

## A Compelling Call for Mix of Modality Procedures at Chicago Meet

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### ABSTRACT

*The following report is an account of the proceedings of the Yoga and Physiotherapy Congress October 16-17, 2017 organized by the Pulsus Group. At this forum there was a constructive exchange of views on taking on board best practices in different health care modalities.*

### Keywords

Complementary and Alternative Medicine (CAM), Lymph Edema, Neural plasticity, Parasympathetic Nervous System, Internalized Mind-Body Awareness.

### Introduction

The Chicago Yoga and Physiotherapy Congress (October 16-17, 2017) organized by the Pulsus Group was remarkable in terms of the case studies and practical suggestions for integrated medicine and therapy that were routine without the usual angst to protect one's professional turf at such get-togethers.

To be fair to the professions, from the early Seventies there has been a conspicuous and unmistakable progress towards holistic and interdisciplinary therapies that combine best practices in different health care modalities, which for convenience has been christened complementary and alternative medicine or CAM. As an example, take women with breast cancer: in 80 % such cases CAM therapies such as yoga are used to overcome side effects of treatment [1]. However, in some wellness establishments and hospital environments, managements have been somewhat protective of the professional turf. This could be either because of insurance reimbursement or medical malpractice fears, or both. Also some mainstream physicians and other health care practitioners tend to be set in their ways, giving the impression that they function in professional silos [2]. This mindset appears to be making way, even if at a snail's pace to a more relaxed disposition that permits using techniques from other modalities such as yoga, acupuncture, chiropractic and others. Gratifyingly there is significant evidence that the inter-modality procedures thus taken on board are effective

both therapeutically and cost-wise.

For CAM to emerge as a viable clearing house of best practices, the following agenda is imperative:

- Functional coordination between teams of physicians of different modalities,
- Clinical integration for purposes of common diagnostic tests and treatments,
- Continuous interaction with all stakeholders in health care
- Real urge to help the emergence of an integrated system that makes use of appropriate therapies and
- Building bridges between modalities.

### No Silo-thinking

At the Yoga and Physiotherapy Congress, Chicago there was much pooling of ideas and views with open minds with no silo thinking. Participants were an eyewitness to vigorous but genial discussions on focusing on the patient's ailments and on how best to pool diagnostic and therapeutic intelligence to treat major ailments of humanity. There was a meeting of minds in regard to a multi-pronged approach to health issues such as cancer and opioid addiction. The latter in particular, is assuming epidemic proportions accounting for over 64,000 'deaths of despair' in 2016 with an instant negative impact on life expectancy in America [3]. Death caused by Iatrogenic and medical errors number over 250,000 per annum, the 3rd leading cause of death after heart disease and cancer [4].

Professionals in any modality would feel mandated to take a crack at lessening the dimensions of the opioid epidemic. A

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timely contribution towards this end beginning with substitution of addictive with non-addictive pain killers or tranquilizers would make their vocation more vital and requisite. The issues related to the epidemic squatted themselves as the undercurrent of much of the discussions, mandating dealing with the epidemic's root causes that necessitate healing the whole patient rather than just a body (part) or mind.

### **Bracing Welcome and Introduction**

The discussions spread over two days got off well with a bracing welcome and introduction by Nicole Superits, Yin Yoga practitioner. She was also the master of ceremonies gently but effectively nudging participants to play an active part in the deliberations without getting distracted. Dutch Martin, a certified Yoga Instructor and President, Toastmasters Club, contributed to protocol maintenance skillfully. He was a catalyst making sure that the proceedings ran with clockwork precision as outlined in the exquisitely designed Scientific Program for the Conference. Everyone's attention was riveted to his appeal to go holistic.

