

Robert T. Sataloff, MD, DMA, Associate Editor

The Use of Nutrition and Integrative Medicine or Complementary and Alternative Medicine (CAM) for Singers, Part 1

Joel S. Edman, Lauren B. Kondrad, and Birgit Rakel



Joel S. Edman



Lauren B. Kondrad



Birgit Rakel

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NUTRITION IS FUNDAMENTAL to the healthy development and function of all bodily processes; and “alternative” and “complementary” medicines and approaches are used extremely commonly by singers. Singing teachers should have a basic familiarity with these important topics. This is the first of a two-part article that will discuss the use of nutrition and integrative medicine for singers. In this first article, a definition and categorization of integrative medicine is presented, along with background information on nutrition, herbal medicine, homeopathy, physical fitness, and stress management. In the second article, these approaches will be applied to specific conditions to describe how integrative medicine can be useful for diseases or conditions such as GERD, allergies, URIs, menopausal symptoms, and performance anxiety. Then we will present a framework and other information that can help singers utilize integrative medicine services effectively.

INTRODUCTION AND DEFINITION OF INTEGRATIVE MEDICINE OR COMPLEMENTARY AND ALTERNATIVE MEDICINE (CAM)

Integrative Medicine is the current term being used to describe a holistic approach to health care (although some people still call it CAM). It is defined by the Consortium of Academic Health Centers for Integrative Medicine (CAHCIM) as “the practice of medicine that reaffirms the importance of the relationship between practitioner and patient, focuses on the whole person, is informed by evidence, and makes use of all appropriate therapeutic approaches, healthcare professionals and disciplines to achieve optimal health and healing.”¹ From a practical standpoint, the appropriate question may be: Can I address this symptom or problem with a natural approach instead of medication or surgery? For this approach to work effectively, however, it is important to understand what integrative medicine is and what framework is needed so that it can be applied in the best way possible. Integrative medicine is practiced in concert with traditional Western allopathic medicine, not as an iso-

TABLE 1. Classification of Integrative Medicine/Complementary and Alternative Medicine Practices with Examples.

Dietary, Nutritional Supplement, Herbal, and Other Biological Therapies	
<i>Use of diet and supplementation for therapeutic and preventive purposes.</i>	
Therapeutic Diets	Intravenous Therapies
Vitamins, Minerals, Fatty Acids, etc.	Aromatherapy
Herbs	Detoxification
Manual Healing Methods	
<i>Systems that are based on manipulation and/or movement of the body.</i>	
Osteopathic Manipulative Therapy	Pressure Point Therapies
Chiropractic	Postural/Movement Reeducation Therapies
Massage Therapy	Bioenergetic Systems
Mind-Body Interventions	
<i>Behavioral, psychological, social, and spiritual approaches to health.</i>	
Biofeedback	Mindfulness-Based Stress Reduction (MBSR)
Meditation	Hypnosis and Imagery
Yoga	Prayer and Mental Healing
Tai Chi and Chi Gong	Art and Music Therapy
Alternative Medical Systems	
<i>Complete systems of theory and practice that have been developed mostly outside of the Western biomedical model.</i>	
Traditional Oriental Medicine	Naturopathic Medicine
Acupuncture	Homeopathic Medicine
Ayurvedic Medicine	Environmental Medicine
Energy Medicine	

lated alternative, and it recognizes that medicine and surgery are necessary sometimes. However, integrative medicine seeks to minimize the need for invasive therapies and to optimize the availability and effectiveness of more “natural” alternatives. Since medications and surgery may have side effects that impact voice performance adversely, singers should be familiar with other options, but they also should recognize that even nonprescription substances may have negative side effects. So, it is wise to use nutritional supplements, herbs, and other approaches under the guidance of an integrative medicine team to avoid hazards of uninformed self treatment.

Table 1 outlines a classification for integrative medicine practice, although there may be overlap between categories.² Many integrative medicine practices provide a range of these therapies with the ability to integrate them with allopathic or conventional medical approaches and practitioners. These integrative therapies, when carefully applied, are safe and have the potential for bringing greater well-being to all who use them.

