



# E-NEWSLETTER

Spring 2010

*Feature Article:*

Integrative Neurology  
Patient- and Disease Centered Approaches

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## Director's Message

Hello everyone,

With all the changes going on at the global and personal level, we are reminded to be mindful of where we focus and choosing to see the brighter side of every aspect and infusing our health care, ourselves, and others with love, inner calm, and compassion. With this said, I am excited to inform you that our next Colorado Integrative Medicine Conference will be held during July 15-17, 2011 (next year) at YMCA of the Rockies in Estes Park, Colorado. Based on most of the 2009 attendees' input, the focus will again on mind-body medicine with an added "lifestyle management" component. Please mark your calendars.

In this issue of AlterMed's e-Newsletter, Dr. Allen Bowling discusses the best evidence at this time on the recommended diet along with a comprehensive approach for the management of Multiple Sclerosis. Along the lines of successful MS management, Meghala Divakaran discusses Marcia West's (a MS patient's) journey to Soukya in India. Kelly Storms mentions Yoga practice gaining popularity in America and discusses the history, its components, and proper abdominal breathing benefits and techniques.

I thank Dr. Bowling, AlterMed volunteers, and our editor (Shiela) for their contribution to this issue. Together through our voices and actions, we are changing our health care toward more holism, wellness, and prevention.

Kerri Diamant, Executive Director

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# Integrative Neurology: Patient -and Disease-Centered Approaches

By Allen C. Bowling, MD PhD  
October 21, 2009



Much of my career has been devoted to researching and developing integrative approaches to the treatment of neurological diseases. This article will review the approach that we have developed and the general strategies that we currently use in the Complementary and Alternative Medicine (CAM) Service at the Colorado Neurological Institute (CNI).

## Background Studies

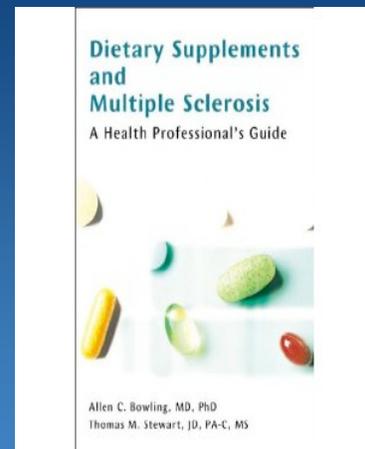
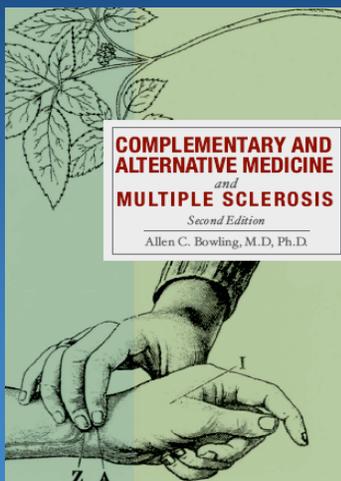
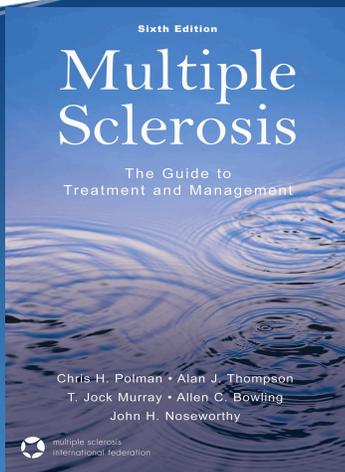
I have been involved in CAM for more than 30 years. However, my views about--and approach to--CAM were transformed by several studies that we conducted in the mid-1990s.

- In one study, we surveyed more than 400 people with MS in the Rocky Mountain region.<sup>1</sup> We found that nearly two-thirds of people with MS were using CAM – some CAM therapies, such as diets and specific dietary supplements, were actually

Please visit Dr. Bowling's website on CAM research:

<http://neurologycare.net/CAM/CAM.aspx>

## RECENT PUBLICATIONS





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being used more commonly than the FDA-approved medications for MS.<sup>1</sup> (Similar data, with prevalence of CAM use of 50-90% in people with MS, has subsequently been reported in several other studies in the United States.<sup>1</sup>)

- Having found that the majority of our patients were using some form of CAM, we conducted a study to determine what type of CAM information was available to people with MS.<sup>2</sup> At two bookstores in the Denver area, we reviewed the MS information in 50 lay books on CAM. In some books, MS was incorrectly defined as a form of muscular dystrophy. Of greater concern, many books made the incorrect and potentially dangerous statement that, since MS is an immune disorder, people with MS should take supplements to activate the immune system. In fact, MS is an immune disease. However, it is characterized by an excessively active immune system. Thus, immune-stimulating supplements could actually be harmful. We also found that it was rare for books to discourage the use of any CAM therapy and that no books had the same recommendations.

