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NATUROPATHIC DOCTOR NEWS & REVIEW
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Student Scholarship Honorable Mention

Morphea

Effective Treatment with Homeopathy

TERRI BUGG, ND
PATRICIA J. RENNIE, ND

Morphea, also known as localized scleroderma, is a rare disease with an incidence rate of 3 in 100 000 and a prevalence rate of 50 per 100 000.[1] The disease affects women 2.6 times more than men, and can appear in all races, though appears to be more common, up to 73-82%, among Caucasians.[2] The average age of onset for morphea is typically between 20 and 40 years of age and depends on the type of morphea involved. Approximately 50-65% of those affected are adults.[3] The etiology of morphea is unknown[4]; however, the condition has been associated with trauma, vascular abnormalities, autoimmune processes, viruses, and infections.[5] Morphea is a chronic

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Vis Medicatrix Naturae

Cardiovascular Disease

Using Cactus, Crataegus, and Physical Medicine

DEBORAH FRANCES, RN, ND
CHRIS CHLEBOWSKI, DC, ND

In answer to a question from one of his students, Bill Mitchell, ND, picked up the chalk and proceeded to fill 2 blackboards with biochemical equations. He then set the chalk down, turned back to the students, and said, "Basically, we have no idea."

While there is no doubt that continuing to deepen our understanding of biochemistry and pathophysiology is a vital part of serving our patients, our real job, as Benedict Lust always stressed, is to mobilize the vital force.

The following cases offer a few examples of the incredible results naturopathic doctors see regularly in clinical practice – results that blossom from the healing power of nature inherent in the therapies we choose and in our patients' bodies.

Bill also used to say, "Nature does the work. The doctor takes the credit."

A Case of Arrhythmia & Chest Pain

Dr Chlebowski

A 68-year-old woman presented to the clinic with new symptoms of palpitations and chest pain. She described the pain as a sensation of constriction that felt like an "iron band" encircling her chest. Examination revealed tachycardia and an irregularly irregular pulse. She had responded well in the past to homeopathic Phosphorus and Phosphoric acid for symptoms of rheumatoid arthritis and fatigue, but the cardiac symptoms were a new development.

Based on the keynote symptom of constriction as if a metal band was around the chest[1] the patient was given 1 dose of Cactus grandiflorus 30C in the office, and a dose of 200C to take home and use if symptoms did not abate. Within 12 hours of the 30C dose, the strange feeling was gone from her chest, having disappeared rapidly and permanently. Both the rate and the rhythm of her heart had also returned to normal.

A Case of End-Stage CHF

Dr Frances

A 90-year-old woman in end-stage congestive heart failure (CHF) had extreme dyspnea that was aggravated by the slightest exertion. Even the effort of talking was too much. Although she was being treated by a cardiologist, she had experienced little to no relief from allopathic medications. Respirations were short, shallow, and frequent, and she suffered from a constant, weak, dry cough that added to her state of exhaustion.

Three rubrics were used from Murphy's

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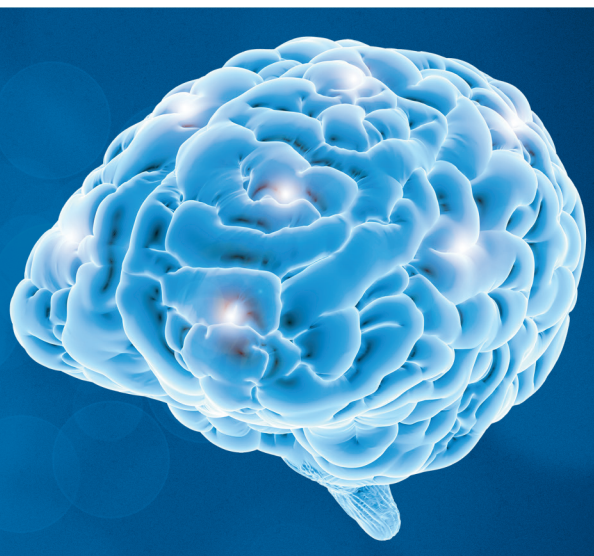

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inflammatory skin disease, which manifests as a disorder of cellular immunity, microcirculation, and an abnormal increase in collagen synthesis.[6] Excessive collagen deposition causes sclerosis and fibrosis of the skin, which contributes to stiffness, movement disorders, and limited mobility.

Current first-line treatments with the most evidence for efficacy in morphea include phototherapy, methotrexate, systemic corticosteroids, calcipotriene, and topical tacrolimus.[7] However, there is no consensus on the treatment of morphea, and most of the studies are case series, with very few comparative or placebo-controlled clinical trials.[8] Management of morphea remains unsatisfactory or inconsistent, as some patients receive systemic immunosuppressives while others receive little to no therapy. Methotrexate, either alone or with corticosteroids, has the greatest level of evidence.[7] However, recurrence rates following discontinuation of treatment are high, ranging from 30-40%.[5] Long-term use of corticosteroids is associated with increased risks of cardiovascular disease, osteoporosis, increased infections, and suppressed adrenal gland function. Chronic use of methotrexate can result in liver damage and side effects including nausea and vomiting, mouth ulcers, and anemia. Treating scleroderma in earlier stages is generally more successful at reducing inflammatory activity compared to treating sclerosis featuring chronic, well-established lesions.[9]

Case Presentation

This case report is of a 68-year-old female Chilean senior citizen who initially presented with chief complaints of morphea. Based on skin biopsy, the patient was conventionally diagnosed with morphea. Her medical doctor prescribed methotrexate and corticosteroids, which she refused in favor of alternative therapies. The onset of the skin condition was 4 months prior to seeking natural treatment. Two years before the onset of the condition, the patient cited several major stressful life events that continued to affect her, including a sudden loss of employment and the death of her pet cat. The patient was single and lived alone, and she described her pet as an important and primary emotional support for her. She experienced intense shock, grief, and sadness at the death. She had been unable to express the grief fully and was still in the grieving process. She admitted that the loss of her pet triggered a deep fear of being alone, fear of the aging process, and fear of the transition process into retirement.

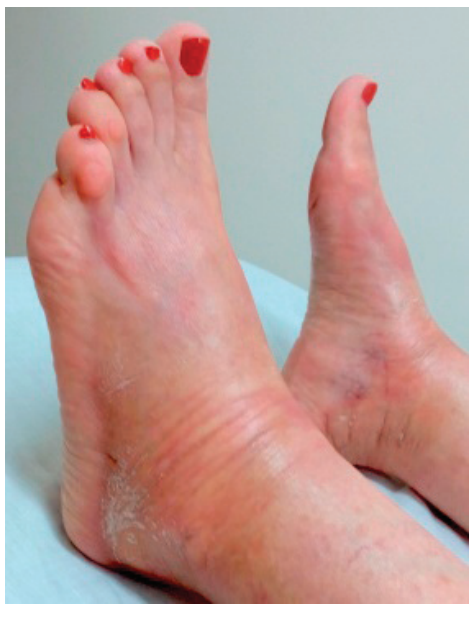
The patient did not have a genetic predisposition to morphea or other skin disorders per family history or previous medical history. She also had no prior history or family history of physical trauma, radiation exposure, major infection, or autoimmune conditions. She had a good social support system with friends and was conscientious about her health, incorporating a healthy diet and regular light exercise. She lived an active lifestyle, spending her time visiting friends in social gatherings, doing errands, or traveling.