An important challenge for integrative medicine practitioners is to establish how effective “it” is. This is not an easy task given the nature of complex or chronic diseases, and the combination of approaches that are often recommended. For example, how do you quantify benefits derived from dietary guidelines, nutritional supplements, stretching/exercise/yoga, stress management techniques, therapeutic touch, and/or other approaches followed at the same time? It is therefore important to find practitioners who are good at both clinical practice and staying current with progress in the field. It should also be noted that there may be other integrative approaches that may be helpful under certain circumstances which are not mentioned in this discussion (e.g., Alexander Technique, developed by an Australian actor who felt that his intermittent voice loss was due to poor head and neck postures that could be improved with proper posture training). This article will describe what integrative medicine approaches could include, how they might be helpful, and how to apply integrative medicine to specific symptoms or problems.

DIETARY GUIDELINES AND NUTRITIONAL SUPPLEMENTATION

Good nutrition is an important foundation for optimal performance, as well as for an integrative medicine approach to common symptoms and disorders. This includes both the use of specific dietary guidelines and targeted nutritional supplementation.

It is well established that some individuals may be at significant risk for subclinical or clinical nutritional deficiencies and malnutrition. Many common factors may contribute to nutritional inadequacy, including unhealthy diet, poor appetite, depression, isolation, and disability, although there are many other influences that can have important effects in individual circumstances. The most common nutrient insufficiencies and deficiencies may be found for folate, vitamin D, calcium, zinc, and magnesium.³

It is also important to know that there are a few key differences between medical nutrition therapy practiced in an integrative or CAM clinic in comparison with a dietetics setting. One primary difference is that integrative nutritionists or dietitians are much more likely to recommend therapeutic diets (e.g., vegetarian, rotation/elimination, sugar-free, or lower carbohydrate), at least for a specific period of time, because they can be an important part of an integrative program. Another important distinction is that nutritionists and integrative medical practitioners are much more likely to prescribe or recommend nutritional supplements to go along with therapeutic diets, whereas most dietitians are not trained in the use of nutritional supplements and have little experience with their therapeutic potential.

Dietary Guidelines

Many basic dietary guidelines and considerations that are common knowledge are in agreement with integrative medicine and nutrition. For example, these would include eating five to seven servings of vegetables and fruits per day, balancing vegetarian and animal sources of protein, eating healthy fats, and limiting sugars and refined carbohydrates. Research supports these guidelines in the prevention and complementary treatment of heart disease, cancer, and age-related neurocognitive decline.⁴

Three primary dietary approaches that are frequently addressed in integrative medicine and can affect singers are: 1) balance of macronutrients and other factor-spe-

cific guidelines for hypoglycemia, abnormal glucose tolerance, and insulin resistance; 2) elimination or rotation diets for food intolerance or food allergy; and 3) anti-inflammatory diets. Depending upon the symptom or disorder, various levels of dietary guidelines could be recommended and/or a combination of these approaches as described below.

It is possible that abnormal glucose tolerance in underweight people (hypoglycemia) and insulin resistance in overweight or obese individuals reflect a continuum that can be addressed in similar ways. Hypoglycemia can cause or contribute to fatigue, headaches, anxiety, depression, heart palpitations, and other symptoms. Approaches to address this may include: limiting or avoiding sugars and refined carbohydrates; balancing meals for protein, healthy fat, and complex carbohydrate; limiting caffeine; eating smaller, more frequent meals and snacks; regular stretching and exercise; and possibly specific nutrients such as magnesium and chromium. These approaches are particularly important with the increasing prevalence of overweight individuals, obesity, and diabetes.

