

Clinical Roundup

Selected Treatment Options for Depression

CAM Therapies

Estimates indicate that > 350 million people are affected by depression worldwide.¹ While conventional medicine defines depression as a neurochemical disequilibrium disorder, treating it with psychoactive drugs, such as neurotransmitter reuptake inhibitors,² complementary and alternative medicine (CAM) finds different causes for depression and, therefore, its treatment. Approximately 10%–20% of patients' conditions respond poorly to conventional therapy or the conditions are nonresponsive.³ Thus, we report some CAM interventions with which we have seen good results in our clinical practice by combining them in an individualized way according to each patient's needs.

Acupuncture—A significant beneficial effect of acupuncture is that it can reduce the severity of depression. One meta-analysis showed that acupuncture and electroacupuncture as monotherapies had similar effects, compared to usual medication,⁴ although when either of these therapies were combined with antidepressants, the results were no better than medication alone.⁵

Vitamin D—Research shows that elderly people with vitamin D deficiency have an increased risk of depression, with an association between the severity of symptoms and decreased serum 25OHD₃ levels.⁶ A trial of 600 international units (IU)/day supplementation for 6 months produced significant improvement in the well-being of subjects.⁷ Although the ideal dose recommended has not been determined yet, higher doses seem to produce better results; thus, we usually recommend 600–800 IU/day.

Homeopathy—"A rapid, gentle and permanent restoration of the health,"⁸ proposed by Hahnemann, may be achieved by using an individualized homeopathic medicine selected according to the similitude to the patient's symptoms. In one trial, homeopathy was not considered to be an inferior

treatment, compared to fluoxetine, for acute treatment of patients with depression⁹; however, inconclusive results were obtained when comparing individualized homeopathic treatment with placebo.¹⁰

Polyunsaturated fatty acids (PUFAs)—A high proportion of PUFAs are found in brain lipids. n-3 PUFAs may affect serotonergic and dopaminergic transmissions,¹¹ which are involved in depression. Observational data have shown an association between lower levels of n-3 PUFAs and depression.³ Although the ideal dose is still debated, we have seen positive results with 2 g/day of flaxseed oil, a precursor of the n-6 and n-3 PUFAs.

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Acupuncture

Depressive disorders are defined by the American Psychiatric Association in the *DSM-V* as comprising a group of disorders that include major depression, dysthymic disorder, adjustment disorder with depressed mood, and minor depression.¹ Clinical symptoms may be emotional (intense sadness and emotional distress, emotional numbness, anxiety, or irritability), ideational (worthlessness or guilt, death or suicide), and neurovegetative (loss of energy, changes in sleep and appetite), causing clinically significant distress or psychosocial impairment.¹

Depression is commonly associated with other disorders such as anxiety and alcohol and drug abuse.² Depression is highly prevalent, frequently underdiagnosed and undertreated, and, at the same time, a major cause of functional disability, mortality, and economic loss.^{2–4}

Modern literature recognizes acupuncture and moxibustion, two techniques from Traditional Chinese Medicine (TCM), as useful resources for managing depressive disorders. These techniques are used in conjunction with drugs and psychotherapy.^{5,6}

The description of depressive disorders in TCM is based on the same clinical features as in Western medicine, but they will be classified according to the patient's condition and symptoms. There are different pathogenic factors in TCM. Stagnation of Liver *Qi* and Spleen Deficiency is one of the most common syndromes of depression.⁵ Heart *Yin* Deficiency, Disharmony of the Spleen and Stomach, and Kidney Deficiency may also exist, and their meridian points should be tonified.^{5,7} For each syndrome there is a specific TCM prescription. Neurovegetative manifestations, such as insomnia and palpitations, may be treated with the Heart or Pericardium meridian acupoints, while chest tightness and epigastric discomfort, memory loss, and excessive worry can be treated with the Spleen meridian acupoints.⁷

Acupuncture may be effective for reducing the severity of depression,^{6,8} and, used in conjunction with Western conventional care, may help lower doses of drugs and may improve adherence to conventional treatments.^{3,8}

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Auriculotherapy

Depression is known to be associated with physical illness, immune dysfunction, and mortality from suicide.¹ Given the pharmacologic therapy limitations for treating depression, other noninvasive complementary methods integrated with mainstream medicine must be explored. Auriculotherapy, an approach involving Traditional Chinese Medicine (TCM), is proposed as a therapy for patients who have depression, wherein specific points on the auricle are punctured or stimulated to treat various disorders of the body.² This therapy is a specialized form of acupuncture that treats the ear as a micro-system of the body.³

