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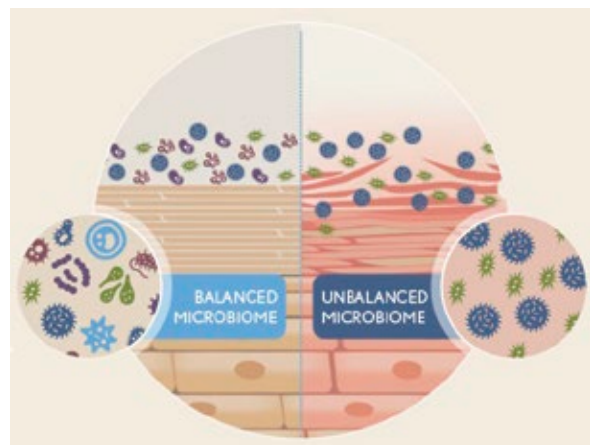
# Integrative Medicine for Posttraumatic Stress and Complex Trauma

A Special Report by Dr. Leslie Korn

Posttraumatic stress is the quintessential MindBodySpirit dis-order that alters physiological, biological, and psychological balance. People with PTSD and complex trauma often experience dysregulation of multiple systems of function that impairs physical, affective, and cognitive function. It can lead to a profound sense of disconnection from others, and loss of purpose and hope.

**Dissociation** is common following trauma and is associated with disabling side effects including substance abuse, self-harming behaviors, eating disorders and chronic pain. In his analysis of the whiplash model of pain, Scaer suggests that the chronic pain syndrome that results from mild motor vehicle accidents does not correspond with the actual events—that it more likely represents dissociated memory that was laid down at the time of impact due to intense fear. Chronic illnesses and autoimmune disorders such as rheumatoid arthritis, multiple sclerosis, lupus, inflammation of the thyroid

and digestive disorders including GERD, microbiome imbalance, diabetes, cardiovascular disease and mitochondrial illnesses such as chronic fatigue syndrome and fibromyalgia all occur at higher rates in people with PTSD.



**Integrative Medicine** methods provide a range of approaches to self-regulation, healing and and promote self-care behaviors. These methods facilitate deep rest, help to reset circadian rhythm, and release endogenous opioid and cannabinoids leading to a reduction in anxiety and an enhanced sense of well-being. Some methods like meditation, chanting, runners high of aerobic exercise, hot



yoga and bodywork therapies offer ways to gain awareness and control over the dissociative process. Relaxation techniques (such as breathing exercises, guided imagery, and progressive muscle relaxation), energy psychology such as tapping, tai chi, and qi gong are all practical and beneficial methods that are easily incorporated into daily self-care routines.



**Botanical therapies** are widely used to address symptoms of PTSD, most notably the use of Cannabis, Kava, and St John's Wort. Touch therapies, animal assisted therapies, and group rituals are used to facilitate a complex psychobiological response, which may improve the capacity for attachment through structured affective and sensory engagement with other caring beings. Group spiritual rituals and

entheogenic rituals emphasize transpersonal approaches to engender self-compassion and meaning-making as the patient reevaluates his or her place in the cosmos following traumatic events. The military conducts four-day "healing retreats" for small groups of patients and their caregivers. These retreats provide a selection of nature-based recreational activities. Participants choose their activities and choice may be central to efficacy, suggesting the importance of engaging the patient's intuitive recognition of what will be helpful to them in their current stage of recovery.

Research on recreational, adventure and nature-based therapies for PTSD, while promising, and intuitively would seem beneficial, is inconclusive. Yet these therapies may be valuable for their combination of physical exercise, the exposure to the light/dark cycles of natural light that entrain circadian rhythm and the opportunity to share nature with others. Animal-assisted and equine therapies likewise show a diverse range of results and offer techniques to harness the human-animal bond. Equine therapies provide for physical rehabilitation with riding,

grooming and trust building via the “affective mirror” that horses reflect back to humans. Some equine programs ask veterans to help rehabilitate horses who have been wounded and traumatized, leading to awareness of their own “wounded healer” identity to be used as a pathway to mutual helping and healing. Canine animal assistants help reduce anxiety in sexual abuse survivors and rape victims who report crime or testify in court and also renew the capacity to develop attachment, tolerate sensation and pleasure and to give and receive non-sexual, caring touch through physical contact.