These studies indicated that the majority of our MS patients were using CAM, but that the CAM information that was available to them was confusing, contradictory, inaccurate, and potentially dangerous. We have addressed this situation through a variety of programs.

### *Integrative Neurology—The Example of MS*

In the area of MS, we have developed a variety of educational and clinical services. In the area of education, we have developed the world's largest database of MS-relevant CAM information. This information has been put together in practical and easy-to-use formats for lay and professional audiences through books, web-based information, lectures, and collaborative work with MS and neurology organizations around the world. It has been refreshing and surprising that interest in CAM education among professionals has increased so much over the past five years that I now do as much professional as lay education on the subject.

The combination of extensive clinical experience with MS and access to a massive database of MS-relevant information



about CAM and conventional therapies has given us the opportunity to develop an integrative model that is truly objective and evidence-based.<sup>3</sup> This approach is modifiable and thus may be personalized to meet the specific needs of individual patients. In addition, this approach is comprehensive and is designed to optimize “disease modification” (slowing down the disease process of MS) and symptom relief. There are five major steps in this approach:

- **Step 1: Disease-Modifying Medications**  
The best evidence that we have for modifying the disease course in MS is with the six conventional, FDA-approved medications.
- **Step 2: Diet**  
There is much confusion and controversy about dietary approaches to MS. The best evidence at this time is with polyunsaturated fatty acids<sup>4</sup> and vitamin D.<sup>5,6</sup>
- **Step 3: Wellness Approaches**  
This step, which is the most individualized of the five steps, aims to create a feeling of hope and empowerment. Therapies in this category are diverse and include mind-body medicine, spirituality, prayer, and psychotherapy.
- **Step 4: Exercise**  
Conventional exercise programs may be developed through physical therapists. Hydrotherapy may be especially helpful for those with walking difficulty. Unconventional exercise programs, such as tai chi<sup>7,8</sup> and yoga<sup>9</sup>,



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may also provide therapeutic effects in MS.

- **Step 5: Integrative Approach to Symptom Management**

Since MS may cause more than 20 different symptoms, this is the most complex step. Relevant symptoms are identified, and then a systematic, evidence-based approach is taken to considering unconventional and conventional treatment options that are appropriate for the individual.

Steps 1-3 are aimed at optimizing disease-modifying effects, while Steps 3-5 are intended to maximize symptomatic therapy. Step 3, the Wellness approach, may have both disease-modifying and symptomatic effects. This “Five-Step Approach” is implemented through clinical visits and through one-on-one and group education meetings. Information is provided, and, when appropriate, patients are referred to CAM practitioners.

### *Other Neurological Diseases*

As with MS, an integrative approach has been developed for treating people with brain tumors, peripheral neuropathy, and multiple other neurological conditions. There is not a single approach that can be applied to all neurological diseases. Rather, the unique features of each disease need to be considered and incorporated into a disease-specific model of integrative care.

### *Observations and Conclusions*

It has been extremely rewarding to be intensively involved in conventional and unconventional therapies for treating neurological conditions. This work has made it clear to me that much of what is provided in conventional medical practice is shaped by cultural and medical traditions and insurance reimbursement. In some clinical situations, these external forces may be powerful enough that the type of medical care that is provided is shaped more by these forces than by the specific needs of individual patients.

My involvement in CAM has also revealed to me the complexity of this subject. In my opinion, for a given neurological condition, it is far more difficult to thoughtfully and objectively consider CAM therapies than conventional

therapies.

It is possible for integrative neurology and other forms of integrative medicine to grow significantly and have increased acceptance within conventional medicine over the next decade. I believe that CAM professionals play a critical role in this paradigm shift. Low quality or variable standards in the CAM field may lead to increased skepticism about CAM and could actually worsen the current situation by widening the gap between conventional medicine and CAM. On the other hand, high quality standards among CAM professionals, as is advocated by AlterMed, may be a critical factor in facilitating a paradigm shift. Such a shift could lead to a larger number of treatment options that are available for patients with specific diseases, more individualized care, and, ultimately, higher quality health care.