The patient's main presenting symptoms were indurated, dry, and discolored skin, distributed over the ankles and dorsal feet bilaterally. At the time of initial presentation she rated her condition as 8/10, (10=worst). The affected skin was not pruritic or painful, but was associated with intense discomfort, stiffness, and sensation of tightness, as if the skin were about to break. On examination, the epidermis of the feet and ankles bilaterally was dry, hyperkeratotic, indurated, flaking, cracking, and stiff, with approximately 40% discoloration in the affected areas, which included white, light yellow, pink, and light purple (Figure 1). Skin discoloration was most prominent when the feet were in flexed position or when the patient was supine. Epidermis at the dorsal and lateral ankle areas was sclerotic, smooth, and shiny, with decreased mobility. The right foot was slightly less affected than the left foot, and the toes were spared bilaterally. She had dry skin on her face and upper and lower extremities, and spider veins were observed on the lateral sides of the right and left-upper thighs. All other physical findings were within normal limits. In the mental and emotional sphere, the patient suffered from chronic grief, anxiety related to her health, insomnia, and intense restlessness. She had persistent restlessness in the feet, with desire for constant movement and a sense of internal unease. Movement greatly improved her symptoms, as it ameliorated both her physical discomfort and emotional restlessness. The patient found both the morphea and insomnia distressing and having a negative impact on her quality of life.

Treatment

The primary intervention was an individualized constitutional homeopathic medicine. The single homeopathic remedy, Rhus radicans, was prescribed as a 200C

Figure 1. **Before Treatment**



potency. The patient received a total of 3 dry doses of 2 pellets per dose over a period of 6 months, with approximately 6-7 weeks between doses (Table 1). Selection of the appropriate homeopathic medicine was based on the guiding totality of symptoms that characteristically represented the entirety of the case, including mental, physical, and general symptoms. As you know, homeopathic materia medica was developed through clinical signs and symptoms both in patient provings and patients treated with homeopathy. Materia medica and repertorization were used to select appropriate rubrics for skin qualities (stiffness, induration, discoloration) as well as key mental and emotional features (grief, restlessness, sleeplessness) (Figure 2, next page). The repertory software program MacRepertory (Edition 8.5.2.9) was used to match rubrics to an extensive collection of historical repertory databases. Rubrics were analyzed under the Expert Analysis setting.

Rhus tox vs Rhus radicans

Analysis of the rubrics scored Rhus toxicodendron, also known as the Atlantic poison oak (*Toxicodendron pubescens*), as the top remedy. A review of homeopathic materia medica and provings indicated clinical use of both Rhus tox and Rhus radicans in dermatological conditions characterized by rash, stiffness, induration, yellow or white discoloration, and anxiety with restlessness.[10] Rhus radicans, also known as the Eastern poison ivy (*Toxicodendron radicans*), is symptomatically a close relative of the well-known homeopathic remedy Rhus toxicodendron. Rhus radicans is a poisonous Asian and North American flowering plant that causes intense pruritus, erythema, and dermatitis on contact.

The clinical use of homeopathic Rhus radicans is quite similar to Rhus tox, the main distinction being that Rhus radicans is often used in more severe presentations of a condition and when Rhus tox fails to act.[10] Rhus radicans was chosen as a first remedy due to the severe presentation of this patient's condition. Keynotes for the remedy are joint or skin stiffness accompanied by anxiety and restlessness that are ameliorated by motion – symptoms which the patient in this case study strongly exhibited.

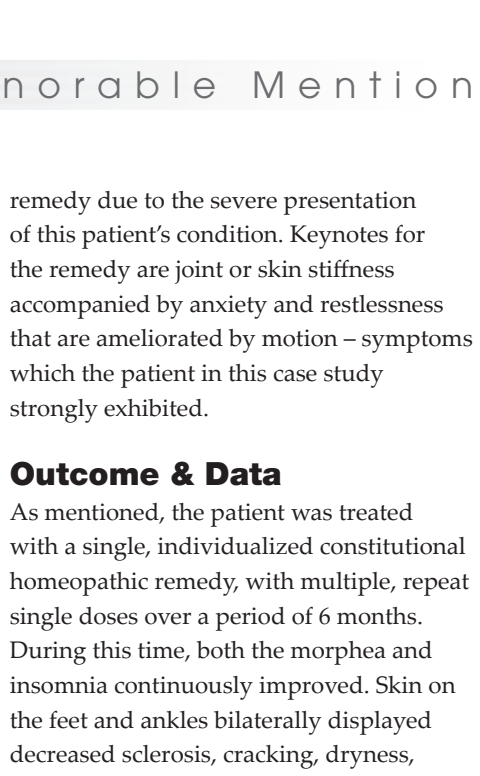
Table 1. **Frequency & Dosing of Remedy**

Date	Treatment	Dose
September 19, 2016	Rhus radicans 200C	2 dry pellets once
November 14, 2016	Rhus radicans 200C	2 dry pellets once
February 6, 2017	Rhus radicans 200C	2 dry pellets once

Outcome & Data

As mentioned, the patient was treated with a single, individualized constitutional homeopathic remedy, with multiple, repeat single doses over a period of 6 months. During this time, both the morphea and insomnia continuously improved. Skin on the feet and ankles bilaterally displayed decreased sclerosis, cracking, dryness, and discoloration. In comparison to before treatment, skin in the area exhibited increased suppleness and mobility at the end of treatment (Figure 3).

Figure 3. **After Treatment**



Patient outcome was evaluated both subjectively (through a 0-10 numerical analogue scale based on self-identified symptoms of concern) and objectively (through validated clinical assessment outcomes based on localized scleroderma skin activity and skin damage). After the first homeopathic dose and reassessment after 3 weeks, energy and insomnia had improved, with no difficulty falling asleep on any days. The morphea had also improved, with a decrease in dryness. However, a sensation of tightness and restriction on movement remained. After the second homeopathic dose, the patient had a return of old symptoms, including whole-body itching for approximately 2 months and a temporary worsening of existing symptoms for 1 week.

At the end of treatment the patient subjectively rated the morphea as 3/10 (10=worst), compared to 8/10 at the onset of treatment. The patient rated the insomnia as 2/10 at end of treatment, compared to 8/10 at initial presentation. Subjective assessment demonstrates a 63% improvement in morphea and 75% improvement in insomnia. At the end of treatment the patient reported decreased anxiety about her health, a greater sense of overall well-being, decreased grief and internal restlessness, and a discontinuation of restless sensation in the lower extremities. Energy levels had increased and were consistent, with only an occasional drop in energy in the afternoons.

To objectively evaluate localized

scleroderma, computerized skin scores (CSS), MRI, skin biopsy and ultrasound can be used. However, these methods often require specialized equipment or training, are not available at the teaching clinic, and are invasive or often expensive, so were not utilized. Several clinical assessment methods have been published, such as the Modified Rodnan Skin Score (MRSS), the Localized Scleroderma Skin Severity Index (LoSSI), and the Localized Scleroderma Assessment Tool (LoSCAT).[11,12] These methods assess activity and damage based on limited clinical parameters.

The LoSCAT has recently been validated to assess scleroderma,[12,13] is the most widely reported outcome measure for morphea, and has been recommended for future treatment studies.[13,14] The LoSCAT consists of the modified LoSSI (mLoSSI), the Localized Scleroderma Damage Index (LoSDI), and the Physician Global Assessment of Disease Damage (PGA-D). The LoSCAT was selected in this case to objectively evaluate the patient's condition before and after treatment (Table 2 and Figure 4). The LoSSI score decreased from 12 to 4, and the LoSDI decreased from 8 to 4. Objective assessment demonstrates a 67% improvement in skin activity and 50% improvement in scleroderma skin damage after 6 months of treatment.

Discussion

Conventional treatment and management of morphea is challenging and unsatisfactory, and backed by very few comparative or placebo-controlled trials.[5] A variety of therapeutic strategies have been proposed and used clinically; however, no consensus currently exists regarding treatment strategies for morphea. Lack of agreement on how to accurately capture disease outcomes in localized scleroderma has also hindered the development of efficacious treatment protocols.[5] Similarly, there is a lack of controlled therapeutic studies examining treatment of morphea with homeopathy. However, homeopathy offers an alternative approach with a higher safety profile and fewer adverse effects,[15-17] as demonstrated in this case.