Navy Physical Therapist and Chiropractor James McKivigan, Touro University, Henderson, Nevada opened the Keynote Forum with a thought-provoking lecture on yoga therapy for breast cancer. Yoga intervention has occurred, somewhat like an afterthought, after extreme challenges were faced by breast cancer patients. Also there are gaps in research outcomes of yoga interventions for lymph edema. McKivigan's paper was an attempt to draw attention to this gap and find ways to bridge it. The lymphatic system is compromised by localized fluid and tissue swelling. He called for systematic documentation of successful yoga interventions for lymph edema. This would immensely benefit the 140 million persons that experience lymph edema following breast cancer. Evidence is building up that yoga treatment has been effective both physically and psychologically.

### **Yoga and Breast Cancer**

During discussions of McKivigan's paper it was noted that gene typos and mutations may diminish the capability of caretaker genes like BRCA1 or BRCA2. Genetic testing can throw light on whether the cancer is of high or low risk incidence, which in turn would help choose an appropriate chemotherapy, mild or aggressive. Such a risk forecast is of invaluable help to the patient as well as the oncologist. It was suggested that it is possible that yoga may have the answer for genetic typos and mutations by creating the right environment for BRAC1 and BRAC2, thereby blocking the detrimental ways of gene typos and mutations. In other words yoga helps women become less vulnerable to cancer. Together with genetic information as to whether the mutations diminish the capability of caretaker or repairing gene like BRCA1 or BRCA2, the low or high risk of cancer incidence can be determined together with appropriate chemotherapy and dosage. This is invaluable info to both physicians and women.

The Second address in the Keynote Forum was a paper co-authored by Sudhanva Char, Biostatistician (and a Certified Yoga Teacher) and Robert Rectenwald DC, both at Life University, Marietta, GA.

The latter could not attend. The paper dwelt on the urgent need to come up with a CAM-based logistic strategy to come to grips with the epidemic of opioid drug overdosing as a social obligation and help professionals in health sciences emerge as more requisite to the community. Chiropractic adjustment of dysfunctional spinal joints, the unique specialty of the profession, has positive impact on sensorimotor integration in the cortex as well as in improving mental wellness [5]. Adjustments to the spine help bring about such wellness by means of neural plasticity enabling the nervous system to compensate for injury or ailments.

### **Disinfectant Environment**

There is significant evidence that a larger measure of success attends upon on yogic techniques when employed to tackle psychosomatic issues and compulsive cravings, often symptomatic of lack of impulse control and will power. Yoga has successfully tackled opioid (painkiller) dependence or addiction thanks to several millennia of practice: 'been there and done that' kind of status. It specializes in creating the disinfectant environment that deters impulsive behavior as well as cognitive dissonance. The co-authored paper presented by Char, noted that some modalities specialize dealing with illness of a body part, as for instance dentistry with oral health care and chiropractic with issues related to musculoskeletal and nerve pain. Others like Ayurveda and yoga avoid a constricted biomechanical approach and are pronouncedly holistic together with detailed treatments for specific body parts as well as for the entire human personality. They treat all of mind-body-spirit-social environment as a singularity. Another important distinction from mainstream medicine is the non-drug and non-invasive modus operandi of techniques such as chiropractic and yoga.

### **The highlights of the co-authored keynote paper were:**

It is the parasympathetic nervous systems (the relaxation response) in the subcortical brain that is trained by yogic practice to serve as shock absorber and not the sympathetic nervous system in the cortex serving to initiate the "fight or flight" reaction to shocks. The most important improvement chiropractic brings about is of the integrity of the vertebral motor unit (VMU), helping to normalize nerve function. Yoga knows that breath is the bridge between the mind and the body and thereby helps coordinate their functions. Yoga helps shut off mental chatter. The parasympathetic nervous system dominates the yoga-trained person unlike someone doing traditional exercises only.

### **Chiropractic Adjustment and PTSD**

- There is growing evidence that chiropractic care is effective in treating PTSD. A case study reported on a patient suffering from post-deployment PTSD, which interfered with his ability to function on a daily basis. He had group and individual psychological therapy with little improvement. After 12 visits of chiropractic adjustments, he reported significant improvement in coping skills and overall ability to function in daily living.
- Yoga helps the endocrine apparatus produce happy biochemicals: serotonin, dopamine, Oxytocin (the love chemical),

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and endorphins (or endogenous morphine inhibiting pain signals).