Another potentially important approach is rotation or elimination diets, which can be useful for stomach and intestinal disorders (IBS, GERD, and IBD), migraines, autoimmune disorders, chronic inflammatory or pain disorders, skin conditions, allergies, or others. These diets can be applied in three primary ways, including: 1) a rotation diet one to two times per week of foods in Level 1 or Level 2 (Level 1 foods include sugar, dairy, wheat, alcohol, and caffeine); 2) a Level 1 elimination diet; and 3) Level 2 elimination diet—avoid foods from Level 1 plus other potentially offending foods such as peanuts, soy, other gluten grains (rye, barley, and oats), corn, citrus, eggs, and any other foods that may be suspected. An individual's ability and willingness to comply even for a short time is important to consider, but very important benefits will be seen by some people.

Recent research and commentary suggest that aging may be an inflammatory process.⁵ While most research suggests that omega-3 fatty acids have the most significant anti-inflammatory effects, there is also some evidence to support the effects of monounsaturated fat, antioxidants, phytonutrients, and possibly other factors.⁶ These guidelines can be encouraged by eating more foods containing omega-3 fats and monounsaturated fats that are listed in Table 2.

TABLE 2. Healthy Dietary Fat.

Omega-3 Fatty Acids	Monounsaturated Fatty Acids
Fish—salmon, mackerel, sardines, others	Olive oil and olives
Ground flax seeds or flax oil	Nuts and seeds
Soy products	Avocado
Nuts and seeds	
Dark green leafy vegetables	

When developing an effective nutritional program, the primary challenge is to target the optimal diet and supplement program that can produce results yet are not so difficult that adherence is sacrificed. Therefore this requires dialogue with practitioners, as well as informational and practical support. Finally, the guidelines should be followed for a finite period of time such as one to six weeks to see if results are achieved. An example recommendation could be to avoid or rotate sugar, wheat, dairy, and alcohol for four weeks and see what results are produced.

Sometimes by just applying therapeutic diets for a short time it can be determined if this will be beneficial. While there may be many people who cannot follow strict guidelines, there are many who can and are encouraged to follow through, especially if they can feel better or see the changes they are looking for.

Nutritional Supplementation

The use of nutritional supplements can be very beneficial for prevention, symptom control, and specific conditions. It is important, however, to get good advice about their use.

The use of nutritional supplements in clinical practice is to a certain degree a question of philosophy and practice orientation. For integrative or complementary medicine practitioners, supplements are a part of the framework of natural approaches that include diet, exercise, stress management, and other modalities such as acupuncture or massage. For conventional physicians where insurance and time constraints often limit the degree to which other health related issues can be addressed and where experience is often limited, it is not a frequently included approach. In general, however, people can be particularly responsive to targeting key supplements as part of an integrative approach, in

order to avoid adding to the number of other medications already being taken and to avoid potential adverse effects or interactions.

There is a large range of supplements that practitioners may recommend or that individuals may try on their own. These categories of supplements include vitamins, minerals, fatty acids, amino acids, antioxidants, probiotics and prebiotics, herbs and botanicals, enzymes, hormones, glandulars, functional foods and food concentrates, homeopathic remedies, and others.

There are many reasons to suggest why supplements may be beneficial, including poor dietary choices, variations in soil nutritional content, micronutrient losses from food processing and cooking, and genetic defects or variations in individual nutrient requirements. To understand how supplements can benefit people, it is possible to use several models, including nutritional deficiency, subclinical nutritional deficiency, and biological response modifiers or enhancing biological activity. The overt nutritional deficiency is well defined and most often utilized in medical and nutritional practice. Classic examples are iron and vitamin B₁₂ deficiencies that produce clinical symptoms, can be identified through laboratory analyses, and supplemented and monitored for symptom and test changes.

More challenging is the evaluation of the other two models in which there may be varying levels of supportive evidence from test tube, animal, and clinical research. For example, a subclinical magnesium deficiency is the reason why many integrative medicine practitioners recommend magnesium despite normal serum or red blood cell magnesium levels.⁷ Magnesium is a cofactor for over 300 enzymes in the body. Research supports magnesium's influence in high blood pressure, diabetes, and glucose tolerance, migraines, allergies, muscle cramps, constipation, and nervous system and memory function.⁸ Because magnesium is often inadequate in the diet and can be depleted by chronic disease, it is often recommended by integrative healthcare providers to help address a range of symptoms.

