in) is Beneficial for Stabilizing the Postpartum Depressive State

Ushiroyama T. Efficacy of kampo medicine xiong-gui-tiao-xue-yin (kyuki-chouketsuin), a traditional herbal medicine, in the treatment of maternity blues syndrome in postpartum period. Am J Chin Med 2005;33(1):117-26

- *“The results of this study demonstrate the beneficial clinical effects of Xiong-gui-tiao-xue-yin (Kyuki-chouketsu-in) in stabilizing psychological state in the postpartum period. Xiong-gui-tiao-xue-yin (Kyuki-chouketsu-in) can be expected to improve the mental health of women in the postpartum period and prevent maternity blues.”*
- *“Within 3 weeks of postpartum, there was a significant difference in the incidences of maternity blues between the Xiong-gui-tiao-xue-yin (Kyuki-chouketsu-in) group (15.7%; 21/134 and the control group (32.1%; 43/134) ($p=0.0195$). No adverse effects were observed in this study. The results of this study demonstrate the beneficial clinical effects of Xiong-gui-tiao-xue-yin (Kyuki-chouketsu-in) can be expected to improve the mental health of women in the postpartum period and prevent maternity blues.”*

Yohimbine with antidepressants

Yohimbine Increases Response to Antidepressants

Sanacora G. Addition of the alpha2-antagonist yohimbine to fluoxetine: effect on rate of antidepressant response. Neuropsychopharmacology 2004 Jun;29(6):1166-71

- *“The rate of achieving categorical positive responses was significantly more rapid in the F/Y group compared to the F/P group using both the HDRS and the CGI scales as outcome measures in a survival analysis using a log-rank test ($\chi^2(1) = 5.86, p=0.016$ and $\chi^2(1)=5.29, p=0.021$, respectively). At the last observed visit, 18 (69%) of the 26 F/Y subjects met the response criteria for CGI compared to 10 (42%) of 24 F/P subjects. Using the HDRS criteria, 17 (65%) of 26 F/Y subject vs 10 (42%) of 24 F/P subjects were responders. The addition of the alpha2-antagonist yohimbine to fluoxetine appears to hasten the antidepressant response. There is also a trend suggesting an increased percentage of responders to the combined treatment at the end of the 6-week trial.”*

Chronobiologic, Light Therapy, Sleep Deprivation and others

Therapies such as Chronobiologic Treatment, Bright Light Therapy, Natural Light Therapy and Sleep Deprivation

Bright Light Therapy

Bright Light Therapy Superior to Antidepressant Imipramine in Inpatients with Recurrent Non-seasonal Depression

Prasko J. Bright light therapy and/or imipramine with recurrent non-seasonal depression. *Neuro Endocrinol Lett.* 2002 Apr;23(2):109-13

- *“Patients of all three groups improved significantly. The improvement of the patients of group B treated with bright light therapy plus placebo was superior to the other two groups, but not significantly. Bright light therapy can be effective in the treatment of non-seasonal major depressive disorder.”*

Bright Light Therapy

Bright Light Therapy Stabilizes the Antidepressant Effect of Partial Sleep Deprivation

Neumeister A. Bright light therapy stabilizes the antidepressant effect of partial sleep deprivation. *Biol Psychiatry.* 1996 Jan 1;39(1):16-21

- *“Partial sleep deprivation (PSD) results in a pronounced decrease of depressive symptoms in the majority of patients with major depressive disorder. Generally this acute antidepressant effect is not stable, relapse usually occurs after one night of recoverable sleep. We therefore studied whether light therapy, beginning in the morning after PSD, is able to prevent the relapse after sleep deprivation, using controlled, balanced parallel design. All patients received an antidepressant medication, which was kept constant before and during the study period. Fourteen of the 20 patients (70%) showed a reduction of at least 40% in the Hamilton Depression Rating Scale(HDRS) in the morning after PSD and were classified as PSD responders. Responders as well as nonresponders were randomly assigned to receive either bright light(BL/3000 lux) or dim light (DL/100 lux) therapy during the following 6 days after PSD. In the responder group BL therapy prevented significantly ($p=0.005$) the relapse after the next night of sleep and prolonged significantly ($p=0.011$) the antidepressant effects of PSD up to 7 days. In contrast, patients in the DL condition relapsed after the recovery night and showed no further improvement of the depressive syndrome after 1 week of DL therapy. PSD nonresponders did not benefit from light treatment. These findings indicate that BL therapy might be efficacious to prevent relapse after PSD.”*

Bright light with aerobic exercise

Bright Light Exposure and Aerobic Exercise Can Relieve Depression

Leppamaki SJ. Randomized trial of the efficacy of bright-light exposure and aerobic exercise on depressive symptoms and serum lipids. J Clin Psychiatry 2002 Apr;63(4):316-21

- *“Bright light administered twice a week, alone or combined with physical exercise, seems to be useful intervention for relieving seasonal mood slumps.”*

Bright light with antidepressants and Wake Therapy

Bright Light Augments Antidepressant Effects of Medication and Wake Therapy in Patients with Major Depression

Loving RT. Bright light augments antidepressant effects of medication and wake therapy. Depress Anxiety 2002;16(1):1-3.

- *“Inpatient studies have suggested that bright light therapy can be used to sustain the antidepressant effects of wake therapy (sleep deprivation). In an outpatient trial, a half night of home wake treatment was followed by 1 week of light treatment. All subjects had Major Depressive Disorders according to DSM-IV criteria and were receiving concomitant antidepressant medication. Subjects were randomly assigned to receive either 10,000 lux bright white light for 30 min between 6 and 9 AM or dim red (placebo) light at a comparable time. Seven subjects completed treatment with bright white light and six completed treatment with placebo. On the Hamilton Depression Rating Scale (HDRS17, SIGH-SAD-SR version), the group receiving bright light improved 27% in 1 week ($P=0.002$). The group receiving placebo did not improve, except for one outlier. The benefit of bright light was significant compared to placebo with removal of the outlier ($P<0.025$).”*

Morning Bright Light Therapy with Citalopram

Morning Bright Light Therapy Hastens the Antidepressant Effect of Citalopram

Benedetti F. Morning light treatment hastens the antidepressant effect of citalopram: a placebo-controlled trial. J Clin Psychiatry 2003 Jun;64(6):648-53

- *“The combination of citalopram and light treatment was more effective than citalopram and placebo in the treatment of major depression. With an optimized timing of administration, low-intensity light treatment significantly hastened and potentiated the effect of citalopram, thus providing the clinical psychiatrists with an augmenting strategy that was found effective and devoid of side effects.”*

Multistage Chronobiologic

Multistage Chronobiologic Intervention for the Treatment of Depression

Moscovici L. A multistage chronobiologic intervention for the treatment of depression: a pilot study. *J Affective Disord* 2009 Aug;116(3):201-7

- *"The current article reports the design and the initial outcome results of a new chronobiologic multistage intervention (CMI) that is comprised of the following techniques: (i) partial sleep deprivation during the second half of the night (wake therapy—WT), (ii) medium (green) wavelength light in combination with dawn simulation (DS), (iii) bright light therapy (BLT), and (iv) sleep phase advance (SPA).*

These initial findings showed the procedure to be effective and well tolerated. It affords many advantages, such as the achievement of a rapid response, no extinction of the therapeutic effect after 4 weeks of follow-up, safety, high patient compliance and cost effectiveness. These encouraging results warrant validation in further randomized controlled clinical trials."

Movement, Mind-Body Therapies, Qigong, Yoga, T'ai Chi and Massage Therapy

Alternative Therapies such as Exercise, Dance and Mind-Body Therapies Qigong, Yoga, T'ai Chi and Massage Therapy

Dejian

Dejian Mind-Body Intervention is Effective at Reducing Intake of Antidepressants and Improving Depression

Chan AS. A Chinese Chan-based mind-body intervention for patients with depression. *J Affective Disord* 2012 Dec 15; 142(1-3):283-9

- *"...the DMBI group ($p < 0.05$), but not the CBT or waitlist groups, demonstrated significant reduction in intake of antidepressants, and significant improvement in specific depression-related symptoms including difficulty in concentration ($p = 0.002$), and problems in gastrointestinal health ($p = 0.02$) and overall sleep quality ($p < 0.001$). This study has provided some evidence for the short term effect of the DMBI on Chinese population. Its long-term effect on a larger sample and on Caucasian population warrants further investigation."*

Exercise, for Major Depression

Exercise Improves Symptoms of Major Depression

Babyak M. Exercise treatment for major depression: maintenance of therapeutic benefit at 10 months. *Psychosom Med* 2000 Sep-Oct;62(5):633-8

- *“The purpose of this study was to assess the status of 156 adult volunteers with major depressive disorder (MDD) 6 months after completion of a study in which they were randomly assigned to a 4-month course of aerobic exercise, sertraline therapy, or combination of exercise and sertraline. After 4 months patients in all three groups exhibited significant improvement; the proportion of remitted participants (ie, those who no longer met diagnostic criteria for MDD and had an HRSD score <8) was comparable across the three treatment conditions. **After 10 months, however, remitted subjects in the exercise group had significantly lower relapse rates ($p=.01$) than subjects in the medication group.** Exercising on ones own during the follow-up period was associated with a reduced probability of depression diagnosis at the end of that period (odds ratio = 0.49, $p=.0009$).*

Hayward LM. Group exercise reduces depression in obese women without weight loss. *Percept Mot Skills* 2000 Feb;90(1): 204-8

- *“Given participation in a 6-mo. Exercise and relaxation training 8 obese women showed significant change in scores on the Beck Depression Inventory over the 6-mo. Interval, but not on Body Mass Index or Medical Outcome Study Short-Form-36.”*

Dimeo F. Benefits from aerobic exercise in patients with major depression: a pilot study. *Br J Sports Med.* 2001 Apr;35(2):114-7

- *“Aerobic exercise can produce substantial improvement in mood in patients with major depressive disorders in a short time.”*

Exercise, for Postpartum Depression

Exercise Relieves Postpartum Depression

Da Costa D. A randomized clinical trial of exercise to alleviate postpartum depressed mood. *J Psychosom Obstet Gynaecol* 2009 Sep;30(3):191-200

- *“Home-based exercise is a feasible nonpharmacological intervention with the potential to alleviate postpartum depressive symptoms, especially in women with higher initial depressed mood scores as measured by the EPDS.”*

Laughter Yoga

Laughter Yoga is at Least as Effective as Group Exercise in Improvement of Depression

Shahidi M. Laughter yoga versus group exercise program in elderly depressed women: a randomized controlled trial. *Int J Geriatr Psychiatry* 2011 Mar;26(3):322-7

- *“Our findings showed that Laughter Yoga is at least as effective as group exercise program in improvement of depression and life satisfaction of elderly depressed women.”*

Massage Therapy

Massage Therapy Alleviates Depressive Symptoms

Hou WH. Treatment effects of massage therapy in depressed people: a meta-analysis. *J Clin Psychiatry* 2010 Jul;71(7):894-901

- *“All trials showed positive effect of massage therapy on depressed people.” “Massage therapy is significantly associated with alleviated depressive symptoms. However, standardized protocols of massage therapy various depression rating scales, and target populations in further studies are suggested.”*

Qigong

Regular Qigong Practice Relieves Depressive Symptoms

Tsang HW. Effect of a qigong exercise programme on elderly with depression. *Int J Geriatr Psychiatry* 2006 Sep;21(9):890-7

- *“This report shows that regular qigong practice could relieve depression, improve self-efficacy and personal well-being among elderly persons with chronic physical illness and depression.”*

Sahaj Yoga, for Depression

Sahaj Yoga is Beneficial in the Management of Depression

Sharma VK. Effect of Sahaj Yoga on depressive disorders. *Indian J Physiol Pharmacol* 2005 Oct-Dec;49(4):462-8

- *“Sahaj Yoga is a meditative technique that has been found to have beneficial effects in some psycho-somatic illnesses. The study was carried out on 30 cases (19 Males, 11 females, age 18-45 years) of major depression diagnosed on the basis of DSM IV criteria. The patients were then randomly divided into two groups: Group 1: (10 Males & 5 Females) Patients who were practicing Sahaj Yoga and also received conventional antidepressants. Group 2: (9 Males & 6 Females) Patients who were only receiving conventional antidepressants. Training in Sahaj yoga was conducted under the*

supervision of a trained Sahaj Yogi for 8 weeks. At the start of the study, all the patients were subjected to Hamilton Rating Scale for Depression (HAM-D) and Hamilton Rating Scale for Anxiety (HAM-A). Above scales were again assessed after two months of treatment. There was significant improvement in HAM-D as well as HAM-A scores in patients receiving Sahaj Yoga was significantly higher than in Group 2 patients. The number of patients who went into remission after two months of intervention were also significantly higher in Group 1 patients ($P=0.02$). The present study demonstrates that Sahaj Yoga has got a potential role as a component in the management of depressive disorders."

Sahaj Yoga, for Major Depression

Sahaj Yoga Improves Neuro-cognitive Functions in Patients with Major Depression

SharmaVK. Effect of Sahaj Yoga on neuro-cognitive functions in patients suffering from major depression. Indian J Physiol Pharmacol 2006 Oct-Dec;50(4):375-83

- *"The results thereby, demonstrate that Sahaj Yoga practice in addition to the improvement in various other cognitive domains seen with conventional antidepressants, can lead to additional improvement in executive functions like manipulation of information in the verbal working memory and added improvement in attention span and visuo-motor speed of the depressives."*

Sudarshan Kriya Yoga with antidepressants

Antidepressant Efficiency of Sudarshan Kriya Yoga (SKY) in Melancholia

Janakiramaiah N. Antidepressant efficacy of Sudarshan Kriya Yoga (SKY) in melancholia: a randomized comparison with electroconvulsive therapy (ECT) and imipramine. J Affect Disord 2000 Jan-Mar;57(1-3):255-9

- *"Within the limitations of the design (lack of double blind conditions), it can be concluded that, although inferior to ECT,SKY can be a potential alternative to drugs in melancholia as a first line treatment."*

T'ai Chi

Effect of T'ai Chi on Depressive Symptoms Remains Significant

Cho KL. Effect of T'ai Chi on depressive symptoms amongst Chinese older patients with major depression: the role of social support. Med Sport Sci 2008;52:146-54

- *"By performing multiple regression analyses, we examined whether the effect of group assignment (T'ai Chi and control groups) on five measures of depressive symptoms (i.e.*

the total scores of CES-D scale, and scores of all its subscales including symptoms related to somatic, negative affect, interpersonal relation, and well-being) remained significant after controlling for age, gender, education, and LSNS. Results indicate that the beneficial impact of T'ai Chi on five measures of depressive symptoms remained significant when we adjusted for age, gender, and education. On the other hand, the effect of our intervention disappeared when changes of social support were controlled for. Social support might be partly responsible for the effect of T'ai Chi on depressive symptoms because practicing T'ai Chi is a social activity in nature."

Lavretsky H. Complementary use of T'ai Chi chih augments escitalopram treatment of geriatric depression. *Am J Geriatric Psychiatry* 2011 Oct;19(10):839-50

- *"Complementary use of a mind-body exercise, such as TCC, may provide additional improvements of clinical outcomes in the pharmacologic treatment of geriatric depression."*

Tango

Argentine Tango Dance is as Effective as Mindfulness as a Treatment for Depression

Pinniger R. Argentine tango dance compared to mindfulness meditation and a waiting-list control: a randomized trial for treating depression. *Complement Ther Med* 2012 Dec;20(6):377-84

- *"Sixty-six participants completed the program and were included in the statistical analysis. Depression levels were significantly reduced in the tango (effect size $d=0.050$, $p=0.010$), and meditation groups (effect size $d=0.54$, $p=.025$), relative to waiting list controls. Stress levels were significantly reduced only in the tango group (effect size $d=0.45$, $p=.022$). Attending tango classes was a significant predictor for the increased levels of mindfulness $R(2)=.10$, adjusted $R(2)=.07$, $F(2,59)=3.42$, $p=.039$. Mindfulness-meditation and tango dance could be effective complementary adjuncts for the treatment of depression and/or inclusion in stress management programs."*

Acupuncture and Acupoint Stimulation

Therapies such as Manual Acupuncture, Electroacupuncture, Laser Acupuncture and Transcutaneous Electrical Acupoint Stimulation

Acupuncture

Acupuncture Has an Antidepressant Effect on SSRI's

Huang Y. Anti-depressive effect of acupuncture on selective serotonin reuptake inhibitors. *Zhongguo Zhong Xi Yi Jie He Za Zhi* 2013 Oct;33(10):1341-4

- *“Acupuncture could effectively improve antidepressive effects of SSRIs and reduce their adverse reactions.”*

Acupuncture, as monotherapy

Acupuncture Monotherapy is Effective in Major Depressive Disorder

Mischoulon D. A pilot study of acupuncture monotherapy in patients with major depressive disorder. J Affect Disord 2012 Dec 10;141(2-3):469-73

- *“HAM-D-17 scores decreased from 19.1 +/- 4.4 to 9.9 +/-6.3 ($p<0.001$) in the once-weekly acupuncture group, and from 21.9 +/-5.3 to 14.3 +/-6.1 ($p=0.012$) in the twice-weekly acupuncture group. Response rates were 62% for the once-weekly acupuncture group and 22% for the twice-weekly acupuncture group. Standardized acupuncture treatment was safe, well-tolerated and effective, suggesting good feasibility in outpatient settings.”*

Lyons Z. Acupuncture and Chinese herbs as treatments for depression: an Australian pilot study. Complement Ther Clin Pract 2012 Nov;18(4):216-20

- *“Acupuncture was effective in reducing depressive symptoms. However, herbs did not have an additional treatment effect. Beliefs and attitudes were positive.”*

Acupuncture, during pregnancy

Acupuncture is Effective Treatment for Depression during Pregnancy

Manber R. Acupuncture: a promising treatment for depression during pregnancy. J Affect Disord 2004 Nov 15;83(1):89-95

- *“Acupuncture holds promise for the treatment of depression during pregnancy.”*

Manber R. Acupuncture for depression during pregnancy: a randomized controlled trial. Obstet Gynecol 2010 Mar;115(3):511-20

- *“The short acupuncture protocol demonstrated symptom reduction and a response rate comparable to those observed in standard depression treatments of similar length and could be viable treatment option for depression during pregnancy.”*

Acupuncture with antidepressants

Acupuncture Reduces the Side-effects of Antidepressants and Improves Symptoms of Depression

Zhang WJ. Combination of acupuncture and fluoxetine for depression: a randomized, double-blind, sham-controlled trial. *J Altern Complement Med* 2009 Aug;15(8):837-44

- *“Additionally applied standardized acupuncture to low-dose fluoxetine for depression is as effective as a recommended dose of fluoxetine treatment. Depressive patients with severe anxious symptoms and/or intolerable side-effects of antidepressants can benefit from it.”*

Roschke J. The benefit from whole body acupuncture in major depression. *J Affective Disord* 2000 Jan-Mar;57(1-3):73-81

- *“Additionally applied acupuncture improved the course of depression more than pharmacological treatment with mianserin alone. However, we could not detect any differences between placebo and verum acupuncture.”*

Qu SS. A 6-week randomized controlled trial with 4-week follow-up of acupuncture combined with paroxetine in patients with major depressive disorder. *J Psychiatr Res* 2013 Jun;47(6):726-32

- *“In this 6-week randomized controlled trial with 4-week follow-up, 160 patients with major depressive disorder (MDD) were randomly assigned to paroxetine (PRX) alone (n=48) or combined with 18 sessions on manual acupuncture (MA, n=54) or electrical acupuncture (EA, n=58). Both additional MA and EA produced a significantly greater reduction from baseline in score on HAM-D-17 and SDS at most measure points from week 1 through week 6 compared to PRX alone. The clinical response was markedly greater in MA (69.8%) and EA (69.6%) groups than the group treated with PRX alone (41.7%, P=0.004). At 4 weeks follow-up after completion of acupuncture treatment, patients with EA, but not MA, continued to show significantly greater clinical improvement. Our study indicates that acupuncture can accelerate the clinical response to selective serotonin reuptake inhibitors (SSRIs) and prevent the aggravation of depression.”*

He Q. A controlled study on the treatment of mental depression by acupuncture plus TCM medication. *J Tradit Chin Med* 2007 Sep;27(3):166-9

- *“Acupuncture plus TCM medication may show satisfactory results for mental depression, indicating that a synergic action may exist between acupuncture and TCM medication.”*

Zhang WJ. Combination of acupuncture and fluoxetine for depression: a randomized, double-blind, sham-controlled trial. *J Altern Complement Med* 2009;15(8):837-44

- *“Additionally applied standardized acupuncture to low-dose fluoxetine for depression is as effective as a recommended dose of fluoxetine treatment. Depressive patients with severe anxious symptoms and/or intolerable side effects of antidepressants can benefit from it.”*

Cranial Electroacupuncture with antidepressants

Dense Cranial Electroacupuncture Stimulation Augments Antidepressant Efficacy

Zhang ZJ. Dense cranial electroacupuncture stimulation for major depressive disorder—a single-blind, randomized, controlled study. PLoS One 2012;7(1):e29651.