- Yoga tends to go for root-cause analysis of issues such as opioid addiction. Conveniently and coherently it goes deep down into philosophical issues weighing down on overall wellness such as stress, knowledge of (one)self, cardiac diseases, cancer, materialistic or hedonistic pursuits for happiness, non-violence in thought, word and deed, inner and outer cleanliness, and rationality in decision-making. Yoga is all-encompassing.

### **PT and Yoga**

Physiotherapy, together with mainstream modalities, has been employing complementary therapies for some time [6,7]. A critical study relates to acute low back pain (sample size of 320 between the ages of 18 and 64). The subjects were assigned to “12 weekly sessions with a yoga instructor, 15 sessions of physical therapy (PT) over 12 weeks, or education with a book and periodic newsletters about back pain therapy. The Rowland Morris Disability Questionnaire (RMDQ) was used to elicit information about pain intensity. The results were that the 95% one-sided lower confidence level was 0.83 (RMDQ) and 0.97 for pain indicating noninferiority of yoga to PT. Yoga and PT participants were 21 and 22 percent less likely respectively than education users to try pain medication. Improvements were maintained even at one year [8].

The third paper in the Keynote Forum was of Dutch Martin speaking on “how yoga breaks you down so you can break through.” His presentation was a case study of the phenomenal capability of yoga. Dutch Martin’s presentation was passionate and most convincing, bringing home in ringing tones how yoga brought order in his personal life. Yoga brought him the courage and mental wherewithal to make a clean breast of troubling emotions. It helped surgical jettison of emotional baggage and rewrite of a new narrative of a sensible climb in life.

The Technical sessions got off to an excellent start by the profoundly scholarly talk by Dattatraya Devarao Kulkarni, Kaivalyadham Yoga Institute, Lonavala, India on the role of yogic science in physiotherapy (PT). PT delves on the vegetative component of brain-body functions, but is somewhat oblivious of the internalized mind-body awareness which plays a preeminent role in auto-guidance of mind-body synchronization and harmonization. Mental health and wellness are heavily dependent on mindfulness without which humans are more vulnerable to mental disorders. Patanjali school of yoga focused on psycho-somatic aspects of brain behavior or psyche function, and Swatmarama school concentrated on experiential relaxation during the transition from the somatic or body situation to the psychic plane. The contrasting exercise is itself a construct of a psychobiological 2-way 5-step human information processing (HIP) pathway to handle somatic and cortical awareness. Such wholesome awareness treats yogic instruction as ‘a priori’ information that can be processed for the practitioners’ benefit by the automatic and control modes of attention.

### **Yoga, a Value-adding Paradigm for PT**

In this setting Kulkarni illustrated how breath awareness triggers electro-cortical activity which in turn monitors and minimizes metabolic energy expenditure. This happens by means of modulation of psycho-neuro-immune (PNI) system via the neuro-endocrine hypothalamic-pituitary axis. The scientific uniqueness of yoga is the enhanced signal power for cell-to-cell communications thus positively impacting both affective and cognitive homeostasis. Yogic HIP is more relaxing because of the two-step post-detection closure (PDC) HIP which captures perceived somatic activity in both the detection and rejection stages. In the neural space it helps attain the neutral state of attention in the perceptual channel. For these outstanding reasons yogic breath awareness would be high value-added paradigm in PT, something that future research cannot do without.

Cat Levine, Yoga Teacher, Be Yoga Andersonville, Chicago, was the next to speak of “the transformative power of yoga on body and mind.” She had an impressive list of case studies for numerous health issues including increasing arthritis, bone density, high blood pressure, multiple sclerosis, stress, scoliosis, right knee protrusion, and other physical and mental disorders. Her practice treats injuries and symptoms by a distinctive sequence of yoga postures.