Omega-3 fatty acids or fish oil supplements are a good example of supplements that have biological response effects. Supplements can enhance dietary influences, as described in the previous dietary section, and can effectively alter the production of pro-inflammatory versus anti-inflammatory molecules. Omega-3 fatty acids are

TABLE 3. Framework for Recommending Supplements.

Healthy diet as a foundation
 Evidence base that includes a sound rationale and mechanism
 Positive benefit to risk ratio
 Defined dose and time frame to assess effects

Targeted populations to treat such as: (a) people with adverse or inadequate responses to medication; (b) people who would like to try nutrition and/or natural therapies before taking pharmaceuticals; or (c) older people who are already taking many medications

potentially beneficial in a range of disorders due to their anti-inflammatory effects and impact on cell membrane and tissue function because of its effect on membrane fatty acid composition.⁹ There is no established nutritional status measure, although some studies have quantified blood levels of specific omega-3 fatty acids or omega-3 to omega-6 fatty acid ratios.¹⁰ Fish oil should often be taken with caution and under the supervision of a medical practitioner because it can thin the blood and cause bleeding.

These are two good examples (among many) in which there are not accurate nutritional status measures available. This lack of effective assessment measures and data makes it much more difficult to conduct research that can quantify supplement recommendation effects and more clearly determine their effects on specific diseases.

Despite the challenges presented, supplements can be effectively taken by people, once a reliable source of products is identified. Table 3 describes an effective framework from which supplements can be recommended.

There are some dietary or nutritional supplements that can be safely recommended and may be beneficial. Table 4 presents some of the most important and useful supplements (the first three could be considered a foundation approach).¹¹

Herbal Medicine

Herbal medicine, the use of plant-based products to influence symptoms or disorders, is often included with the use of nutritional supplements as part of a nutritional supplement/herbal regimen. Herbs may also be recommended, however, as part of traditional medical approaches such as Ayurveda, Traditional Chinese Medicine, and Tibetan Medicine, or East Asian Medicine that have been practiced for thousands of years. Significant research, largely supported by the National Center for

Complementary and Alternative Medicine (NCCAM) and the Office of Dietary Supplements, is now being conducted to examine the effects of herbal therapies. In Europe and Australia herbal products are regulated by government agencies to assure product quality. An ongoing debate compares the use of standardized herbal products indexed to specifically identified and quantified active ingredients versus the use of whole herbs (leaves and/or stems) that may have multiple active ingredients.

An example of a commonly used herb is black cohosh. Black cohosh has been used for centuries by traditional Chinese medicine practitioners, and is now commonly used for menopausal symptoms such as hot flashes, migraine headaches, sleep disturbances, and mood disturbances, although the specific mechanism by which it acts remains unclear. St. John's Wort (*Hypericum perforatum*) is another example of an herb frequently recommended for mild to moderate depression. Although it is not as well known, St. John's Wort may also be helpful for wound healing and antiviral effects. While research suggests that this herb can be beneficial, it is not well understood which of the mechanisms are most important. It is also a good example of an herbal product that can significantly influence the circulating levels and/or effectiveness of drugs. This results because St. John's Wort induces liver enzymes, which can affect blood levels of many common medications.¹²

It is beyond the scope of this article to provide a detailed list and description of the use of herbs, but this information is available elsewhere,¹³ and there are resources listed at the end of this article. Herbal products can be useful, although more caution is necessary because there are more common interactions between some herbs and many drugs.

Homeopathy

Homeopathy is an approach to health and healing that is based on the principle of *similia similibus curentur*, or "like heals like." The founder and primary developer of homeopathy was the German physician Samuel Hahnemann (1755–1843). He spent most of his life testing and documenting remedy effects, and recording them in the *Organon of Medical Art*. For most of the nineteenth and early twentieth centuries, homeopathy was the mainstream medicine practiced in the United States.

Homeopathy specifically challenges the biological system or physiology of an individual by exposing it to

TABLE 4. Important and Useful Dietary Supplements.

