**Holistic Approaches to Pain Management**

**and Treatment of Substance Use Disorders including Opioids & Heroin**

**Acupuncture**

* Acupuncture is a part of East Asian medicine developed in China over 2,500 years ago and currently practiced throughout Asia, Europe and the United States.
* Acupuncture is the insertion of fine needles into specific points on the surface of the body for the purpose of stimulating healing.
* Acupuncture may be a safe and feasible treatment to assist mothers to reduce their dosage of methadone (Janssen et al, 2012).
* Acupuncture was found to be as effective as relaxation training techniques for problems with anxiety, sleep or substance use or in reducing the need for further addiction treatment in patients with substance use problems and comorbid psychiatric disorders (Ahlberg, Skarberg, Brus & Kjellin, 2016).

**Animal-Assisted Therapy**

* Animal-Assisted Therapy is being used in a wide variety of settings to help people with acute and chronic illnesses.
* This is based on the many physical and psychological benefits seen in patients when they interact with animals.
* These include lowered blood pressure and heart rate, increased beta-endorphin levels (a hormone produced by the brain and nervous system that reduces pain), decreased stress levels, reduced feelings of anger, hostility, tension and anxiety, improved social functioning, and increased feelings of empowerment, trust, patience and self-esteem.
* Animal therapy is looked upon as both a learning and healing experience. It has been demonstrated that simple presence of a dog was beneficial for reducing stress levels in stressed adults (Gonzalez-Ramierz et al, 2013).
* Literature has shown that animals’ presence, spontaneous behaviors and availability for interaction may facilitate therapy.
* It has been demonstrated that interactions with a friendly animal can result in reducing levels of cortisol and increasing oxytocin, dopamine, endorphins and phenethylamine (Abreau & Figueiredo, 2015).

**Aromatherapy**

* Aromatherapy uses essential oils extracted from plants and herbs that can be inhaled or applied through the skin.
* Aromas derived from these natural plant sources have been shown in clinical studies to have positive effects on the mind and the body.
* These essential oils, which are composed of naturally occurring chemicals, can help to support emotional balance, a sense of calm, stress relief, and feelings of well-being.
* It is known that thinking about the scent can be as powerful as the scent itself.
* Mentioning certain scents can bring about a deeper discussion of feelings and emotions, allowing the patient to tune into the experience more intimately, to feel it more directly, and to connect to it on a fuller level (LaTorre, 2003).
* Aromatherapy provides a potentially effective treatment for a range of psychiatric disorders appears to be without the adverse effects of many conventional psychotropic drugs (Perry & Perry, 2006).

**Biofeedback**

* Biofeedback is a scientific way of learning how to reduce tension.
* Biofeedback practitioners use instruments to give people immediate feedback about the level of tension in their bodies.
* People practicing biofeedback often say they gain psychological confidence when they learn that they can control their physical reactions.
* Biofeedback has been found effective in several aspects of addiction treatment (Sokhadze, Cannon & Trudeau, 2008).
* Heart rate variability biofeedback (HRV BFB) is a clinical intervention that is gaining growing empirical support for the treatment of a number of psychological disorders, several of which are highly comorbid with substance use disorders (SUDs).
* The autonomic nervous system is the bases of two key processes implicated in the formation and maintenance of addictive pathology—affect dysregulation and craving—and it appears that HRV BFB may be an effective intervention to ameliorate autonomic nervous system dysregulation in these processes, and as such, prove to be an effective intervention for SUDs (Eddie et al, 2015 and Eddie et al 2014).

**Creative Arts Therapies**
**Art Therapy – Dance Therapy – Drama Therapy – Poetry Therapy**

* Creative therapies can be very helpful in the process of recovery from addiction.
* They offer the opportunity to get in touch with their inner self and with their higher power.
* These creative therapies can provide a form of expression for feelings that cannot be easily identified or put into words.
* Through helping the people with an addiction connect with their more authentic self, the expressive therapies can help raise self-esteem and provide an opportunity to create new experiences beyond habitual and painful emotional patterns.
* The creative arts foster a renewed ability to relax without drugs or alcohol (Oklan & Henderson, 2014).
* Art therapy has been empirically assessed as an effective form of relapse prevention for substance abusers who are relatively treatment resistant, defensive and unexpressive (Tam, Shik & Lam, 2016)