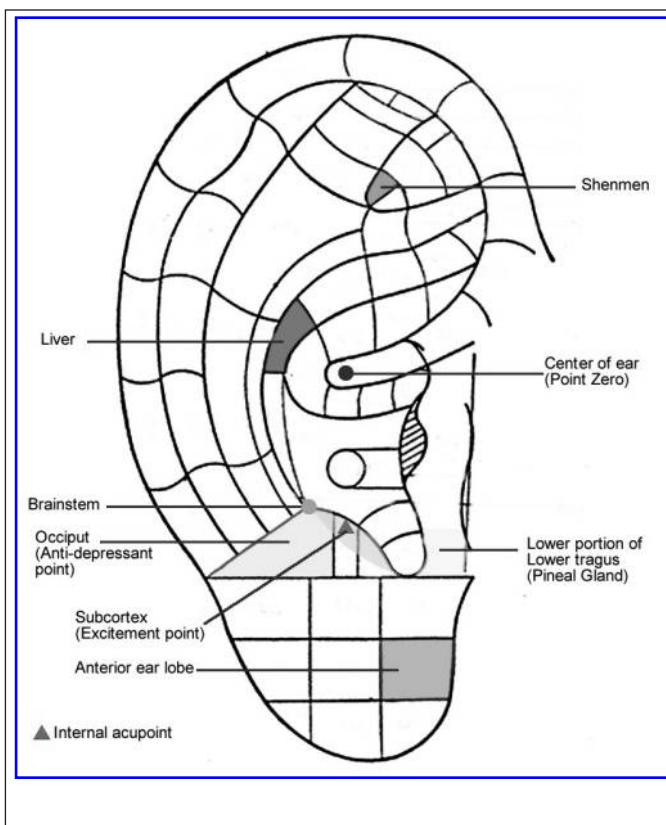
In auricular acupuncture, eight auricular points that can be used to relieve depressive status are identified (Table 1). The Chinese Standard Ear-Acupoints Chart, which is recognized by the World Health Organization, is used to locate the points (Fig. 1). The selection of points was based on the “organ” theory of Chinese medicine as well as perspectives in Western medicine.

Depression is associated with defects in the neurotransmitters (norepinephrine, dopamine, and serotonin) in the brain⁴; thus, a number of selected auricular points correspond to the different parts of the brain. The treatment protocol includes application of magnetic pellets starting on either the left ear or the right ear. Only one ear receives treatment at a time, with each ear treated alternately, for a total treatment of 4 weeks. After the first application, the magnetic pellets are retained on the acupoints for 1 week, and then a new set of pellets is applied on the opposite ear in a similar fashion.

Table 1. Eight Specific Auricular Points for Treating Depression

Auricular points	Rationale
Shenmen	Used to calm the mind
Liver	Liver is associated with emotion from the TCM perspective
Occiput	Also known as the "Antidepressant point" ³
Subcortex	Also known as the "Excitement point," to relieve depression & is used to calm the mind. ³
Anterior ear lobe (lower portion)	Also known as "Master Cerebral" & is near the "Be happy point," which is located on the back of the ear. ^{3,a}
Center of ear	Also known as "Point zero," for achieving general homeostatic balance ³
Brainstem	Also known as the "Brain" ³
Lower tragus (lower portion)	Also known as the "Pineal Gland" ³

^aHuang LC. Auricular Treatment: Formulae and Prescriptions. Orlando: Auricular Medicine International Research and Training Centre, 2001.
TCM, Traditional Chinese Medicine.

**Figure 1. Location of auricular points for depression.**

To enhance the treatment effect, the pellets are applied to the reactive region of each identified acupoint as detected by an acupoint detector. The effect of the treatment is evaluated using the

Hamilton Depression Rating Scale and the Subjective Happiness Scale. Based on my and my colleagues' clinical experiences auricular acupuncture provides a holistic, convenient, nonpainful, hygienic, and risk-free therapy to help patients with depression.

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Yoga I

Yoga can enhance one's spiritual life and perspective beyond the physical life regardless of one's particular religion.¹ It enables people to attain and maintain a balance between exertion and relaxation, and this produces a healthy and dynamic state of homeostatic equilibrium.² Recent studies have shown that yoga improves mood³ and reduces depression scores.⁴ These changes have been attributed to an increased secretion of thalamic γ -aminobutyric acid⁵ with a greater capacity for emotional regulation.⁴ Even a 10-day yoga-based lifestyle modification program has been reported to improve subjective well-being scores of patients.⁶

There has been extensive work done on Sudarshan Kriya Yoga and depression at the National Institute of Mental Health and Allied Sciences in India. This technique has been recommended as a potential alternative to drugs for melancholia as a first-line treatment.⁷

In addition to its benefits for patients themselves, yoga also has a great role for managing depression manifesting in family caregivers of patients with dementia.⁸ Researchers also support the promising role of yoga as an intervention for depression because the intervention is cost-effective and easy to implement.⁴ In the yoga therapy practice where I work, at the Centre for Yoga Therapy, Education and Research (CYTER) in Pondicherry, the principles used are²:

- (1) **Becoming one with the breath**—Body movement and breath are synchronized particularly in the use of *kriya* or structured movements, such as the sun salutation. We use forceful breath patterns, such as *bhastrika* and *kapalbhati* for activation.