Supplement	Rationale
Multivitamin and Mineral	Despite some conflicting results, research has suggested that multivitamin and mineral supplements may reduce the risk for heart attacks and certain types of cancer, as well as reduce inflammation, and infection rates in diabetics and the elderly. ^a Taking a multivitamin and mineral every day can reinforce healthy behaviors that contribute to a healthy lifestyle.
Omega-3 Fatty Acids or Fish Oil	Health benefits of fish were described earlier in this article. It should also be noted that fish oil is now endorsed by the American Heart Association for the prevention of cardiovascular disease (CVD). There are at least five mechanisms by which omega-3 fatty acids reduce CVD risk including: (a) anti-inflammatory; (b) cholesterol reduction; (c) anti-clotting; (d) promotes normal heart rhythm; and (e) affects important cytokines or biological medications. ^b It should be used with caution, however, since high doses can cause bleeding.
Calcium, Magnesium, and Vitamin D	Important for bone health and the many important aspects of magnesium influence that were listed earlier. Also, there is some recent provocative research suggesting that vitamin D may be involved in immune function and cancer, autoimmune disorders, insulin resistance, and possibly other disorders, especially in the elderly. ^c
Probiotics	Have been shown to be helpful for symptoms such as constipation and diarrhea, and they are very safe. ^d They may also be helpful for irritable bowel syndrome (IBS), inflammatory bowel disease (IBD), skin problems, and allergies.
Licorice Root Extract (LRE) or Deglycyrrhizinated Licorice (DGL)	Have been shown to be helpful primarily for gastritis, or inflammation of the stomach, as well as for infections of the upper respiratory tract, which indicates its use for symptoms of gastrointestinal reflux disease (GERD). ^e
Glucosamine sulfate and chondroitin sulfate	Good research suggests that glucosamine and chondroitin sulfate can help reduce stiffness and pain in osteoarthritis. ^f
Co-enzyme Q10	Co Q10 is an important part of the energy generating process in all cells. Statin drugs given for cholesterol reduction also lower circulating levels of CoQ10, but the consequences are not well understood. Perhaps the most common symptom would be muscle cramps. Supplementation may be warranted especially in susceptible populations such as those over 65 years of age who have fatigue and those with congestive heart failure. ^g

^a A. El-Kadiki and A. J. Sutton, "Role of Multivitamins and Mineral Supplements in Preventing Infections in Elderly People: Systematic Review and Meta-Analysis of Randomised Controlled Trials," *British Medical Journal* 330, no. 16 (April 16, 2005): 871.

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^e Natural Standard: The Authority on Integrative Medicine (2010), www.naturalstandard.com.

^f F. Richey, O. Bruyere, O. Ethgen, M. Cucherat, Y. Henrotin, and J. Y. Reginster, "Structural and Symptomatic Efficacy of Glucosamine and Chondroitin in Knee Osteoarthritis: A Comprehensive Meta-Analysis," *Archives of Internal Medicine* 163, no. 13 (July 14, 2003): 1514–1522.

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a remedy that causes the symptoms that an individual is reporting. In so doing, the body's own healing mechanisms are stimulated to respond, thus promoting homeostasis or healing to occur. Although controversial, there is an emerging body of medical literature and research

that shows benefits of homeopathic approaches for fibromyalgia syndrome, respiratory symptoms, postoperative swelling and pain, and other disorders.¹⁴

The two main approaches to the practice of homeopathy are: 1) classical homeopathy; and 2) the use of

combination remedies. Classical homeopathy involves the recommendation of an individualized single remedy based on a thorough and comprehensive interview. This would include the totality of symptoms and any other characteristics that may be considered important or relevant. In contrast, combination or complex remedies are in essence manufactured by homeopathic companies for a range of disorders or symptoms such as colds, cough, allergies, headaches, diarrhea, etc. While these remedies are available in most health food or supplement stores and can be effective, classical homeopathy is considered to be more specific and individualized for a patient, and a truer form of homeopathy. Classical homeopathy also requires considerable experience to effectively work with people.