### **Yoga helps achieve one’s potentials**

The next talk was by Tanja Pazou, Dancer and Choreographer as well as Yoga and Meditation Specialist on the topic of “Live well! – Transform your life with creative Movement.” She explained movingly how her dance career was tripped over by a sciatic nerve problem and how she tenaciously clung on to her yoga practice to successfully overcome the nerve predicament. This success egged her on to discover herself and experience amazing mind expansion inclusive of the whole gamut from quantum physics to psychiatry to mind development. This was a classic study in how breath is the bridge between the body and the mind. Such an enlivened consciousness helps unleash creativity and lets it blossom forth by way of different forms of dance movements for a variety of music. Tanja Pazou assured the gathering that this path of conscious movement would help the seeker to discover oneself and also design one’s own life as desired. One of her students was on hand to serve as evidence of recovery of his voice through her coaching after a surgery of his throat necessitating tracheoesophageal puncture (TEP). Obviously yoga helps dancers in numerous ways and there are several websites supporting a regular yoga routine for dancers [9].

### **One-Minute Tongchun to Limber up**

Julia Chung, Owner and Head Instructor, Body & Brown Yoga, USA who spoke next on “Tongchun” exercises which restore one’s vitality and mindfulness, literally kept the participants on their feet imparting instruction in “One-minute Tongchun” founded by Ihehi Lee. Her workshop kept all persons physically active and helped them limber up holistically. Such activity has enormous therapeutic connotation and this lesson was not lost on the yoga-physiotherapy listeners.

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## Yoga as Future Medicine

Day Two Key Note address was by Sudhanva Char, Life University, Marietta, GA and his topic was “Yoga: What are its capabilities?” Yoga is hailed as future medicine because of its millennial history and evolution. And yet it lends itself well as CAM. It has proven itself both as a cure as well as a prophylactic [10]. It is obsessed with happiness at the micro- as well as the macro-levels, with a preference for Gross Domestic Happiness (GDH), rather than Gross Domestic Product (GDP). There is now ample clinical and anecdotal evidence that yoga augurs robust physical, mental and emotional well-being. The ‘Yoga for Depression’ study by the Research Council for Complementary Medicine (RCCM) London, UK – and a META analysis by Ross et al recommended down-regulation of HPA (Hypothalamic Pituitary Adrenal) Axis and ease up on the SNS (Sympathetic Nervous System). Yoga Therapy Handbook is unequivocal in its findings about yoga intervention for anxiety-related issues [11]. The superiority of Yoga over other mainstream alternatives in regard to mental and neurological health underlying the “Deaths of Despair” is well brought about in the statistic of 94 percent cure rate among 838 persons with anxiety disorder [12].

Some of the outstanding documents bolstering this fact are expert consensus documents such as the Clinical Expert Consensus Document on the use of complementary, alternative and integrative therapies employed for cardiovascular diseases (CVDs) [13]. The scope of the American College of Cardiology Task Force was wide and comprehensive covering acupuncture, stress management, hypertension, chelation, mind-body placebos, prana, chi, qui, obesity, dozens of edible items, diets, nutrition, macronutrients, alcohol, Omega-3 and -6 fatty acids, vitamins, herbs, caffeine, bioenergetics, supplements, yoga and a host of others [14]. The consensus was that for many of the CVDs yoga offered significantly superior benefits than alternative remedies. Movements and positions in yoga and the breathing exercises can lower the blood pressure and alter breathing patterns [15]. Among other improvements in physical fitness, yoga can increase absolute and relative maximal oxygen uptake by 7% and 6%, respectively, after eight weeks in a controlled setting. Yoga has been associated with improved heart rate variability and respiratory variables. There can be a decrease in sympathetic response and changes in baroreflex sensitivity [16].

Char concluded by keynoting the following:

- Yogic scientific techniques focus the mind on the work on hand by cutting out mental chatter.
- Yoga generates more alpha energy (bioelectricity) and takes the mind and body to the higher level of performance
- Yoga brings relaxation and internal awareness
- Yoga is energizing rather than fatiguing
- Two effective techniques to cut down tension and stress are: Breathing and the Corpse pose
- Urgent need to include Yoga as one of the mainstream therapies for tackling the persistent mental and bodily ailments of humanity in as rational a manner as possible.