The use of integrative methods (also called Complementary Alternative Medicine) is the same in the PTSD and general population alike, ranging from 39-41%. People who use these methods include victims of physical and sexual abuse, torture, and refugees and people with diverse ethnic backgrounds, many of whom may be particularly receptive to methods similar to their traditional cultural practices. Traditional medicine is defined as healing practices indigenous to a specific cultural tradition. Cultural Healing beliefs and methods should be identified and prioritized during





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assessment and treatment when working with recent immigrants, refugees, indigenous populations or people for whom cultural/ethnic identity may be significant. Where stigma about seeking mental health care exists, integrative methods may be especially useful as they engage the somatic and spiritual narrative as a pathway to the psyche. The DSM-V Cultural Formulation Interview provides modules designed to elicit information on use of integrative and traditional cultural practices using as person-centered approach.

**Integrative methods** are often derived from religious/spiritual and culture specific practices. Many of these approaches like Vipassana (Buddhist) Meditation, Traditional Chinese Medicine and Yoga are increasingly “secularized” or denuded of their cultural or spiritual overtones in order to adapt an acceptable, generic health experience. In contrast, there is syncretic exchange across “cultural/spiritual identity” borders. Among

these include the use of traditional rituals for PTSD and substance abuse recovery like the Plains Native’s sweat lodge and Sun Dance ceremonies, the Southwest Native American Church Peyote Ceremony, the Canoe Journey of the Pacific Northwest, drumming rituals, and Curanderismo, all of which include, by invitation, both native and non-native veterans and others in recovery. Other wide ranging examples of cross-spiritual exchange include the introduction of Vipassana Buddhist meditation into (maximum security) prisons with a predominant population of African American Christian men and Neo Shamanic practices that involve “soul retrieval” and use of entheogenic-facilitated psychotherapy.



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## Entheogens

Healing rituals for PTSD and Complex Trauma rituals increasingly incorporate the use of entheogens for the treatment of PTSD and its sequelae. Entheogens (also referred to as psychedelics) refers to chemicals or plants that lead to the experience of the divine within. Since scientific exploration of entheogens for mental health began, entheogens have been incorporated into psychotherapy and other rituals for the purpose of treating anxiety and PTSD and to access a transcendent (or in the case of MDMA, an empathic) state in order to potentiate radical change. There are promising results for the use of entheogen-assisted psychotherapy for the treatment of PTSD and substance abuse including the use of Ayahuasca, Psilocybin, LSD, DMT, Iboga, and MDMA.



## Bodywork, Massage and Somatic Therapies

Considering the experience of somatic distress in PTSD, it is understandable why many people explore somatic interventions often in lieu of, or in addition to psychotherapy. Some Bodywork therapies emphasize deep relaxation, while others incorporate guided imagery and psychotherapeutic exchange during massage or somatic awareness exercises. Massage techniques range from a very light touch to a deep touch, some use only pressure points other methods apply oil, rocking, stretching, petrissage and cross-fiber friction with the patient either clothed or unclothed and draped. At least moderate pressure is required to stimulate vagal activity and induce parasympathetic response.