In treating people, homeopathy is an important approach to consider because it can be helpful and does not interfere with other modalities. This may be particularly helpful in elderly patients who may already be taking many medications. Much more information is available through the resource listed at the end of the article.

LIFESTYLE APPROACHES: EXERCISE/PHYSICAL FITNESS AND STRESS MANAGEMENT

Exercise/Physical Fitness

We all know that exercise and fitness are essential components of health and well-being. What some people may not appreciate is that peak performance and optimal health and well-being require good physical fitness. It is best to find identify an activity in which one enjoys participating so that it is easy to continue long term. Exercise will help with mood, sleep, immune function, musculoskeletal complaints, heart disease, and overall strength, balance, and endurance.

Mild to moderate aerobic activity can be interspersed with weight lifting exercises throughout the week. Regular exercise consists of moving for at least twenty minute periods three to four times per week. Aerobic activity is characterized as any movement that increases the heart rate, while weight training consists of arm or leg strengthening repetitions with weights or via repetitious lifting of arms and legs. Of course, care must be exercised not to overdo exercises at the risk of injuring shoulders or other vulnerable joints. Yoga, tai chi, chi gong, and the

like are also good fitness techniques that increase strength, flexibility, and balance, and are known to enhance energy.

Sometimes a short course or ongoing sessions with a skilled physical therapist or exercise physiologist is a wise start. One may benefit also from working with a personal trainer to establish a good fitness regimen that is individualized to one's needs and abilities. There are also many fitness classes available that incorporate aerobic and muscle strengthening exercises in a social, group setting.

For many, the big challenge is to determine how to fit it into one's schedule. It can therefore be essential to take all important circumstances into consideration when setting up a schedule or program. The aftereffects of vigorous exercise may also temporarily effect vocal performance, so exercise scheduling must be particularly sensitive to rehearsal and performance commitments.

Stress Management

Relaxation techniques and stress management are in many ways the heart of integrative medicine. Disease is thought to be significantly influenced by stresses, thought processes and emotional factors, as well as one's spiritual life. Therefore, healing is most likely to occur when a practitioner not only examines the physical aspects of symptoms or disorders, but also considers mental and emotional characteristics, stresses that may be present, as well as influences of spiritual beliefs and practices.

There are so many ways to evaluate and encourage emotional and spiritual well-being that only an overview can be presented within this article. What is important to recognize is that illnesses and stresses can lead to chronic or recurrent symptoms as well as considerable suffering or discomfort that often can be affected by attention to emotional and spiritual factors, as well as a variety of stress management techniques. These techniques range from various psychological or talk therapies to body work, exercise or yoga, to other enjoyable and therapeutic activities, hobbies, and social networking.

Within integrative medicine, a technique that has been embraced and well researched since 1979 is mindfulness-based stress reduction (MBSR), developed by Jon Kabat-Zinn.¹⁵ Integrating Buddhist meditation traditions with hatha yoga and the contemporary science of stress, is a good illustration of the mind, body, and spirit concept by encouraging the participants to turn

toward the full experience of life with a perspective of curiosity and kindness. From another viewpoint, MBSR promotes being present with an observer's mind instead of being reactive to stress-related physical sensations, thoughts, and feelings, as well as any other related issues that may arise. Accumulating evidence supports the beneficial effects of MBSR for stress levels, mood, sleep and/or quality of life in a variety of disorders including depression and anxiety, fibromyalgia, chronic pain, menopausal hot flashes, cancer, and other populations.¹⁶

It is well documented that many symptoms and diseases have a mind-body connection. Ongoing research is now attempting to clarify mechanisms and identify biological markers and valid characteristics or scales that can be useful in quantifying and confirming clinical observations. This research is examining disorders such as irritable bowel syndrome, fibromyalgia and chronic fatigue, headaches and migraines, immune deficiency and autoimmune disorders, heart attacks, and many others.

Within integrative medicine the concepts and practice of spirituality, religion, and/or prayer are considered very important to well-being and strongly supported. This is an important aspect of American life and is associated with good health.