- *“DCEAS is a safe and effective intervention that augments the antidepressant efficacy. It can be considered as an additional therapy in the early phase of SSRI treatment of depressed patients.”*

Electroacupuncture

Electroacupuncture Has Therapeutic Effects for Treating Depression

Han C. Clinical study on electro-acupuncture treatment for 30 cases of mental depression. J Tradit Chin Med 2004 Sep;24(3):172-6

- *“Electro-acupuncture, therapy can produce the same clinical therapeutic effect as that produced by the tetracyclic drug maprotiline, giving less side effect and better symptomatic improvement.”*

Song Y. Effects of electroacupuncture and fluoxetine on the density of GTP-binding –proteins in platelet membrane in patients with major depressive disorder. J Affect Disord 2007 Mar;98(3):253-7

- *“EA might be served as an alternative treatment for moderate depression and we further demonstrate that abnormal levels of Galpha protein in platelet membrane might be a potential risk factor for MDD.”*

Lou H. Clinical research on the therapeutic effect of the electro-acupuncture treatment in patients with depression. Psychiatry Clin Neurosci 1998 Dec; Suppl: S333-40

- *“The results from both studies showed that the therapeutic efficacy of EA was equal to that of amitriptyline for depressive disorders ($P<0.05$). Electroacupuncture had a better therapeutic effect for anxiety somatization and cognitive process disturbance of depressed patients than amitriptyline ($P<0.001$). The article suggested that EA treatment was an effective therapeutic method for depressive disorders. Particularly, it was a treatment of choice for depressed patients who were unable to comply with the classic tricyclic antidepressants because of their anticholinergic side effects. The possible mechanism of EA treatment is discussed.”*

Laser acupuncture

Laser Acupuncture is Effective in Mild-to-Moderate Depression

Quah-Smith JI. Laser acupuncture for mild to moderate depression in a primary care setting—a randomized controlled trial. *Acupunct Med* 2005 Sep;23(3):103-11

- *“At the end of the treatment period, Beck Depression Inventory scores fell from baseline by 16.1 points in the intervention group and by 6.8 points in the sham control group ($P<0.001$). The difference showed only a trend four weeks later, but was again significant after 12 weeks ($P=0.007$). Laser acupuncture was well tolerated with transient fatigue as the most common adverse effect. Laser acupuncture may be worth further investigation as a treatment for mild to moderate depression in primary care.”*

Quah-Smith I. Laser acupuncture for depression: a randomized double blind controlled trial using low intensity laser intervention. *J Affect Disord* 2013 Jun;148(2-3):179-87

- *“Laser acupuncture showed a clinically and statistically significant benefit with reducing symptoms of depression on objective measures.”*

Transcutaneous Electrical Acupoint Stimulation

Transcutaneous Electrical Acupoint Stimulation is Safe and Noninvasive way to Improve Depressive Mood

Chang SH. Effectiveness of transcutaneous electrical acupoint stimulation for improving depressive mood status among nursing home elders in Taiwan: a pilot study. *Geriatr Nurs* 2010 Sep-Oct;31(5):324-30

- *“In conclusion, TEAS can be safe, easy, and noninvasive technique for nursing home staff to improve the depressive mood status of elders.”*

Allopathic Treatments

Allopathic Treatments for Depression such as Testosterone and Estrogen Replacement, Botulinum A Toxin

17beta-estradiol

Transdermal Patches of 17beta-estradiol has Antidepressant Effect and is Effective in Depression

Soares CN. Efficacy of estradiol for the treatment of depressive disorders in perimenopausal women: a double-blind, randomized, placebo-controlled trial. Arch Gen Psychiatry 2001 Jun;58(6):529-34

- *"Fifty women were enrolled in the study; 26 met DSM-IV criteria for major depressive disorder, 11 for dysthymic disorder, and 13 for minor depressive disorder. Remission of depression was observed in 17 (68%) women treated with 17beta-estradiol compared with 5 (20%) in placebo group (P=.001). Subjects responded similarly to estradiol treatment, regardless of DSM-IV diagnosis. Patients treated with estradiol sustained antidepressant benefit of treatment after the 4-week washout period, although somatic complaints increased in frequency and intensity. Treatment was well tolerated and adverse events were rare in both groups." Transdermal estradiol replacement is an effective treatment of depression for perimenopausal women."*

Botulinum Toxin A

Treatment of Depression with Botulinum Toxin A

Finzi E. Treatment of depression with botulinum toxin A: a case series. Dermatol Surg 2006 May;32(5):645-9

- *"Ten depressed patients were treated with botulinum toxin A, and 9 of 10 patients were no longer depressed 2 months after treatment. The tenth patient had an improvement in mood. To our knowledge, these are the first reported cases of depression treated with botulinum toxin A."*

Estrogen Replacement Therapy

Estrogen Replacement Therapy May Have Antidepressant Efficacy in Depressed Women

Rasgon NL. Estrogen replacement therapy in the treatment of major depressive disorder in perimenopausal women. J Clin Psychiatry 2002;63 Suppl 7:45-8

- *"This small study suggests that for some antidepressant-naïve perimenopausal women with clinical depression, ERT may have antidepressant efficacy. In depressed women who have minimal response to a selective serotonin reuptake inhibitor, ERT may augment response. Further controlled trials are needed."*

Stahl SM. Natural estrogen as an antidepressant for women. J Clin Psychiatry 2001 Jun;62(6):404-5

- *"Recent well-controlled studies suggest that estrogen has antidepressant actions in perimenopausal women. Estrogen may also have antidepressant actions in postpartum women and across the life cycle for women who are resistant to treatment with various*

antidepressants. The question, however, of which depressed women to treat with antidepressants, which with estrogen and which with both remains unanswered.”

Nicotine patches for nonsmokers

Antidepressant Effect of Transdermal Nicotine Patches for Nonsmoking Patients with Major Depression

Salin-Pascual RJ. Antidepressant effect of transdermal nicotine patches in nonsmoking patients with major depression. J Clin Psychiatry 1996 Sep;57(9):387-9

- *“Nicotine patches produced short-term improvement of depression with minor side effects. Because of nicotine’s high risk to health, nicotine patches are not recommended for clinical use in depression. Analogue drugs may be developed in the future that may help improve depression without the risk of other major health problems.”*

Testosterone, gel

Testosterone Gel is Efficacious for the Treatment of Depression and Has Antidepressant Effects

Shores MM. A randomized, double-blind, placebo-controlled study of testosterone treatment in hypogonadal older men with subthreshold depression (dysthymia or minor depression). J Clin Psychiatry 2009 Jul;70(7):1009-16

- *“These results suggest that testosterone replacement may be efficacious treatment for subthreshold depression in older men with hypogonadism.”*

Pope HG Jr. Testosterone gel supplementation for men with refractory depression: a randomized, placebo-controlled trial. Am J Psychiatry 2003 Jan;160(1):105-11

- *“These preliminary findings suggest that testosterone gel may produce antidepressant effects in the large and probably underrecognized population of depressed men with low testosterone levels.”*

Testosterone, intramuscular

Intramuscular Testosterone Injections are an Effective Antidepressant Strategy for Dysthymia

Seidman SN. Effects of testosterone replacement in middle-aged men with dysthymia: a randomized, placebo-controlled clinical trial. J Clin Psychopharmacol 2009 Jun;29(3):216-21

- *“After the intervention, the mean HDRS score decreased significantly more in the testosterone group (7.46 [4.56]) than in the placebo group (1.8 [4.13], $t_{21}=-3.07$,*

P=0.006). Remission, defined as a CGI improvement score of 1 or 2 and a final HDRS score lower than 8, was achieved by 7 (53.85) of 13 in the testosterone group and 1 (10%) of 10 in the placebo group (P=0.03). Testosterone replacement may be an effective antidepressant strategy for late-onset male dysthymia."

Cognitive Behavioral Therapies

Alternative Cognitive Behavioral Therapies for Depression such as Mindfulness, Humor, Emotional Freedom Techniques, and Self-Help

Bibliotherapy

Bibliotherapy May Be as Effective as Standard Care for Depression

Naylor EV. Bibliotherapy as a treatment for depression in primary care. J Clin Psychol Med Settings 2010 Sep;17(3):258-71

- *"This study was designed to determine whether a physician-delivered bibliotherapy prescription would compare favorably with the prevailing usual care treatment for depression in primary care (that often involves medication) and potentially offer an alternative. Six family physicians were trained to write and deliver prescriptions for cognitive-behavioral bibliotherapy. Thirty-eight patients were randomly assigned to receive either usual care or a behavioral prescription to read the self-help book, Feeling Good (Burns, D.D. (1999). Feeling good: The new mood therapy. New York: HarperCollins). The treatment groups did not differ in terms of overall outcome variables. Patients in both treatment groups reported statistically significant decreases in depression symptoms, decreases in dysfunctional attitudes, and increases in quality of life. Although not statistically significant, the mean net medical expenses in the behavioral prescription group were substantially less. This study provided empirical evidence that a behavioral prescription for Feeling Good may be as effective as standard care, which commonly involves an antidepressant prescription."*

Emotional Freedom Technique

Emotional Freedom Techniques are Effective for Depression

Church D. Brief group intervention using emotional freedom techniques for depression in college students: a randomized controlled trial. Depress Res Treat 2012;2012:257172

- *"After controlling for baseline BDI score, the EFT group had significantly less depression than the control group at post test, with a mean score in the "nondepressed" range (P=.001; EFT BDI mean =6.08, SE=1.8 versus control BDI =18.04, SE=1.8). Cohen's d was 2.28, indicating a very strong effect size. These results are consistent with those noted in other*

studies of EFT that included an assessment for depression and indicate the clinical usefulness of EFT as a brief, cost-effective, and efficacious treatment.”

Humor Therapy

Humor Therapy Improves Quality of Life in Depressed Patients

Walter M. Humor therapy in patients with late-life depression or Alzheimer’s disease: a pilot study. *Int J Geriatr Psychiatry* 2007 Jan;22(1):77-83

- *“The quality of life scores improved both in HT and ST groups for depressive patients but not for patients with AD irrespective of the therapy group. Depressive patients receiving HT showed the highest quality of life after treatment. In addition, patients with depression in both therapy groups showed improvements in mood, depression score, and instrumental activities of daily living. Although there was no significant effect of humor therapy comparing with standard therapy on quality of life, these findings suggest that humor therapy can provide an additional therapeutic tool.”*

Mindfulness

Mindfulness for Treatment of Depression

Van Aalderen JR. The efficacy of mindfulness-based cognitive therapy in recurrent depressed patients with and without a current depressive episode: a randomized controlled trial. *Psychol Med* 2012 May;42(5):989-1001

- *“The study suggests that MBCT is as effective for patients with recurrent depression who are currently depressed as for patients who are in remission. Directions towards a better understanding of the mechanisms of action of MBCT are given, although future research is needed to support these hypotheses.”*

Manicavasgar V. Mindfulness-based cognitive therapy vs cognitive behavior therapy as a treatment for non-melancholic depression. *J Affect Disord* 2011 Apr; 130 (1-2):138-44

- *“MBCT appears to be as effective as CBT in the treatment of current depression. However, CBT participants with four or more previous episodes of depression derived greater benefits at 8-week post-treatment than those with less than four episodes.”*

Miscellaneous Therapies

Cold shower

Cold Shower as a Potential Treatment for Depression

Shevchuk NA. Adapted cold shower as a potential treatment for depression. *Med Hypotheses* 2008;70(5):995-1001

- *“This work presents a hypothesis that depression may be caused by the convergence of two factors: (A) A lifestyle that lacks certain physiological stressors that have been experienced by primates through millions of years of evolution, such as brief changes in body temperature (e.g. cold swim), and this lack of “thermal exercise” may cause inadequate functioning of the brain. (B) Genetic makeup that predisposes an individual to be affected by the above condition more seriously than other people. To test the hypothesis, an approach to treating depression is proposed that consists of adapted cold showers (20 degrees C, 2-3 min, preceded by gradual adaptation to make the procedure less shocking) performed once or twice daily. The proposed duration of treatment is several weeks to several months. The following evidence appears to support the hypothesis: Exposure to cold is known to activate the sympathetic nervous system and increase the blood level of beta-endorphin and noradrenaline and to increase synaptic release of noradrenaline in the brain as well. Additionally, due to the high density of cold receptors in the skin, a cold shower is expected to send an overwhelming amount of electrical impulses from peripheral nerve endings to the brain, which could result in an anti-depressive effect. Practical testing by a statistically insignificant number of people, who did not have sufficient symptoms to be diagnosed with depression, showed that the cold hydrotherapy can relieve depressive symptoms rather effectively. The therapy was found to have a significant analgesic effect and it does not appear to have noticeable side effects or cause dependence. In conclusion, wider and more rigorous studies would be needed to test the validity of the hypothesis.”*

Diet, exercise, sunlight, and sleep patterns

Modifying Diet, Exercise, Sunlight Exposure, and Sleep Patterns May Be Useful in the Treatment of Depression

Garcia-Toro M. Four hygienic-dietary recommendations as add-on treatment in depression: a randomized-controlled trial. *J Affect Disord* 2012 Oct;140(2):200-3

- *“This study suggests lifestyle recommendations can be used as an effective antidepressant complementary strategy in daily practice.”*

Kangaroo (skin to skin) care

Kangaroo (skin to skin) Care May Lessen Depression after Postbirth

Dombrowski MA. Kangaroo (skin to skin) care with postpartum woman who felt depressed. MCN AM J Matern Child Nurs 2001 Jul-Aug;26(4):214-6

- *"The mother in this case study had numerous known risk factors for postpartum depression and was in rehabilitation for drug abuse. She was crying at 2 hours postbirth and expressing feelings of sadness as her baby was being unwrapped for her first kangaroo care (KC) experience. Thereafter, during our research protocol, her self-reported depression scores decreased rapidly and had disappeared by 32 hours postbirth. A benefit of KC requiring systematic study is that KC may lessen maternal depression. There is new knowledge that some functions of the maternal HPA axis become dampened during the last trimester of pregnancy as the placenta increases its secretion of corticotrophin-releasing hormone. The sudden loss of the placenta following delivery, accompanied by a suppressed HPA axis, may have an effect on mood during the immediate postpartum period. Perhaps appropriate reactivation of the maternal HPA axis can be triggered following birth by stimulation inherent in KC, thereby minimizing risk for postpartum depression."*

Neurofeedback

Neurofeedback As a Treatment for Major Depressive Disorder

Peeters F. Neurofeedback as a treatment for major depressive disorder—A pilot study. PLoS One 2014 Mar 18;9(3):e91837

- *"We observed response in 1 and remission in 4 out of a total of 9 participants. The effectiveness appeared largest in female participants. The mean asymmetry of alpha-activity decreased significantly over sessions in a quadratic fashion. This decrease was associated with clinical response. This pilot study suggests that neurofeedback aimed at reduction of frontal asymmetry of alpha-activity may be effective as treatment for depression. However, this was an open label pilot study. Non-specific effects of the procedure and/or a beneficial natural course may have confounded the results. Randomized controlled trials will have to establish the efficacy of neurofeedback for depression."*

Radio Electric Asymmetric Treatment

Radio Electric Asymmetric Treatment is More Effective for Depression than Lexapro

Mannu P. Radio electric treatment vs. Es-Citalopram in the treatment of panic disorders associated with major depression: an open-label, naturalistic study. Acupunct Electrother Res 2009;34(3-4):135-49

- *"Compared the efficacy of REAC and Es-Citalopram in the treatment of simultaneous coexistence of Panic Disorder with Major Depression in 9-weeks open label naturalistic*

study. After the 1st week, patients treated with REAC therapy showed a significant relief of depressive symptoms compared with Es-Citalopram. For Panic Disorder, REAC treatment had more effective results than the drug especially after the 3rd week of observation. The REAC treatment obtained better results during the entire study, and its high safety and tolerability profile has been confirmed."

Self-help audio

Self-help Audio Cassettes are Improve Attitudes in People with Depression

Blenkiron P. Coping with depression: a pilot study to assess the efficacy of a self-help audio cassette. Br J Gen Pract 2001 May;51(466):366-70

- *"A clinically significant improvement in overall attitudes and knowledge of 13% (95% confidence interval = 7-20%, P=0.001) was seen. Negative attitudes decreased most among those not taking antidepressants (P=0.007). Hearing a description of depressive symptoms and practical advice on coping were rated as the main benefits. Thirty (60%) patients stated that they had already begun to try out the cognitive-behavioral suggestions within the first week. Larger randomized controlled trials are needed to confirm the efficacy of self-help audio cassettes for depression. This tape may be most helpful to patients with negative attitudes towards treatment, especially those who initially decline antidepressant medication."*

Talbinah food

Talbinah Food Consumption has the Potential to Reduce Depression and Enhance Mood

Badrasawi MM. Effect of Talbinah food consumption on depressive symptoms among elderly individuals in long-term care facilities, randomized clinical trial. Clin Interv Aging 2013;8:279-85

- *"The results indicated that Talbinah is a high carbohydrate food (86.4%) and has a high tryptophan: branch chain amino acids ratio (1:2). A Wilcoxon nonparametric test showed that there was a statistically significant decrease on depression, stress, and mood disturbances scores among the intervention group (P<0.05) for all parameters. In conclusion, Talbinah has the potential to reduce depression and enhance mood among subjects. Ingestion of functional foods such as Talbinah may provide a mental health benefit to elderly people."*

Comorbid Depression and Anxiety Disorder

Alternative and Complementary Treatments for Comorbid Depression and Anxiety Disorder

Aromatherapy

Significant Improvements in Depression and Anxiety with Aromatherapy in Postpartum Women

Conrad P. The effects of clinical aromatherapy for anxiety and depression in the high risk postpartum woman. *Complement Ther Clin Pract* 2012 Aug;18(3):164-8

- *“Analysis of Variance (ANOVA) was utilized to determine difference in EPDS and, or GAD-7 scores between the aromatherapy and control groups at baseline, midpoint and end of study. No significant differences were found between aromatherapy and control groups at baseline. The midpoint and final scores indicated that aromatherapy had significant improvements greater than the control group on both EPDS and GAD-7 scores. There were no adverse effects reported. The pilot study indicates positive findings with minimal risk for the use of aromatherapy as a complementary therapy in both anxiety and depression scales with the postpartum women.”*

“Arts on Prescription” program

“Arts on Prescription” Program Aid in the Process of Recovery for People with Anxiety and Depression

Makin S. ‘Getting back to normal’: the added value of an art-based programme in promoting ‘recovery’ for common but chronic mental health problems. *Chronic Illn* 2012 Mar;8(1):64-75

- *“For some people who experience persistent or relapsing common mental health problems, participation in an arts-based programme provides ‘added value’ in aiding recovery in ways not facilitated by talking therapies alone.”*

Bacopa Monnieri

Bacopa Monnieri Extract Enhances Cognitive Function and Reduces Anxiety and Depression

Calabrese C. Effects of a standardized Bacopa monnieri extract on cognitive performance, anxiety, and depression in the elderly: a randomized, double-blind, placebo-controlled trial. *J Altern Complement Med* 2008 Jul;14(6):707-13

- *“Controlling for baseline cognitive deficit using the Blessed Orientation-Memory-Concentration test, Bacopa participants had enhanced AVLT delayed word recall memory*

scores relative to placebo. Stroop results were similarly significant, with the Bacopa group improving and the placebo group unchanged. CESD-10 depression scores, combined state plus trait anxiety scores, and heart rate decreased over time for the Bacopa group but increased for the placebo group. No effects were found on the DAT, WAIS digit task, mood, or blood pressure. The dose was well tolerated with few adverse events (Bacopa $n=9$, placebo $n=10$), primarily stomach upset. This study provides further evidence that *B. monnieri* has potential for safely enhancing cognitive performance in the aging.”