## Yin Yoga

Another highlight of Day 2 deliberations were the presentations of Nicole Superits and Dutch Martin. Nicole Superits’ elegant presentation of “Elemental Yin Yoga” generated much discussion. Unmistakably she brought out the links between Yin Yoga, the Five Element Theory, Modern Meridian Theory and Buddhist Mindful Meditation. Yin Yoga attempts successfully to combine modern science with ancient oriental wisdom. The Meridian concept originates in traditional Chinese medicine or TCM. TCM has spawned the Low Hydraulic Resistance Channels through which chemicals are transported and this is called volume transport (VT). 14 meridian channels that run longitudinally on the human body have been identified. Meridians can be discerned physically, mentally and emotionally. Nicole Superits’ tidy explanation of how the elements are awakened and balanced through release of energy and via the deep fascia (or connective tissue surrounding muscles, bones, nerves and blood vessels) was much appreciated. Such energy removes blockages to relaxation. Yin Yoga then can be credited with helping the practitioner rise to one’s potentials.

## Live Your Dreams

Dutch Martin’s captivating presentation was motivational about “Living Your Dreams,” a brainchild of the charismatic speaker Les Brown. As Member of the Les Brown Maximum Achievement Team (LBMAT) Dutch Martin enthralled the participants with breathtaking capabilities of the scientific ideas of LBMAT. They would help those interested to come up with their best performance either on the yoga mat or in the real world.

## Need for Yogic Full Breath

Another significant paper was that of S.S. Shiva Singh Khalsa, Spirit Rising Yoga, USA on the theme of “The power of breath and posture: Releasing the blocks.” Without taking the stage, in a down-to-earth self-effacing style Shiva Singh Khalsa, student of the eminent Yogi Bhajan, lucidly explained how as people grow old they lose flexibility of the ribcage and the spine. This constriction somewhat hampers the yogic full breath, thereby malnourishing or under-nourishing the trillions of cells in the body, each one pining for more oxygen, the prana or life breath or Qi. Cell atrophy would increase and that would compromise longevity. This is the rationale underlying the emphasis on yoga postures and pranayama bringing back full awareness to yogic deep breathing patterns. This line of reasoning was received well.

## Physiotherapy (PT) Presentations

There were several in-depth PT presentations by highly accomplished younger professionals. Many of these papers could not be presented because of inability to travel to USA. To overcome this problem some of the professionals sent their video demo lectures. Nivedita Kadambi et al, SDM College of Physiotherapy, Dharwad, India presented a video of their PT research: Combination of RICE (rest, ice, compression, and elevation) protocol with Mulligan’s MWM (mobilization with movement) in grade 1 acute lateral ankle sprains – a pilot study. Their conclusion was that Mulligan’s MWM together with RICE

protocol by way of correction of distal-tibio-fibular positional fault has proven itself superior to control treatment of acute lateral ankle sprains. Another distinguished video presentation was of Sanam Mainali et al., Dayanand Sagar College of Physiotherapy, Bangalore on “Significance of q-angle as a prognostic outcome measure for subjects with spastic diplegia.” Their paper concluded that q-angle is a reliable prognostic outcome measure of the competency of therapeutic exercises designed for the pediatric patient. Sanam Mainali had the distinction of presenting a second paper “Impact of vision on neck control in cerebral palsy (CP) child.” The second paper successfully brought out how visual dysfunctions play a decisive role in postural control of children with CP. CP rehabilitation helps the child gain neck control as well body balance.

About 15 professionals from all over the world who were listed in the scientific program as paper presenters could not make it to the Congress. And yet Pulsus’ Yoga and Physiotherapy Congress in Chicago during October 16-17, 2017 was successful in pulling together numerous health professionals from diverse areas and in providing a forum for useful swapping of experiences and ideas. There was much to learn and professionals could build on whatever they picked up at this Congress.

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