### *Additional Information*

Allen C. Bowling, MD, PhD, has been involved in CAM for more than 30 years. He is currently the Medical Director of the Multiple Sclerosis Service and the Director of the Complementary and Alternative Medicine Service at the Colorado Neurological Institute (CNI). He is also Clinical Associate Professor of Neurology at the University of Colorado-Denver. He is a Phi Beta Kappa graduate of Yale and obtained his MD and PhD degrees from Yale, his neurology residency training at University of California-San Francisco, and his fellowship training at Massachusetts General Hospital-Harvard Medical School. He was the Medical Director of the Rocky Mountain MS Center from 2003-2007. Dr. Bowling is the author or co-author of several books and many articles on CAM and has provided CAM consultation or authored CAM publications for many neurological organizations around the world. Additional information about Dr. Bowling, the CAM program at CNI, and neurologically relevant CAM is available at [www.neurologycare.net](http://www.neurologycare.net) and [www.thecni.org](http://www.thecni.org).



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## A Success Story of MS Management with Complementary and Alternative Therapies

Adapted from Meghala Divakaran's blog

Marcia E. West of Colorado shares her miraculous true story of battling MS successfully with Traditional Ayurvedic Medicine

According to Marcia West, Soukya is internationally acclaimed. Treatments range from wellness packages to intervention for medical conditions. I was the perfect candidate – my disease had progressed minimally over the ten years and unless you knew me before, there would not have been any noticeable pointers that I even had MS. After 12 hours of evaluations by their team of doctors, it was determined they could “cure” my MS if I stayed for six weeks of intensive, specially formulated treatments. We stayed.

The facility itself is a totally self contained enclave dedicated to mind, body and spirit connections. I thought of it as a Shangri-La, and for six weeks I was immersed in Indian cuisine (organic foods designed for one's individual needs, most of which was grown there), natural treatments, some formulated especially for the program as designed for me by the doctors, daily acupuncture, hot oil massages, which grew more intense as time progressed, and so much more. I was first detoxified and when the detoxification was nearly over, new Ayurvedic medicines and massages were introduced to replace the old with the new. Never before had I been so well-cared for, and I fell in love with Indian culture, the people, as well as a form of medicine thousands of years old.

Every day, I was scheduled for at least five different treatments, some more intense than others. Specially trained, Indian therapists – women- caringly put me through my paces. Some spoke a little English, others, not at all. It was better that way. The treatments were becoming more and more intense and took my mind and heart places I thought were no longer a part of my life. Sometimes I'd be in tears, for no known reason. Other times I felt so exposed, as if I was a filleted fish. None of the treatments hurt physically. For the most part, they were delightful. But it was the unexpected emotional times that hurt. What I now know is the





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emotional ups and downs are a natural part of the detoxification process. When you are treated so specifically, by people who genuinely care about your well-being, you have to let go of pre-conceived ideas. In letting go one can take the next step forward. I took many.

For Marcia E. West's full story, please check out Meghala Divakaran's blog:

<http://healingthroughnature.blogspot.com>

## Inspirational Yoga

By Kelly M. Storms

*"As age old traditions of yoga and meditation enter complementary health care, they represent ways to manage stress and chronic disease and promote good health...It is now forming a part of research specifically on complementary medicine as an aid to good health."*

*- Mark Micozzi, author of Complementary and Alternative*



The practice and philosophy of yoga began in India almost 5,000 years ago as a method of discipline and a set of attitudes to reach spiritual enlightenment. The word "yoga" comes from the Sanskrit word yuj, which means yoke, or union. It is a representation of the union between mind and body. Yoga in traditional Hinduism involves inner contemplation, a rigorous system of meditation practice, ethics, metaphysics, and devotion to God, or Brahman. Yoga is grounded in principles intended for relaxation and balance of the mind, body, and spirit using breathing (pranayama), stretching exercises and postures (asanas), and meditation<sup>1</sup>. Both the mental, spiritual and physical benefits of yoga have become increasingly popular all over the world and especially in western cultures<sup>2</sup>.