**Equine-Assisted Therapy**

* Equine-Assisted Therapy has been around for a long time. It was originally started as a therapy for people with physical disabilities and developmental disorders.
* It has been successfully used as part of the treatment for various psychological issues such as depression, anxiety, and eating disorders as well.
* People recovering from addiction have also been found to benefit from interactions with horses.
* This type of outdoor therapy experience combines the power of nature with the benefit of forming a relationship with an animal to help build confidence, trust, patience, and self-esteem.
* Some addiction treatment programs have seen results from the use of horses in treatment, particularly for younger patients, although most research evidence on equine therapy’s benefits has taken place outside of the substance use treatment field (ADAW, 2015).
* It is believed that Patients riding a horse can become familiar with the tools needed to get the horse to respond effectively, and that can translate for the patients to an understanding of the tools they need to stay grounded in recovery, from support meetings to daily meditations.
* Also, the “herd” dynamics that patients observe in how the horses interact with one another teach lessons about leading and following in life, everything observed in working with the horses is a tie-in to something else (ADAW, 2015).
* Four interrelated aspects of equine therapy, namely “change of focus”, “activity”, “identity”, and “motivation,” suggest this therapy is more than just a break from usual SUD treatment.
* The stable environment is portrayed as a context where participants could construct a positive self: one which is useful, responsible, and accepted; more fundamentally, a different self from the “patient/self” receiving treatment for a problem (Kern-Godal et al., 2016).

**Gardening**

* Being in nature is known, in and of itself, to have a healing effect on the mind and emotions.
* Gardening as a form of therapy has increasingly been used as an approach to addiction and mental health treatment.
* Healing gardens are often a part of addiction treatment centers, long term care facilities and other healthcare settings.
* Gardening can help to lower stress, boost self-confidence, build teamwork, and foster perseverance.
* The rewards are both immediate and long term as one sees the plants and garden develop and change with the seasons.
* This can be as simple as having some potted herbs or plants in one's home; becoming part of a community garden; or cultivating one's own vegetable or flower garden on one's roof if allowed or at one's home.
* Gardening promotes a new self-concept and gardening helps emotional and behavioral management (Twill, Purvis & Norris, 2011).
* Research has shown that patients participating in gardening programs resulted in experiencing reduced stress and depression, in addition to improving the quality of their lives (Detweiler, et al., 2015).

**Guided Imagery**

* Guided Imagery involves the use of the imagination to achieve specific healing and life goals.
* It can be effective in helping people cope with stress and regain a sense of control and well-being.
* As with all other mind/body techniques, interest, motivation and practice are keys to the successful use of guided imagery for health and healing.
* Guided imagery is considered a nonpharmacologic modality as well as complementary and alternative medicine, and involves imagining scenes, pictures, or experiences to help the body heal from pain (Burhenn et al., 2014).
* It was found that incorporating guide imagery and other holistic therapies helped patients reduce opiate use.
* While some patients found other physicians to give them the opiates they desired, those who persisted in an environment of respect and acceptance significantly reduced opiate consumption compared with patients in conventional care.
* While resistant to complementary and alternative medicine therapies initially, the majority of patients came to accept and to appreciate their usefulness (Mehl-Madrona, Mainguy & Plummer, 2016).
* Stress Management techniques utilizing guide imagery were found to reduce pain for those suffering from chronic neck pain (Metikaridis et al., 2017).

**Herbal Therapy**

* Herbs are natural plant substances that have a variety of effects on the body.
* Many herbs have long been used in detoxification.
* Kudzu has the potential for moderating alcohol abuse.
* Kava and valerian can be used to treat the insomnia that accompanies withdrawal.
* Milk thistle has been shown to improve liver function.
* The use of herbs in the recovery process may be most effective when combined with other strategies that support the whole person including nutrition, bodywork, acupuncture, relaxation and exercise (Behere, Muralidharan & Benegal, 2009).
* It has also been demonstrated that there is a link of the action of herbs or acupuncture to the neurotransmitters system implicated in alcohol dependence (Liu, Lawrence & Liang, 2011).