Although no peer-reviewed literature exists for morphea, homeopathic materia medica is extensive and derived from clinical cases collected over the past 200 years.

A cross-sectional descriptive survey study assessed the use of complementary and alternative medicine (CAM), including homeopathy, in pediatric rheumatological cases, including several with scleroderma.[18] A high prevalence of CAM use in pediatric rheumatology patients attending a tertiary-care ambulatory clinic was found, although actual results from its use were not evaluated. To date, no peer-reviewed medical literature or clinical trials exist on the treatment of scleroderma-related conditions with homeopathy. The lack of literature is possibly due to the rare incidence of scleroderma and, in particular, morphea. Although no peer-reviewed literature exists for this condition, homeopathic materia medica is extensive and derived from clinical cases collected over the past 200 years and systematic provings indicating the symptoms best treated by a particular remedy.

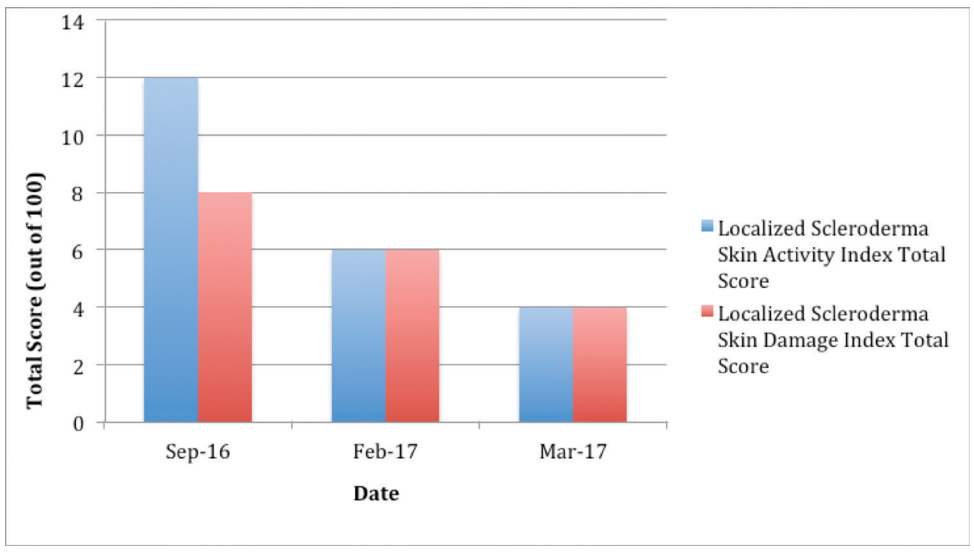
After several months of constitutional homeopathic treatment, the patient's physical symptoms – and, most importantly, the mental and emotional symptoms such as energy and mood – all markedly improved. Homeopathic medicines work on the totality of the patient, including the mental, emotional, and physical aspects. Consistent administration of the homeopathic medicine via scheduled repetition of doses was the main variable held constant throughout treatment. Improvements were noted after each successive dose of homeopathic medicine, supporting the notion that Rhus radicans is an effective primary intervention.

An indication of the correct remedy selection was the long action of single doses as well as the slight aggravation at beginning of treatment that was followed by overall improvement. According to Hahnemann, the closer a remedy is to the simillimum, the more reaction may be expected[15]; the exact simillimum may cause a slight aggravation before relief comes.[15] Deep therapeutic action was demonstrated by the return of old symptoms (ROS), which occurred after the second dose. Earlier in the year, prior to the manifestation of morphea, the patient experienced intense whole-body itching for several months on the back, shoulders, and extremities. The itching spontaneously resolved, followed by the appearance of morphea. The resolution of 1 symptom that is immediately followed by another, more severe symptom, represented a shift in disease state from a milder condition to a deeper pathological state.

An ROS occurs during homeopathic treatment when unresolved disease states and previous suppressions reappear before being removed, and is a sign of a correct remedy selection.[19] According to both Hering's Direction of Cure and Hahnemann, an ROS is a clinically observed symptom or symptoms that can indicate a deep-seated healing and healing crisis in a patient.[19,20] The reversing of the order of symptoms is the basis of the direction of cure because it inherently includes the return of old, unresolved states as well as the movement from within to without, from the most important to the less important, and from above to below when the disease clearly developed this way.[19] This process also includes a beneficial change in the mental state, an increased sense of well-being, and increased vitality – all of which this patient experienced. After the second dose, in spite of a temporary slight worsening of symptoms, the patient had an internal sense of well-being. The temporary worsening of symptoms may be classified as a homeopathic aggravation[15] and can be interpreted as an indication of a positive healing process.

Limitations in the case include a lack of reassessment by biopsy as well as the possibility of spontaneous resolution.

Figure 4. **LoSCAT Results: Graph**



(LoSCAT = Localized Scleroderma Cutaneous Assessment Tool)

Figure 2. **Repertorization**

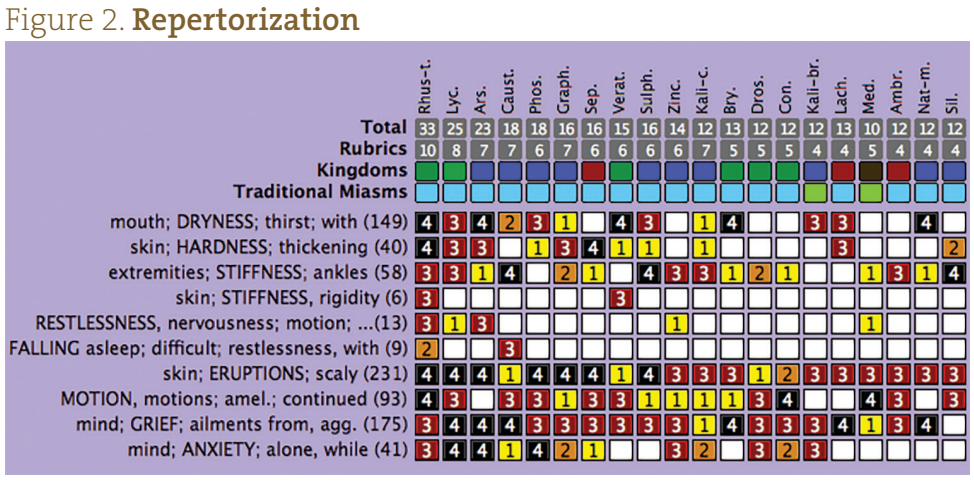


Table 2. **LoSCAT Results: Data**

Date	LoSSI (Total Score, out of 100)	LoSDI (Total Score, out of 100)
9/19/2016	12	8
2/13/2017	6	6
3/6/2017	4	4

(LoSCAT = Localized Scleroderma Cutaneous Assessment Tool; LoSSI = Localized Scleroderma Skin Activity Index; LoSDI = Localized Scleroderma Skin Damage Index)

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Naturopathic Doctor News & Review

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To confirm improvement in morphea, morphological skin changes should be evaluated through follow-up biopsy testing and correlated to clinical outcomes in scleroderma skin damage and activity, as described earlier. The potential exists that observed changes in the patient's condition might be superficial in nature and not representative of a true regression of the disease. The natural history of morphea shows that spontaneous regression can occur within 3 to 5 years, with the average time of spontaneous remission, or skin softening, occurring at 2.7 years.[1] However, the available evidence does not show resolution before 3 years. The patient in this case experienced improvement within 6 months of treatment, which most likely indicates that results were due to the therapy undertaken and not a result of spontaneous remission.

