



# Smart Life Forum

Harry D. Friedman, DO, FAAO

*Osteopathic Approach to Patient Care and Wellness*

Thursday, November 16, 2006

7:00 PM

Cubberly Community Center  
4000 Middlefield Road, Room H1, Palo Alto, California



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(Add your own notes, too!)

## Future Speakers:

- **December 21** - Richard Kunin, MD.  
*Overview of Megavitamin Therapy*
- **January 19** - Robert Lustig  
*What's Behind the Obesity Epidemic*

## Foundation for Mind Being Research (FMBR) Upcoming Meeting

Russell Targ and J.J. Hurtak have just published the book *The End of Suffering: Fearless Living in Troubled Times ... or, How to Get Out of Hell Free*. They will present a step-by-step approach that they have developed over a lifetime of research to accomplish this goal. See [fmb.org](http://fmb.org)

### ***Meet Harry Friedman***

Dr. Friedman's practice incorporates traditional Osteopathic manipulative methods to help diagnose and treat health problems of all types; musculoskeletal, neurological, vascular, digestive, cardio-pulmonary, genitourinary, and infectious. Osteopathic manipulative methods involve highly specialized palpatory skills to assess and treat the health and vitality living within the patient. Such palpation focuses on the function of all tissues as expressed in posture, movement and all forms of homeostatic balance.

Dr. Friedman incorporates many types of hands-on methods in his practice including cranial, visceral, and myofascial release, functional, counter-strain, muscle energy, and high velocity thrust techniques. Additional therapeutic approaches include exercise and proprioceptive retraining, postural correction, levitor orthotic brace, prolotherapy and trigger point injections. His Osteopathic care is often provided in conjunction with other complementary practices including homeopathy, Orthomolecular nutrition, physical therapy, bodywork, acupuncture, biofeedback, and psychotherapy.

Dr. Friedman teaches internationally and has helped to set up Osteopathic programs for physicians in Germany and France. He is co-founder of San Francisco International Manual Medicine Society.

### **OSTEOPATHIC PHILOSOPHY**

Osteopathic medicine has always stressed the interrelationship of the body's multisystem functions as well as the inseparable unity of the whole person. Having its roots in the late

19th century, its founder A.T. Still M.D. inspired a medical reformation that combined medical knowledge with a holistic approach stimulating the body's inherent capacity for health and healing. In this modern era, we are witnessing a return to the practice of medicine as an art; integrating natural and technological approaches, scientific and intuitive thinking, structural and functional therapeutics, and patient and disease focused care. Osteopathic medicine has espoused this type of approach for over 100 years with wide ranging benefits for health enhancement, peak performance and cost containment. Osteopaths in America are fully licensed physicians and employ diagnostic and treatment approaches the same as an M.D., but they offer something else...

Homeostatic control mechanisms are highly sensitized, responding with precision and power to subtle changes in biomechanical and metabolic demands. Optimal multisystem function requires the unimpeded supply of proper blood nutrients and disposal of metabolic waste products, while a balanced nervous system coordinates symphonic function of internal physiological processes. Peak performance requires not only the proper placement and coordination of each part in relation to the whole but also necessitates a unity of the whole that enhances the function of each part.

In osteopathic medicine, the precept that "the whole is greater than the sum of its parts" has definite applications for clinical assessment and management. Manual palpatory assessment can appreciate the vitality and function of the whole as well as the individual parts. Osteopathic medicine therefore uniquely cares for both the whole person and the parts that make up that person. To accomplish this, we must carefully study the structural and functional relations of the body's inherent integrative functions because structure and function are reciprocally related. These relationships allow for the capacity to function simultaneously as an undivided whole as well as an intricately coordinated machine. Osteopathic manipulative approaches therefore can alternatively evaluate the function of the whole or its component coordinated parts and provide treatment that enhances each.

These integrated functions bestow upon individuals the ability to regulate, repair, and express themselves fully and without compromise as long as basic physical and psycho emotional needs are satisfied. These needs are significant and can be appreciated more fully when viewed in light of the osteopathic concept.

Proper nutrition, shelter from the elements, regular exercise, socioeconomic stability, self-respect, and love are needs that are required to function optimally. Osteopathic assessment focuses on the function of processes that reflect the satisfaction of these needs through observation, palpation, and clinical problem solving.