**Homeopathy**

* Homeopathy is a non-toxic, gentle system of medicine that uses highly-diluted remedies to treat illness and relieve discomfort in a wide variety of health conditions.
* It is thought that homeopathic remedies are able to stimulate a person’s bodily systems to deal with stress and illness more efficiently.
* Research is currently being undertaken to understand how and why these remedies work on the mental and physical level.
* Specific homeopathic remedies may be helpful during the period of withdrawal from alcohol or drugs.
* Homeopathy is practiced by licensed physicians and other qualified prescribers in many parts of the world, including Europe, Asia, and the U.S.
* While self-care with homeopathy can be helpful for minor short-term illnesses and injuries, if an illness or condition is chronic or serious, it is best to consult an experienced prescriber for a remedy that more accurately meets an individual’s health needs.
* It has been difficult to research the effectiveness of Homeopathy with mental health and substance abuse disorders, but results of such studies support its use with these disorders (Adler et al., 2011).
* Alcoholism is one of the world's costly drug use problem. In addition, an alcoholic can develop multiple forms of addiction to alcohol simultaneously such as psychological, metabolic, and neurochemical. This behavior interferes with the alcoholic's normal personal, family, social, or work life. Here the best way of Homeopathic mode of treatment is to treat the patient by giving constitutional medicine along with moral support (Gupta & Shah, 2015).
* The therapeutic potential of perispinal injection for CNS disorders is highlighted by the rapid neurological improvement in patients with otherwise intractable neuroinflammatory disorders that may ensue following perispinal etanercept administration (Tobinick et al., 2012 & Tobnick et al., 2014, & Tobinick, 2016).

**Hypnosis**

* Hypnosis is a calm natural state of focused attention which can be produced by one's self or with the help of a therapist.
* From that state, the mind is especially receptive to ideas and suggestions compatible with the person's goals.
* Some people have found hypnosis to be a useful part of a total recovery program. It has been used in dealing with patients who are wanting to stop drinking with some success (Jayasinghe, 2005).
* Hypnosis allows the patients reinvestment of their senses, as well as a modification of their relationship with the outside world. This helps them to change and start a process of opening up and letting go of their addicting behaviors (Kammoun et al., 2009).

**Massage and Bodywork**

* Massage and bodywork address the mind/body/spirit, offering the possibility of healing and change on many levels.
* On a physical level, it can facilitate the release of tension and holding and improve energy balance and flow.
* It also offers the opportunity to explore deeper levels of relaxation and peace, greater self-acceptance and awareness, and a deeper connection to self and others.
* Management of non-specific neck pain disorders often include massage therapy as well as exercise therapy intervention or promotion which have been found to be effective non-pharmaceutical treatments (Skillgate et al., 2015).
* Patients with severe pain were found after massage therapy, to report highly significant improvement in their levels of distress, pain, tension, discomfort, and mood compared with their premassage ratings (Suresh et al, 2008).

**Meditation**

* Meditation has roots in many spiritual traditions, including Hinduism, Buddhism, Islam, Judaism, and Christianity.
* Meditation emerged in each case as a spiritual practice to discipline the mind and deepen spiritual awareness.
* There is an ongoing call for the incorporation of spirituality into the world of substance abuse treatment and the use of meditation seems to be responsive to this call (Horton & Naelys, 2016).
* Today meditation is also practiced for stress management, personal growth, general wellness, and its therapeutic effects for medical and emotional difficulties.
* The most recent boost to meditation comes from the mindfulness meditation movement, derived from Vipassana in Buddhism but presented in Western form by Jon Kabat-Zinn and others (Moss, 2011).
* An abundance of empirical research studies has now emerged documenting specific benefits from mindfulness meditation and meditation in general.
* There are many different types of meditation which all work to slow down the chatter of the mind and promote relaxation and mental clarity.
* Benefits of these age-old techniques of healthy living have been shown to persuasively to promote resilience and better mental health (Hazri & Sakar, 2014).

**Mindfulness**

* Mindfulness helps one to tap into the present moment – for relaxation and reduction of stress in any situation: at home, at the office or school, while driving, and while shopping.
* Mindfulness has been found to reduce opioid cue-reactivity while restructuring natural reward processing and provides preliminary support for the hypothesis that behavioral interventions may ameliorate craving by enhancing reward responsiveness (Garland, Froeliger, & Howard, 2014).
* Also recent study has demonstrates preliminary feasibility and efficacy of Mindfulness Meditation as a treatment for co-occurring prescription opioid misuse and chronic pain (Garland, Manusov, Froeliger, Kelly, Williams & Howard, 2014).
* Providing training and promoting mindfulness as an effective factor for the treatment and reduction of detrimental impacts of addiction can be a major step toward treatment of dependency on drugs and its individual and social impacts.
* Through providing adequate trainings to patients, the addiction intensifying factors can be harnessed, preventive measures can be strengthened, and the forthcoming detrimental outcomes can be prevented (Imani, et al, 2016).