Chamomile

Chamomile May Provide Antidepressant Activity in Anxious and Depressed Humans

Amsterdam JD. Chamomile (*Matricaria recutita*) may provide antidepressant activity in anxious, depressed humans: and exploratory study. *Altern Ther Health Med* 2012 Sep-Oct;18(5):44-9

- *“In the current study, the research team observed a significantly greater reduction over time in total HAM-D scores for chamomile vs. placebo in all participants ($P<.05$). The team also observed a clinically meaningful but nonsignificant trend for a greater reduction in total HAM-D scores for chamomile vs placebo in participants with current comorbid depression ($P=.062$). When the team examined the HAM-D core mood item scores, it observed a significantly greater meaningful but nonsignificant trend for a greater reduction over time for chamomile vs placebo in participants without current or past depression ($P=.06$). Chamomile may provide clinically meaningful antidepressant activity that occurs in addition to previously observed anxiolytic activity.”*

Continuous Positive Air Pressure

Continuous Positive Air Pressure (CPAP) Treatment Decreases Depression and Anxiety in Sleep Apnea Patients

Sanchez AI. The effects of continuous positive air pressure treatment on anxiety and depression levels in apnea patients. *Psychiatry Clin Neurosci* 2001 Dec;55(6):641-6

- *“The results indicate that there exist statistically significant differences in depression levels after 1 month and after 3 months of treatment ($P<0.05$). In specific, a drop in depression symptomology was observed in both experimental conditions. With respect to anxiety state-trait levels, the obtained results show statistically significant differences in anxiety-trait levels after 1 month and after 3 months of treatment ($P<0.05$) and in anxiety state after 3 months of treatment ($P<0.01$). Both variables experienced a decrease after CPAP treatment.”*

Dietary antioxidants

Dietary Supplementation of Antioxidants has a Significant Reduction on Anxiety and Depression

Gautam M. Role of antioxidants in generalized anxiety disorder and depression. Indian J Psychiatry 2012 Jul; 54(3):244-7

- *"It was observed that patients with GAD and depression had significantly lower levels of vitamin A, C, and E in comparison to healthy controls. After dietary supplementation of these vitamins for a period of 6 weeks, a significant reduction in anxiety and depression scores of patients was observed. A significant increase in blood levels of antioxidants was observed in patients ($P < 0.05$) except that of vitamin E in the group of depressed patients. The findings suggest that antioxidant supplement therapy as an adjuvant therapy is useful in patients with stress-induced psychiatric disorders and the results have been discussed."*

Diet with fruit and vegetables

Healthy Diet with Fruit and Vegetable Intake Prevents Depression and Anxiety

Mc Martin SE. The association between fruit and vegetable consumption and mental health disorders: evidence from five waves of a national survey of Canadians. Prev Med 2013 Mar;56(3-4):225-30

- *"These findings suggest a potentially important role of a healthy diet in the prevention of depression and anxiety."*

Homeopathy

Homeopathy Improves Symptoms of Depression and Anxiety

Davidson JR. Homeopathic treatment of depression and anxiety. Altern Ther Health Med 1997 Jan;3(1):46-9

- *"Homeopathy may be useful in the treatment of affective and anxiety disorders in patients with mildly to severely symptomatic conditions."*

Kava

Kava is Effective in Depression and Anxiety

Sarris J. The Kava Anxiety Depression Spectrum Study (KADSS): a randomized, placebo-controlled crossover trial using an aqueous extract of Piper methysticum. Psychopharmacology (Berl). 2009 Aug;205(3):399-407

- *“The aqueous Kava preparation produced significant anxiolytic and antidepressant activity and raised no safety concerns at the dose and duration studied. Kava appears equally effective in cases where anxiety is accompanied by depression. This should encourage further study and consideration of globally reintroducing rootstock extracts of Kava for the management of anxiety.”*

Mindfulness

Mindfulness for Treatment of Comorbid Anxiety and Depression

Hofmann SG. The effect of mindfulness-based therapy on anxiety and depression: A meta-analytic review. J Consult Clin Psychol 2010 Apr;78(2):169-83

- *“These results suggest that mindfulness-based therapy is promising intervention for treating anxiety and mood problems in clinical populations”*

Hazlett-Stevens H. Mindfulness-based stress reduction for comorbid anxiety and depression: case report and clinical considerations. J Nerv Ment Dis 2012 Nov; 200(11):999-1003

- *“This case demonstrates how MBSR was associated with dramatic clinical improvement of an individual with symptoms of panic, generalized anxiety, and depression. Scores on clinical assessment measures suggested clinically severe levels of anxious arousal, generalized anxiety, worry, fear of negative evaluation, and depression at the beginning of the intervention. The scores on all these measures fell well within normal limits 7 weeks later at the end of the intervention, and no remaining symptoms were reported afterward. Increased life satisfaction and quality of life were documented as well. This case illustrates the potential benefit of MBSR as an alternative or adjunctive treatment for comorbid anxiety and depressive disorder symptoms.”*

Prayer

Prayer Shows Significant Improvement on Depression and Anxiety

Boelens PA. A randomized trial of the effect of prayer on depression and anxiety. Int J Psychiatry 2009;39(4):377-92

- *“Direct contact person-to-person prayer may be useful as an adjunct to standard medical care for patients with depression and anxiety.”*

Boelens PA. The effect of prayer on depression and anxiety: maintenance of positive influence one year after prayer intervention. *Int J Psychiatry Med.* 2012;43(1):85-98

- *“Evaluations post-prayer at 1 month and 1 year showed significantly less depression and anxiety, more optimism, and greater levels of spiritual experience than did the baseline (pre-prayer) measures ($p < 0.01$ in all cases). Subjects maintained significant improvements for a duration of at least 1 year after the final prayer session. Direct person-to-person prayer may be useful as an adjunct to standard medical care for patients with depression and anxiety.”*

Qigong and Yoga fusion

Qigong and Yoga Fusion Offer Solutions for Stress, Anxiety and Depression

Posadzki P. Yoga an qigong in the psychological prevention of mental health disorders: a conceptual synthesis. *Chin J Integr Med* 2010 Feb; 16(1):80-6

- *“This study proposes to explore two alternative medicine therapies-qigong and yoga for balancing the essential duo of holistic mind-body and consequently offer a solution for stress, uncertainty, anxiety and depression. Qualitative research methods have been used to create a conceptual synthesis of yoga and qigong. It has been suggested that an increased sense of control is the interface between these two modalities. This conceptual congruence of qigong and yoga is thought to be a selective, curative method, a prescription for ideal living and ground of human essence existence. Furthermore, this essence is thought to enhance the mind’s self-regulatory processes and prevent mental health disorders. The two alternative therapies can prevent mental health disorders such as anxiety, depression and, minimize mental health disruptions such as stress and poor quality of life. It is suggested that patients and/or clients can benefit from this fusion.”*

Radio Electric Asymmetric-Conveyer

Radio Electric Asymmetric-Conveyer Reduces Symptoms of Depression and Anxiety

Rinaldi S. A new approach on stress-related depression & anxiety: Neuro-Psycho-Physical-Optimization with Radio Electric Asymmetric-Conveyer. *Indian J Med Res* 2010 Aug;132:189-94

- *“This study showed a significant reduction in scores measuring subjective perceptions of stress in patients treated with a cycle of REAC-CRM therapy. At the end point the number of patients reporting symptoms of stress-related anxiety and depression on PSM test was significantly reduced ($P < 0.001$); in the placebo group no significant difference was highlighted. NPPO therapy with a cycle of REAC-CRM was shown to reduce subjective perceptions of stress measured by PSM test and in particular, symptoms of a stress-related anxiety and depression.”*

Reiki Energy Healing

Reiki Energy Healing Helps Reduce Symptoms of Psychological Distress, Depression and Anxiety

Richeson NE. Effects of Reiki on anxiety, depression, pain, and physiological factors in community-dwelling older adults. *Res Gerontol Nurs* 2010 Jul;3(3):187-99

- *“Significant differences were observed between the experimental and treatment groups on measures of pain, depression and anxiety; no changes in heart rate and blood pressure were noted. Content analysis of treatment notes and interviews revealed five broad categories of responses: Relaxation; Improved Physical Symptoms, Mood and Well-being; Curiosity and Desire to Learn More; Enhanced Self-Care; and Sensory and Cognitive Responses to Reiki.*

Shore AG. Long-term effects of energetic healing on symptoms of psychological depression and self-perceived stress. *Altern Ther Health Med* 2004 May-Jun;10(3):42-8

- *“Upon completion of treatment, there was a significant reduction in symptoms of psychological distress in treatment groups as compared with controls ($P < .05$; Eta square ranging from .09- .18), and these differences continued to be present 1 year later ($P < .05$; Eta square ranging from .12- .44).”*

Vitamins A, C, & E

Reduction in Anxiety and Depression after Dietary Supplementation with Antioxidants—
Vitamins A, C, & E

Gautam M. Role of antioxidants in generalized anxiety disorder and depression. *Indian J Psychiatry* 2012 Jul;54(3):244-7

- *“It was observed that patients with GAD and depression had significantly lower levels of vitamin A, C, and E in comparison to healthy controls. After dietary supplementation of these vitamins for a period of 6 weeks, a significant reduction in anxiety and depression scores of patients was observed ($P < 0.001$). A significant increase in the blood levels of antioxidants was observed in patients ($P < 0.05$) except that of vitamin E in the group of depressed patients.”*

Vitamin B complex, methylated

Methylated Vitamin B Complex Shows Significant Improvement in Depressive and Anxiety Symptoms

Lewis JE. The effect of methylated vitamin B complex on depressive and anxiety symptoms and quality of life in adults with depression. *ISRN Psychiatry* 2013 Jan 21;2013:621453

- *“Max Stress B showed significant and more continuous improvements in depressive and anxiety symptoms, compared to placebo. Additionally, Max Stress B showed significant improvement on the mental health scale of the SF-36 compared to placebo. Thus, we showed modest utility of Max Stress B to improve mood symptoms and mental health quality of life in adults with depression.”*

Seasonal Affective Disorder

Dawn simulation

Dawn Simulation is Associated with Greater Remission and Response Rates than Bright Light Therapy

Avery DH. Dawn simulation and bright light in the treatment of SAD: a controlled study. *Biol Psychiatry* 2001 Aug 1;50(3):205-16

- *“Dawn simulation was associated with greater remission and response rates compared to the placebo and compared to bright light therapy. The hours of sunshine during the week before each assessment were associated with a positive clinical response.”*

L-tryptophan with Light Therapy

L-tryptophan Augmentation of Light Therapy for Patients with Seasonal Affective Disorder

Lam RW. L-tryptophan augmentation of light therapy in patients with seasonal affective disorder. *Can J Psychiatry* 1997 Apr;42(3):303-6

- *“This open-label study suggests that L-tryptophan may be an effective augmentation strategy for those patients with SAD who show limited or poor response to bright light therapy.”*

Light Room Therapy

Light Room Therapy is Effective in Mild Forms of Seasonal Affective Disorder

Rastad C. Light room therapy effective in mild forms of seasonal affective disorder—a randomized controlled study. *J Affect Disord* 2008 Jun;108(3):291-6

- *“Light room therapy was effective in reducing depressive symptoms in subjects with winter depressive mood. Results were maintained over a period of one month.”*

Low-intensity blue-enriched white light and standard bright light

Low-intensity Blue-enriched White Light (750 lux) and Standard Bright Light (10,000 lux) are Equally Effective in Treating Seasonal Affective Disorder

Meesters Y. Low-intensity blue-enriched white light (750 lux) and standard bright light (10,000 lux) are equally effective in treating SAD. A randomized controlled study. BMC Psychiatry 2011 Jan 28;11:17

- *“With sample size being small, conclusions can be only preliminary. Both treatment conditions were found to be highly effective. The therapeutic effects of low-intensity blue-enriched light were comparable to those of the standard light treatment. Saturation effects may play a role, even with a light intensity of 750 lux. The therapeutic effects of blue-enriched white light in the treatment of SAD at illuminances as low as 750 lux help bring light treatment for SAD within reach of standard workplace and educational lighting systems.”*

Natural light

Natural Light as a Treatment for Seasonal Affective Disorder

Wirz-Justice A. ‘Natural’ light treatment of seasonal affective disorder. J Affect Disord 1996 Apr 12;37(2-3):109-20

- *“Patients with seasonal affective disorder (SAD) were treated for 1 week either with a daily 1-h morning walk outdoors (natural light) or low-dose artificial light (0.5 h@2800 lux). The latter treatment (given under double-blind conditions) can be considered mainly placebo and did not improve any of the depression self-ratings, whereas natural light exposure improved all self-ratings. According to Hamilton depression score, 25% remitted after low-dose artificial light and 50% after the walk. Sleep duration or timing were not crucial for the therapeutic response. The morning walk phase-advanced the onset and/or offset of salivary melatonin secretion, but individual clinical improvement could not be correlated with specific phase-shifts. Morning cortisol was decreased. Low-dose artificial light did not modify melatonin or cortisol patterns. This is the first study to provide evidence for the use of outdoor light exposure as a potential alternative or adjuvant to conventional artificial light therapy in SAD.”*

Negative air ions

High-Density / High-Output Negative Air Ions for the Treatment of Seasonal Affective Disorder

Goel N. Controlled trial of bright light and negative air ions for chronic depression. Psychol Med 2005 Jul;35(7):945-55

- *“SIGH-SAD score improvement was 53.7% for bright light and 51.1% for high-density ions v. 17.0% for low-density ions. Remission rates were 50%, 50% and 0% respectively. The presence or severity of atypical symptoms did not predict response to either treatment modality, nor were phase advances to light associated with positive response. Both bright light and negative air ions are effective for the treatment of chronic depression. Remission*

rates are similar to those for SAD, but without a seasonal dependency or apparent mediation by circadian rhythm phase shifts. Combination treatment with antidepressant drugs may further enhance clinical response."

Terman M. Treatment of seasonal affective disorder with high-output negative ionizer. J Altern Complement Med 1995 Jan;1(1):87-92

- *"The severity of depressive symptoms (prominently including the reverse neurovegetative symptoms of hypersomnia, hyperphagia, and fatigability) decreased selectively for the group receiving high-density treatment. Standard depression rating scale assessments were corroborated by clinical impressions. When a remission criterion of 50% or greater reduction in symptom frequency/severity was used, 58% of subjects responded to high-density treatment while 15% responded to low-density treatment ($\chi^2 = 5.00$, $df = 1$, $p = 0.025$). There were no side effects attributable to the treatment, and all subjects who responded showed subsequent relapse during withdrawal. Treatment with high-density negative ionizer appears to act as a specific antidepressant for patients with seasonal affective disorder. The method may be useful as an alternative or supplement to light therapy and medications."*

SAD light device

Portable SAD Light Device Phototherapy Achieves Clinical Improvement in Patients with Seasonal Affective Disorder

Ravaris CL. A simple portable ocular light device for phototherapy of seasonal affective disorder. Biomed Instrum Technol 1994 Nov-Dec;28(6):484-9

- *"The authors report the development and safety and acceptability study of a portable ocular light device, the SADlite. The study was conducted in 15 adult patients who had seasonal affective disorder (SAD). Each patient was given three two-week "on" phototherapy periods alternating with three two-week "off" periods. The SADlite provides 8,000 lux. Thirteen (13) of the 15 patients were completers and, as a group, achieved impressive clinical and statistically significant improvement ($p < 0.0001$) on three standard outcome measures. The SADlite was well tolerated, produced no adverse visual effect, and preferred by patients previously exposed to stationary phototherapy devices."*

Vitamin D

Vitamin D Outperforms Phototherapy for the Treatment of Seasonal Affective Disorder

Gloth FM 3rd. Vitamin D vs broad spectrum phototherapy in the treatment of seasonal Affective disorder. J Nutr Health Aging 1999;3(1):5-7

- *"All subjects receiving vitamin D improved in all outcome measures. The phototherapy group showed no significant change in depression scale measures. Vitamin D status improved in both groups (74% vitamin D group, $p < 0.005$ and 36% phototherapy group, $p < 0.01$). Improvement in 25-OH D was significantly associated with improvement in depression scale scores ($r^2=0.26$; $p=0.05$). Vitamin D may be an important treatment for SAD. Further studies will be necessary to confirm these findings."*
- *"Improvement in 25-OH D was significantly associated with improvement in depression scale scores ($r^2=0.26$; $p=0.05$). Vitamin D maybe important for the treatment of SAD."*

Stress and Generalized Anxiety Disorder

Eastern, Ayurvedic, Herbal, Essential Oils, and Aromatherapy

Therapies such as Chinese Herbal Medicines, Ayurvedic Medicines, Western Herbal Remedies, Essential Oils, and Aromatherapy

Aromatherapy massage

Aromatherapy Massage has a Positive Effect on Mood and Anxiety

Edge J. A pilot study addressing the effect of aromatherapy massage on mood, anxiety and relaxation in adult mental health. *Complemet Ther Nurs Midwifery* 2003 May;9(2):90-7

- *"This study was carried out with eight subjects specifically referred for aromatherapy; each received a standardized aromatherapy massage weekly for 6 weeks. The subjects levels of anxiety and depression were measured using the Hospital Anxiety and Depression (HAD) Scale prior to the first massage and after the final massage. The subject's levels of mood, anxiety and relaxation were recorder using a visual analogue before and after each massage and then again 6 weeks after last massage. Comparison was made between the HAD Scale results for each client and also the visual analogue scale results for before and after massage and also first massage and 6 weeks postmassage for sample group. Improvements were shown for in six out of eight subjects HAD Scale results. The study was carried out over an 8-month period."*

Aswagandha

Aswagandha has Anxiolytic Activity and is Superior to Placebo

<p>Andrade C. A double-blind, placebo-controlled evaluation of anxiolytic efficacy of an ethanolic extract of withania somnifera. <i>Indian J Psychiatry</i> 2000 Jul;42(3):295-301</p>
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- *“Statistical trends favoring the drug were observed at both time points. At 6 weeks, significantly more patients met a priori response criteria in the drug group (88.2%) as compared with placebo group (50%). The drug was well-tolerated and did not occasion more adverse effects than did placebo. It is concluded that this ethanolic extract of withania somnifera has useful anxiolytic potential and merits further investigation.”*

Chandrasekhar K. A prospective, randomized double-blind, placebo-controlled study of safety and efficacy of high-concentration full-spectrum extract of ashwagandha root in reducing stress and anxiety in adults. Indian J Psychol Med 2012 Jul; 34 (3):255-62

- *“The findings of this study suggest that a high-concentration full-spectrum Ashwagandha root extract safely and effectively improves and individuals resistance towards stress and thereby improves self-assessed quality of life.”*

Borage

Borage is Effective in the Treatment of Anxiety Disorder

Sayyah M. A double-blind, placebo-controlled study of the aqueous extract of Echium amoenum for patients with Generalized Anxiety Disorder. Iran J Pharm Res 2012 Spring; 11 (2):697-701

- *“In this study, patients were randomly assigned to receive the aqueous extract (500 mg) plus fluoxetine or fluoxetine (20 mg/day) plus placebo. The results showed significant difference between the two groups in treatment of GAD. Moreover, there was not any significant difference between the two groups in terms of observed side effects. E. amoenum is effective on anxiety disorder, especially in higher dosage, without any serious side effects.”*
- *“The aim of this study was to assess the efficacy and tolerability of the aqueous extract of Echium amoenum in combination with SSRIs in patients with General Anxiety Disorder (GAD). The study was an 8-week double-blind randomized clinical trial. Thirty-seven adult outpatients who met the DSM-IV-TR criteria for GAD based on the structured clinical interview participated in the trial. In this study, patients were randomly assigned to receive the aqueous extract (500 mg) plus fluoxetine or fluoxetine (20 mg/day) plus placebo. The results showed significant difference between the two groups in treatment of GAD. Moreover, there was not any significant difference between the two groups in terms of observed side effects. E. amoenum is effective on anxiety disorder, especially in higher dosage, without any serious side effects.”*