This patient experienced improvement within 6 months of treatment, most likely indicating that results were due to the therapy undertaken and not a result of spontaneous remission.

Conclusion

This case report demonstrates the effectiveness of a well-selected homeopathic remedy, as a primary intervention in morphea, to support healing of dermatological conditions. The homeopathic medicine Rhus radicans was clinically shown to improve morphea, a rare skin condition that is historically difficult to treat.

Homeopathy was founded in the 18th century by the German physician, Samuel Hahnemann. Homeopathy is based on the principle of "like cures like," or the Law of Similars, where highly diluted small doses of a substance can heal a health condition that would produce similar symptoms to that same condition when given in larger doses. As a complementary and alternative medicine, homeopathy is a whole-systems approach to healthcare that is prescribed based on the patient's entire pattern of symptoms, including the physical, emotional, mental, and spiritual factors of disease, to treat root causes and provide highly individualized treatment. Since homeopathic medicines have a high safety profile, low risk of side effects, and are cost-effective, they constitute a viable alternative to conventional treatment in morphea.

Terri Bugg, ND, has a general family practice in Vancouver, British Columbia, with special clinical interests in mental health in adults and youth, autoimmune disease, and environmental medicine. Dr Bugg graduated from the Canadian College of Naturopathic Medicine (CCNM) in 2017; her other academic credentials were earned from the Ontario College of Homeopathic Medicine (DHMHS) and the University of Toronto (HBSc). She is originally from Yellowknife, Northwest Territories, and prior to naturopathic medicine she cultivated her love for nature working in biological research and the environmental field.

Patricia J. Rennie, ND, has been active in the field of naturopathic medicine in Ontario for over 25 years. Dr Rennie has a busy private practice in Thornhill, Ontario, and supervises interns at CCNM on a pediatric shift. She has served as academic faculty at CCNM, teaching anatomy labs and pediatrics, has served on the OAND Board, and was a founding member of Health Canada's Pediatric Expert Advisory Council.

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Repertory:

COUGHING, HEART, complaints, with[2]

CLINICAL, CONGESTIVE, heart disease[3]

BREATHING, DIFFICULT, HEART, problems, with[4]

Several remedies came up, but on reviewing materia medica, Cactus grandiflorus seemed the most appropriate. As the daughter gave the case to me and I did not have the opportunity to see the patient, it is likely I was missing some key symptoms that might have made me more confident in my prescription. Cactus was chosen for its strong affinity for the heart and the fact that it fit what symptoms I did have for her.

The patient was given a 30C dose, to take every 2 hours as needed. On follow-up with the daughter a day or so later, I learned that the remedy had significantly alleviated both the dyspnea and the cough. The patient was breathing much more easily and the family was quite relieved. The patient was told to use the 30C potency as needed, and the remedy continued to help until she went into a coma and died a few months later.

Cactus, the Remedy

The symptom of being bound by a metal band is a keynote for homeopathic Cactus, a remedy that is also known to have an affinity for the heart. Other indications for prescribing Cactus include valvular insufficiency, ventricular hypertrophy, palpitations, and angina with a constrictive sense of suffocation.[5] Interestingly, Dr Chlebowski has also successfully prescribed Cactus for dysmenorrhea with a constrictive, squeezing quality, which shows that the essence of this remedy can be represented in any system of the body.

Selenicereus grandiflorus, also known as night-blooming cereus, thrives in the harsh, dry soil of the desert and blooms only at night, encouraging us to do the same when life seems barren and dark.

Cactus, the Herb

When used botanically, cactus (Latin name, *Selenicereus grandiflorus*) acts as a stimulating tonic, cardiac restorative, and diuretic. It is especially useful in CHF, mitral valve insufficiency, and angina.[6] A low-dose botanical, cactus should be administered judiciously. A 1:1 tincture of fresh plant may be given in divided doses of up to 45 drops in any 24-hour period.[6]

Selenicereus grandiflorus, also known as night-blooming cereus, thrives in the harsh, dry soil of the desert and blooms only at night, encouraging us to do the same when life seems barren and dark. Thirty drops of cactus tincture can be added to a 1-oz bottle of water, and given in doses of 1-5 drops as needed for melancholic despair and anxiety. Giving the patient an image of the plant blooming in the desert night can help augment the healing power of the medicine. The night-blooming cereus is specific for patients going through a dark night of the soul. Plants have so much to share with us on so many levels…*Vis medicatrix naturae.*

Repetition of the Dose

As I (Dr Frances) write up these cases each month, I am struck by the differences in our styles of prescribing. Dr Chlebowski tends to repeat a homeopathic remedy sparingly, whereas I often have my patients repeat frequently in acute cases. We both get good results; so much for dogma. Instructions to back off with repetitions, once the remedy begins to act, are crucial, and the remedy should only be repeated this frequently in acute cases.

A Case of Impending CVA

Dr Frances

The daughter of a 66-year-old long-term patient called in a panic to report that her mother was experiencing a sudden onset of what she called "amnesia."

Suspecting a cerebrovascular accident (CVA) in the making, I instructed her to take her mother directly to the emergency room. "But stop by the office on your way," I added. "I'll be waiting outside."

When they pulled up 10 minutes later, I handed the patient a teaspoon and a solid extract of hawthorn, with instructions to take it like food. "Just eat it," I said firmly.

The patient later reported that her symptoms lifted dose by dose with each teaspoonful of hawthorn she ingested. She was already better by the time she got to the hospital, where she was given the diagnosis of transient ischemic attack.

Discussion

Rich in antioxidant and anti-inflammatory flavonoids, hawthorn (*Crataegus*) acts as a nutritive tonic, enhancing cardiovascular (CV) health by improving coronary perfusion, lowering high blood pressure, increasing the cross-linkage of connective tissue of blood vessels, and generally strengthening the function and integrity of CV tissue.[7] The inclusion of hawthorn in the treatment of CV disease (CVD) has been seen in our clinic to enhance the efficacy of other therapies aimed at treating CVD. I (Dr Frances) never omit it from any CV treatment plan.

Although *Crataegus* is usually thought of as a nutritive tonic for long-term use, it should not be neglected in acute cases. Its efficacy in acute angina, impending CVA, and acute asthma is reliable, significant, and not to be underestimated.

Hiatal Hernia Syndrome

Dr Chlebowski

Many times over the last decade, I (Dr Chlebowski) have had patients report to the clinic with "cardiac symptoms" of palpitations and pain and pressure in the left side of the chest but whose cardiac workup was negative. These patients are rightfully fearful that they are experiencing some kind of cardiovascular event. Often they have already consulted their primary-care physicians or made a visit to the emergency room, only to have a thorough cardiac workup come out negative. More frequently than not, a simple reduction of the stomach alleviates all of the patient's symptoms.

Disappearance of symptoms in these cases occurs so reliably that I cannot think of a case where the technique has failed. This suggests that even in cases where symptoms are of true cardiac origin, hiatal hernia, gastroesophageal reflux disease (GERD),[8] and other possible pathologies of the stomach should be addressed, as their presence may likely be exacerbating the cardiac condition.

Due to the anatomical proximity of the stomach to the heart, even a mild hiatal hernia can cause cardiac symptoms. Also, because the heart and stomach share parasympathetic innervation, increased tone of the vagus nerve can reflexively cause irritation in the heart. Both organs relate to the sympathetic nervous system at the level of the thoracic spine: the splanchnic nerve and T5 to T10 for the stomach, and T2 to T4 for the heart.

For more information, I highly recommend the book, *Hiatal Hernia Syndrome: Insidious Link to Major Illness: Guide to Healing*, by Theodore Baroody, ND, DC.