Massage controls pain severity through its effects on both physical and psychological symptoms. Massage led to a significant reduction of PTSD symptoms in veterans and has shown promising results in the reduction of substance abuse anxiety stress and depression and dissociation. A com-

munity-based study with trauma survivors found significant improvement in the domains of interpersonal safety, interpersonal boundary setting, bodily sensation, and bodily shame in response to massage and energy-based therapies. Specific medical massage/light, “energetic” touch techniques include Cranial Sacral Therapy used for Traumatic Brain Injury, the Perineal technique of Polarity Therapy and Thiele massage which has shown efficacy for chronic pelvic pain, bladder pain syndromes and chronic non-inflammatory nonbacterial prostatitis, which occur at high rates in survivors of abuse.



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## Case

John was arrested during the Chicago riots of 1968 and was raped in the holding cell while he awaited release. He suffered for decades from chronic constipation, hemorrhoids, and anal sphincter spasms, which led to chronic use of muscle relaxants and anxiolytics. He sought improvement and alternatives to medication. Following psychoeducation using progressive muscle relaxation and guided imagery, he

undertook a series of treatments that involved gentle massage of the perineal muscles while engaging in psychotherapeutic dialogue to decondition from intrusive imagery and muscular contraction. He experienced acute relief from painful spasms, and improved over time, practicing relaxation methods. He sought treatment occasionally as needed. He was able to stop using medication.

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These many therapeutic methods of touch address symptoms and facilitate a spectrum of states of consciousness. Body-centered psychotherapy is conducted by dual-trained clinicians that combines touch and psychotherapy as a process-oriented technique and may also serve as exposure therapy where the bodymind is contacted in order to decondition autonomic hyperarousal associated with somatic memories. Energy Freedom Techniques include self-touch during which the client “taps” on specific acupuncture points while recalling intrusive memories.

Some methods, like Somatic Experiencing focus on a non-touch approach to facilitating patient awareness of their interoceptive, kinesthetic, and proprioceptive experience.





## Acupuncture

Traditional Chinese needle insertion along meridians, electro-acupuncture, and auricular acupuncture is widely used for the treatment of symptoms associated with PTSD including anxiety, depression, pain, substance abuse and insomnia. Systematic reviews of acupuncture for PTSD show promising results ranging from positive to mixed. Both body and auricular acupuncture reduces the severity of withdrawal symptoms associated with rapid opiate detoxification, increases participation rates of patients in long-term treatment programs, and reduces cravings and relapse. Techniques of particular clinical interest for PTSD are Five Element Acupuncture, a method that actively incorporates a spiritual and emotional approach, and Japanese style acupuncture, which uses



very light needle insertion ideal for young children, elders, and needle-sensitive individuals. The National Acupuncture Detoxification Association (NADA) protocol is also a widely used, five-point auricular protocol for substance abuse recovery that is often applied to large numbers of individuals concurrently, in community based settings and in war zones, refugee camps and during disasters. Lay acupuncture practitioners are approved to apply this protocol in many though not all states, under medical supervision, making this a convenient adjunct to residential and out-patient behavioral health care delivery.

Acupuncture is also used for self-harming behaviors. Acupuncture and moxibustion stimulate opioid/endocannabinoid-mediated analgesia, likely through the same process as the burning and cutting associated with self-injury. The practice of acupuncture also includes the application of moxibustion, the burning of the herb *Artemisia vulgaris* on or near acupuncture points. A small study demonstrated that acupuncture reduced self-injurious behavior (SIB) in adoles-



cents. Researchers identified SIB in nonhuman primates targeting known acupuncture analgesia points suggesting the potential value of teaching self-acupuncture as an alternative to SIB.

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## Case

Janet was a 20-year old in treatment for cutting and burning her arms and thighs. She denied a history of trauma or abuse. Following 3 weeks of psychotherapy including psychoeducation about cutting, burning and self-regulation of affect, the therapist accompanied her to a female acupuncturist. During treatment together, we explored sensations and emotional feelings and reframed piercing the skin and heat as a structured therapeutic ritual that could help Janet relax and self-regulate without self-harming. Intensive treatment duration was 15 weeks, during which Janet was also taught Tai Chi, and Yoga exercises to

release anxiety and provided the anxiolytic herb Kava (*Piper methysticum*) to use as needed. Psychotherapy continued and Janet made symptomatic progress. As Janet became aware of her experiences of abuse, she felt she did not want to be “penetrated” by the needles but rather sought other forms of therapy including exercise, and massage therapy to help her relax and self-regulate. Janet explored various integrative methods over the course of 28 months of Post Trauma psychotherapy. She gradually replaced self-harming behaviors with self-care and was able to return to school.