- (2) **Shifting from individuality to universality**—Yogic counseling aims to help the participant understand the bigger picture and improve self-esteem.
- (3) **Holistic approach of yoga as a lifestyle**—Use of early morning sunlight for healing and rejuvenating activities, use of water for internal and external cleansing, and careful attention to diet. Gentle stretching and strengthening static practices (*āsana*s) are introduced in a graded manner, depending on the physical ability of the patient.

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Yoga II

Depression, a significant contributor to the global burden of disease, is estimated to affect 350 million people worldwide.¹ The World Health Organization estimates that depression will be the number-one health concern in both developed and developing nations by 2030.²

Yoga is cost-effective; easy to implement; and produces beneficial emotional, psychologic, and biologic effects. Thus, it appears to be a promising intervention for depression.³ In a study, it was found that *yogāsana*s featuring backbends of long duration, both passive and active, along with vigorous hand balancing and, finally, restful supported backbending relaxation, were beneficial in depression.⁴ Iyengar yoga also places a great deal of emphasis on postures that involve opening of the chest, such as backbends, as they may have direct effects

on the blood circulation, thus elevating mood and psychologic well-being.⁵

A study of 28 young adults with depression, who were randomly divided into two groups (yoga and wait-list control), showed that two classes of Iyengar yoga per week for 5 weeks led to a significant reduction in self-reported symptoms of depression, negative mood, and fatigue.⁶ Yoga postures emphasized in this study were backbends, standing and inverted postures with brief periods of relaxation, and breathing exercises in between.⁶ In another study, *Shavāsana* was examined as a therapeutic technique for depression, which revealed this type of yoga's effectiveness for alleviating depression.⁷

In a randomized clinical trial, 45 untreated patients with depression were divided into three groups who received (1) antidepressant medication (i.e., imipramine), (2) electroconvulsive therapy, or (3) *Sudarshana Kriyā* Yoga (SKY). Assessments were made at baseline and performed every week for 4 weeks. All three groups had reductions in depression scores (based on the Beck Depression Inventory and the Hamilton Rating Scale for Depression). In the third week, the SKY group and the group taking imipramine had similar scores, but the SKY group had higher scores than the electroconvulsive therapy group.⁸

The practice of *Sahaja* Yoga meditation produced additional improvement in executive functions. These included manipulation of information in verbal working memory and added improvement in attention span and visual-motor speed of patients with depression.⁹

The following yogic practices¹⁰ (60 minutes daily for 3 months) may be useful for managing depressive disorders:

- (1) **Loosening practices**¹¹—*Shithilikarana vyāyāma* for ~ 15 minutes:
 - (A) Standing practices are jogging, jumping, hip twisting, forward and backward bending, alternate toe touching, and side bending
 - (B) Sitting practices are Tiger stretch and *Halāsana-Paschimottānāsana* stretch
 - (C) Supine practices are straight leg raising, both legs raising, and cycling
- (2) **Breathing practices**¹⁰—*Prānāyāma* for ~ 8 minutes involves forceful exhalation (*Kapālbhāti* for 2 minutes), right nostril breathing (*Suryānuloma Viloma prānāyāma* for 2 minutes), Bellow breathing (*Bhastrikā* for 2 minutes); or SKY and Oceanic breathing (*Ujjayi* for 2 minutes).
- (3) **Physical postures**¹⁰—*Āsanas* for a total of ~ 12 minutes:
 - (A) Standing *āsanas* are Sun Salutation (*Surya Nama-skāra* for 5 minutes) and Half wheel pose (*Ardha Chakrāsana*; 1 minute for each side)
 - (B) Sitting *āsanas* are Camel pose (*Ustrāsana* for 1 minute), and Posterior Stretching Pose (*Paschimottānāsana* for 1 minute)
 - (C) A prone *āsana* is the Cobra pose (*Bhujangāsana* for 1 minute)

- (D) Supine *āsanas* are Upside down Seal (*Viparithkaranī āsana* for 2 minutes) and Wind releasing pose (*Pavanmukthāsana* for 1 minute)
- (4) **Meditations**—*Pranava japa*¹⁰ (*OM* Chanting) and *Saha-jā Yoga*⁹ Meditation for 15 minutes
- (5) **Guided relaxation**—Corpse pose (*Savāsana*)¹¹ for 10 minutes at the end of *āsanas* and *prānāyama*.