There are many ways that emotional, psychological and spiritual factors can influence health and disease, and this has been illustrated effectively by Rachel Naomi Remen, in her lectures and books.¹⁷ Dr. Remen encourages practitioners to be present and listen effectively so that a caring environment can allow people the opportunity to share and to uncover the stories that shape all lives. In many cases, significant traumas or stresses may need to be acknowledged or dealt with before they can be let go and healing can be allowed to occur.

The second part of this article will continue by applying the integrative medicine modalities to specific disorders.

APPENDIX

Websites and Resources

American Academy of Medical Acupuncture (AAMA) and Medical Acupuncture Research Foundation, 5820 Wilshire Blvd., Suite 500, Los Angeles, CA 90036; (323) 937-5514; www.medicalacupuncture.org

American Association of Acupuncture and Oriental Medicine, 433 Front Street, Catasauqua, PA 18032; (610) 266-1433; www.aaom.org

American Association of Naturopathic Physicians, 4435 Wisconsin Ave., NW, Suite 403, Washington, DC 20016; (866) 538-2267; www.naturopathic.org

American Botanical Council, 6200 Manor Road, Austin, TX 78723; (512) 926-4900; <http://www.herbalgram.org>

American Chiropractic Association, 1701 Clarendon Boulevard, Arlington, VA 22209; (703) 276-8800; www.amerchiro.org

American Holistic Medical Association, PO Box 2016, Edmonds, WA 98020; (425) 967-0737; www.holisticmedicine.org

American Institute of Homeopathy, 801 N. Fairfax Street, Suite 306, Alexandria, VA 22314; (888) 445-9988; www.homeopathyusa.org

American Massage Therapy Association; www.amta.org; Foundation research database—www.amtafoundation.org

American Osteopathic Association, 142 E. Ontario St., Chicago, IL 60611; (800) 621-1773; www.osteopathic.org

Association for Applied Psychophysiology and Biofeedback, 10200 W. 44th Ave., #304, Wheat Ridge, CO 80033; (303) 422-8436; www.aapb.org

Bravewell Collaborative, 1818 Oliver Avenue South, Minneapolis, MN 55405; www.bravewell.org

Consortium of Academic Health Centers for Integrative Medicine; www.imconsortium.org—Listing of potential health centers and integrative medicine practitioners

Duke University's Center for the Study of Religion, Spirituality and Health; www.dukespiritualityandhealth.org

Institute for Functional Medicine, 4411 Pt. Fosdick Drive NW, Suite 305, P.O. Box 1697, Gig Harbor, WA 98335; (800) 228-0622, Fax: (253)853-6766; <http://www.functionalmedicine.org>

National Center for Complementary and Alternative Medicine (NCCAM), National Institutes of Health (NIH); 6707 Democracy Blvd., Suite 401, Bethesda, MD 20892; (888) 644-6226; <http://nccam.nih.gov>

Natural Medicines Comprehensive Database (subscription required) <http://www.naturaldatabase.com>

Office of Dietary Supplements, NIH, 6100 Executive Blvd., Room 3B01, MSC 7517, Bethesda, MD 20892; (301) 435-2920; <http://ods.od.nih.gov>

NOTES

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- Joel S. Edman, DSc**, is the Director of Integrative Nutrition and Associate Research Director at the Myrna Brind Center of Integrative Medicine, Thomas Jefferson University and Hospital, Philadelphia, PA. He is also an integrative medicine consultant, educator and health coach in Media, PA (www.EdmanNutrition.com).
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- Lauren B. Kondrad** is a senior at Drexel University, majoring in biology, with future plans to attend medical school.
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- Birgit Rakel, MD**, is the Director of the Integrative Medicine Women's Health Program and a Family Physician at the Myrna Brind Center of Integrative Medicine, Thomas Jefferson University and Hospital, Philadelphia, PA. She completed her integrative medicine/Bravewell Fellowship with Dr. Andrew Weil at the University of Arizona, and is an assistant professor in the departments of Family and Community Medicine, and Emergency Medicine.