Specifically, osteopathic assessment considers mobile functions of fluid and tissue as they relate to:

- Whole body unity; evaluating the vitality of the “bio-terrain” and inter-relationships between different body systems and parts.
- Respiratory and circulatory mechanics associated with thoracic cage and diaphragmatic function and their relationship to the movement of arterial, venous and lymphatic fluids.
- Reflexes coordinating central and autonomic nervous system functions including the motor, visceral, neuron-endocrine, and immune systems.
- Three dimensional bio-mechanical configuration of connective tissue fascias and their functional responses to weight bearing stress and strain.
- The energetic capacity of the individual to respond to the complex multisystem demands of physical and psycho emotional challenges (adaptive responses).

By enhancing mobile functions related to these physiologic capacities, osteopathic medicine promotes the coordinated function of body systems and structures and the capacity of the individual to function as a vital purposeful whole.

## OSTEOPATHIC MODELS OF HUMAN FUNCTION

Five models of human function have been developed to provide a better understanding of the precepts of osteopathic medicine. These five models are *holistic man*, *neurologic man*, *circulatory man*, *self-regulating man*, and *energy-spending man*. The *holistic man* model can be appreciated in the concept of myofascial continuity. If we start with bone, we see that it is wrapped in the periosteum, a dense fibrous layer of connective tissue. The periosteum is then attached to fibrous connective tissues called tendons and the tendons then become continuous with the skeletal muscle fibers which are themselves wrapped in fascia. The relationship is repeated throughout the body in a myofascial attachment of one bone to another bone. In like fashion, every part of the body is attached to every other part by fascial sheaths and connective tissue glue. In between and through these attachments run the blood vessels, nerves, and visceral structures that make up the rest of the body. Wholism lies in the fascias of the body separating but also connecting every part relating it to the whole. Additionally, wholism reflects the dynamic relationship between biologic, psychoemotional, and behavioral processes. In real life, it is essentially this wholism that allow the person to recover from a life-changing event such

as paralysis, mobilizing the necessary resources of body, mind, and spirit to overcome these potentially disabling challenges.

The second model is *neurologic man*. Neurologic function has clear segmental relationships that connect the upper limb to the neck and upper thoracic spine where the nerves come from, as well as the lower limb to the lumbosacral spine. The nerve from each spinal segment is responsible for transmitting nociceptor, mechanoreceptor, and proprioceptor impulses from the periphery and controlling motor responses in skeletal and smooth muscles. Additionally, visceral structures are connected to the same spinal segments by the autonomic nervous system. Through these many interconnections, alterations in somatic structures can influence visceral structures and vice versa. Additionally, limbic system (psycho-emotional) function influences and is influenced by somatic and visceral function. Again, structure and function are interrelated and can be palpated and treated by Osteopathic approaches.

The third model is *circulatory man*. This concept involves the coordinated function of the respiratory and circulatory system. Normal diaphragmatic function causes changes in pressure within the major compartments of the body and is essential to the proper delivery of arterial fluids and the return of venous and lymphatic waste products to the heart. The thoracic cage contains two important diaphragms, one at the inferior and the other at the superior thoracic aperture. These diaphragms possess extensive connective tissue attachments to the muscular and bony structures that they approximate. Important neurovascular and visceral structures also traverse these diaphragms. An additional diaphragm is located in the pelvis that is made of muscle slings that also function in the same capacity to assist with respiratory and circulatory function. Optimal circulatory function throughout the body is dependent on these musculoskeletal and physiologic relations to provide the optimum movement of these important body fluids.

The fourth model, *self-regulating man* represents the key distinction between allopathic and osteopathic medicine. In allopathic medicine, the primary focus is on evaluating and treating disease process using various external agents to influence internal function. This approach ignores the many host responses that are central to the individual's ability to maintain optimal help and to resist as well as recover from disease. These internal mechanisms that promote health and resist disease are related to the integrative functions of the body as well as the unifying principle of the whole, and are all within the scope of Osteopathic diagnosis and treatment.

Finally, we have the last model of *energy-spending man*. Osteopathic medicine has often

described the musculoskeletal system as the primary machinery of life with the viscera being termed the secondary machinery. The concept states that the heart, lungs, intestines, and other organs provide supportive processes that provide the energy for the musculoskeletal system to carry out our daily activities. The effects of segmental and regional motor disturbances on energy-spending man are considerable. Increased energy consumption from compensatory muscle activity and higher metabolic demand result from even the smallest injury to the lower extremities. Multiple insults of this type are constantly challenging the energy demands of the individual and compromise the available energy that may be required to perform other functions such as recuperative responses to illness and stress responses to psycho-emotional demands.