Deborah Frances, RN, ND, practiced homeopathy and nutrition as a registered nurse before graduating from NCNM (now NUNM) in 1993. She practiced in rural Oregon for several years before returning to Portland to teach at NCNM. Dr Frances has been a popular lecturer at conferences around the country and has taught as adjunct faculty at both NCNM and Bastyr. She has taught classes on herbal medicine, acute prescribing for NDs, dream work, and shamanic healing. She is strongly influenced by the traditional teachings of her Lakota ancestry. Dr Frances is the author of *Practical Wisdom in Natural Healing*, available at drdeborahfrances.wordpress.com.

Chris Chlebowski, DC, ND, is a homeopath, chiropractor, and naturopathic physician. Dr Chlebowski graduated from Western States Chiropractic College in 2007 and from NCNM in 2011. He and his family live and work in Ashland, OR, where he owns and operates an integrative clinic focused on the treatment of difficult, chronic disease. Although his work is always built on a firm foundation of homeopathy, botanical medicine, and nutrition, he also utilizes hyperbaric oxygen, IV therapies, and many other modalities.

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Cardiac Biomarkers

A Well-Validated Clinical Tool

JOCELYN FAYDENKO
FRASER SMITH, MATD, ND

Cardiovascular disease (CVD) is the leading cause of mortality in the United States.[1] Although the classic lipid panel presents well-validated information about long-term risk, it does not provide insight into the degree of inflammation within the arterial intima. Since atherosclerosis is an inflammatory disease, it is critical for prevention-oriented physicians to obtain information about the state of arterial inflammation and stability of focal plaques in their patients.[2] Naturopathic medicine is a primary-care system of medicine with a strong emphasis on prevention and support of the body's intrinsic healing pathways, often involving nutrition. By understanding how inflammatory biomarkers are indicative of cardiovascular risk, healthcare practitioners can better inform their patients of the potential risks they may face, as well as prevent cardiac events from occurring.[3] The purpose of this review is to describe the predictive benefits of several key cardiac biomarkers, based on current evidence. It should be clear that these are of high relevance in the diagnosis and management of CVD, in both its incipient and progressive phases.

The use of advanced cardiac biomarkers is an emerging yet well-validated clinical tool that may be a better predictor of short-term risk than the classic lipid panel.[3] Half of all patients who have experienced a cardiac event had cholesterol levels consistent with proper guidelines at the time.[4] Unlike the traditional lipid panel, cardiac biomarker testing provides information about inflammation, including oxidative stress within the endothelium, oxidized LDL (OxLDL) cholesterol, C-reactive protein (CRP), and plaque (atherosclerotic) growth and stability. As evidenced in the JUPITER trial, statin drugs such as rosuvastatin lower CRP; thus, this anti-inflammatory effect may be as important as their total effect on circulating lipid levels.[5]

Biomarkers of Inflammation

F_2-Isoprostanes

F_2-Isoprostanes (IsoPs) are a measure of lipid peroxidation due to the metabolism of arachidonic acid, a compound necessary for mediating basic bodily functions, such as building muscle tissue. This marker has been utilized as one of the most sensitive indicators for lipid peroxidation in vivo, which led to its incorporation into a number of clinical trials.[6] IsoPs have since become recognized as one of the most reliable biomarkers for lipid peroxidation and how it corresponds to disease. Several studies[7-9] have found correlations between IsoP levels and both CRP and homocysteine levels. IsoPs have also been shown to be increased in individuals with hypertension as compared with normotensive individuals.[10-13] In addition, healthy older adults were found to have significantly elevated IsoPs when subjected to short durations of ischemia/reperfusion, as compared with young adults exposed to the same conditions.[14] Individuals with the highest IsoP levels (ie, IsoP > 0.86 ng/mg) have a 30-fold increased risk of developing coronary heart disease (CHD).[15,16] Increased IsoPs have been associated with increased intake of red meat. Also, except for extreme cases, levels decrease with exercise.[17] Besides indicating an increase in arterial oxidative stress, increased IsoPs can also act as vasoconstrictors and lead to platelet activation.[6,14]

Oxidized LDL

Oxidized LDL (OxLDL) reflects LDL cholesterol that has been modified on its ApoB-100 subunit by reactive oxygen species. Elevated OxLDL levels play a role in the initiation of vascular inflammation and have been associated with increased risks of atherosclerotic CHD, metabolic syndrome, CVD, and complications of diabetes mellitus.[6,18] It has been found that individuals with increased levels of OxLDL are 4 times more likely to develop metabolic syndrome, and in healthy middle-aged males, high OxLDL suggests a 4-times greater risk of developing CHD, with a stepwise increase in OxLDL correlating with an increase in disease severity.[19] Levels in the range of 45-59 U/L indicate moderate risk, while levels above 59 U/L indicate high risk.[16]

C-Reactive Protein

C-reactive protein (CRP) is an acute-phase protein released by the liver during inflammation; it plays a major role in the innate human immune response. CRP is also expressed within diseased atherosclerotic arteries in smooth muscle and is an indicator of low-grade systemic inflammation.[20] Elevated levels of high-sensitivity CRP (hsCRP) may indicate an increased risk of plaque vulnerability and atherogenesis, as well as recurrent risk of cardiovascular events in patients with established coronary artery disease and stable angina.[6] Measurement of hsCRP has also been relevant in the assessment of primary prevention; future stroke, myocardial infarction, incident peripheral arterial disease, and cardiovascular death have all been predicted independently by baseline hsCRP levels, as evidenced in 2 studies.[21,22] Levels in the range of 1-3 mg/L indicate an average risk for cardiovascular disease, while levels above 3 mg/L indicate high risk.[16]

Urinary Microalbumin

Urinary microalbumin reflects very small amounts of albumin that has leaked into the urine; the specific laboratory marker is the ratio of urine albumin to urine creatinine (URAC). In persons with an increased risk of cardiovascular events, such as those with hypertension or diabetes mellitus, microalbuminuria is an established risk factor for cardiovascular morbidity and mortality as well as end-stage renal disease.[23,24] Because microalbuminuria reflects vascular damage in the kidneys and systemic endothelial dysfunction, microalbuminuria has been suggested as a marker for increased risk of all-cause and CVD mortality and increased incidence of CHD events.[23,24] A URAC above 30.0 indicates high risk, and the higher the microalbumin level, the higher the risk of heart attack, stroke, and death.[16,23]

> The classic lipid panel does not provide insight into the degree of inflammation within the arterial intima.

Myeloperoxidase

Myeloperoxidase (MPO) is secreted at sites of inflammation by activated phagocytes, and can trigger oxidative damage to cells and tissues. Evidence suggests MPO may play a role in plaque vulnerability, and indicate increased risk of CVD, CHD, and possibly heart attack.[6,25] One study showed that MPO was strongly expressed at plaque rupture sites in advanced human atherosclerotic plaques taken from patients with sudden cardiac death.[26] In another study,[27] serum MPO predicted significantly increased cardiac risk during a 6-month follow-up among patients with acute coronary syndromes (ACSs), although especially in patients who also had low levels of troponin T (another prognostic marker for cardiac events). Another hazard of elevated MPO is that it can oxidize the Apo A-1 subunit of HDL-cholesterol, thereby reducing its atheroprotective functions and rendering it less effective in scavenging cholesterol.[28] In addition, MPO and hsCRP together have been shown to predict long-term cardiovascular mortality after coronary angiography.[6]

Interestingly, decreased cardiovascular risk has been associated with diminished enzymatic activity of MPO, which can result from specific genetic polymorphisms.[29,30]

It is important to note that MPO levels are not likely to be elevated due to chronic infections or rheumatologic disorders (unlike CRP), as free MPO in the blood is a specific marker of vascular inflammation and vulnerable plaque, erosions, or fissures. Serum MPO levels above 480 pmol/L are indicative of a high risk of CVD events.[16]