Centella Asiatica

Centella Asiatica is a Promising Anxiolytic for the Treatment of Generalized Anxiety Disorder

Jana U. A clinical study on the management of generalized anxiety disorder with Centella asiatica. Nepal Med Coll J 2010 Mar;12(1):8-11

- *“The observations revealed that, CA not only significantly ($p < 0.01$) attenuated anxiety related disorders but it also significantly ($p < 0.01$) reduced stress phenomenon and its correlated depression. CA further significantly ($p < 0.01$) improved the willingness for adjustment and cognition. Results indicated that Centella asiatica may be useful in the treatment of GAD and may be used as a promising anxiolytic agent in the near future.”*

Chamomile

Chamomile Extract has Modest Anxiolytic Activity for the Treatment of Generalized Anxiety Disorder

Amsterdam JD. A randomized, double-blind, placebo-controlled trial of oral Matricaria recutita (chamomile) extract therapy for generalized anxiety disorder. J Clin Psychopharmacol 2009 Aug;29(4):378-82

- *“This is the first controlled clinical trial of chamomile extract for GAD. The results suggest that chamomile may have modest anxiolytic activity in patients with mild to moderate GAD. Future studies are need to replicate these observations.”*

Cyracos® lemon balm

Cyracos® Lemon Balm Extract Reduces Anxiety and Insomnia

Cases J. Pilot trial of Melissa officinalis L. leaf extract in the treatment of volunteers suffering from mild-to-moderate anxiety disorders and sleep disturbances. Med J Nutrition Metab 2011 Dec;4(3):211-218

- *“Cyracos® reduced anxiety manifestations by 18% ($p < 0.01$), ameliorated anxiety-associated symptoms by 15% ($p < 0.01$) and lowered insomnia by 42% ($p < 0.01$). As much as 95% of subjects (19/20) responded to treatment, of which 70% (14/20) achieved full remission for anxiety, 85% (17/20) for insomnia, and 70% (14/20) for both. Our study demonstrates, for the first time that chronic administration of Melissa officinalis L. relieves stress-related effects. It is critical that further studies incorporate a placebo and investigate physiological stress markers.”*

Galphimia Glauca

Galphimia Glauca has Anxiolytic Effectiveness Superior to Lorazepam

Herrera-Arellano A. Therapeutic effectiveness of Galphimia glauca vs. lorazepam in generalized anxiety disorder. A controlled 15-week clinical trial. Planta Med 2012 Sep;78(14):1529-35

- *"We concluded that G. glauca herbal medicinal product, standardized in 175 mg of galphimine-B and administered for 15 weeks to patients with generalized anxiety disorder, showed greater anxiolytic effectiveness than that obtained with lorazepam, with high percentages of therapeutic tolerability and safety."*

Herrera-Arellano A. Efficacy and tolerability of standardized herbal product from Galphimia glauca on generalized anxiety disorder. A randomized, double-blind clinical trial controlled with lorazepam. Planta Med 2007 Jul;73(8):713-7

- *"The present work compared the therapeutic effectiveness, safety, and tolerability of the new GgHP with lorazepam on patients with generalized anxiety disorder (GAD). By means of controlled, randomized, double-blind clinical trial, outpatients of either sex who matched the DSM-IV diagnostic criteria with a score of ≥ 19 points on the Hamilton Anxiety Scale (HAM-A) were included. The experimental group was treated orally with GgHP in capsules twice a day for 4 weeks. The control group received lorazepam (1 mg) under the same conditions and presentation. A total of 152 patients were included in the trial (72 in the experimental group). From the first week of treatment, GgHP showed important anxiolytic effectiveness, very similar to that produced with lorazepam. Both treatments showed important anxiolytic effectiveness, very similar to that produced with lorazepam. Both treatments showed therapeutic safety (no alterations on biochemical analysis of hepatic and renal function). Nevertheless, concerning side effects, GgHP evidenced a considerably higher tolerability than lorazepam."*

Ginkgo Biloba

Ginkgo Biloba Extract Enhances Cognitive Functioning and Alleviates Anxiety

Woelk H. Ginkgo biloba special extract EGb 761 in generalized anxiety disorder and adjustment disorder with anxious mood: a randomized, double-blind, placebo-controlled trial. J Psychiatr Res 2007 Sep;41(6):472-80

- *"EGb 761 was significantly superior to placebo on all secondary measures. It was safe and well tolerated and may thus be of particular value in elderly patients with anxiety related to cognitive decline."*
- *"One hundred and seven patients with generalized anxiety disorder (GAD, n=82) or adjustment disorder with anxious mood (ADWAM, n=25) according to the diagnostic and statistical manual of mental disorders, third edition- revised (DSM-III-R) were randomized to daily doses of 480 mg EGb 761, 240 mg EGb 761 or placebo for 4 weeks. Intention-to-treat (ITT) analyses were performed on the primary outcome measure, the Hamilton rating scale for anxiety (HAMA), and the secondary variables, the clinical global impression of change (CGI-C), the Erlangen anxiety tension and aggression scale (EAAS), the list of complaints (B-L'), and the patients global rating of change. The HAMA total scores decreased by -14.3 (+/-8.1), -12.1 (+/-9.0) and -7.8 (+/-9.2) in the high doses EGb 761, the low dose EGb 761 and the placebo group, respectively. Changes were*

significantly different from placebo for both treatment groups with $p=0.0003$ (high dose group) and $p=0.01$ (low dose)."

Kava-Kava extract LI 150

Kava-Kava extract LI 150 is as effective as Opipramol and Buspirone in Generalized Anxiety Disorder

Boerner RJ. Kava-Kava extract LI 150 is as effective as Opipramol and Buspirone in Generalized Anxiety Disorder—an 8-week randomized, double-blind multi-centre clinical trial in 129 out-patients. *Phytomedicine* 2003;10 Suppl 4:38-49

- *"Kava-Kava LI150 is well tolerated and as effective as Buspirone and Opipramol in the acute treatment of out-patients suffering from GAD."*

Lasea® Lavendula oil

Lasea® Lavendula Oil Capsules Significantly Reduce Anxiety and Sleep Disturbances in Patients with Major Depression

FiBLer M. A case series on the use of lavendula oil capsules in patients in patients suffering from major depressive disorder and symptoms of psychomotor agitation, insomnia and anxiety. *Complement Ther Med* 2014 Feb;22 (1):63-9

- *"In 6 cases, the combination of Lasea® and an antidepressant resulted in a reduction of MDD. Lasea® also reduced agitation in 6 cases. Psychological anxiety was reduced in 5, somatic anxiety, in 4 cases whereas sleep-onset and sleep-maintenance insomnia improved in 3 cases each. The results demonstrate that Lasea® reduces some anxiety related symptoms and sleep disturbances in MDD patients. Furthermore Lasea® significantly reduces psychomotor agitation. Additionally, the results indicate a significant global improvement stemming from the combination therapy of Lasea® and antidepressant medication."*

Lemon balm and Valerian

Combinations of Lemon Balm and Valerian Posses Anxiolytic Properties and Relieve Anxiety

Kennedy DO. Anxiolytic effects of a combination of *Melissa officinalis* and *Valeriana officinalis* during laboratory induced stress. *Phytother Res* 2006Feb;20(2): 96-102

- *"The results showed that 600 mg dose of the combination ameliorated the negative effects of DISS on ratings of anxiety. However, the highest dose (1800 mg) showed an increase in anxiety that was less marked but which reached significance during one testing session. In*

addition, all three doses led to decrements in performance on the Stroop task module within the battery, and the two lower doses led to decrements on the overall score generated on the DISS battery. These results suggest that a combination of Melissa officinalis and Valeriana officinalis possesses anxiolytic properties that deserve further investigation"

Magnesium preparation (Sympathyl)

Herbal/Magnesium Preparation (Sympathyl) Improves Symptoms in Mild-to-Moderate Anxiety Disorders

Hanus M. Double-blind, randomized, placebo-controlled study to evaluate the efficiency and safety of a fixed combination containing two plant extracts (Crataegus oxyacantha and Escholtzia californica) and magnesium in mild-to-moderate anxiety disorders. Curr Med Res Opin 2004 Jan;20 (1):63-71

- *"The preparation containing fixed quantities of Crataegus oxyacantha, Eschscholtzia californica, and magnesium proved safe and more effective than placebo in treating mild-to-moderate anxiety disorders. Sympathyl is produced and marketed by Laboratoire Innotech International, Arcueil, France."*

Passionflower

Passionflower is a More Advantageous Anxiolytic Choice than Oxanepam for Generalized Anxiety

Akhondzadeh S. Passionflower in the treatment of generalized anxiety: a pilot double-blind randomized controlled trial with oxazepam. J Clin Pharm Ther 2001 Oct;26(5):363-7

- *"The results suggest that Passiflora extract is an effective drug for the management of generalized anxiety disorder, and the low incidence of impairment of job performance with Passiflora extract compared to oxazepam is an advantage. A large-scale trial is justified."*

Rhodiola Rosea (Rhodax)

Rhodiola Rosea (Rhodax) Improves Symptoms of Generalized Anxiety Disorder

Bystritsky A. A pilot study of Rhodiola rosea (Rhodax) for generalized anxiety disorder (GAD). J Altern Complement Med. 2008 Mar;14(2):175-80

- *"Significant improvement in GAD symptoms was found with R. rosea, with a reduction in HARS scores similar to that found in clinical trials."*

Silexan

Silexan (Lavender oil) is Effective in Generalized Anxiety Disorder

Kasper S. Lavender oil preparation Silexan is effective in generalized anxiety disorder—a randomized, double-blind comparison to placebo and paroxetine. *Int J Neuropsychopharmacol* 2014 Jan 23:1-11

- *“The HAMA total score decreased by 14.1 +- 9.3 points for Silexan 160 mg/d, 12.8 +- 8.7 points for Silexan 80 mg/d, 11.3 +-8.0 points for paroxetine, and 9.5 +- 9.0 points for placebo (mean +- s.d.). Silexan 160 and 80mg/d were superior to placebo in reducing the HAMA total score ($p<0.01$) whereas paroxetine showed a trend towards significance ($p=0.10$) in the full analysis set. In the Silexan 160 mg/d group 73/121 patients (60.3%) showed a HAMA total score reduction >50% of the baseline value and 56 (46.3%) had a total score <10 points at treatment end, compared to 70/135 (51.9%) and 45 (33.3%) for Silexan 80 mg/d, 57/132 (43.2%) and 45 (34.1%) for paroxetine, and 51/135 (37.8%) and 40 (29.6%) for placebo. In addition, Silexan showed a pronounced antidepressant effect and improved general mental health and health-related quality of life.”*

Kasper S. Efficacy and safety of silexan, an new, orally administered lavender oil preparation, in subthreshold anxiety disorder—evidence from clinical trials. *Wien Med Wochenschr* 2010 Dec; 160(21-22):547-56

- *“Patients treated with silexan showed average HAMA total score decreases by between 10.4 +- 7.1 and 12.0 +- 7.2 points at week 6 and by between 11.8 +- 7.7 and 16.0 +- 8.3 points at week 10. In GAD silexan and lorazepam showed comparable HAMA total score reductions (90% CI for mean value difference: -2.3; 2.8 points).”*

Kasper S. Silexan, an orally administered Lavandula oil preparation, is effective in the treatment of ‘subsyndromal’ anxiety disorder: a randomized, double-blind, placebo controlled trial. *Int Clin Psychopharmacol* 2010 Sep; 25(5):277-87

- *“Lavandula oil preparation had a significant beneficial influence on quality and duration of sleep and improved general mental and physical health without causing any unwanted sedative or other drug specific effects. Lavandula oil preparation silexan is both efficacious and safe for the relief of anxiety disorder not otherwise specified. It has a clinically meaningful anxiolytic effect and alleviates anxiety related disturbed sleep.”*

Suanzaorentang

Chinese Remedy Suanzaorentang has the Same Anxiolytic Effect as Diazepam

Chen HC. Suanzaorentang versus diazepam: a controlled double-blind study in anxiety. *Int J Clin Pharmacol Ther Toxicol* 1986 Dec;24(12):646-50

- *“Suanzaorentang (250 mg t.i.d.) and diazepam (2 mg t.i.d.) had almost the same anxiolytic effect. However, suanzaorentang, but not diazepam, improved the psychomotor performance during the daytime. No significant subjective side effects were observed during treatment with suanzaorentang.”*

Sweet orange aroma

Sweet Orange Aroma has Anxiolytic Activity in Anxiety

Goes TC. Effect of sweet orange aroma on experimental anxiety in humans. J Altern Complement Med 2012 Aug;18(8):798-804

- *“Although more studies are needed to find out the clinical relevance of aromatherapy for anxiety disorders, the present results indicate an acute anxiolytic activity of sweet orange aroma, giving some scientific support to its use as a tranquilizer by aromatherapists.”*

Yiqiyangxin

Yiqiyangxin Chinese Medicine is Effective in the Treatment of Generalized Anxiety Disorder

Wang T. Efficacy of Yiqiyangxin Chinese medicine compound combined with cognitive therapy in the treatment of generalized anxiety disorders. Asian Pac J Trop Med 2012 Oct;5(10):818-22

- *“Yiqiyangxin Chinese medicine compound combined with cognitive therapy can be significantly reduce the recurrence after medicine withdrawal and is effective on generalized anxiety disorders. Furthermore, the incidence of adverse reactions is low. The treatment program is worthy clinic application in the further.”*

Vitamins, Minerals, Amino Acids, Omega-3 Fatty Acids, Nutraceuticals and Physiologics

5-HTP

5-HTP is Effective in Anxiety Disorder

Kahn RS. Effect of serotonin precursor and uptake inhibitor in anxiety disorders; a double-blind comparison of 5-hydroxytryptophan, clomipramine and placebo. *Int Clin Psychopharmacol* 1987 Jan;21(1):33-45

- *“A double-blind placebo-controlled study of 5-HTP and clomipramine was carried out on 45 patients suffering from anxiety disorders (DSM-III). Clomipramine has shown to be effective in that it induced significant improvement on all rating scales as compared to placebo. 5-HTP showed a moderate reduction of the symptomatology on the 90-item symptoms checklist (SCL-90) and the State Scale of Spielberger State-Trait Anxiety Inventory. Clomipramine and 5-HTP differed in their efficacy in that 5-HTP did not affect the associated depressive symptomatology. The results support the hypothesis that brain serotonergic pathways are involved in the pathogenesis of anxiety disorders, particularly in agoraphobia and panic disorders.”*

Micronutrients

Micronutrients Improve Anxiety and Stress Related Symptoms and Psychological Functioning

Rucklidge JJ. Psychological functioning 1 year after a brief intervention using micronutrients to treat stress and anxiety related to 2011 Christchurch earthquakes: a naturalistic follow-up. *Hum Psychopharmacol* 2014 May;29(3):230-43

- *“Disaster survivors improve psychologically over time regardless of receiving intervention; however, those taking micronutrients during the acute phase following a disaster show better outcomes, identifying micronutrients as a viable treatment for acute stress following a natural disaster with maintenance of benefits 1 year later.”*

Omega-3

Omega-3 Supplementation Lowers Anxiety Among Health Adults

Kiecolt-Glaser JK. Omega-3 supplementation lowers inflammation and anxiety in medical students: a randomized controlled trial. *Brain Behav Immun* 2011 Nov;25(8):1725-34

- *“These data suggest that n-3 supplementation can reduce inflammation and anxiety even among healthy young adults. The reduction in anxiety symptoms associated with n-3 supplementation provides the first evidence that n-3 may have the potential anxiolytic benefits for individuals without an anxiety disorder diagnosis.”*

Mind-Body Therapies Yoga, T'ai Chi, Qigong and Spa Therapies

Balneotherapy

Balneotherapy has a Significant Advantage Compared to Paxil in the Treatment of Generalized Anxiety Disorder

Dubois O. Balneotherapy versus paroxetine in the treatment of generalized anxiety disorder. Complement Ther Med 2010 Feb;18(1):1-7

- *“A total of 237 outpatients were enrolled in four centres; 117 were assigned randomly to BT and 120 to paroxetine. The mean change in HAM-A scores showed an improvement in both groups with a significant advantage of BT compared to paroxetine (-12.0 vs -8.7; $p < 0.001$). Remission and sustained response rates were also significantly higher in the BT group (respectively 19% vs 7% and 51% vs 28%). BT is an interesting way of treating GAD. Due to its safety profile it could also be tested in resistant forms of generalized anxiety and in patients who do not tolerate or are reluctant to pharmacotherapies.”*

Charcoal kiln saunas

Charcoal Kiln Saunas Improve Mood and Decrease Anxiety

Hayasaka S. Effects of charcoal kiln saunas (Jjimjilbang) on psychological states. Complement Ther Clin Pract 2008 May;14(2):143-8

- *“Changes in psychological states before and after sauna bathing were determined. All mood scales and both manifest anxiety measures were improved after bathing. Charcoal kiln sauna bathing appears to improve mood and decrease anxiety. It is a limitation of this study that this was a descriptive prospective and an uncontrolled intervention study.”*

Qigong

Qigong is recommended for Those Suffering with Anxiety

Chow YW. Biopsychosocial effects of qigong as a mindful exercise for people with anxiety disorders. J Altern Complement Med 2007 Oct; 13(8): 831-9

- *“We purpose, because of its potential therapeutic effects, that qigong can be considered as an alternative therapy to help meet the increasing demand of nonpharmacologic modalities in achieving biopsychosocial health for those suffering from anxiety in the general population.”*

Stone spa

Stone Spa Improves Mood and Decreases Anxiety

Hayasaka S. Effects of stone spa (Ganban-yoku) on psychological states. Complement Ther Clin Pract 2009 Aug;15(3):129-32

- *“The scores for Tension-Anxiety and Anger-Hostility and both anxiety measures were improved statistically after stone spa use. Stone spa use shows considerable promise for improving mood and reducing anxiety.”*

T'ai Chi

T'ai Chi is More Effective on Decreasing Anxiety than Drug Therapy Alone

Song QH. Effect of T'ai Chi exercise on the physical and mental health of the elder patients suffered from anxiety disorder. Int J Physiol Pathophysiol Pharmacol 2014 Mar 13;6(1):55-60

- *“After the elder patients suffered from the anxiety disorder are treated with T'ai Chi exercise in addition to drug therapy, their effect is more significant than those who only are treated by the drug. Meanwhile, if the patients are only treated by the drug, their disease is easy to reoccur after curing. However, if they insist on T'ai Chi exercise, the recurrence rate is low and the effect is significant.”*

Yoga-based lifestyle

Yoga Based Lifestyle Intervention Has Significant Effect on Anxiety

Gupta N. Effect of yoga based lifestyle intervention on state and trait anxiety. Indian J Physiol Pharmacol 2006 Jan-Mar;50(1):41-7

- *“The intervention consisted of asanas, pranayama, relaxation techniques, group support, individualized advice, and lectures and films on philosophy of yoga, the place of yoga in daily life, meditation, stress management, nutrition, and knowledge about illness. The outcome measures were anxiety scores, taken on the first and last day of the course. Anxiety scores, both state and trait anxiety were significantly reduced. Among the diseased subjects significant improvement was seen in the anxiety levels of patients of hypertension, coronary artery disease, obesity, cervical spondylitis and those with psychiatric disorders. The observations suggest that a short educational programme for lifestyle modification and stress management leads to remarkable reduction in anxiety scores within a period of 10 days.”*

Cognitive Behavioral Therapies

Autogenic training

Autogenic Training is Effective for the Treatment of Anxiety Disorders

Sakai M. Application of autogenic training for anxiety disorders: a clinical study in a psychiatric setting. Fukuoka Igaku Zasshi 1997 Mar;88(3):56-64

- *“The effects of autogenic training for anxiety disorders were investigated in a psychiatric setting of a medical school hospital and the predictors of this treatment outcome were identified. Fifty-five patients who meet the DSM-III-R criteria for anxiety disorders were treated individually with autogenic training by the author from October 1981 to October 1995. The medical records of the patients were investigated retrospectively. The results showed that the autogenic training was successful. Twenty-eight patients (51%) were cured, fourteen (25%) much improved, eight (15%) improved and five (9%) unchanged at the end of treatment. Forty-two patients (76%) were assessed as having successful treatment.”*