### Yoga Practice in America

If you were to look at a list of group fitness classes at any health club or recreation center across America, you would find one, if not several, yoga classes offered. The classes are among a recent addition to both recreation centers and individual studios, and have been increasing in popularity over the last decade.

According to the 2007 National Health Interview Survey (NHIS), yoga is one of the top 10 Complementary and Alternative Medicine (CAM) modalities used by Americans. More than 13 million adults practiced yoga in 2006, and between 2002 and





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2007 use of yoga among adults increased by 1 percent (or approximately 3 million people)<sup>1</sup>. Although there are several reasons why Americans have started incorporating yoga into their lives, two main motivators are physical fitness and relaxation.

**Physiological Benefits of Yoga: An overview**

Yoga master Rod Stryker states in his 2007 article *Maha Mudra* that yoga is one of the most complete and effective forms of exercise. A combination of physical fitness, relaxation and meditation, yoga has been reported to improve adverse health conditions such as anxiety disorders, asthma, high blood pressure, and depression<sup>3</sup>. Purposeful combinations of movements and postures, coupled with specific breathing techniques also strengthen the cardiopulmonary, lymphatic, and immune systems. Meditation alone has been found to reduce heart rate, and to increase electroencephalogram alpha waves that are associated with relaxation<sup>4</sup>.

**An Almost Forgotten Philosophy: The Yoga Sutras and Vinyasa**

However popular and important are the physiological benefits, the foundation for the practice and philosophy of yoga lies in the Yoga Sutra and the Vinyasa system. The yoga sutra was created by the legendary Putanjali, who prescribed the following eight "limbs" to be practiced sequentially<sup>3</sup>.

<b>Samadhi</b>		<b>Higher consciousness</b>
<b>Yama</b>		<b>Moral behavior</b>
<b>Niyama</b>		<b>Healthy habits</b>
<b>Asana</b>		<b>Physical postures</b>
<b>Pranayama</b>		<b>Breathing exercises</b>
<b>Pratyahara</b>		<b>Sense withdrawal</b>
<b>Dharana</b>		<b>Concentration</b>
<b>Dhyana</b>		<b>Contemplation</b>

It would be a mistake to imply the yoga sutra and vinyasa are separate practices. Vinyasa yoga was designed to practice these sutras simultaneously. Gregor Maehle explains in his book *Ashtanga Yoga Practice and Philosophy* that vinyasa yoga is a system of yoga specifically designed for householders. Householders, those who had a family and a job or a business to attend to, did not have time to dedicate to the sequential practice of the sutras. Vinyasa yoga incorporated all the sutras practiced together which could be done in as little as two hours.

Different forms of vinyasa yoga put more emphasis on certain "limbs" than others. Hatha yoga, the most commonly practiced in the United States and Europe, emphasizes two of the eight limbs: postures (asanas) and breathing exercises (pranayama)<sup>1</sup>.

**Pranayama: Breathing Exercises or, The Control of Energy**

The term "pranayama" is a combination of two words, prana and ayama. Ayama means extending or stretching, and prana is typically referred to as inner breath or life force. Maehle describes pranayama as the extension of breath: the adoption of calm, peaceful, and steady breathing pattern. In *Complementary Medicine in Clinical Practice* editor Dr. David Rakel writes, pranayama is "thought by many cultures as the essence of being... a universal energy that can be used to find a balance between the body, mind, the conscious-unconscious and the sympathetic-parasympathetic nervous systems".





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### Effects of Stress on Pulmonary Function

We all experience emotional stress. This may be temporary or long term. It is fairly common knowledge that stress, over time wears on the body and can manifest into a variety of conditions and diseases. To calm a friend one may say, "Take a deep breath..." So, obviously we know it will help, but *how* we breathe is what can have such a profound impact on the body.

Dr. Rakel, Director of the University of Wisconsin Integrative Medicine Program and Assistant Professor at the UW Medical School, has applied current scientific knowledge of pulmonary ventilation and respiration to the research of different breathing techniques and subsequent physiological effects. "The sympathetic nervous system is stimulated and initiates several physical responses such as increased heart rate, perspiration, muscle contractions, and increased respiratory rate which is characterized by rapid and shallow breaths. If these responses happen too often, it negatively affects physical health and can result in a range of possible symptoms such as hypertension and inflammation." Dr. Rakel continues by emphasizing that simply taking a few deep breaths is not effective. To experience long term decrease in stress and overall better health, there must be a consistent decrease in heart rate, respiration and deep relaxation of muscles which can be obtained by changing *the way* we breathe.