Lp-PLA_2

Lipoprotein-associated phospholipase A_2 (Lp-PLA_2) is a useful marker for measuring arterial wall inflammation due

to the build-up of cholesterol, even when minimal calcified plaque is present. A soft, inflammatory plaque with a friable fibrous cap and small core diameter can be potentially unstable, leading to rupture.[31] Lp-PLA$_2$ assists in the creation of 2 potentially pro-inflammatory and pro-atherogenic particles by oxidizing phospholipids into a free oxidized fatty acid and lysophosphatidylcholine. For those with established CVD, Lp-PLA$_2$ can predict the risk of future adverse events.[6] In one study, both Lp-PLA$_2$ and CRP were independently and significantly associated with CHD in patients with "optimal" LDL cholesterol levels below 130 mg/dL.[6] A separate study showed that elevated Lp-PLA$_2$ levels were predictive of fatal or non-fatal heart attack in a 14-year follow-up of middle-aged men with hypercholesterolemia.[6] Lp-PLA$_2$ has also been suggested as an independent predictor of incident type 2 diabetes due to its positive association with insulin resistance among older adults.[32] Levels of Lp-PLA$_2$ above 200 ng/mL indicate a high risk of developing CHD.[16]

Relevance to Naturopathic Practice

The question remains, how relevant is this to naturopathic practice? If the lifestyle measures that patients need to embark on are obvious, and the medical alternatives are clear, what is the need for these tests? The answer is 4-fold:

1. These biomarkers can predict risk in the short term, even very short-term, versus the possible decades of risk predicted by the classic lipid panel.
2. Compared to a standard lipid panel, the biomarkers provide more dimensions of information, including: inflammation, endothelial dysfunction, changes to ApoA on LDL particles, immune activation, and plaque progression and plaque instability. As a result, they can help target what physiological processes are dysfunctional and what needs to be addressed with plant extracts, nutritional therapy, and other interventions.
3. The biomarkers can be used for patient education. For instance, a young patient with high F2-isoprostanes can see that he has oxidative stress in his arteries. Or, a 13-year-old with dysfunctional HDL due to high MPO can be shown to be at significant risk for metabolic syndrome.
4. Of paramount importance, we can gauge how well our naturopathic protocols are working. Is there a change in inflammation with treatment? Is the patient's risk of a cardiac event actually decreasing? These questions can be given clear answers by the testing outlined in this article.

For those with established CVD, Lp-PLA$_2$ can predict the risk of future adverse events.

Conclusion

Naturopathic medicine strongly emphasizes individualization of treatment. The cardiac biomarkers discussed here help identify individualized and focal areas of dysfunction in our patients – in terms of metabolism, cellular function, and molecular biological events. This in turn can help us create strategies that augment the body's ability to heal itself, and to know if our choice of therapy is moving a particular patient in that direction.

References 15-32 available online at ndnr.com

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Treating Pneumonia

When Antibiotics Fail

SHANNYN FOWL, ND

So many pulmonary pathologies are difficult to treat and sometimes even difficult to diagnose. Pneumonia, on the other hand, is usually a clear diagnosis after an X-ray, and naturopathic tools are pure gold when it comes to treatment.

In this article I will share a few cases of pneumonia. Please notice that 3 of these cases were failed by standard-care treatment options and that it took a natural approach to finally achieve healing. Please be assured that, as naturopathic doctors, you not only have an incredible array of tools to use, but when you "take in the essence of a patient," you can also use those tools with extraordinary accuracy. Please also note that because of their healing experience, most of the patients described here are now natural health advocates and patients for life.

Case Study 1: After 3 Months of Antibiotics

A 73-year-old male presented to my clinic with pneumonia of 12 weeks' duration. He reported that his symptoms began several months prior, initially starting as unilateral facial nerve irritation and swelling. This facial nerve issue was treated with antibiotics.

He was very busy with family visits, then became so fatigued that he was unable to do anything. No one else in the family had been sick. Over the next 3 months he was treated 4 times with IV and oral antibiotics, had 3 inconclusive lung biopsies, and his lungs were aspirated twice. He would feel temporarily better after antibiotics. His most recent doctor's visit was to the emergency room 4 days before consulting me, where he was given a chest X-ray and a new prescription of antibiotics.

The patient has continued to experience shortness of breath and night sweats, and has lacked energy to the point where he struggles to get dressed for the day and spends the day on the couch. He reported no other underlying health conditions, other than an enlarged prostate.

Physical exam revealed a very tired man without a cough.

Lungs had light expiratory wheezes on the left, but 2-3-second expiratory wheezes on the right. No anterior wheezes were found. Slight crackles were noted inconsistently.

No other physical abnormalities were found.

Impressions

Although this patient was supportive of naturopathic medicine in general, he had not sought care with a naturopathic doctor or used natural medicine before this condition. Both patient and wife seemed like they would follow through, if not, in fact, desperate to find something that worked so that he could get back to "living." This case seemed clearly to have some viral influence.

Treatment Plan

1. Get copies of lab tests, pathology reports, and X-ray reports to me
2. Mustard packs 1-2 times daily on the back or chest for 3 days or until we discuss stopping them. Patient given a handout and briefly instructed on the procedure in the office.
3. Warming socks at night. Handout provided.
4. Vitamin A for anti-viral effects and repair of mucosal tissue. Told to take with food.
    - Start with 50 drops (500 000 IU) per day for 3 days
    - Reduce to 25 drops (250 000 IU) per day for 3 days
    - Day 7: Reduce to 12 drops (120 000 IU) per day for 3 days
    - Day 10: Reduce to 6 drops (60 000 IU) per day for 2 weeks after symptoms abate
5. Aromatherapy: Patient given an essential oil combination containing *Pinus silvestris*, *Eucalyptus globulus*, *Melaleuca viridiflora*, *Terebenthina*, and *Thymus vulgaris*. Told to take 5 drops up to 5 times per day.
6. Bland diet of soups, veggies, and meats
7. Patient was directed to call with any questions and to follow up by phone in 3 days. He was told that he should see results within 3 days, and was instructed to call if signs or symptoms worsened.

Follow-up

He did call in 3 days, but to report that he was feeling 95% better than he had in 4 months. He felt very grateful. He was told to continue the treatment plan and to follow up in the office in 3-4 days in order to review labs and auscultate his lungs. It took him a month to follow up.

At this 1-month follow-up, he reported that he was 80-95% back to normal. He had started some exercise and was getting back into life again, in general. He still needed an afternoon nap. His appetite was also improving, though he was still having night sweats and some wheezing. He'd had no facial swelling reoccurrences. He'd stopped the warming socks because he was developing some fungus on his feet.

Physical exam revealed clear lungs with good air movement.

His labs from our first visit showed high WBC, iron-deficiency anemia, negative TB test, and low vitamin D. A differential was not run on the CBC, which would have been helpful.

During this visit, the patient was advised to take vitamin D, probiotics, iron, zinc, and a garlic/cinnamon combination (to be taken 3 times daily with food), to prevent a reoccurrence. An X-ray was ordered for 2-4 weeks. He was advised to take good care of himself, since weakened lungs could increase his risk for a repeat pneumonia.

The patient did not follow up for an entire year, only presenting at that point for a rising PSA. In this visit, he reported complete resolution of the pneumonia and symptoms after following the recommended treatment plan. After months of a geriatric patient battling pneumonia, and 4-6 scripts of antibiotics, 3 cultures, and inadequate labs, through naturopathic care he was able to feel 95% better within 3 days and experience complete resolution of his pneumonia within 4-6 weeks of seeking care. This is not an isolated case; naturopathic medicine is gold for pneumonia.