## **PRINCIPLES OF OSTEOPATHIC ASSESSMENT**

Musculoskeletal evaluation must consider the weightbearing function at play during specific activities in a specific individual and at a particular moment in time. All weightbearing activities share a basic fundamental relation to gait function that serves as a useful common starting point for evaluation. The osteopathic evaluation of gait assesses both the dynamic interplay of components making up the gait cycle and the overall unity of body movement. Regional observation of body symmetry identifies both structural and functional components that influence gait. Position and relative lack or excess of movement is noted from head to toe comparing left to right, front to back, and top to bottom. Areas of altered structure or function are recorded and compared with a similar assessment repeated after osteopathic intervention.

Assessment of whole body function during gait requires a different focus on the entire body moving through space. This can be accomplished by using peripheral vision to look at the space surrounding the body as it participates in ambulatory movement. What draws attention are areas of relative absence of motion and their associated substituted or compensatory movements. Complex whole body patterns of movement and counter movement can often be appreciated in three-dimensional spiraling pathways that connect seemingly unrelated areas of the body. These connections and areas of hypo- and hyper-mobility are noted.

Regional testing of dynamic body movement can also be conducted assessing both structural and functional symmetry. Regional movements are performed observing for proper muscle firing sequencing and the balance of agonist and antagonist muscles.

Altered movement patterns contribute to uneven weight bearing mechanics, proprioceptive dysfunction, impaired coordination and reflexes, increased energy demand, increased metabolic waste products and eventually degenerative diseases and chronic pain syndromes.

Observation of weight bearing during specific activities requires a thorough knowledge of the normal weight-bearing movements required by any given activity. Evaluation of coordinated muscle function and reflexes can be accomplished through assessment of whole body and regional movements. Regional motion testing in the osteopathic approach focuses on areas of relative decreased mobility and compensatory areas of increased mobility. The osteopathic approach only begins with these observations and generally emphasizes segmental disturbances that interfere with regional participation of whole body movement and which disturb proprioceptive feedback function. For example, a rib dysfunction may interfere with a person's normal arm motion which might interfere with the hand-eye coordination necessary to hit or catch a ball. Identification and subsequent treatment of this rib dysfunction would reestablish more optimal afferent feedback information and enhance hand-eye coordination.

Once an area of regional dysfunction or decreased mobility has been identified, segmental evaluation of that disturbance is performed. This involves identifying the exact location of altered tissue texture and tension as well as characterizing the altered rotary and/or translatory motion characteristics at this identified segment. Additionally, areas of regional hypo-mobility are evaluated for tension reflected in the passive connective tissue space that connects and supports the active neuromuscular elements. Connective tissues respond to dynamic stress and strain by reorganizing to accommodate and balance forces that influence proprioceptive and neuromuscular control mechanisms. This reorganization involves collagen and reticular fibers which proliferate causing increased stiffness in what is essentially a colloid-fluid matrix. Optimal function of connective tissue requires a relative predominance of its fluid properties over its more solid tensile properties. Dynamic fluid properties are subsequently compromised in areas of dysfunction causing a relative turbulence and loss of vitality in these tissues. Such connective tissue deformation is characterized by three-dimensional shortening and thickening and is perceived as a palpable tension and twist of myofascial structures. Responding to both initial and ongoing stress from postural strain and traumatic injury, connective tissue deformation easily compromises neurovascular and musculoskeletal structures and their associated functions. There is associated compromise of cellular and immune elements which normally require a relative fluid predominance in the sol/gel matrix. Palpation of these subtle fluid and tissue disturbances requires highly developed



psychomotor skills that necessitate time and practice to master.

With most weight-bearing activities, the importance of the lower extremity and lumbo-pelvic mechanism cannot be overstated. Disturbances in this mechanism can result from primary dysfunctions of either or both. With the passage of time, secondary compensatory disturbances will become stronger and more symptomatic due to persistence of the altered feedback mechanisms and changes in the connective tissue. However, it is also almost universally true that when the primary disturbances are located and resolved, the associated compensatory neuromuscular and myofascial dysfunctions begin to resolve spontaneously. This point underlies the importance of reflex and compensatory changes between specific areas of dysfunction and more distant seemingly unrelated areas.