Meditation

Meditation is as effective as Medication in the Treatment of Generalized Anxiety Disorder

Vahia VN. Efficacy of meditation in generalized anxiety disorder. Indian J Psychiatry 1993 Apr;35(2):87-91

- *“A study was conducted to compare the efficacy of meditation with that of imipramine and chlordiazepoxide in the treatment of Generalized Anxiety Disorder. At the end of five weeks, meditation was found to be as effective as pharmacotherapy in controlling symptoms of anxiety. It was superior in altering trait anxiety (TMAS Scores). Meditation is an easy to learn and cost effective therapy. It has a distinct edge over pharmacotherapy in that it does not have the associated problems of habit formation, withdrawal effects, overdosage or other undesirable effects.”*

Mindfulness

Mindfulness for Treatment of Generalized Anxiety Disorder

Evans S. Mindfulness-based cognitive therapy for generalized anxiety disorder. J Anxiety Disord 2008 May;22(4):716-21

- *“MBCT may be an acceptable and potentially effective treatment for reducing anxiety and mood symptoms and increasing awareness of everyday experiences in patients with GAD.”*

Asmaee Majid S. Effect of mindfulness based stress management on reduction of generalized anxiety disorder. Iran J Public Health 2012;41(10):24-8

- *“Mindfulness-based stress reduction may be an acceptable intervention in the improvement of generalized anxiety disorder symptoms.”*

Hoge EA. Randomized controlled trial of mindfulness meditation for generalized anxiety disorder: effects on anxiety and stress reactivity. J Clin Psychiatry 2013 Aug;74(8):786-92

- *“These results suggest that MBSR may have a beneficial effect on anxiety symptoms in GAD and may also improve stress reactivity and coping as measured in a laboratory stress challenge.”*

Mindfulness Meditation Stress Reduction

Mindfulness Meditation Stress Reduction is Beneficial for the Treatment of Anxiety Disorders

Kabat-Zinn J. Effectiveness of a meditation-based stress reduction program in the treatment of anxiety disorders. Am J Psychiatry 1992 Jul;149(7):936-43

- *“A group mindfulness meditation training program can effectively reduce symptoms of anxiety and panic and can help maintain these reductions in patients with generalized anxiety disorder, panic disorder, or panic disorder with agoraphobia.”*

Hoge EA. Randomized controlled trial of mindfulness meditation for generalized anxiety disorder: effects on anxiety and stress reactivity. J Clin Psychiatry 2013 Aug;74(8):786-92

- *“These results suggest that MBSR may have a beneficial effect on anxiety symptoms in GAD and may also improve stress reactivity and coping as measured in a laboratory stress challenge.”*

Lee SH. Effectiveness of meditation-based stress management program as an adjunct to pharmacotherapy in patients with anxiety disorder. J Psychosom Res 2007 Feb;62(2):189-95

- *“A meditation-based stress management program can be effective in relieving anxiety symptoms in patients with anxiety disorder. However, well-designed, randomized, and controlled trials are needed to scientifically prove the worth of this intervention prior to treatment.”*

Relaxation training

Relaxation Training Shows Consistent and Significant Efficiency in Reducing Anxiety

Manzoni GM. Relaxation training for anxiety: a ten-years systemic review with meta-analysis. BMC Psychiatry 2008 Jun 2;8:41

- *“The results show consistent and significant efficacy of relaxation training in reducing anxiety. This meta-analysis extends the existing literature through facilitation of a better understanding of the variability and clinical significance of anxiety improvement subsequent to relaxation training.”*

Transcendental Meditation®

Transcendental Meditation® Technique for the Treatment of Anxiety Disorders

Orme-Johnson DW. Effects of the transcendental meditation technique on trait anxiety: a meta-analysis of randomized controlled trials. J Altern Complement Med 2014 May;20(5):330-41

- *“Populations with elevated initial anxiety levels in the 80th to 100th percentile range (e.g., patients with chronic anxiety, veterans with post-traumatic stress disorder, prison inmates) showed larger effect sizes (-0.74 to -1.2), with anxiety levels reduced to the 53rd to 62nd percentile range. Studies using repeated measures showed substantial reductions in the first 2 weeks and sustained effects at 3 years. Conclusion: Overall, TM practice is more effective than treatment as usual and most alternative treatments, with greatest effects observed in individuals with high anxiety. More research is needed in this area, especially with high-anxiety patients, conducted under medically supervised conditions.”*

Miscellaneous Therapies for the Treatment of Anxiety

Binaural beat tapes

Binaural Beat Tapes are Beneficial for Treatment of Mild Anxiety

Le Scouarnec RP. Use of binaural beat tapes for treatment of anxiety: a pilot study of tape preference and outcomes. Altern Ther Health Med 2001 Jan;7(1):58-63

- *“Listening to binaural beat tapes in delta/theta electroencephalogram range may be beneficial in reducing mild anxiety. Future studies should account for music preference among participants and include age as a factor in outcomes, incentives to foster tape listening, and a physiologic measure of anxiety reduction. A controlled trial that includes binaural beat tapes as an adjunctive treatment to conventional therapy for mild anxiety may be warranted.”*

Wahbeh H. Binaural beat technology in humans: a pilot study to assess psychologic and physiologic effects. J Altern Complement Med 2007 Jan-Feb;13(1):25-32

- *“Binaural beat technology may exhibit positive effect on self-reported psychologic measures, especially anxiety. Further research is warranted to explore the effects on anxiety using a larger, randomized and controlled trial.”*

Bright Light Therapy

Bright Light Therapy May Have Anxiolytic Effects

Youngstedt SD. Does bright light have an anxiolytic effect? An open trial. BMC Psychiatry 2007 Oct 30;7:62

- *“The results show consistent and significant (albeit modest) anxiolytic effects following acute bright light exposure in low anxiety adults. Further randomized, controlled trials in clinically anxious individuals are needed.”*

EEG alpha-increase biofeedback

EEG Alpha-increase Biofeedback shows Significant Reductions to Stressors Compared to Other Forms of Biofeedback for Generalized Anxiety Disorder

Rice KM. Biofeedback treatments of generalized anxiety disorder: preliminary results. Biofeedback Self Regul 1993 Jun;18(2):93-105

- *“Forty-five individuals with generalized anxiety (38 with GAD as defined by DSM-III) were randomized to 4 treatment conditions or a waiting list control. Patients received 8 sessions of either frontal EMG biofeedback, biofeedback to increase EEG alpha, biofeedback to decrease EEG alpha, or a pseudomeditation control condition. All treated subjects showed significant reductions in STAI-Trait Anxiety and psychophysiologic symptoms on the Psychosomatic Symptom Checklist. Only alpha-increase biofeedback subjects showed significant reductions in heart rate reactivity to stressors at separate psychophysiological testing session. Decreased self-report of anxiety was maintained at 6 weeks posttreatment.”*

Heart Rate Variability Biofeedback Therapy

Heart Rate Variability Biofeedback Therapy is Beneficial for the Treatment of Anxiety in Perinatal Depression

Beckham AJ. A pilot study of heart rate variability biofeedback therapy in the treatment of perinatal depression on a specialized perinatal psychiatry inpatient unit. Arch Womens Ment Health 2013 Feb; 16(1):59-65

- *“The use of HRVB was associated with statistically significant improvement on all instrument scores, the greatest of which was STAI scores, and most women reported frequent continued use of HRVB techniques after discharge. These results suggest that HRVB may be particularly beneficial in the treatment of the prominent anxiety features of perinatal depression, both in inpatient and outpatient settings.”*

Shirodhara Oil-dripping treatment

Shirodhara an Ayurvedic Oil-dripping Treatment has Relaxing Anxiolytic Effects

Xu F. Pharmacophyso-psychologic effect of Ayurvedic oil-dripping treatment using an essential oil from *Lavandula angustifolia*. J Altern Complement Med. 2008 Oct; 14(8):947-56

- *“Lavender Shirodhara showed potent anxiolytic and ASC-inducing or promoting effects, and induced the largest increase in foot skin temperature. The correlation between anxiolysis and ASC, as well as the correlation between these psychologic effects and elevated foot skin temperature were larger in the lavender Shirodhara than in the other two conditions. It was speculated that the psycho-physiologic effects of lavender Shirodhara would be brought about by three mechanisms: (1) the well-known relaxing action of essential oils from *L. angustifolia* mediated by olfactory nerves, (2) the pharmacologic action of substances absorbed through the skin or mucosa in sesame oil or lavender essential oil, and (3) the physiologic effect of sesame oil dripped on the forehead induced by the somato-autonomic reflex through thermosensors or pressure sensors in the skin or hair follicles via the trigeminal cranial nerve. The complicated pharmacophyso-psychologic action of Ayurvedic oil treatment may provide a useful model for future pharmacophyso-psychotherapy.”*

Uebaba K. Psychoneuroimmunologic effects of Ayurvedic oil-dripping treatment. J Altern Complement Med 2008 Dec; 14(10): 1189-98

- *“These results indicate that Shirodhara has anxiolytic and ASC-inducing effects, and it promotes a decrease of noradrenaline and exhibits a sympatholytic effect, resulting in the activation of peripheral foot skin circulation and immunopotentiality.”*

Obsessive-Compulsive Disorder

Vitamins, Minerals, Amino Acids, Omega-3 Fatty Acids, Nutraceuticals and Physiologics

Glycine

Glycine as Adjunctive Treatment of Obsessive-Compulsive Disorder

Greenberg WM. Adjunctive glycine in the treatment of obsessive-compulsive disorder in adults. J Psychiatric Res. 2009 Mar;43(6):664-70

- *“The glycine condition approached efficacy for treatment of OCD in this study, with the high dropout rate related to problems with palatability and small sample size the principal caveats. This may indicate a new strategy for the treatment of OCD, although confirmatory studies are clearly needed.”*

Inositol

Inositol is Effective in Treating Obsessive-compulsive Disorder

Fux M. Inositol treatment of obsessive-compulsive disorder. Am J Psychiatry 1996 Sep;153(9):1219-21

- *“The subjects had significantly lower scores on the Yale-Brown Obsessive Compulsive Scale when taking inositol than when taking placebo. The authors conclude that inositol is effective in depression, panic, and obsessive-compulsive disorder, a spectrum of disorders responsive to selective serotonin reuptake inhibitors.”*

Inositol with SSRIs

In Some Cases Inositol is Effective SSRI Adjunctive Therapy for Treatment Refractory Obsessive-Compulsive Disorder

Seedat S. Inositol augmentation of serotonin reuptake inhibitors in treatment-refractory obsessive-compulsive disorder: an open trial. Int Clin Psychopharmacol 1999 Nov;14(6):353-6

- *“Ten OCD patients who failed to respond to current and previous trials of serotonin reuptake inhibitors participated in open-label trial of inositol (18gm/day) [corrected] augmentation for 6 weeks. Symptoms were rated at 2 weekly intervals using the Yale-Brown Obsessive-Compulsive Scale, the Montgomery-Asberg Depression Rating Scale, and the Clinical Global Impressions (CGI) Scale. The majority of patients (n=7) did not respond to treatment with inositol augmentation on the CGI improvement item. However, a small number of patients (n=3) did report a clinically significant response on the CGI improvement item.”*

Micronutrient formula

Micronutrient Formula Puts Obsessions in Remission

Rucklidge JJ. Successful treatment of OCD with micronutrient formula following partial response to Cognitive Behavioral Therapy (CBT): a case study. J Anxiety Disord 2009 Aug;23(6): 836-40

- *“This case describes an 18 year-old male with OCD who first underwent cognitive behavioral therapy(CBT) for a 1 year period with a modest response (his OCD had shifted from severe to moderate). Within a year, his anxiety had deteriorated back to the severe range and now had major depression. He then entered an ABAB design trial using a nutritional formula consisting of mainly minerals and vitamins (together know as micronutrients). After 8 weeks on this formula, his mood was stabilized, his anxiety was reduced, and his obsessions were in remission. The treatment was then discontinued for 8 weeks, during which time his obsessions and anxiety worsened and his mood dropped. Reintroduction of the formula again improved the symptoms. This case illustrates the importance of considering the effect micronutrients have on mental illness.”*

N-acetylcysteine with SSRIs

N-acetylcysteine Augmentation in SSRI Refractory Obsessive-Compulsive Disorder

Lafleur DL. N-acetylcysteine augmentation in serotonin reuptake inhibitor refractory obsessive-compulsive disorder. Psychopharmacology (Berl) 2006 Jan;184(2):254-6

- *“NAC augmentation was effective in treating SRI-refractory OCD in this single case. Further research I warranted to investigate the use of NAC and other glutamate modulating agents in the treatment of OCD.”*

Afshar H. N-acetylcysteine add-on treatment in refractory obsessive-compulsive disorder: a randomized, double-blind, placebo-controlled trial. J Clin Psychopharmacol 2012 Dec;32(6):797-803

- *“This trial suggests that N-acetylcysteine may be a safe and effective option to augment standard treatment in patients with refractory obsessive-compulsive disorder.”*

Sarcosine Therapy

Sarcosine Therapy for Obsessive-Compulsive Disorder

Wu PL. Sarcosine therapy for obsessive compulsive disorder: a prospective, open-label study. J Clin Psychopharmacol 2011 Jun;31(3):369-74

- *“Sarcosine treatment can achieve a fast therapeutic effect in some OCD patients, particularly those who are treatment naïve. The study supports the glycine transporter-1 as a novel target for developing new OCD treatment. Large-series placebo-controlled, double-blind studies are recommended.”*

Zinc

Zinc is an Effective Add-on Agent for the Treatment of Obsessive-Compulsive Disorder

Sayyah M. Evaluation of oral zinc sulfate effect on obsessive-compulsive disorder: a randomized placebo-controlled clinical trial. Nutrition 2012;28(9):892-5

- *“The results show that zinc, as adjuvant agent for obsessive-compulsive disorder, produces improved outcomes.”*

Western & Islamic Herbal Medicines and Psilocybin Mushrooms

Borage

Borage Extract is Effective for the Treatment of Obsessive-Compulsive Disorder

Sayyah M. Efficacy of aqueous extract of *Echium amoenum* in the treatment of obsessive-compulsive disorder. *Prog Neuropsychopharmacol Biol Psychiatry* 2009 Nov 13;33(8):1513-6

- *“This study investigated the efficacy and safety of the aqueous extract of E. amoenum in the treatment of obsessive-compulsive disorder. Forty-four patients were randomly assigned to receive either E. amoenum aqueous extract (500mg/day) or placebo in a 6-week, double-blind, parallel-group trial. Patients were assessed before the study and during weeks 1, 2, 4, and 6 by the Yale-Brown Obsessive Compulsive (Y-BOCS), the Hamilton Rating Scale for Anxiety (HAM-A), and a score sheet on adverse effects. In weeks 4 and 6, the extract showed a significant superiority over placebo in reducing obsessive and compulsive and anxiety symptoms. The results suggest that E. amoenum aqueous extract has some anti obsessive and compulsive effects.”*

Milk Thistle

Milk Thistle is as effective as Prozac in the Treatment of Obsessive-Compulsive Disorder

Sayyah M. Comparison of *Silybum marianum* (L.) Gaertn with fluoxetine in the treatment of obsessive-compulsive disorder. *Prog Neuropsychopharmacol Biol Psychiatry* 2010 Mar 17;34(2):362-5

- *“Our objective in this study was to compare the efficacy of the extract of S. marianum (L.) with fluoxetine in the treatment of OCD. The study was an 8-week pilot double-blind randomized trial. Thirty five adult outpatients who met DSM-IV-TR criteria for OCD based on the structured clinical interview participated in the trial. The minimum score of Yale-Brown Scale for OCD was 21 for all patients. In this double-blind and randomized trial, patients were randomly assigned to receive either capsule of the extract (600 mg/day) or fluoxetine (30 mg/day) for 8 weeks. The results showed no significant difference between the extract and fluoxetine in the treatment of OCD. There was also no significant difference between the two groups in terms of observed side effects.”*

Psilocybin

Psilocybin is Associated with Reductions in Obsessive-Compulsive Symptoms

Moreno FA. Safety, tolerability, and efficacy of psilocybin in 9 patients with obsessive-compulsive disorder. J Clin Psychiatry 2006 Nov;67(11):1735-40

- *“In a controlled clinical environment, psilocybin was safely used in subjects with OCD and was associated with acute reductions in core OCD symptoms in several subjects.”*

St. John’s Wort

St. John’s Wort is Effective in Obsessive-Compulsive Disorder

Taylor LH. An open-label trial of St. John’s Wort (*Hypericum pertoratum*) in obsessive-compulsive disorder. J Clin Psychiatry 2000 Aug;61(8):575-8

- *“Significant improvement was found with Hypericum, with a drop-in Y-BOCS score similar to that found in clinical trials. The fact that a significant change was found as early as 1 week into treatment suggests a possible role initial placebo response, although improvement grew larger over time. Results warrant a placebo-controlled study of Hypericum OCD.”*

Mind-Body Therapies

Aerobic exercise

Aerobic Exercise Improves Outcome in Obsessive-Compulsive Disorder

Brown RA. A pilot study of moderate-intensity aerobic exercise for obsessive compulsive disorder. J Nerv Ment Dis 2007 Jun;195(6):514-20

- *“Study findings at the end of this 12-week aerobic exercise intervention point to beneficial effect (Cohen’s $d=1.69$) on reduction in OCD symptom severity. Further, reductions in OCD symptom severity appear to persist 6 months later. Lastly, improvement in overall sense of well-being was observed after the 12-week intervention. Results of this study suggest that a randomized clinical trial evaluating the efficacy of this 12-week aerobic exercise intervention is warranted.”*

Abrantes AM. Acute changes in obsessions and compulsions following moderate-intensity aerobic exercise among patients with obsessive-compulsive disorder. J Anxiety Disord 2009 Oct;23(7):923-7

- *“Participants reported reductions in negative mood, anxiety, and OCD symptoms at the end of each exercise session relative to the beginning. Changes in the magnitude of the effect of exercise in reducing negative mood and anxiety remained fairly stable while levels*

of self-reported obsessions and compulsions decreased over the duration of the intervention. Results of this study point toward the promising effect of exercise for acute symptom reduction in patients with OCD.”

Kundalini Yogic Meditation

Kundalini Yogic Meditation Techniques are Effective for the Treatment of Obsessive-Compulsive Disorder

Shannahoff-Khalsa DS. Randomized controlled trial of yogic meditation techniques for patients with obsessive-compulsive disorder. *CNS Spectr.* 1999 Dec; 4(12):34-47

- *“The objective of this study was to compare efficacy of two meditation protocols for treating patients with obsessive-compulsive disorder (OCD). Patients were randomized to two groups-matched for sex, age, and medication status-and blinded to the comparison protocol. They were told the trial would last for 12 months, unless one protocol proved to be more efficacious. If so, groups would merge, and the group that received the less efficacious treatment would also be afforded 12 months of the more effective one. The study was conducted at Children’s Hospital, San Diego, Calif. Patients were selected according to Diagnostic and Statistical Manual of Mental Disorders, Third Edition-Revised (DSM-III-R) criteria and recruited by advertisements and referral. At baseline, Group 1 included 11 adults and 1 adolescent, and Group 2 included 10 adults. Group 1 employed a kundalini yoga meditation protocol and Group 2 employed the Relaxation Response plus Mindfulness Meditation technique. Baseline and 3 month interval testing was conducted using the Yale-Brown Obsessive Compulsive (SCL-90-R OC) and Global Severity Index (SCL-90-R GSI) scales, Profile of Moods scale (POMS), Perceived Stress Scale (PSS), and Purpose in Life (PIL) test. Seven adults in each group completed 3 months of therapy. At 3 months, Group 1 demonstrated greater improvements (Student’s paired t-tests) showed that Group 1 significantly improved on all six scales, but Group 2 had no improvements. Groups were merged for additional year using Group 1 techniques. At 15, months the final group (N=11) improved 71%, 62%, 66%, 74%, 39% and 23%, respectively, on the Y-BOCS, SCL-90-R OC, SCL-90-R GSI, POMS, PSS, and PIL; $P<0.003$ (analysis of variance). This study demonstrates that kundalini yoga techniques are effective in the treatment of OCD.”*

Yoga breathing techniques

Yoga Breathing Techniques are Effective in the Treatment of Obsessive-Compulsive Disorder

Shannahoff-Khalsa DS. Clinical case report: efficiency of yogic techniques in the treatment of obsessive-compulsive disorders. *Int J Neurosci* 1996 Mar;85(1-2):1-17

- *“A specific yogic breathing pattern has been prescribed for the treatment of OCD, as well as others for treating generalized anxiety. A one year course of therapy was followed. Subjects improved on the Yale-Brown Obsessive-Compulsive Scale (Y-BOCS) comparing*

baseline with three, six, nine & 12 month results (one way ANOVA for repeated measures, $F(4,12)= 3.343$, $p < .046$). Five patients completed the study (Y-BOCS results were 83%, 79%, 65%, 61% improvement, and one at-18%), group mean improvement of +54%. The Symptoms Checklist-90-R showed significant improvement comparing baseline and 12 months using two-tailed T-tests for OCD ($t=13.856$, $p < .001$), anxiety ($t=3.167$, $p < .051$), and global severity indexes ($t=7.314$, $p = .005$). Perceived Stress Scale scores showed significant improvement for the five test periods (one-way ANOVA for repeated measures, $F(4,12)= 9.114$, $p < .001$). Five patients were well stabilized on fluoxetine prior to the study, three stopped medication after seven months or less, and two significantly reduced it, one by 25% and the other by 50%. These techniques, merit further study under controlled conditions and could help lead to new approaches for the treatment of OCD and perhaps other impulse control and anxiety-related disorders."