Case Study 2: Dragged in by a Spouse

A 45-year-old male presented with strained breathing. He would lean forward in his chair and off to one side. He had congestion, green-colored sputum, fatigue, wheezing, fever, and chills. His symptoms started with a head cold 2 weeks prior; then his ear became clogged. Muscle aches in his thighs made it difficult to sleep and caused him to moan. Although he felt too tired to even check his emails, he'd been jogging daily. His wife did the warming socks procedure for him and started him on vitamin C, vitamin A, and zinc. She also told him to take an herbal immune-boosting formula (*Echinacea*, *Spilanthes*, *Baptisia* spp, and *Commiphora myrrha*), which he was still taking when he came to my office.

On physical exam, his lungs sounded suspicious for pneumonia, with lots of crackles. He was sent for a stat X-ray and given 2 local options where they could cash-pay. We also drew some blood for lab tests.

Impressions

This case involves a spouse of a current patient. He didn't necessarily buy into our office's philosophy of medicine until he had a need himself. With the nature of his discharge and discomfort, bacteria seemed involved, but I wanted to protect him from a complicated viral infection as well. We also discussed how to protect the rest of the family by limiting their exposure to his saliva, including droplets of saliva from respiration, sneezing, and coughing. We also discussed how pushing ourselves with stress can impair ciliary function in the

lungs; when defense resistance is lowered, an infection is more likely to go deeper into the chest.

I did not encourage this patient to call with questions, since we were already getting a massive amount of calls from this family. However, I repeatedly covered what was safe and not safe, in an attempt to address any questions pertinent to the treatment plan. I encouraged his wife to write down any questions that arose so we could cover them in person in a few days. Imaging and labs can be financial obstacles for patients, so being aware of cash-pay options, where patients can get in quickly with minimal frustration, will help you provide quality care.

Treatment Plan

In the meantime, the patient was instructed to take the following:

1. Vitamin C: 3 grams or to bowel tolerance
2. Magnesium for muscle pain: 2 capsules at bedtime (too much can cause diarrhea)
3. Vitamin A: Start with 7 drops (70 000 IU) for 5 days. Then reduce as follows:
   - 6 drops for 3 days
   - 5 drops for 3 days
   - 4 drops for 3 days
   - 3 drops for 3 days
   - 2 drops for 3 days
4. Antimicrobial product containing vitamin A and 7-8 botanicals: 1 tablet 3 times daily with food. If side effects (eg, headaches, nausea, belly pain, dryness), take only 2 tablets daily. If no problems, increase to 4/day, then 6/day (2 tablets 3 times daily) for 7 days.
5. Drink plenty of water
6. Ginger tea, to increase body temperature and warm the lungs
7. Inhale eucalyptus-scented steam (place eucalyptus oil in steamer or use in the shower)
8. The patient was told that he should be getting better by the third day of treatment; if not, we would do something different. He was instructed to follow up for lab and imaging results.

> Just when we might be overwhelmed by running a business, these patients often remind us and reflect back to us the heart and confidence of our amazing medicine.

Follow-up

I spoke with the patient and his wife by phone the next day to discuss lab results, which included electrolyte imbalances, elevated liver enzymes, WBC elevation (neutrophils primarily involved), and bronchopneumonia per the chest X-ray. Diagnosis was bacterial bronchopneumonia with full lung involvement. At this point we added probiotics and mustard packs. We also called in a script for antibiotics in case they chose to go that route; it was a safety net for the patient.

He followed up the next day for a slow IV Myer's push. His lungs had improved somewhat, with friction rubs throughout and crackles mostly in the right-middle lung and lower edge of the upper lung, as opposed to throughout the lungs.

The Myer's push was repeated 4 days later. One week after the push, his upper lungs were clear, although some wheezing in his middle lung, and crackles in his lower lungs, were still present. At this point he appeared to be getting headaches from the antimicrobial product and vitamin A. We discontinued both and started 3 homeopathic drainage products.

A week later, he was still having headaches despite stopping the antimicrobial and vitamin A, but it seemed he was also working too much. He was advised to rest and repeat the X-ray.

At the 6-week point, his X-ray was clear, lungs were clear, and he felt back to normal. They never used the antibiotics, since they never felt they needed them. This patient is now a complete believer in naturopathic medicine, perhaps more than the doctor herself at times.

The next time I saw him was for a severely abscessed bug bite, which I wasn't sure how to treat without lancing (a procedure not within our scope); however, the patient was such a believer in our other tools that we successfully treated it with homeopathics and botanicals. Just when we might be overwhelmed by running a business, these patients often remind us and reflect back to us the heart and confidence of our amazing medicine.

Case Study 3: A Return to Her Roots

A 56-year-old female with a predisposition to frequent upper respiratory infections (URIs) returned to the office with pneumonia that was unresolved after 3 courses of antibiotics. The patient's rib cage was very sore from coughing. She had been coughing up yellow and green mucus, and cried in my office from exhaustion.

Physical exam revealed inspiratory and expiratory crackles throughout her lower lungs, but her upper lungs were clear. Each course of antibiotics would help for awhile but then stop; the pulmonologist told her that the infection was resistant to all the antibiotics they had tried but that they would keep trying new ones. She reported that her boyfriend was worried about her, was very supportive, and would be willing to help her with mustard packs.

Impressions

This patient was a true believer in natural medicine. On top of the antibiotics prescribed for her at an urgent care clinic, she was trying some herbal mixtures suggested by a family member who was early in her studies at a naturopathic university. Her only obstacle to seeking follow-up care for an acute illness in my office was the cost.

Treatment Plan

The patient was instructed to do the following:

1. Mustard packs: Mix 1 cup of flour with 1 tbsp mustard, and make a paste with water. Apply the paste to the back and watch for burning; pink is okay. Cover with a hot, wet hand towel. Leave on for 20 minutes; don't get chilled.
    - End with an icy cold rub with a washcloth
    - Do this twice daily, if possible, for 3 days
2. *Saccharomyces boulardii* while on antibiotics: 1 capsule daily until 3 days past finishing the antibiotics. Pause on the probiotics while taking the *Saccharomyces*.
3. Antimicrobial product with vitamin A and 7-8 botanicals: If tolerated, take 3 times daily with food; otherwise, take 1 tablet twice daily with food.
4. Vitamin A: 10 drops (50 000 IU) daily for 3 days
    - Then 2 drops/d for 3 days, then 1 drop/d until a week past feeling healed
5. Vitamin C: 2000-4000 mg daily
6. Thyme tea was recommended
7. Four homeopathic drainage products: 5 drops 3 times daily
8. Consider nebulized glutathione for 3 days (estimated cost $200-300 plus the cost of a nebulizer)
9. The patient was instructed to let us know how she was doing in the next 3-4 days

Follow-up

Four days later the patient reported by phone that she was very much on the mend and feeling much better. She was encouraged to follow up to have her lungs listened to and to get a repeat X-ray with her insurance-based doctor, due to the cost.

This is just another shine for naturopathic tools in a failed pharmaceutically treated case of pneumonia.

Case Study 4: Graduation Day

A 16-year-old male presented with shortness of breath. Symptoms initiated with a fever 1 week prior, progressing to a cough (eventually with yellow sputum), headache, weakness, and fatigue.

On physical exam, his breathing was harder and faster than usual. His lungs had consistent crackles, both inspiratory and expiratory, throughout his lungs, sparing only his lower-left lung. His oxygen saturation was 80%, improving to 92% with deep breaths.

Impressions

This final case is of a teenager who was graduating from high school later that day but was so sick that he was concerned he wouldn't be able to walk across the stage after sitting up front for the ceremony. He had missed several dance performances this week, but had also pushed through several. They had been to urgent care, been told it was a viral URI [influenza test was negative], and to watch and wait; however, he was not improving. They came to my office in a last-ditch attempt for help that could enable him to participate in graduation. We discussed how we might be able to find a middle ground for attending graduation, such as coming in at the last minute to walk; a doctor's note was also offered to help make this possible. This was the first visit for this family.