## **OSTEOPATHIC APPROACHES TO PATIENT MANAGEMENT**

Enhancing self-regulatory and self-healing mechanisms within the unified function of the whole patient is the primary focus of osteopathic treatment. This can be reflected in balanced function of the active neuromuscular and passive connective tissue elements comprising the body's mobile systems. Regional and segmental disturbances and neuromuscular control can be resolved through skilled observation of patient responses to the systematic application of corrective manipulative forces.

Alterations in tissue tension characterizing mobile dysfunction are monitored for their response to rotary and/or translatory motions applied by passive operator control. Corrective forces are then brought to bear by operator or patient effort or by inherent self-regulating forces within the patient. Patient responses to manipulative forces can maintain enhance or sometimes reverse the corrective impulses of treatment. Often these responses are associated with other areas of disturbed physiologic function. These related disturbances may involve more primary mobile dysfunctions or other physiological mechanisms that require treatment. Such other physiologic mechanisms include viscerosomatic reflex activities, compromised respiratory/circulatory mechanics and connective tissue dysfunction that may compromise neural, vascular or visceral structures.

Corrective forces can be direct or indirect. Direct technique engages and overcomes the restrictive barrier and lengthens tight muscles and fascia. Indirect techniques move away



from the restrictive barrier towards greater tissue relaxation and spontaneous relief characterized by reduced afferent feedback and recovery of the dynamic physiologic midline. Both direct and indirect principles stimulate the inherent restorative capacity of the patient by reestablishing dynamic fluid and tissue balance related to whole body vitality. Manipulative procedures can require patient activity (i.e. muscle contraction) or can be passive, the forces being introduced by the operator with or without impulse. Additionally, inherent forces within the patient can be utilized to influence manipulative procedures including respiratory motion, connective tissue creep and hysteresis and even the patient's inherent capacity for health and healing. Lower extremity function is a primary concern in osteopathic patient management. Optimal joint mobility and balanced muscle and connective tissue function in the lower extremity are the foundation for weight bearing functions of the entire body. "If the foundation is off, the whole building will be weakened and more easily disturbed by tension of every kind". Manipulative interventions are often followed by additional postural interventions to optimize this important relationship to whole body function. Standing anteroposterior and lateral postural films can be evaluated for sacral base unleveling associated with pelvic tilt and short leg syndrome. Appropriate lift therapy can be implemented to reestablish the normal horizontal relationship of the sacral base to the lumbar spine. Lumbopelvic instability of sagittal postural function may also require evaluation (i.e. for hyperlordosis syndrome) and treatment utilizing lifts, braces, belts, orthotics, ligament injections, and surgery if the patient is at high risk for neurologic compromise.

Additional consideration is given to the use of custom foot orthotics to optimize the mechanical relationships of the forefoot, hindfoot, and ankle.

Patient responses to osteopathic manipulation vary greatly though frequency and duration of treatment are highly individualized. Maintenance of optimal function is reinforced with a home exercise program that incorporates proprioceptive sensorimotor retraining and stretching and strengthening to balance the functions of agonist and antagonist muscles and minimize substitution by synergistic muscles. Additionally, patients are instructed in the proper biomechanics of sitting, standing, lifting, bending, reaching, sleeping, and breathing, as well as in the use of proper footwear. Behavioral aspects of motivation, lifestyle habits, and psychoemotional stress are all important aspects of osteopathic management of the whole patient and should be carefully evaluated.

## **CONCLUSION**

The uniqueness of the osteopathic approach to evaluation and treatment of most medical problems centers around the interrelationships between body regions and the integrative whole body functions of fluid and tissue. While relieving pain and restoring local function are important therapeutic goals, they are only part of the osteopathic approach to patient management. Osteopathic thinking considers the individual component part in relationship to the whole person. Neuromuscular control mechanisms have central and peripheral relationships that interconnect different structures and functions throughout the rest of the body. Connective tissue serves an important role in transmitting and balancing mechanical and fluid forces necessary to carry out coordinated body functions. Optimal function of the central and autonomic nervous systems and the respiratory and circulatory systems require proper mobile function in their musculoskeletal relations. Psychoneuro-immunological system interactions involve whole body and local stress responses that can be influenced by osteopathic manipulation and patient lifestyle management. Adequate provision for fulfilling physical, emotional, socioeconomic, and spiritual needs has a profound influence on the patient as a whole as well as on musculoskeletal performance. Enhancing these functions so that patients can excel in their personal and professional endeavors is the ultimate goal of osteopathic patient management.



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