**Transcendental Meditation**

* The long-term positive effects of Transcendental Meditation seems to be correlated with a reduced relapse rate.
* Transcendental Meditation may not only reduce tension and anxiety, but also enhance a sense of control in anxiety-provoking situations that strengthens the long-term resistance to stress.
* Transcendental Meditation (TM) program has been recommended for improving soldier resilience, and as a viable adjunctive treatment option for PTSD and Anxiety (Barnes, Monto, Williams & Rigg, 2016).

**Music Therapy**

* Music can have a powerful effect on emotions and mood. It can be a vehicle for self-expression and can help create peaceful and calm feelings.
* As such, it can be a valuable tool for people working to overcome an addiction.
* Music therapy can help people process emotions and supports personal growth important to overcoming addictions.
* Research into the effect of group improvisational music therapy on depression in adolescents and adults with substance abuse was investigated music therapy relieved their depressive symptoms (Albornoz, 2011).
* Use of Music therapy with postoperative patients resulted in them experiencing enhanced pain management and environmental noise satisfaction (Commeaux & Steele-Moses, 2013).
* But even just listening to music on your own or creating music can have some important benefits. It can help:
	+ (1) Release or calm the emotional highs and lows people often feel when they first become sober,
	+ (2) Manage stress levels - listening to or creating music can be a wonderful way to de-stress,
	+ (3) Relieve a sense of boredom that is often felt in early recovery and
	+ (4) Increase enjoyment and reduce feelings of loneliness which can lessen the stress of recovery

**Neurofeedback**

* Neurofeedback (also called Brain wave biofeedback) is a therapy in which patients learn to change their brain wave patterns.
* Changing brainwaves can have a beneficial effect on relaxation and reduce stress and its unhealthy impact on the brain and nervous system.
* In one type of neurofeedback the training involves normalization of alpha and theta brain waves which are disturbed by long term substance abuse.
* Neurofeedback has shown dramatic success in several studies in preventing relapses from drug and alcohol addiction.
* Neurofeedback is considered an excellent therapeutic tool for treating substance abuse conditions and for treating eating disorders.
* Although it has been used primarily in treating attention deficit disorders, neurofeedback is seen as beneficial in the treatment of many conditions affecting thought processes (ADAW, 2010).
* 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 Nelso & Esty, 2012).

**Nutrition**

* In dealing with the chemical imbalances that are both a cause of substance abuse and a result of long-term substance addiction, nutritional therapy can be helpful in several ways.
* It has been found that there is a strong relationship between sugar addiction and alcoholism. Eliminating certain substances such as sugars and simple starches and increasing protein intake can help to rebalance brain chemistry.
* Good nutrition can also help heal damage to the body caused by the depletion of nutrients common in substance abuse. Use of nutritional Supplements, Vitamins and Herbs helps restore the proper biochemical balance in the brain.
* Research has found that nutrition education is an essential component of substance abuse treatment programs and can enhance substance abuse treatment outcomes. For this reason, nutrition education, should be incorporated into substance abuse treatment programs (Grant, Haughton & Sachan, 2004).
* Supporting this point of view is that indications are that drug abuse may increase the risk of the metabolic syndrome because Drug-abusing patients have higher rates of diabetes complications and Substance abuse is a significant contributing factor for treatment noncompliance in diabetes
* Nutrition education can enhance substance abuse treatment outcomes (Virman et al., 2007)

**Tai chi**

* There are many ways to achieve a meditative state of mind. For those who have trouble sitting quietly for periods of time, various movement practices and martial arts, such as tai chi, qigong, and karate, can focus and calm the mind and enhance feelings of self-confidence and self-worth.
* **Tai chi** - has been found in a recent study to be a promising exercise that improves quality of life for individuals with stimulant dependence (Dong et al., 2016).

**Qigong** - is a traditional Chinese health practice for mind and body wellness. It integrates slow movement, a relaxed posture, a focus on breathing, and a clear and calm state of mental awareness. It is considered a form of exercise called “moving meditation".

* Qigong meditation appears to contribute positively to addiction treatment outcomes, with results at least as good as those of an established stress management program.
* Results for those who meditate adequately are especially encouraging. Meditative therapy may be more effective or acceptable for female drug abusers than for males. (Chen, Comerford, Shinnick, & Ziedonis, 2010).
* A recent study showed that internal Qigong generated benefits on treating some chronic pain with significant differences (Bai et al, 2015).

**Additional Self-Directed Holistic Approaches**

* Stretching exercises
* Running
* Walking
* Stationary Cycle
* Stationary Walker
* Stationary Climber
* Yoga and Meditation
* Journal Writing