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Some patients prefer acupuncture and some prefer touch therapies. Many choose to experience both but at different stages in their recovery. Assessing for an acupuncture or touch therapy referral should include assessment for the meaning of penetration by needles for survivors who are victims of “penetration” and also the meaning of touch and the type of touch engendered by tactile proximity. Touch can engender a preverbal state reminiscent of early attachment, that “needling” does not. This may be beneficial at one stage or frightening at another. Clinician gender also plays an important role in the choice of referral and the patient may want a therapist in the room during the initial sessions in order to feel safe.

## Yoga and Breathing

Hyperventilation and breathing pattern disorders are common in PTSD and have a bi-directional effect on anxiety. Intersecting these patterns with various breathing exercises are consistently found to be a well-accepted and effective approach to the self-management of anxiety. Approximately 11 percent of the general US population uses breathing exercises and 10 % practice Yoga with practice percentages varying based on geographical region. Breathing exercises are a well-established part of trauma-informed cognitive behavioral therapy, dialectical behavioral therapy and mindfulness meditation.

Breath has long been considered to be the link between Mind Body and Spirit. *Respirar*, to breathe, derives from the root word *espiritu*, meaning spirit. Yoga scholars suggest that if “you control the breathe you control the mind.” Different methods demonstrating efficacy include Pranayama, Kundalini and Kriya yoga. These techniques vary by how they alter the nasal cycle, which correlates to the two

physiological states of rest and activity. Greater airflow in the left nostril reflects the resting phase and greater airflow in the right nostril correlates with the activity phase. Forcing the breath through only one nostril stimulates the contralateral hemisphere and ipsilateral sympathetic nervous system via the hypothalamus). Research on Yoga breathing for PTSD shows a reduction of symptoms, severity depression and reduced risk of alcohol and drug use.



Hatha Yoga incorporates physical movements, focus and attention, along with methods that control the breath. A PTSD-informed Hatha Yoga model



is a safe and effective adaptation to address the specific needs of the PTSD population. Yoga is tailored for pain, dissociation, eating disorders, sedentism, metabolic syndrome, obesity, substance abuse, anxiety, hyperventilation, and depression. Hatha yoga increases self-efficacy in women with PTSD and frequency of yoga practice is a predictor for reduction of depression and PTSD symptoms suggesting the value of incorporating Yoga practice into an ongoing, self-care program. Individual yoga exercises can be taught in the clinical setting to address specific needs, for example to address the purging motion used in bulimia.

The contraction and heaving motion of the diaphragm stimulates the vagus nerve and releases the chronic muscular contraction of the diaphragm commonly experienced in chronic anxiety and bulimia. The anxiolytic effect of purging movement may be achieved and reframed as self-care instead of self-harm, by doing a yoga exercise called the Uddiyana Bandha.




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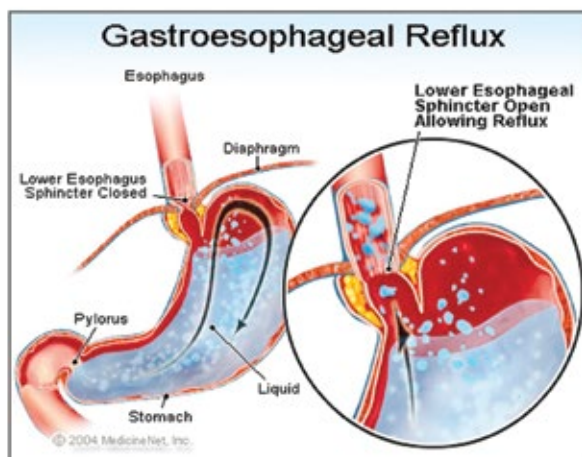
## Case