Bright Light Therapy and Chronotherapy

Bright Light Therapy

Successful Treatment of Obsessive-Compulsive Disorder with Bright Light Therapy

Hoflich G. Successful treatment of seasonal compulsive syndrome with phototherapy. *Nervenarzt*. 1992 Nov;63(11):701-4

- *"We report the case of a 40-year-old woman with seasonal form of obsessive compulsive disorder (OCD) which was usually accompanied by obsessions and occurred only in autumn or winter. Frequently, the OCD symptomatology was accompanied by depression. After a 12 day treatment with full spectrum bright light (3000 lux; 2 hours a day between 9 and 11 am) without changing the long-term antidepressive medication (125 mg amitriptyline/day) there was a complete remission of OCD symptomatology, with no relapse during the next months."*

Chronotherapy with Cognitive Behavioral Therapy

CBT Augmented with Chronotherapy for Obsessive-Compulsive Disorder

Coles ME. Compulsion or chronobiology? A case of severe obsessive-compulsive disorder treated with cognitive-behavioral therapy augmented with chronotherapy. *J Clin Sleep Med* 2011 Jun 15;7(3):307-9

- *"OCD patients with nighttime compulsions may receive light exposure that results in delayed sleep times/circadian phase. Chronotherapy may enhance outcomes for refractory OCD patients, particularly those who perform compulsions at night."*

Cognitive Behavioral Therapies

Bibliotherapy support group (for hoarding disorder)

Bibliotherapy Support Group May be a Promising Intervention for Hoarding Disorder

Frost RO. The effectiveness of a biblio-based support group for hoarding disorder. Behav Res Ther 2011 Oct;49(10):628-34

- *“These findings suggest that a facilitated biblio-based group may be a promising intervention for hoarding disorder.”*

Eye Movement Desensitization and Reprocessing

Eye Movement Desensitization and Reprocessing (EMDR) is More Therapeutic than Celexa in Treatment of Obsessive-Compulsive Disorder

Nazari H. Comparison of eye movement desensitization and reprocessing with citalopram in treatment of obsessive-compulsive disorder. Int J Psychiatry Clin Pract 2011 Nov;15(4):270-4

- *“It is concluded that although both therapeutic methods (EMDR and Citalopram) had significant effect in improving obsessive signs but it seems that in short term EMDR has better effect in improvement of final outcome of OCD.”*

Mindfulness

Mindfulness is Effective for Obsessive-Compulsive Disorder

Wilkinson-Tough M. Is mindfulness-based therapy an effective intervention for obsessive-intrusive thoughts: a case series. Clin Psychol Psychother 2010 May-Jun;17(3):250-68

- *“Three participants received a relaxation control intervention followed by a six-session mindfulness-based intervention which emphasized daily practice. Following therapy all participants demonstrated reductions in Yale-Brown Obsessive-Compulsive Scale scores to below clinical levels, with two participants maintaining this at follow-up. Qualitative analysis of post-therapy feedback suggested that mindfulness skills such as observation, awareness and acceptance were seen as helpful in managing thought-action fusion and suppression. Despite being limited by small participants numbers, these results suggest that mindfulness may be beneficial to some people experiencing intrusive unwanted thoughts and further research could establish the possible efficacy of this approach in larger samples.”*

Movement Decoupling, for Trichotillomania

Movement Decoupling: A Self-help Intervention for the Treatment of Trichotillomania

Moritz S. Movement decoupling: A self-help intervention for the treatment of trichotillomania. *J Behav Ther Exp Psychiatry* 2011 Mar;42 (1):74-80

- *“Trichotillomania (TTM) is classified as an impulse control disorder characterized by the recurrent urge to pullout one’s hair resulting in noticeable hair loss. Cognitive-behavioral therapy, involving habit reversal training, currently represents the treatment of choice. The present study assed the feasibility and effectiveness of a novel self-help technique, entitled decoupling (DC). DC aims at attenuating TTM by performing movements that decouple the behavioral elements involved in hair pulling. A total of 42 subjects with TTM were recruited via self-help forums for TTM and were randomized either to DC or progressive muscle relaxation (PMR). After four weeks, participants were asked to fill out the same questionnaires as before and rate the effectiveness of the intervention. The completion rate was high and the reliability of the assesments at least satisfactory. The DC group showed a significantly greater decline on the Massachusetts General Hospital –Hair Pulling Scale, which served as the primary outcome, relative to PMR indicating a medium to strong effect size. Declines on scales tapping depression and obsessive-compulsive disorder were comparable between the two groups. Despite some methodological limitations and need for replication including follow-up and expert ratings, the present study suggests that DC may prove beneficial to a substantial number of individuals affected with TTM.”*

Hertenstein E. Mindfulness-based cognitive therapy in obsessive-compulsive disorder—a qualitative study on patients experiances. *BMC Psychiatry* 2012 Oct 31;12:185

- *“Participants valued the treatment as helpful in dealing with their OCD and OCD related problems. Two thirds of the patients reported a decline in OCD symptoms. Benefits included an increased ability to let unpleasant emotions surface and live more consciously in the present. However, participants also discussed several problems. The data provide preliminary evidence that patients with OCD find aspects of the current MBCT protocol acceptable and beneficial. The authors suggest to further explore MBCT as complementary treatment strategy for OCD.”*

Miscellaneous Therapies

Diet

Dietary Treatment Cure Chronic Obsessional Ruminations

Rippere V. Dietary treatment of chronic obsessional ruminations. Br. J Clin Psychol 1983 Nov;22(Pt 4): 314-6

- *“Chronic obsessional ruminations may prove resistant to psychological treatment because they are not psychological in nature but epiphenomena of brain dysfunction secondary to nutritional factors. The case is described of a chronic, treatment-resistant ruminator who made a dramatic and lasting recovery when a high protein breakfast was added to his elimination diet regimen, undertaken when years of psychological and pharmacological treatment had failed. Biochemical and clinical evidence supports the hypothesis that hypoglycaemia secondary to inappropriate diet was the cause of his disorder. Dietary contributions to obsessional ruminations should probably be sought early on in the assessment of such patients.”*

Electroacupuncture

Electroacupuncture for Obsessive-Compulsive Disorder

Zhang ZJ. Electroacupuncture for refractory obsessive-compulsive disorder: a pilot waitlist-controlled trial. J Nerv Ment Dis 2009 Aug;197(8):619-22

- *“EA additional treatment produced significantly greater improvements at end point compared with the waitlist group in reducing both Yale-Brown Obsessive-Compulsive Scale (10.2 +/-4.2 vs 18.8 +/- 7.4, p=0.004) and Clinical Global Impression-Severity scores (3.0+/- 1.1 vs 4.4+/- 1.1, p =0.002). As an additional therapy, EA is effective in alleviating OCD symptoms of treatment-resistant patients.”*

Neurofeedback

Neurofeedback has Efficacy in the Treatment of Obsessive-Compulsive Disorder

Surmeli T. Obsessive compulsive disorder and the efficacy of qEEG-guided neurofeedback treatment: a case series. Clin EEG Neurosci 2011 Jul;42(3):195-201

- *“Thirty-three out of 36 subjects who received NF training showed clinical improvement according to the Yale-Brown obsessive-compulsive scale (Y-BOCS). The Minnesota*

multiphasic inventory (MMPI) was administered before and after treatment to 17 of the subjects. The MMPI results showed significant improvements not only in OCD measures, but all of the MMPI results showed a general decrease. Finally, according to the physicians evaluation of the subjects using the clinical global impression scale (CGI), 33 of the 36 subjects were rated as improved. Thirty-six of the subjects were followed for an average of 26 months after completing the study. According to follow-up interviews conducted with them and/or their family members 19 of the subjects maintained the improvements in their OCD symptoms. This study provides good evidence for the efficacy for NF treatment in OCD."

Koprivova J. Prediction of treatment response and the effect of independent component neurofeedback in obsessive-compulsive disorder: a randomized, sham-controlled, double-blind study. *Neuropsychobiology* 2013;67(4):210-23

- *"Independent component NFB in OCD proved useful in percentage improvement of compulsions. Based on our correlation analyses we hypothesize the we targeted a network related to treatment resistance."*

Psychedelic drugs

Psychedelic Drugs Are Potential Treatments for Obsessive-Compulsive Disorder

Delgado PL. Hallucinogens, serotonin and obsessive-compulsive disorder. *J Psychoactive Drugs* 1998 Oct-Dec;30(4):359-66

- *"This article will briefly review the relevant clinical and preclinical studies relating to the effects of hallucinogens on OCD. These data suggest that activation of 5-HT₂ receptors by hallucinogens may lead to acute reduction of, as well as possible longer-lasting beneficial effects on, the symptoms of OCD. Evidence for and against involvement of 5-HT_{2A} and/or 5-HT_{2C} receptors in the therapeutic effects of drug therapies for OCD are reviewed. Issues related to the pharmacological properties and safety of psychedelic drugs, when considered as potential treatments for patients with OCD, are summarized."*

Brandrup E. LSD treatment in severe case of compulsive neurosis. *Acta Psychiatr Scand* 1977 Feb;55(2):127-41

- *"A detailed account is given of the course and outcome of the treatment with LSD of an incapacitating compulsive-neurotic condition in a 30-year-old male. The treatment took place over 1 ½ years from the autumn of 1962, and the patient, who has been followed since then, is completely cured symptomatically. In addition, fortunate change in his general personality has taken place. The events during the LSD sessions revealed the basic elements of a development of his personality since childhood, particularly the toilet-training period, which resulted in a typical compulsive character neurosis. In turn, this character neurosis became the matrix for the outbreak of his manifest neurotic compulsions which began 4 years before the onset of treatment. The material which*

emerged was in complete accordance with Freudian theory. No interpretations were given. While under the action of the drug the patient was left alone except for brief visits by the doctor and nurse. He was free to call them if his anxiety became too strong for him to cope alone. Besides, he had the support of reporting his experiences to the doctor after the LSD-effect had worn off and discussing them during interviews between the LSD days, still without interpretations being given to him. Practical details of procedure are reported. The necessary caution in employing LSD for treatment purposes, especially the selection of patients, is emphasized: theoretical implications of the psychological material and the course of the curative process are discussed."

Phobia's and Social Anxiety Disorder

Botulinum Toxin A

Botulinum Toxin A is Effective in Reducing Hyperhidrosis and Improving Symptoms of Social Anxiety Disorder

Connor KM. Botulinum toxin treatment of social anxiety disorder with hyperhidrosis: a placebo-controlled double-blind trial. J Clin Psychiatry 2006 Jan;67(1):30-6

- *"Forty subjects were randomly assigned to treatment and included in analyses. Response rates were 75% (15/20) for botulinum toxin type A versus 15% (3/20) for placebo on the HDSS ($p < .001$). Botulinum toxin type A produced significantly more improvement in many daily activities that had been limited ($p < .01$), as well as greater improvement in work and social functioning in overall disability ($p < .05$). Botulinum toxin type A was well tolerated, as was paroxetine."*

Cannabidiol

Cannabidiol has Anxiolytic Effects in Social Anxiety Disorder

Crippa JA. Neural basis of anxiolytic effects of cannabidiol (CBD) in generalized social anxiety disorder: a preliminary report. J Psychopharmacol 2011 Jan;25(1):121-30

- *"These results suggest that CBD reduces anxiety in SAD and that this is related to its effects on activity in limbic and paralimbic brain areas."*

Bergamaschi MM. Cannabidiol reduces the anxiety induced by simulated public speaking in treatment-naïve social phobia patients. Neuropsychopharmacology 2011 May;36(6):1219-26

- *"Pretreatment with CBD significantly reduced anxiety, cognitive impairment, discomfort, and alert levels when compared with the control group as assessed with the VAMS. The SSPS-N scores evidenced significant increases during the testing of placebo group that was almost abolished in the CBD group. No significant differences were observed between CBD and HC in SSPS-N scores or in the cognitive impairment, discomfort, and alert factors of VAMS. The increase in anxiety induced by the SPST on subjects with SAD was reduced with use of CBD, resulting in similar response as the HC."*

Emotional Freedom Techniques

Single Treatment Session of Emotional Freedom Techniques (EFT) Reduces Specific Phobias

Wells S. Evaluation of meridian-based intervention, Emotional Freedom Techniques (EFT), for reducing specific phobias of small animals. J Clin Psychol 2003 Sep;59(9):943-66

- *“Randomly assigned participants were treated individually for 30 min with EFT (n= 18) or a comparison condition, diaphragmatic breathing (DB) (n = 17). ANOVAS revealed that EFT produced significantly greater improvement than did DB behaviorally and on three self-report measures, but not on pulse rate. The greater improvement for EFT was maintained, and possibly enhanced, at six-to nine months follow-up on behavioral measure. These findings suggest that single treatment session using EFT to reduce specific phobias can produce valid behavioral and subjective effects. Some limitations of this study also are noted and clarifying research suggested.”*

Salas MM. The immediate effect of brief energy psychology intervention (Emotional Freedom Techniques) on specific phobias: a pilot study. Explore (NY) 2011 May-Jun;7(3):155-61

- *“Emotional Freedom Techniques significantly reduced phobia-related anxiety (BAI $P = .042$; SUDS $P = .002$) and ability to approach the feared stimulus (BAT $P = .046$) when presented as an initial treatment of following diaphragmatic breathing. When presented as the initial treatment, the effects of EFT remained through the presentation of the comparison intervention. The efficacy of EFT in treating specific phobias demonstrated in several earlier studies is corroborated by the current investigation.”*

Manasamitra Vataka

Ayurvedic Medication Manasamitra Vataka is Effective as Klonopin in the Treatment of Generalized Anxiety Disorder with Comorbid Social Phobia

Tubaki BR. Clinical efficacy of Manasamitra Vataka (an Ayurveda medication) on generalized anxiety disorder with comorbid generalized social phobia: a randomized controlled study. J Altern Complement Med 2012 Jun;18(6):612-21

- *“This is the first study conducted on the efficacy of Manasamitra Vataka in anxiety disorders. The results suggest that Manasamitra Vataka is effective in the management of GAD with comorbid generalized social phobia. Add-on effect of Shirodhara reduced the daytime sleepiness. Further studies on Manasamitra Vataka need to be carried out to judge its potential as a first-line treatment modality.”*

Protein-source Tryptophan

Protein-source Tryptophan is an Efficacious Treatment for Social Anxiety Disorder

Hudson C. Protein-source tryptophan as an efficacious treatment for social anxiety disorder: a pilot study. Can J Physiol Pharmacol 2007 Sep;85(9):928-32

- *“Protein-source tryptophan with carbohydrate, but not carbohydrate alone, resulted in significant improvement on an objective measure of anxiety. Protein-source tryptophan combined with a high glycemic carbohydrate is a potential anxiolytic to those suffering from social phobia.”*

Radio Electric Asymmetric Conveyor Brain Stimulation

Radio Electric Asymmetric Conveyor Brain Stimulation is as effective as Zoloft in Social Anxiety Disorder

Fontani V. Social anxiety disorder: radio electric asymmetric conveyor brain stimulation verses sertraline. Patient Prefer Adherence 2011;5:581-6

- *“Ten of 23 subjects on NPPO-REAC and six of the 20 taking sertraline were much improved or very much improved 1 month after the first NPPO-REAC cycle (t1). Sixteen of the subjects on NPPO-REAC and ten of the subjects taking sertraline were much improved or very much improved 1 month after the second NPPO-REAC cycle (t2). In respect of the Liebowitz Social Anxiety Scale, at t1 NPPO-REAC resulted in statistically more efficiency for sertraline on both fear and avoidance total scores. At t2, NPPO-REAC resulted in statistically more efficiency for sertraline on fear but not on avoidance. NPPO-REAC is an effective treatment for SAD, allowing substantial and clinically meaningful reductions in symptoms and disability in comparison with sertraline.”*

Panic Disorder

Autogenic training

Panic Disorder Successfully Treated with Autogenic Training and without Medication

Sakai M. Two cases of panic disorder treated with autogenic training and in vivo exposure without medication. Psychiatry Clin Neurosci 1996 Dec;50(6):335-6

- *“The aim of this study was to use autogenic training in combination with in vivo exposure in the behavioral treatment of panic disorder without medication. Two cases of panic disorder with agoraphobic avoidance were presented. Case 1 was a 33 year old married who exhibited mild panic symptoms, and case 2 was a 23 year old single male who had severe panic symptoms. Both subjects were successfully treated with the combination of these two techniques. Treatment effects were maintained for 9 years as a follow up in case 1, and for 4 years in case 2.”*

Sakai M. A clinical study of autogenic training-based behavioral treatment for panic disorder. Fukuoka Igaku Zasshi 1996 Mar;87(3):77-84

- *"The results showed that this autogenic training-based behavioral treatment had successful results. Fifteen patients were cured, nine much improved, five improved, and five unchanged at the end of treatment. Improvement trends were found as for the severity of panic attack and the severity of agoraphobic avoidance. No consistent findings about predictors emerged when such pretreatment variables as demographics and severity of symptoms were used to predict the outcome. Also, three treatment variables showed useful predictive power. First, practicing the second standard autogenic training exercise satisfactorily predicted better outcomes. Second, application of vivo exposure was found to be positively associated with the treatment outcome in patients with agoraphobic avoidance. Third, longer treatment periods were associated with better outcomes. These findings suggested that the autogenic training-based behavioral treatment could provide relief to the majority of panic disorder patients."*

Ayahuasca

Hallucinogenic Brew Ayahuasca Alleviates Signs of Hopelessness and Panic-like Related Symptoms

Santos RG. Effects of ayahuasca on psychometric measures of anxiety, panic-like and hopelessness in Santo Daime members. J Ethnopharmacol 2007 Jul 25;112(3):507-13

- *"The present study investigated ayahuasca for at least 10 consecutive years. The study was done in the Santo Daime church, where the questionnaires were administered 1hr after the ingestion of the brew, in a double-blind, placebo-controlled procedure. While under the acute effects of ayahuasca, participants scored lower on the scales for panic and hopelessness related states. Ayahuasca ingestion did not modify state-or trait anxiety. The results are discussed in terms of possible use of ayahuasca in alleviating signs of hopelessness and panic-like related symptoms."*

Bibliotherapy, for symptom improvement

Bibliotherapy is Effective for Panic Disorder

Nordin S. Expanding the limits of bibliotherapy for panic disorder: randomized trial of self-help without support but with a clear deadline. Behav Ther 2010 Sep;41(3):267-76

- *"In this study, participants were randomized to either unassisted bibliotherapy (n=20) with a scheduled follow-up telephone interview or to a waiting list control group (n=19). Following a structured psychiatric interview, participants in the treatment group were sent a self-help book consisting of 10 chapters based on cognitive behavioral strategies for the treatment of panic disorder. No therapist contact of any kind was provided during the treatment phase, which lasted for 10 weeks. Results showed that the*

treatment group had, in comparison to control group, improved on all outcome measures at post treatment and at 3-month follow-up. The tentative conclusion drawn from these results is that pure bibliotherapy with a clear deadline can be effective for people suffering from panic disorder with or without agoraphobia."