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Kelee® Meditation

In my clinical practice, I try to teach my patients how to perform Kelee® meditation to help relieve their stress, anxiety, and depression. I have personally practiced Kelee meditation for 8 years and have noticed the continual improvement in the quality of my own life with regard to these same three problems. Kelee meditation is a specific form of meditation focused on developing “stillness of mind,” which only takes 5–10 minutes twice daily to perform.^{1–4}

It is easy to teach my patients how to perform the meditation at the end of their clinic visits. In addition, my patients often do not have the time for more time-intensive interventions, and are always looking for something easy and quick to do that will improve their health.

As a result of my own personal improvements, I decided to study Kelee meditation in a clinical population at the University of California San Diego (UCSD) Medical Center. My colleagues and I were able to demonstrate statistically significant reductions in stress, anxiety, and depression in participants after 12 weeks across 6 different administered questionnaires.⁵

The real advantage of Kelee meditation, compared to other interventions for improving mental health, is that Kelee meditation does not introduce a new medication into the body nor does it try to change a person’s thoughts to change how that person feels. Kelee meditation is unique in making a distinction between brain function and mind function. Developing stillness of mind allows each person to develop clearer perception of mind and to stop the brain’s tendency to ruminate over what it does not understand. Of all of the potential interventions for depression, I have found this meditation to be the most effective way to help my patients learn how to troubleshoot their minds and help themselves.

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Reflective Garden Walking

There is a long history of the therapeutic use of plants and gardens in the care of patients with both physical and mental illnesses.¹ Outdoor gardens have been suggested as a means of improving morale, self-confidence, cooperation, social interaction, and physical functioning for older adults.^{2–4} In Japan an intervention, *Shinrin-yoku* (“forest bathing”), recommended by medical providers, is based on a leisurely stroll in a forest or garden. Researchers have demonstrated that *Shinrin-yoku* has the ability to increase immunoglobulins and decrease depression.⁵

Based on this evidence, a walking guide and reflective journal entitled *Stroll for Well-Being: Garden Walks (Stroll)* was written by the author and used at a local Japanese garden. The *Stroll* was structured so that participants would complete 12 walks in the garden, stopping at 6 specified spots, and reading a descriptive paragraph. Participants would also reflect on the words provided and on the garden surroundings, and express thoughts in the journal provided in the *Stroll*.

For the research, the participants met in groups of ~ 20, to review the *Stroll* guide's journaling and stopping spots. Two additional meetings were held to discuss the experience of participation. We used the Geriatric Depression Scale (GDS), prior to and after the 12 walks, to study the effect of the *Stroll* on depression in 40 older adults and noted a significant improvement in mean scores pre-walk versus post-walk ($t = 12.54$, $P = 0.001$).⁶

After audiotaped and transcribed focus meetings, four themes emerged: (1) "being forced to spend time away from pressures of the day"; (2) "a sense of the beauty of nature"; (3) "the guide helped us to begin our life reflection"; and (4) "gratitude for the beauty of nature and the life I have led." Based on these results, we concluded that reflective garden walking using a journal has the ability to decrease depression in older adults.

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Anthroposophic Health Care

Depressive disorders evolve as the result of a combination of several factors from biologic, physiologic, social, mental, biographic, and spiritual origins¹ that are likely to influence each other. Conventional pharmaceutical interventions (e.g., antidepressants, sleeping pills) and psychotherapy may help a patient overcome or bypass the effect of some biologic and physiologic factors. However, these agents do not address the effect of aberrant diet nor aberrant lifestyle

and/or unaddressed spiritual needs of a patient as (additional) causative factors. The description of anthroposophic health care (AH) that follows is the result of a consensus-seeking process with experienced anthroposophic doctors and therapists in The Netherlands and a review of the literature in this field.