Esther was a sexual abuse survivor who had purging bulimia. She described feeling anxious and purging several times a day often just after eating but also at other times during the day. She described feeling relaxed and sleepy after purging. Esther was taught the Uddiyana Bandha, which involves movement that contracts and releases the diaphragm in ways that mimic the regurgitation process. Esther was instructed to practice this exercise two times a day away from food (or as often she felt the need). She reported feeling more relaxed after the exercise and was able to reduce purging bulimia while she continued post trauma psychotherapy.

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## Nutritional Medicine

Stress and trauma affect blood glucose levels, brain metabolism, energy, and alteration of brain structures. Stress disrupts the autonomic functions which normally signal digestive enzyme release and stress and dysregulates hormones. People with PTSD experience high rates of GERD with evidence of overactive HPA axis and inflammatory cytokines present in IBS and diabetes type 2. The core approach to implementing dietary and nutritional supplementation for PTSD includes enhancing digestion, improving the quality of food and the types of foods that nourish the mind body and do not contribute to or exacerbate depression pain and anxiety. Improving nutritional status and self-care behaviors improves overall well-being.



Nutrition also can serve as a behavioral self-care “barometer” where the client can focus on simple steps of self-care and nourishment required for recovery in PTSD.

Behavioral principles of change include making positive changes: incorporating healthy fats, whole foods, sufficient protein for adequate neurotransmitter synthesis, healthy fats and addressing addictive or unhealthy behaviors: eliminating pro-inflammatory foods moderating food stimulants to achieve mood elevation while avoiding anxiety and insomnia.

Alterations in gut microbiome that occur in response to early life stress may contribute to the development of PTSD later in life. Stress appears to negatively affect gut bacteria in animals under stress and gut bacteria appear regulate the set point for the HPA axis. Probiotics appear to regulate GABA via the vagus nerve. Research suggests that *Bifidobacterium* bacteria reduces pain, suggesting an anti-inflammatory effect.

Magnesium is among the first choices of mineral supplementation. It is an anxiolytic, anti-stress mineral and supports healthy cognitive function and mood. Deficiency is common. People who are chronically stressed or abuse alcohol are subject to deficiencies. Magnesium is a natural sedative; it helps muscles relax and plays an important role in insulin sensitivity, calcium absorption, cardiovascular health, protein synthesis, bone health, and energy metabolism. Magnesium supports the reduction of anxiety, insomnia, and muscle tension.

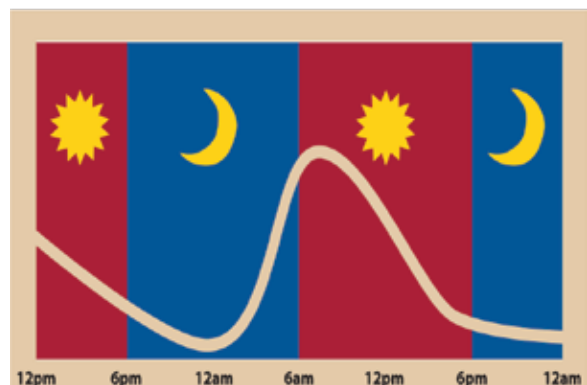
Healthy fats should include food and nutrient sources of EPA/DHA, (Fish), GLA (borage, hemp, evening primrose, black currant seed), complete vitamin E (400 international units (IU), old-pressed olive and sesame oil, raw, unsalted butter or fresh lard and the exclusion of trans fats, margarine and butter replacements. Dosing of fish oil



should start at 3000 mg/day and GLA like Borage Oil 1000 mg/day.