Bibliotherapy, for relapse avoidance

Relapse Prevention Program Delivered by Bibliotherapy Reduces Panic Attacks

Wright J. A bibliotherapy approach to relapse prevention in individuals with panic attacks. J Anxiety Disord 2000 Sep-Oct;14(5):483-99

- *"Compared with a wait list control group, individuals receiving RP exhibited significant reductions on measures of frequency of panic attacks, panic cognitions, anticipatory anxiety, avoidance, and depression. In addition, individuals in the RP group were more likely to attain a "clinically significant change" in status on both panic-free status and level of avoidance more frequently than individuals in the control group. When compared with treatment effects evaluated in two prior phases of this study, the obtained results appear to be the product of a synchronous effect of bibliotherapy and minimal phone contact during the 6-month follow-up period. The results reflect the importance of brief therapist contact in increasing motivation for active participation in bibliotherapy interventions."*

Bright Light Therapy

Bright Light Therapy is suggested for Seasonal Panic Disorder

Sandyk R. Seasonal panic disorder: a possible variant of seasonal affective disorder. Int J Neurosci 1992Feb;62(3-4):263-7

- *"Moreover, since administration of artificial bright light therapy is currently the most effective treatment for SAD, it is suggested that patients with panic disorder should be questioned as to whether their symptoms are seasonally related. If a positive association is established, these patients should be offered treatment with bright light therapy prior or coincident with institution of pharmacotherapy."*

Continuous Positive Airway Pressure

Continuous Positive Airway Pressure (CPAP) Reduces Panic Attacks

Takaesu Y. Effects of nasal continuous positive airway pressure on panic disorder comorbid with obstructive sleep apnea syndrome. Sleep Med 2012 Feb;13(2):156-60

- *“The frequency of panic attacks, total PDSS score, and frequency of alprazolam use for alleviating the attack symptoms were significantly decreased during the optimal CPAP period than during the baseline period and the sham CPAP period. Among the PDSS subitems, the frequency of attacks, panic distress, work impairment, and social impairment showed significant improvements during the optimal pressure period. Our results suggest that OSAS contributes to PD aggravation, and a combination of pharmaceutical treatment for PD and OSAS-specific treatments such as CPAP could be recommended for patients with PD comorbid with OSAS.”*

Inositol

Inositol Outperforms Luvox for Reducing Panic Attacks and Lessens the Severity of Panic Attacks and Agoraphobia.

Palatnik A. Double-blind, controlled, crossover trial of inositol versus fluvoxamine for the treatment of panic disorder. J Clin Psychopharmacol 2001 Jun;21(3):335-9

- *“Twenty patients completed 1 month of inositol up to 18 g/day and 1 month of fluvoxamine up to 150 mg/day. Improvements on Hamilton Rating Scale for Anxiety scores, agoraphobia scores, and Clinical Global Impressions Scale scores were similar for both treatments. In the first month, inositol reduced the number of panic attacks per week (mean and SD) by 4.0 (2) compared with a reduction of 2.4 (2) with fluvoxamine ($p=0.049$). Nausea and tiredness were more common with fluvoxamine ($p=0.02$ and $p=0.01$, respectively). Because inositol is a natural compound with few known side effects, it is attractive to patients who are ambivalent about taking psychiatric medication. Continuing reports of inositol's efficacy in the treatment of depression, panic disorder, and OCD should stimulate replication studies.”*

Benjamin J. Double-blind, placebo-controlled, crossover trial of inositol treatment for panic disorder. Am J Psychiatry 1995 Jul;152(7):1084-6

- *“The frequency and severity of panic attacks and the severity of agoraphobia declined significantly more after inositol than after placebo administration. Side effects were minimal. The authors conclude that inositol's efficacy, the absence of significant side effects, and the fact that inositol is a natural component of the human diet make it a potentially attractive therapeutic for panic disorder.”*

Kami-shoyo-san and Hange-koboku-to

Panic Disorder Successfully Treated with Kampo Medicines: Kami-shoyo-san and Hange-koboku-to

Mantani N. Four cases of panic disorder successfully treated with Kampo (Japanese herbal) medicines: Kami-shoyo-san and Hange-koboku-to. *Psychiatry Clin Neurosci* 2002 Dec;56(6):617-20

- *"In this present report the cases are described of four patients with panic disorder successfully treated with Kampo medicines. These four patients fulfilled the Diagnostic and Statistical Manual of Mental Disorders (DSM) criteria for panic disorder with agoraphobia. The Kampo medicine Kami-shoyo-san (TJ-24) relieved panic attacks, anticipatory anxiety and agoraphobia in two patients, and Hange-koboku-to (TJ-16) relieved these symptoms in the other two patients. The patients in whom Kami-shoyo-san was effective were older and complained of more symptoms than those in whom Hange-koboku-to was effective. These Kampo medicines may be useful as additional or alternative treatments for panic disorder."*

Mindfulness

Mindfulness is an Effective Adjunct to Pharmacotherapy in Patients with Panic Disorder

Kim B. Effectiveness of mindfulness-based cognitive therapy program as an adjunct to pharmacotherapy in patients with panic disorder. *J Anxiety Disorder* 2010 Aug;24(6):590-5

- *"The aim of this study was to examine whether MBCT is effective as an adjunct to pharmacotherapy in the treatment of patients with panic disorder. Twenty-three patients with panic disorder were included in a MBCT program for a period of 8 weeks. The Hamilton Anxiety Rating Scale (HAM-A), Beck Anxiety Inventory (BAI), Beck Depression Inventory (BDI), Anxiety Sensitivity Index-Revised (ASI-R), Albany Panic and Phobia Questionnaire (APPQ), and Panic Disorder Severity Scale (PDSS) were used to assess the patients during the MBCT program. Both HAM-A and PDSS scores were significantly decreased at the 2nd, 4th and 8th weeks compared to baseline in patients with panic disorder (HAM-A, $p < 0.01$; PDSS, $p < 0.01$). Also, BAI, APPQ and ASI-R were improved significantly after MBCT program (BAI, $p < 0.01$; APPQ, $p < 0.01$; ASI-R, $p < 0.01$). In addition, all subscale scores of ASI-R decreased significantly. MBCT could be effective as an adjunct to pharmacotherapy in patients with panic disorder. However, randomized controlled trials are needed."*

Kim YW. Effectiveness of mindfulness-based cognitive therapy as an adjuvant to pharmacotherapy in patients with panic disorder or generalized anxiety disorder. *Depress Anxiety* 2009;26(7):601-6

- *"MBCT may be effective at relieving anxiety and depressive symptoms in patients with panic disorder or generalized anxiety disorder. However, well-designed, randomized controlled trials are needed."*

Radio Electric Asymmetric Treatment

Radio Electric Asymmetric Treatment is More Effective for Panic Disorder than Lexapro

Mannu P. Radio electric treatment vs. Es-Citalopram in the treatment of panic disorders associated with major depression: an open-label, naturalistic study. *Acupunct Electrother Res* 2009;34(3-4):135-49

- *“Compared the efficacy of REAC and Es-Citalopram in the treatment of simultaneous coexistence of Panic Disorder with Major Depression in 9-weeks open label naturalistic study. After the 1st week, patients treated with REAC therapy showed a significant relief of depressive symptoms compared with Es-Citalopram. For Panic Disorder, REAC treatment had more effective results than the drug especially after the 3rd week of observation. The REAC treatment obtained better results during the entire study, and its high safety and tolerability profile has been confirmed.”*

Relaxation Therapy

Relaxation Therapy May Be Useful for Treating General Anxiety Associated with Panic

Taylor CB. A controlled comparison of relaxation and diazepam in panic disorder. *J Clin Psychiatry* 1982 Oct;43(10):423-5

- *“Subjects with panic disorder (N=23) were randomized into a crossover design involving diazepam, placebo, relaxation therapy, or control. Anxiety was measured by a 3-day hourly diary, psychological tests, and assessment of heart rate and skin conductance level during baseline, stress test, and interview. The greatest and only significant physiologic changes occurred with diazepam. The largest pre/posttreatment changes on the psychological tests and self-reported anxiety and depression occurred with relaxation, although the differences were not statistically significant. Relaxation therapy may be useful for treating the general anxiety associated with panic disorder.”*

Respiratory Biofeedback-assisted Therapy

Respiratory Biofeedback-assisted Therapy is Effective for Panic Disorder

Meuret AE. Respiratory biofeedback-assisted therapy in panic disorder. *Behav Modif* 2001 Sep;25(4):584-605

- *“The authors describe a new methodologically improved behavioral treatment for panic patients using respiratory biofeedback from a handheld capnometry device. The treatment rationale is based on the assumption that sustained hypocapnia resulting from hyperventilation is a key mechanism in the production and maintenance of panic. The brief 4-week biofeedback therapy is aimed at voluntarily increasing self-monitored*

end-tidal partial pressure of carbon dioxide (PCO₂) and reducing respiratory rate and instability through breathing exercises in patients environment. Preliminary results from 4 patients indicate that the therapy was successful in reducing panic symptoms and other psychological characteristics associated with panic disorder. Physiological data obtained from home training, 24-hour ambulatory monitoring pretherapy and posttherapy, and laboratory assessment at follow-up indicate that patients started out with low resting PCO₂ levels, increased those levels during therapy, and maintained those levels at posttherapy and/or follow-up. Partial dissociation between PCO₂ and respiratory rate questions whether respiratory rate should be the main focus of breathing training in panic disorder.”

Meuret AE. Respiratory feedback for treating panic disorder. J Clin Psychol 2004 Feb; 60(2):197-207
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- *“We report a new breathing training method that makes use of respiratory biofeedback to teach individuals to modify four respiratory characteristics: increased ventilation (Respiratory Rate x Tidal Volume), breath-to-breath irregularity in rate and depth, and chest breathing. As illustrated by a composite case, feedback of respiratory rate and end-tidal pCO₂ can facilitate voluntary control of respiration and reduce symptoms. Respiratory monitoring may provide relevant diagnostic, prognostic, and outcome information.”*

Posttraumatic Stress Disorder

Acupuncture

Acupuncture is Effective for Posttraumatic Stress Disorder

Hollifield M. Acupuncture for posttraumatic stress disorder: a randomized controlled pilot trial. J Nerv Ment Dis 2007 Jun;195(6):504-13

- *"...acupuncture provided large treatment effects for PTSD ($F [1,46]=12.60$; $p<0.01$; Cohen's $d=1.29$), similar in magnitude to group CBT ($F [1, 47]= 12.45$; $p<0.01$; $d=1.42$) (ACU vs. CBT, $d=0.29$). Symptom reductions at end treatment were maintained at 3 month follow-up for both interventions. Acupuncture may be an efficacious and acceptable nonexposure treatment option for PTSD."*

Hollifield M. Acupuncture for posttraumatic stress disorder : conceptual, clinical, and biological data support further research. CNS Neurosci Ther 2011 Dec;17(6):769-79

- *"There is one published and one unpublished clinical trial that preliminary support the efficacy of acupuncture for PTSD. Although there have been no mechanistic studies of acupuncture in human PTSD, extant research shows that acupuncture has biological effects that are relevant to PTSD pathology. Conceptual, clinical, and biological data support possible efficacy of acupuncture for PTSD."*

Autogenic training, for nightmares

Treatment of Posttraumatic Nightmares with Autogenic Training

Sadigh MR. The treatment of recalcitrant post-traumatic nightmares with autogenic training and autogenic abreaction: a case study. Appl Psychophysiol Biofeedback 1999 Sep;24(3):203-10

- *"The present single-case study investigated the effects of the standard autogenic exercises and autogenic abreaction in reducing the frequency and severity of post-traumatic nightmares in a survivor of a car crash. The patient was also instructed in two additional organ-specific formulas in order to improve her sleep. The results of the study showed that the interventions were successful in effectively treating the patients distressing nightmares. Follow-up data suggested that the treatment effects persisted after the termination of therapy."*

Cannabis resin

Cannabis Resin may dampen the Emotional Impact of Traumatic Memories in Posttraumatic Stress Disorder

Passie T. Mitigation of post-traumatic stress symptoms by Cannabis resin: a review of the clinical and neurobiological evidence. *Drug Test Anal* 2012 Jul-Aug;4(7-8):649-59

- *"It is known from clinical studies that some patients attempt to cope with symptoms of post-traumatic stress disorder (PTSD) by using recreational drugs. This review presents a case report of a 19-year-old male patient with a spectrum of severe PTSD symptoms, such as intense flashbacks, panic attacks, and self-mutilation, who discovered that some of his major symptoms were dramatically reduced by smoking cannabis resin. The major part of this review is concerned with the clinical and preclinical neurobiological evidence in order to offer a potential explanation of these effects on symptom reduction in PTSD. This review shows that recent studies provided supporting evidence that PTSD patients may be able to cope with their symptoms by using cannabis products. Cannabis may dampen the strength or emotional impact of traumatic memories through synergistic mechanisms that might make it easier for people with PTSD to rest or sleep and feel less anxious and less involved with flashback memories."*

D-Serine

D-Serine May Be Effective in the Treatment of Posttraumatic Stress Disorder

Heresco-Levy U. Pilot controlled trial of D-serine for the treatment of post-traumatic stress disorder. *Int J Neuropsychopharmacol* 2009 Oct;12(9):1275-82

- *"Compared with placebo administration, DSR treatment resulted in significantly reduced HAMA ($p=0.007$) and MISS ($p=0.001$) scores and a trend ($p=0.07$) towards improved CAPS total scores. These preliminary findings indicate that NMDAR glycine site-based pharmacotherapy may be effective in PTSD and warrant larger-sized clinical trials with optimized DSR dosages."*

Electroacupuncture

Electroacupuncture is More Effective than Paxil I the Treatment of Posttraumatic Stress Disorder

Wang Y. Clinical studies on treatment of earthquake-caused posttraumatic stress disorder using electroacupuncture. *Evid Based Complement Alternat Med* 2012;2012:431279

- *"The electro-acupuncture group was treated by scalp electro-acupuncture on Baihui (GV 20), Sishencong (EX-HN 1), Shenting (GV 24), and Fengchi (GB 20), and the paroxetine group was treated with simple oral administration of paroxetine. The efficacy and safety*

of the electro-acupuncture on treatment of 69 PTSD patients were evaluated using Clinician-Administered PTSD Scale (CAPS), Hamilton Depression Scale (HAMD), Hamilton Anxiety Scale (HAMA), and Treatment Emergent Symptom Scale (TESS) according to clinical data. The total scores of CAPS, HAMD, and HAMA in the two groups after treatment showed significant efficacy compared to those before treatment. The comparison of reduction in the scores of CAPS, HAMD, and HAMA between the two groups suggested that the efficacy in the treated group was better than that in the paroxetine group. The present study suggested that the electro-acupuncture and paroxetine groups have significant changes in test PTSD, but the electro-acupuncture 2 group was more significant."

Emotional Freedom Techniques

Emotional Freedom Techniques are Effective Treatment for Posttraumatic Stress Disorder

Church D. Psychological trauma symptom improvement in veterans using emotional freedom techniques: a randomized controlled trial. *J Nerv Ment Dis* 2013 Feb;201(2):153-60

- *"The EFT subjects had significantly reduced psychological distress ($p < 0.0012$) and PTSD symptom levels ($p < 0.0001$ after the test. In addition, 90% of the EFT group no longer met PTSD clinical criteria, compared with 4% in the SOC/WL group. After the wait period, the SOC/WL subjects received EFT. In a within-subjects longitudinal analysis, 60% no longer met the PTSD clinical criteria after three sessions. This increased to 86% after six sessions for the 49 subjects who ultimately received EFT and remained at 86% at 3 months and 80% at 6 months. The results are consistent with that of other published reports showing EFT's efficacy in treating PTSD and comorbid symptoms and its long-term effects."*

Eye Movement Desensitization and Reprocessing

Eye Movement Desensitization and Reprocessing (EMDR) Treatment is Effective for Posttraumatic Stress Disorder

Carlson JG. Eye movement desensitization and reprocessing (EMDR) treatment for combat-related posttraumatic stress disorder. *J Trauma Stress* 1998 Jan;11(1):3-24

- *"Compared with other conditions, significant treatment effects in the EMDR condition were obtained at post treatment on a number of self-report, psychometric, and standardized interview measures. Relative to other treatment group, these effects were generally maintained at 3-month follow-up. Psychophysiological measures reflected an apparent habituation effect from pretreatment to post treatment but were not differentially affected by treatment condition."*

Flexyx Neurotherapy System

Flexyx Neurotherapy System May Decrease Posttraumatic Stress Symptoms

Nelson DV. Neurotherapy of traumatic brain injury/posttraumatic stress symptoms in OEF/OIF veterans. J Neuropsychiatry Clin Neurosci 2012 Spring;24(2):237-40

- *“The Flexyx Neurotherapy System (FNS), a novel variant of EEG biofeedback, was adapted for intervention with seven treatment-refractory Afghanistan/Iraq war veterans, and brought about significant decreases in bothersome neurobehavioral and posttraumatic stress symptoms. FNS may help ameliorate mixed trauma spectrum syndromes.”*

Healing touch plus guided imagery

Healing Touch plus Guided Imagery shows Significant Improvements in Posttraumatic Stress Disorder

Jain S. Healing Touch with Guided Imagery for PTSD in returning active duty military: a randomized controlled trial. Mil Med 2012 Sep;177(9):1015-21

- *“Repeated measures analysis of covariance with intent-to-treat analyses revealed statistically and clinically significant reduction in PTSD symptoms ($p < 0.0005$, Cohen’s $d = 0.85$) as well as depression ($p < 0.0005$, Cohen’s $d = 0.70$) for HT+GI vs. TAU. HT+GI also showed significant improvements in mental quality of life ($p = 0.002$, Cohen’s $d = 0.58$) and cynicism ($p = 0.001$, Cohen’s $d = 0.49$) vs. TAU. Participation in complementary medicine intervention resulted in a clinically significant reduction in PTSD and related symptoms in a returning, combat-exposure active duty military population. Further investigation of GT and biofield therapy approaches for mitigating PTSD in military populations is warranted”*

Hyperbaric Oxygen Treatment

Hyperbaric Oxygen Treatment for Post-Concussion Syndrome and Post-Traumatic Stress Disorder

Harch PG. A phase I study of low-pressure hyperbaric oxygen therapy for blast-induced post-concussion syndrome and post-traumatic stress disorder. J Neurotrauma 2012 Jan 1;29(1):168-85

- *“Post-treatment testing demonstrated significant improvement in : symptoms, neurological exam. Full-scale IQ (+ 14.8 points; $p < 0.001$), WMS IV Delayed Memory ($p = 0.026$), WMS-IV Working Memory ($p = 0.003$), Stroop Test ($p < 0.001$), TOVA Impulsivity*

($p < 0.001$), anxiety (GAD-7; $p = 0.007$), quality of life (MPLQoL: $p = 0.003$), and self-report of percent of normal ($p < 0.001$), SPECT coefficient of variation in all white matter and some gray matter ROIs after the first HBOT, and in half of the white matter ROIs after 40 HBOT sessions, and SPECT statistical parametric mapping analysis (diffuse improvements in the regional cerebral blood flow after 1 and 40 HBOT sessions). Forty 1.5 ATA HBOT sessions in 1 month was safe in a military cohort with chronic blast-induced PCS and PTSD. Significant improvements occurred in symptoms, abnormal physical exam findings, cognitive testing, and quality-of-life measurements, with concomitant significant improvements in SPECT.”