AH addresses all factors contributing to depressive disorders. As the factors are intertwined, AH is organized in an organic, multidisciplinary way,² focusing on the restoration of the patient's *ability* to heal first. Thus, first, financial and housekeeping problems, etc., are addressed by social workers. Second, physiologic issues such as exhaustion are treated. In the latter phase, compresses, hydrotherapy, medicinal bath treatments, and rhythmic massages³ may be prescribed. Dietary advice⁴ (to promote sleep and regular and healthy food intake) is also given in this phase. Both of these phases may be combined with either conventional or anthroposophic medicines⁵ from plant, mineral, or animal substances.³

Furthermore, it is acknowledged that some patients benefit from psychologic help, especially when biographic issues and life events influence recovery. Psychologic help, however, is focused on *admitting the importance* of these factors in the development of the depression rather than truly *addressing the reason* that these factors have led to a depression.

A third phase starts as soon as the patient is able and willing to address causative factors that can be influenced by the patient only. Thus, mental cognition and biographic and spiritual issues contributing to the depressive disorder are treated in this phase. Therapeutic goals are reached with the support of anthroposophic medicines,³ art therapists, curative eurhythmic therapists^{6,7} and/or psychotherapists.

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Nutritional Psychology

Nutritional psychology is the science of how nutrients affect mood and behavior. This is a burgeoning field that examines the biophysiologic mechanisms, influenced by our nutrient intake, that underlie mood, behavior, and brain function. Increasing research supports the fact that diet plays an important role in mental health and well-being in Westernized societies.^{1–3} People often eat to relieve symptoms of depression and anxiety, without realizing that their dietary choices actually result in greater fatigue, stress, and mood imbalances.⁴ These dietary influences on mood and behavior have an important impact on the diagnosis and treatment of mental health disorders, including mood disorders such as depression.^{5,6}

We have developed nutritional psychology tools and methodological approaches aimed at improving symptoms of depression and anxiety. A central concept is the blood sugar–adrenal axis (BSAA). The BSAA is a physiologic hormone system in the body, including cortisol and insulin that is activated by an individual's daily dietary pattern. This axis describes the physiologic link between poor dietary intake, fluctuating glucose levels, and mood symptoms.

The BSAA functional concept forms the cornerstone by which the effects of macronutrients on mood are interpreted. The 3-Day Food Journal for Mood (3-DFJM) is a tool designed to help patients self-identify their macronutrient dietary intake patterns, and accordingly, to identify dietary factors that can lead to states of depression, anxiety, and fatigue.

Based on the results of the 3-DFJM, a Macronutrient Mood Therapy (MMT) program can be designed to help patients improve their own moods from a dietary perspective. MMT involves selective removal of dietary factors associated with mood disturbances (e.g., processed, sugary foods) and replaces these factors with increased intakes of dietary components associated with improved moods. Currently, we are developing a 12-week nutritional psychology group manual incorporating the aforementioned tools. We plan to collect pilot data in a veteran sample in January 2014.

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Body Psychotherapy

In depression, patients frequently have physical complaints and body-image disturbances.¹ Somatic symptoms are now regarded as “common presenting features throughout the world.”² These are also expressions of psychosomatic processes.

The therapeutic strategy in body psychotherapy (BPT) is experiential and relational.³ According to Heller, it includes “body techniques to strengthen the developing dialogue between patient and psychotherapist about what is experienced and perceived. . . .the body is considered a means of communication and exploration.”⁴ BPT focuses upon the link between motor systems and emotion regulation, as well as on disturbed emotional processing and affect regulation.

Drawing upon findings from embodied cognitive sciences⁵ and psychotherapy research^{6–8} BPT offers a range of disorder-specific interventions, addressing the link between depressive symptoms and bodily experiences. The disorder-specific approach of BPT for depression has been tested in single case studies, small case series, and, most recently, in a randomized controlled trial, all of which showed good efficacy.^{6–8}

BPT encompasses the following main components:

- (1) Exploratory movements, exercises, and increased sensory awareness (to address lack of affect and reduced psychomotor activity—lack of drive/initiative)
- (2) Techniques derived from neo-Reichian BPT, movement psychotherapy, and psychodrama; exploring, enacting, revitalizing, and transforming the mind, particularly suppressed negative/aggressive impulses (especially those featuring self-destructive/suicidal tendencies); and enhancing patients' affective modulation, psychomotor expressiveness; and fostering healthy self-regulation
- (3) Interventions focusing on bodily strength, capabilities, and other healthy resources, aimed at rebalancing patients' negative self-evaluation and strengthening self-determination
- (4) Working against gravity (physically and metaphorically) to counteract feelings of heaviness and the unbearable weight of emotional/mental pain
- (5) Body-oriented psychologic work directed toward biographic backgrounds with a specific focus toward unmet physical/emotional needs, nourishment, and un-

resolved traumata (i.e. separation/loss), enabling patients to identify how self-destructive tendencies are diverted from external objects to identify a range of more-constructive responses and solutions. ■

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