Chronic stress can lead to a restriction of the connective and muscular tissue in the chest, resulting in decreased range of motion in the chest wall. Decreased range of motion of the chest is commonly referred to as "chest" breathing, and is characterized by shallow, rapid, chest rise and fall, which leads to poor oxygen transfer and subsequent nutrient delivery to tissues. Abdominal breathing, or diaphragmatic breathing, expands the abdomen pulling air into the lower lobes of the lungs. The net effect created by contraction of the diaphragm, also increases blood flow into the tissues of the chest, improving venous return to the heart, which in turn increases blood flow. The flow of lymph, which is rich in immune cells, is also improved. "By expanding the lungs' air pockets and improving the flow of blood and lymph, abdominal breathing helps prevent infection of the lungs and other tissues. Most of all, it is an excellent tool to stimulate the relaxation response that results in less tension and overall sense of well-being."<sup>4</sup>

### The Abdominal Breathing Technique

Adapted from *Complementary Medicine in Clinical Practice*, edited by David Rakel, MD and Nancy Faas, MSW, MPH

By practicing the following abdominal breathing technique twice a day the body will become adapt to continually breathe this way, even while you are asleep.

- Place one hand on your chest and the other on your abdomen. When you take a deep breath in, the hand on the abdomen should rise higher than the one on the chest. This insures that the diaphragm is pulling in air into the bases of the lungs.
- After exhaling though the mouth, take a slow deep breath in through your nose imagining that you are sucking in all the air in the room and hold it for a count of 7 (or as long as you are able, not exceeding 7 seconds.) Don't be discouraged if you can't hold the full 7 counts, this takes practice!
- Slowly exhale through your mouth for a count of 8. As all the air is released with relaxation, gently contract your abdominal muscles to completely evacuate the remaining air from your lungs. It is important to remember that we deepen respirations *not by inhaling more air, but through completely exhaling it.*
- Repeat the cycle four more time for a total of 5 deep breaths and try to breathe at a rate of one breath every 10 seconds. (Or 6 breaths per minute). At this rate our heart variability normalizes, which has a positive effect on cardiac health.

### Expanding Your Experience

Although the Abdominal Breathing Technique will strengthen the cardiopulmonary, lymphatic, and immune systems, physiological effects should not be the only motivator to incorporate pranayama and yoga into your life. Physical fitness and relaxation are visceral compared to the benefits and full experience of yoga.



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Stretching the breath during yoga practice using the *Ujjayi pranayama* technique, and listening to your breath, deepens your practice into meditation. The *ujjayi* breath is audible when there is slight constriction on the glottis. (The epiglottis is the “lid” that is closed when we drink water and open when we breathe.) By partially closing the epiglottis, a gentle hissing sound becomes audible, and is used as a guide throughout the entire yoga practice.

Listening to the sound of your own breath has several implications. Most importantly, it implements the 5th “limb” of yoga, the *pratyahara* technique. Withdrawing the senses from the outer world “draws attention inward and takes it away from external sounds”. Listening to the breath also gives us information about attitude and posture. For example, if the breath is strained, labored, short, aggressive, flat shallow, or fast, adjusting posture or mental focus will allow the Ujjayi breath to become smooth and relaxing<sup>3</sup>.

As Rolf Sovik PsyD describes in his article *The Breath of Self Understanding*, the practice of *pranayama* and *pratyahara* can be practiced on a daily basis. When you are walking from one airport gate to another, sitting in front of your computer screen, or just beginning to fall asleep, intentional breathing goes beyond the physiological benefits and calms the mind. If mindful practice is consistent, proper posture and effective breathing will become natural. “The natural rhythms of breathing soften inner tensions, holding the mind steady, repeatedly cleansing and nourishing as they unfold. By breathing smoothly you can calm even highly agitated emotions during periods of stress. And gradually, in meditation, simple diaphragmatic breathing will lead your mind inward-to deeper levels of being.”<sup>5</sup>

AlterMed Research Foundation would also like to thank Dr. David Rakel for teaching. *The Healer Within*, and *Guided Imagery* at the 2009 Colorado Integrative Medicine Conference.

*Created for AlterMed Research Foundation*

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Shiela Bushanam is the editor of AlterMed Research Foundation.