Integrative Restoration (iRest)

Integrative Restoration (iRest) Reduces Symptoms Associated with Posttraumatic Stress Disorder

Stankovic L. Transforming trauma: a qualitative feasibility study of integrative restoration (iRest) yoga Nidra on combat-related post-traumatic stress disorder. *Int J Yoga Therap* 2011;(21):23-37

- *“This eight-week study examined the feasibility of offering weekly classes in Integrative Restoration (iRest), a form of mindfulness meditation, to military combat veterans at a community mental health agency in San Francisco Bay Area. Participants were 16 male combat veterans (15 Vietnam War and 1 Iraq War) of mixed ethnicity, aged 41 to 66 years, suffering from posttraumatic stress disorder (PTSD). The 11 participants who completed the study reported reduced rage, anxiety, and emotional reactivity, and increased feelings of relaxation, peace, self-awareness, and self-efficacy, despite challenges with mental focus, intrusive memories, and other concerns. All participants reported they would have attended ongoing iRest classes at the agency approximately once per week.”*

Loving-kindness meditation

Loving-kindness Meditation Reduces Symptoms of Posttraumatic Stress Disorder

Kearney DJ. Loving-kindness meditation for posttraumatic stress disorder: a pilot study. *J Trauma Stress* 2013 Aug;26(4):426-34

- *“Overall, loving-kindness meditation appeared safe and acceptable and was associated with reduced symptoms of PTSD and depression. Additional study of loving-kindness meditation for PTSD is warranted to determine whether the changes seen are due to the loving-kindness meditation intervention versus other influences, including concurrent receipt of other treatments.”*

Mindfulness

Mindfulness is an Effective Intervention for Posttraumatic Stress Disorder

King AP. A pilot study of group mindfulness based cognitive therapy (MBCT) for combat veterans with posttraumatic stress disorder (PTSD). *Depress Anxiety* 2013 Jul;30(7):638-45

- *“These data suggest group MBCT as an acceptable brief intervention/adjunctive therapy for combat PTSD, with potential for reducing avoidance symptom cluster and PTSD cognitions. Further studies are needed to examine efficacy in randomized controlled design and to identify factors influencing acceptability and efficacy.”*

Music Therapy

Group Music Therapy Helps Patients with Posttraumatic Stress Disorder

Carr C. Group music therapy for patients with persistent post-traumatic stress disorder—an exploratory randomized controlled trial with mixed methods evaluation. *Psychol Psychother* 2012 Jun;85(2):179-202

- *“Treatment-group patients experienced a significant reduction in severity of PTSD symptoms (-20.18; 95% confidence interval [CI]: [-31.23, -9.12]) and a marginally significant reduction in depression (-11.92; 95%CI: [-24.05, 0.21]) at 10 weeks from baseline compared to the control. Patients viewed music therapy as helpful and reported experiences concur with current literature.”*

Omega-3 Fatty, after injury

Omega-3 Fatty Acid Supplementation Immediately After Accidental Injury Can Reduce Posttraumatic Stress Symptoms

Matsuoka Y. Clearance of fear memory from the hippocampus through neurogenesis by omega-3 fatty acids: a novel preventive strategy for posttraumatic stress disorder? *Biopsychosoc Med* 2011 Feb 8;5:3

- *“The results of an open-label pilot trial of injured patients admitted to the intensive care unit suggest that omega-3 fatty acid supplementation immediately after injury can reduce subsequent PTSD symptoms.”*

Selenium

Selenium Supplementation Can Reduce the Severity of Posttraumatic Stress Disorder

Voitsekhovskis VV. Advances of selenium supplementation in posttraumatic stress disorder risk group patients. *Biochem Khim* 2014 Jan-Feb;60(1):125-32

- *“Posttraumatic stress disorder(PTSD) is a complex of symptoms developed in a patient after traumatic event. The basis of PTSD pathophysiology is hyperactivation of neurons under stress factors influence, so-called excitotoxicity, followed by oxidative stress (OS) because of an accumulation of free radicals. Lipid peroxidation can lead to neurons damage. Neurons are especially susceptible to OS, changing signal transduction and information processing mechanisms. Clinically excitotoxicity performs as different acute stages of transport and metabolism of Glutamate. Research aim: to access PTSD incidence, OS parameters and their adjustment advances using organic Se in PTSD risk group patients. PTSD symptomatic severity (in PCL-M points reduced for 5.85% to baseline, Prevalence Rate reduced for 46.03% to baseline in Se group patients. We can conclude that: 1) there is a statistically reliable severity correlations between the incidence of PTSD and OS parameters, between PTSD symptomatic severity and OS parameters;2) the use of Se during the mission can reduce the OS parameters, minimize the incidence of PTSD and reduce the PTSD symptomatic severity.”*

Silexan

Silexan Decreases Symptoms of Posttraumatic Stress Disorder

Uehleke B. Phase II trial on the effects of Silexan in patients with neurasthenia, posttraumatic stress disorder or somatization disorder. *Phytomedicine* 2012 Jun 15;19(8-9):665-71

- *“At baseline, patients suffered from restlessness (96%), depressed mood (98%), sleep disturbances (92%), or anxiety (72%). Of those, resp. 62%, resp. 57%, resp. 51%, resp. 62% showed improvements during treatment ($p < 0.001$). For all patients, mean D-S score decreased by 32.7% and SCL-90-R Global Severity Index by 36.4% as compared to baseline, ($p < 0.001$), while the SF-36 Mental Health Score increased by 48.2% ($p < 0.001$). Waking-up frequency ($p = 0.002$), Waking-up duration ($p = 0.018$) and mood ($p = 0.03$) improved. Patients suffering from neurasthenia or PSD showed comparable improvements with most outcomes. The results in this trial justify to further investigating Silexan in disorders with accompanying restlessness caused by sub-threshold anxiety. Adverse reactions, predominantly gastrointestinal complaints, were judged as mild or moderate.”*

Thought Field Therapy

Thought Field Therapy is Effective for Trauma in Posttraumatic Stress Disorder

Folkes CE. Thought field therapy and trauma recovery. *Int J Emerg Ment Health* 2002 Spring;4(2):99-103

- *"In this study of 31 clients, a pre-test was given, all participants received Thought Field Therapy (TFT), and were then post-treated after 30 days. Pre-test and posttest total scores showed a significant drop in all symptom sub-groupings of the DSM criteria for PTSD. The findings of this study contrast with the outcomes of other methods of treatment, and are a significant addition to the growing body of data on refugee mental health."*

Connolly S. Brief trauma intervention with Rwandan genocide-survivors using thought field therapy. Int J Emerg Ment Health 2011;13(3):161-72

- *"Group differences adjusted for pretest scores and repeated measures anovas were statistically significant at $p<.001$ for 9 of 10 TSI trauma subscales and for both severity and frequency on the MPSS, with moderate to large effect sizes. Reduced trauma symptoms for the group receiving TFT were found for all scales. Reductions in trauma symptoms were sustained at 2-year follow-up assessment."*

Johnson C. Thought field therapy-soothing the bad moments of Kosovo. J Clin Psychol 2001 Oct;57(10):1237-40

- *"Trauma in Kosovo was treated with Thought Field Therapy (TFT) during five separate trips by members of the Global Institute of Thought Field Therapy, in the year 2000. Clinicians from Sweden, the United Kingdom, and the United States were joined in Kosovo by four physicians who transported them to remote war-torn villages where patients with severe trauma were treated. Treatment was given to 105 patients with 249 separate traumas. Total relief was reported by 103 of the patients, and for 247 of the separate traumas. Follow-up data averaging five months revealed no instance of relapse."*

Transcendental Meditation®

Transcendental Meditation® Helps Alleviate Symptoms of Posttraumatic Stress Disorder

Rosenthal JZ. Effects of transcendental meditation in veterans of Operation Enduring Freedom and Operation Iraqi Freedom with posttraumatic stress disorder: a pilot study. Mil Med 2011 Jun;176(6):626-30

- *"We conducted an uncontrolled pilot study to determine whether transcendental meditation (TM) might be helpful in treating veterans from Operation Enduring Freedom or Operation Iraqi Freedom with combat-related posttraumatic stress disorder (PTSD). Five veterans were trained in the technique and followed for 12 weeks. All subjects improved on the primary outcome measure, the Clinician Administered PTSD Scale (mean change score, 31.4; $p=0.02$; $df=4$). Significant improvements were also observed for 3 secondary outcome measures: Clinician's Global Inventory-Severity (mean change score, 1.60; $p<0.04$; $df=4$), Quality of Life Enjoyment and Satisfaction Questionnaire (mean change score, -13.00; $p<0.01$; $df=4$) and the PTSD Checklist-Military Version*

(mean change score, 24.00; $p < 0.02$; $df = 4$). TM may have helped to alleviate symptoms of PTSD and improve quality of life in this small group of veterans. Larger, placebo-controlled studies should be undertaken to further determine the efficacy of TM in this population."

Rees B. Significant reductions in posttraumatic stress symptoms in Congolese refugees within 10 days of Transcendental Meditation practice. *J Trauma Stress* 2014 Feb;27(1):112-5

- *"This follow-up pilot study tested whether Transcendental Meditation®(TM) practice would significantly reduce symptoms of posttraumatic stress in Congolese refugees within 10 days after instruction. The Posttraumatic Stress Disorder Checklist-Civilian (PCL-C) was administered to nonmatched waitlist controls from a previous study 3 times over a 90-day period. Within 8 days of the third baseline measure, 11 refugees were taught TM, then retested 10 days and 30 days after instruction. Average PCL-C scores dropped 29.9 points from 77.9 to 48.0 in 10 days, then dropped another 12.7 points to 35.3 at 30 days. Effect size at 10 days was high ($d = 4.05$). There were no adverse events. All participants completed the study and were able to practice TM."*

Virtual Reality

Virtual Reality Exposure Therapy May Be a Promising New Medium for Treatment of Posttraumatic Stress Disorder

Difede J. Virtual reality exposure therapy for World Trade Center Post-traumatic Stress Disorder: a case report. *Cyberpsychol Behav* 2002 Dec;5(6):529-35

- *"VR graded exposure therapy was successful for reducing acute PTSD symptoms. Depression and PTSD symptoms as measured by the Beck Depression Inventory and Clinician Administered PTSD Scale indicated a large (83%) reduction in depression, and large (90%) reduction in PTSD symptoms after completing VR exposure therapy. Although case reports are scientifically inconclusive by nature, these strong preliminary results suggest that VR exposure therapy is a promising new medium for treating acute PTSD. This study may be examined in more detail at www.Vrpain.com*

Visual Art Therapy

Visual Art Therapy's Contributes to Treatment of Posttraumatic Stress Disorder

Avrahami D. Visual art therapy's unique contribution in the treatment of post-traumatic stress disorders. *J Trauma Dissociation* 2005;6(4):5-38

- *"This paper describes visual art therapy as an integrative and unique approach, which is most appropriate for the multidimensional treatment of post-traumatic stress disorder (PTSD). The unique contribution of visual art therapy in treatment of PTSD is expressed in*

three major areas: (1) working on traumatic memories, (2) the process of symbolization-integration, and (3) containment, transference and countertransference. Two case descriptions of traumatized patients treated in visual art therapy are presented."

Writing Therapy

Writing Therapy is Useful Alternative for Patients with Posttraumatic Stress Disorder

Van Emmerik AA. Writing therapy for posttraumatic stress: a meta-analysis. *Psychother Psychosom* 2013;82(2):82-8

- *"Writing therapy is an evidence-based treatment for PTS, and constitutes a useful treatment alternative for patients who do not respond to other evidence-based treatments. Internet adaptations of writing therapy for PTS may be especially useful for reaching trauma survivors in need of evidence-based mental health care who live in remote areas or who prefer to retain their anonymity."*

Xiao-Tan-Jie-Yu-Fang

Chinese Herbal Formula Xiao-Tan-Jie-Yu-Fang Improves General Psychological Status in PTSD

Meng XZ. A Chinese herbal formula to improve general psychological status in posttraumatic stress disorder: a randomized placebo-controlled trial on Sichuan earthquake survivors. *Evid Based Complement Alternat Med* 2012;2012:691258

- *"Compared to placebo, the patients in the XTJYF group was significantly improved in all three SCL global indices ($P=0.001-0.028$). More patients in the XTJYF group reported "much improved" than the placebo group ($P=0.001$). The XTJYF group performed significantly better than control in five out of nine SCL factors (somatization, obsessive-compulsive behavior, depression, anxiety, and hostility ($P=0.001-0.036$)), and in sleep quality score ($P<0.001$). XTJYF produced no serious adverse events. These findings suggest that XTJYF may be an effective and safe treatment option for improving GPS in patients with PTSD."*

Yoga

Yoga is Effective for Symptoms of Hyperarousal in Posttraumatic Stress Disorder

Staples JK. A yoga program for the symptoms of post-traumatic stress disorder in veterans. *Mil Med* 2013 Aug;178(8):854-60

- *"The purpose of this pilot study was to evaluate the feasibility and effectiveness of a yoga program as an adjunctive therapy for improving posttraumatic stress disorder*

(PTSD) symptoms in Veterans with military-related PTSD. Veterans (n=12) participated in a 6 week yoga intervention held twice a week. There was significant improvement in PTSD hyperarousal symptoms and overall quality as well as daytime dysfunction related to sleep. There were no significant improvements in total PTSD, anger, or quality of life outcome scores. These results suggest that this yoga program may be an effective adjunctive therapy for improving hyperarousal symptoms of PTSD including sleep quality. This study demonstrates that the yoga program is acceptable, feasible, and that there is good adherence in a Veteran population.

Mitchell KS. A pilot study of a randomized controlled trial of yoga as an intervention for PTSD symptoms in women. J Trauma Stress 2014 Apr;27(2):121-8

- *“During the intervention, yoga participants showed decreases in reexperiencing and hyperarousal symptoms. The assessment control group, however, showed decreases in reexperiencing and anxiety symptoms as well, which may be a result of the positive effect of self-monitoring on PTSD and associated symptoms. Between-groups effect sizes were small to moderate (0.08-0.31). Although more research is needed, yoga may be an effective adjunctive treatment for PTSD.”*

Yoga Breath-based interventions

Yoga Breath-based Interventions Help Relieve Psychological Distress in Depression and Posttraumatic Stress Disorder

Descilo T. Effects of yoga breath intervention alone and in combination with an exposure therapy for post-traumatic stress disorder and depression in survivors of the 2004 South-East Asia tsunami. Acta Psychiatr Scand 2010 Apr;121(4):289-300

- *“Yoga breath-based interventions may help relieve psychological distress following mass disasters.”*

Miscellaneous Citations for Psychiatric Distress

American Skullcap (*Scutellaria lateriflora*)

American Skullcap Significantly Enhances Mood in Healthy Subjects

Brock C. American skullcap (*Scutellaria lateriflora*): a randomized, double-blind, placebo-controlled crossover study of its effects on mood in healthy volunteers. *Phytother Res* 2014 May;28(5):692-8

- *"In a placebo-controlled, double-blind, crossover study, 43 healthy participants were randomized to a sequence of three times daily S. lateriflora (350mg) or placebo, each over two weeks. In this relatively non-anxious population (81% were mildly anxious or less, i.e. Beck Anxiety Inventory (BAI) scores <15), there was no significant difference between skullcap and placebo with BAI (p=0.191). However, there was a significant group effect (p=0.049), suggesting a carryover effect of skullcap. For Total Mood Disturbance measures by the profile of Mood States, there was a highly significant (p<0.001) decrease from pre-test scores with skullcap but not placebo (p=0.072). The limitations of carryover effect, generally low anxiety scores and differences in anxiety levels between groups at baseline (p=0.022), may have reduced the chances of statistical significance in the study. However, as S. lateriflora significantly enhanced global mood without a reduction in energy or cognition, further study assessing its punitive anxiolytic effects in notably anxious subjects with co-morbid depression is warranted."*

Bach flower therapy

Bach Flower Therapy for Emotional Disorders

Oliva I Segura M. Emotional support and Bach Flower Therapy. *Rev Enferm* 2009 Oct;32(10):16-9.

- *"Improvement was measured by EVA scale: 87.4% of those patients who received treatment reported good or very good evolution/results. Bach Therapy appears to be good alternative to psycho-pharmaceuticals, shows itself to be very effective, with fewer secondary effects, and less than 2% of the patients evidencing gastric intolerance to this preparation."*

Caloric Vestibular Stimulation

Caloric Vestibular Stimulation Has a Modulating Effect on Mood and Affective Control

Preuss N. Caloric vestibular stimulation modulates affective control and mood. *Brain Stimul* 2014 Jan.-Feb;7(1):133-40

- *“The results suggest that CVS, depending on side of stimulation, has a modulating effect on mood and affective control. The results complement previous findings in manic patients and provide new evidence for the clinical potential of CVS.”*

Low fat, high carbohydrate diet

Low Fat, High Carbohydrate Diet has Improved Mood Compared to Low Carbohydrate, High Fat Diet

Brinkworth GD. Long-term effects of a very low carbohydrate diet and a low-fat diet on mood and cognitive function. *Arch Intern Med* 2009 Nov 9;169(20):1873-80

- *“Over 1year,there was a favorable effect of an energy-restricted LF diet compared with an isocaloric LC diet on mood state and affect in overweight and obese individuals. Both diets had similar effects on working memory and speed of processing.”*

Galvanic Vestibular Stimulation

Galvanic Vestibular Stimulation (GVS) is a Method of Non-Invasive Brain Stimulation for Psychiatric Disorders

Utz KS. Electrified minds: transcranial direct current stimulation (tDCS) and galvanic vestibular stimulation (GVS) as methods of non-invasive brain stimulation in neuropsychology—a review of current data and future implications. *Neuropsychologia* 2010 Aug;48(10):2789-810

- *“We also review current data on the effects of tDCS and GVS in healthy subjects as well as clinical populations. Significant effects of such stimulation have been reported for motor, visual, somatosensory, attentional, vestibular and cognitive/emotional function as well as for a range of neurological and psychiatric disorders.”*

Mind Sound Technology

Improved Positive Well-being during Practice of Mind Sound Technology

Dayalan H. Psychological well-being in medical students during exam stress-influence of short-term practice of mind sound technology. *Indian J Med Sci* 2010 Nov; 64(11):501-7

- *“Students showed a significant increase ($P < 0.001$) in negative health scores like perceived health scores, anxiety, and depression and significant decrease ($P < 0.001$) in positive health scores like Self-Esteem, Mental Health Score, Social Health Score, and General Health Score*

during exam when compared with baseline. MST practice increased positive health scores ($P < 0.001$) and decreased perceived health score ($P < 0.01$), anxiety, depression, and anxiety-depression scores significantly ($P < 0.001$) when compared with ES score.

Spirituality home study

Spirituality Home Study Program Outperforms Mindfulness Meditation-based Stress Reduction Group in Improving Mood Disturbance

Moritz S. A home study-based spirituality education program decreases emotional distress and increases quality of life—a randomized, controlled trial. *Altern Ther Health Med* 2006 Nov-Dec;12(6):26-35

- *“At the end of the 8-week intervention period, the mean POMS score improvement was -43.1 (-45.7%) for the spirituality group, -22.6 (-22.3%) for the meditation group, and -10.3 (11.3%) for the control group ($P < .001$ for spirituality vs control group; $P = .034$ for spirituality vs meditation group). Mean improvement in the SF-36 mental component summary score was 14.4 (48.6%) for the spirituality group, 7.1 (22.3%) for the meditation group, and 4.7 (16.1%) for the control group ($P < .001$ for spirituality vs control group; $P = .029$ for spirituality vs meditation group). At 12 weeks, PMOS and SF-36 scores remained significantly different from baseline for the spirituality group.”*

Turo (qi dance) training

Turo (qi dance) Training Attenuates Psychological Symptoms and Sympathetic Activation Induced by Mental Stress

Lee HJ. Toro (qi dance) training attenuates psychological symptoms and sympathetic activation induced by mental stress in healthy women. *Evid Based Complement Alternat Med*. 2009 Sep;6(3):399-405

- *“The somatization and hostility subscales of the SCL-90-R of the Turo group were significantly lower than those of the control group after 2 months. The increases in HR and the LF/HF ratio of HRV induced by stress test were significantly lower in the Turo group than in the control group. The TP of the Turo group was significantly higher than that of the control group. The psychological symptoms and sympathetic activation induced by the artificial stress were significantly reduced by the Turo training. These findings suggest that Turo training can play a critical role in attenuating psychological symptoms and stress-induced sympathetic activation.”*