Nutritional supplements used to regulate circadian rhythm include lithium orotate, melatonin, phosphatidylserine, and vitamin B12 (methylcobalamin). Combined with bright light exposure in the morning and the use of blue light-blocking glasses at night. Lactium, developed in France, is a peptide concentrate from casein, that act on GABA receptors. Lactium has been shown to reduce stress and cortisol levels while inducing relaxation and improving mental function and digestion. The three most important nutrients to support blood sugar levels in the body are B complex vitamins, glucose tolerance factor (chromium, B-6 and fiber, and adrenal support in the form of glandulars (adrenal, DHEA, Pregnenolone or compounded low dose cortisol.

Circadian Release of Cortisol



## Inflammation and Depression

Chronic low-level inflammation contributes to depression and cognitive decline. The standard American high in Refined sugar products are highly inflammatory; exacerbating pain and raising triglycerides and cholesterol levels. Sugar depletes B vitamins and immune support minerals, such as zinc, and also reduces the body's capacity to digest and absorb glucose. Proteolytic enzymes include papain and bromelain when taken on an empty stomach are anti-inflammatories without the side effects of NSAIDS.

Bromelain inhibits the cyclooxygenase enzyme and inhibits the synthesis of prostaglandin. It also breaks down fibrin and reduces swelling. Along with optimal Vitamin D levels, and herbal extracts of flavonoids from *Scutellaria baicalensis* and *Acacia catechu* inhibit both of the two pro-inflammatory COX and LOX enzymes to reduce the production of pro-inflammatory eicosanoids they provide a foundation of nutritional anti-inflammatory treatment and may be used for pain and fibromyalgia.



## Cholesterol

Low cholesterol can contribute to significant mental distress, including anxiety, muscle pain, and suicide attempts and may serve as a biological marker of suicidality. A recent study of 50,000 individuals in Norway found that women with cholesterol over 200 lived longer than those with lower cholesterol. Cholesterol is also the foundation for pregnenolone, which serves as the predecessor to virtually all other steroid hormones (including progesterone, cortisol, aldosterone, and testosterone). Pregnenolone is an

endogenous compound synthesized in the central nervous system as well as the adrenal glands. Decreases in pregnenolone are associated with depression, anxiety, and pain in war veterans from Iraq and Afghanistan. Pregnenolone is also metabolized to allopregnenolone, an anxiolytic neuroactive steroid that is decreased in veterans with pain. This suggests artificially forcing down levels of cholesterol may be detrimental to individuals with PTSD.





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## Case

Nelson was a retired combat veteran with PTSD. He was referred by his orthopedic surgeon because he was addicted to prescription opiate medication as a result of an occupational accident in which he injured his lower back. A comprehensive nutritional assessment revealed a pro inflammatory diet, GERD, gastritis, gall stones headaches and use of NSAIDS along with daily opiates. Nelson began a daily treatment program of the NADA acupuncture protocol to reduce pain and ease detoxification and withdrew from NSAID and began slowly reducing his dose of oxycontin. He did water based physical therapy and hydrotherapy to regain range of motion. He began a protocol of Vitamin D, proteolytic enzymes, Chinese medicine analgesic herbs (Sculacia) and essential fatty acids (Omega 3 and Gammalinoleic acids). He was provided Lactium product (milk derived neuropeptides) for sleep.

He began to make changes in his diet to replace refined carbohydrates and transfats with a diet rich in animal proteins, collagen and mineral rich broths, eggs, butter, frozen blueberries and raw apples, cooked and raw vegetables with an emphasis on bitter greens to aid liver and gall bladder function and fermented sauerkraut.

Once his self care plan of exercise, PT acupuncture and dietary changes was stable, he eliminated all use of opiate over a two week period. Following a successful withdrawal Nelson began receiving CBT deep tissue massage and body oriented psychotherapy to continue relax to address his now manageable back pain. During the 2nd session, during massage over the area of injury, Nelson began remembering being beaten by his father on his lower back with a belt buckle and Nelson began a new phase in his recovery.

## Herbal Medicine

There are many botanicals that can be beneficial for symptoms of PTSD.

They are classified by their mechanism of action: adaptogens like licorice and Ashwaghandha, nervines such as Hops, Valerian, and Passionflower, stimulants like coffee, green tea, and anti-inflammatory/analgesics like Buchu, Turmeric and Ginger. Adaptogens support adrenal function, build endurance, and reduce fatigue. By supporting adrenal function they also support immune function and resistance. Adaptogens help utilize oxygen and increase cellular respiration. Common adaptogens include Panax ginseng, Eleuthero and Ashwagandha.



Rhodiola is a mild antidepressant and a stimulant useful for the treatment of anxiety. Rhodiola is also an anti-inflammatory. Rhodiola increases seroto-

nin in the hypothalamus and midbrain as well as opioid peptide levels and supports serotonin, dopamine, and norepinephrine action at the receptor sites. No serious side effects have been reported but rhodiola can be stimulating, so it should be used earlier in the day. People who develop mania in response to antidepressants could respond similarly to high doses of Rhodiola. Rhodiola is a good alternative to the stimulating effects of caffeine. Gotu Kola (*Centella asiatica*), also known as pennywort, is a traditional Ayurvedic and Chinese botanical used as a revitalizing tonic and to treat depression and anxiety. A double-blind, placebo-controlled study of the effects of gotu kola demonstrated a reduction in the acoustic startle response demonstrating anxiolytic effects for people with PTSD.



Green tea is a caffeine source but rich in theanine. It is often combined in supplements with 5-HTP for the treatment of depression and anxiety. It crosses the blood-brain barrier and has been shown in studies to increase levels of serotonin and dopamine in the brain. Theanine is a glutamate antagonist and suppresses glucocorticoids, which may account for its action as an antidepressant. Green tea is also a powerful antioxidant and is associated with longevity. L-theanine and caffeine in combination appear to significantly improve aspects of memory and attention much more than caffeine alone.



Kava is one of the most effective herbal anxiolytics and along with St. John's Wort among most commonly used botanicals. Current evidence supports the use of SJW in treating mild-moderate depression, and the use of kava in treatment of generalized anxiety. SJW is frequently used in potentially dangerous combinations. Clinicians should be aware of these common interactions and warn patients appropriately.





## Conclusion

People who have been traumatized often present with the daily distress of intractable psychosomatic symptoms. Many of these individuals do not seek psychotherapy or pharmacotherapy. Indeed, people search for alternatives like Integrative methods. While many people use some form of integrative medicine, including natural products for self-care, many do not share this information with their clinicians, unless specifically asked. Inquiring enhances clinician/patient rapport and patient safety especially regarding drug-nutrient-herb interactions, and suggests the importance of exploring self-care and self-prescribing practices during the initial intake. Clinician personal experience with these many practices can lead to a “felt” understanding of the benefits and limitations of these methods that enhance the capacity to effectively match patient to method. The central clinical challenge to effective application of integrative medicine therapies is to identify which methods are isomorphic to the individual, and optimal for their stage of recovery. Information about treatment options and active collaboration between clinician and patients appears central to engagement and efficacy. Options for implementa-

tion include in office psychoeducation, such as teaching breathing exercises, offering the development of 12-week groups to practice these methods or rituals, or referral to specific classes or practitioners to engage a teamwork approach. Effective clinical implementation of integrative methods should also address religious and cultural beliefs and socioeconomic barriers. Fortunately, many metropolitan areas have low cost, school training clinics staffed by interns and supervising residents in the fields of Massage, Acupuncture, Nutritional therapies, Botanical Medicine, Naturopathy, and Yoga. With the burgeoning movement in Integrative Mental Health, interns are incorporating integrative methods during graduate school internships of making the referral process accessible to many individuals with PTSD and complex trauma.

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