Treatment Plan

The patient was given homeopathic Lycopodium to get him through graduation day. He was also instructed to do the following:

1. Kali phosphoricum and Ferrum phosphoricum cell salts: 2 pellets of each product 2-6 times daily
2. Vitamin C: 3000-5000 mg daily or to bowel tolerance
3. Vitamin D: 3000 IU daily with food
4. Berberis formula (equal parts of *Berberis vulgaris* and *Berberis aquifolium*): 1 capsule (50 mg) 3 times daily with food. Patient told to stop if side effects developed (eg, dryness, headache, breast tenderness, nausea), and to report back.
5. Vitamin A: 5 drops daily (50 000 IU) until next meeting
6. Warming socks; instructional handout given to patient
7. Food: Soups, blueberry, pomegranate
8. The importance of rest was discussed
9. X-ray was strongly recommended; a written order was provided

Follow-up

I strongly encouraged them to follow up in 3 days; however, I was under the impression that if his illness resolved, I would likely not hear from them again. So I PARQ'd them as best I could (PARQ = Procedures, Alternatives, Risks, and Questions). We also scheduled an appointment, which they later cancelled by phone. I followed up by phone, leaving a message about the importance of having the lungs rechecked within 6 weeks and that complications that could occur. They called and left a message that graduation went very well and all was very good; they decided against a follow-up visit. I didn't see them for a full year, at which time they presented for a physical for dance camp.

Conclusion

Honestly, I have not had a case of pneumonia in my office that our natural tools have not been able to heal. It may happen yet, but I can confidently look my patients in the eye and tell them that naturopathic medicine is gold for pneumonia. Our teachers have passed down powerful and effective tools for treating this problem. Hopefully this article has inspired you to do the same!

Shannyn Fowl, ND, is a graduate of NCNM and a naturopathic doctor in family practice at Journey of Health, in La Mesa, CA. She practices *Docere* for the general public at San Diego Community College, and teaches nursing CE classes, such as "Intro to Naturopathic Medicine" and "Hydrotherapy and Homeopathy for the Family"; she also teaches biology and chemistry via parental involvement in her son's elementary classes. Dr Fowl is presently working on her book geared toward successful assistants in integrative clinics. She resides with her husband and son at a villa in San Diego, where they welcome like-minded visitors.

WNF WORLD NATUROPATHIC FEDERATION

Global Naturopathic Terminology

TINA HAUSSER, HEILPRAKTIKER

Language is the key that opens doors to global cultures, people, and nations. In times of globalization it is fundamental to communicate with each other on the basis of language. Words, as a tool of a language, unite people globally and allow international understanding, exchange of knowledge, and – in the professional field – the clarification of technical terms that may be used differently in different professions.

Every profession has specific technical terms that assist in unifying their profession and that clarify how practitioners approach their work. Using consistent terminology is required for teaching within the profession and for exchanging technical knowledge, both within a profession and with other professions.

In science, terminology plays a crucial role. For example, every system of medicine has its own terminology as well as uses a common language of medicine to guarantee understanding and communication on the professional level.

WNF Naturopathic Terminology Project

In 2017 the World Naturopathic Federation (WNF), in response to an identified need outlined by the World Health Organization (WHO), launched the WNF Naturopathic Terminology Project. Its role is to identify and define the core naturopathic terms that are used both in the naturopathic profession and in other healthcare professions, with the aim of facilitating interprofessional collaboration (IPC) with other health professions.

Background

Naturopathy has a long history and is considered a system of traditional medicine in Europe. Many terms used within the naturopathic profession etymologically originated from the Latin and Greek language. Terms used by philosophers and physicians in old Greece form part of the traditional wisdom that has been developed into modern naturopathic practice, such as the naturopathic philosophy of *Holism*, which is also included in the naturopathic principle of *Treat the Whole Person* and the naturopathic theory of *Integration of the Individual*.

Terms that form the naturopathic principle *Vis Medicatrix Naturae* – or the naturopathic theory *Vis Vitalis* – have been used in medicine since the epoch of Hippocrates and are based on the philosophy of *Vitalism*. All of these terms originated in Latin or Greek language, the common language of traditional medicine in Europe and later of conventional medicine globally.

In the late 1800s, the practice of naturopathy extended into North America, Western Pacific, and India. Today, naturopathy / naturopathic medicine is practiced in over 80 countries, spanning all world regions.

Over time, naturopathic terms have been translated into English language and became part of the naturopathic terminology and practice, developed and applied by health professionals, such as the naturopathic principle *Wellbeing/Wellness*.

Process

When the WNF formed in 2014, one of its initial tasks was to determine how naturopathy / naturopathic medicine was practiced throughout the world and to see whether language and terms were consistent globally. The results of a global survey, published in the WNF World Federation Report (June 2015),[1] revealed that the underlying roots of naturopathy, the terms used, the scope of practice, and the theories that guide assessment and treatment are extremely similar around the world.

After surveying the profession, the WNF sent a second survey in February of 2016. This survey was sent to 85 naturopathic institutions from 49 countries. The results of this survey echoed the first, that is, that the roots of naturopathy are consistent and are taught globally in a similar way. Those results were published in the WNF Naturopathic Roots Report (2016).[2]

As a consequence of the consistency between the 2 surveys, the WNF created a White Paper,[3] outlining the philosophies, principles, and theories that substantiate the scope of naturopathic practice and define the profession globally.

The *White Paper: Naturopathic Philosophies, Principles and Theories*[3] is a 100-page document that details the roots of the naturopathic profession. Apart from the historical overview, it includes the definition of the profession and clarifies the origin, contributors, and practical use of naturopathic philosophies, principles, and theories, including naturopathic terms. As mentioned, technical terms are useful for recognition, definition, and unifying a profession. In the WNF White Paper, naturopathic terms are described in detail including historical origin, contributors, and application in practice today. The White Paper was approved by the global naturopathic profession in September 2017 and will serve as an ongoing valuable resource for naturopathic educational institutions that teach naturopathic history, philosophy, and principles. It will also be a great reference for naturopathic practitioners who want to learn more about the foundation of the naturopathic profession.

The WNF Terminology Project follows from the WNF White Paper. The goal is to provide a more concise document that will allow for better interprofessional collaboration with other systems of healthcare, and to serve as a guide for those in government (or other non-governmental groups) who desire a better understanding of naturopathic terminology.

WNF Terminology Subcommittee

The WNF Terminology Subcommittee is composed of WNF members that have expertise in the foundational basis of naturopathy and/or educational formation. The members are actively practicing naturopaths, naturopathic doctors, researchers, and teachers, all with substantial experience in naturopathy / naturopathic medicine.

The committee is made up of 9 experts from all over the globe and 1 volunteer – a naturopathic student from Bastyr University.

The committee members include:

- Chair: Tina Hausser, Heilpraktiker, Naturopath; OCN FENACO (Spain)
- Dhananjay Arankalle, ND; INYGMA (India)
- Flavia Banchieri, Naturopath; ANTHU (Uruguay)
- Melissa Brown, Naturopath; SANA (South Africa)
- Nick DeGroot, ND; CCNM (Canada)
- John Finnel, ND; AANP (USA)
- Daniel Kieffer, Naturopath; CENATHO (France)
- Iva Lloyd, ND; CAND (Canada)
- Stephen Myers, ND, PhD; ANF (Australia)
- Volunteer: Poorna Menon, naturopathic student; Bastyr University (USA)

The committee members span 6 world regions: Africa, Asia, Europe, Latin America, North America, and Western Pacific. This ensures a broad range of input from the naturopathic community and guarantees representation and references of the global naturopathic profession – which is a core concept of the WNF. Ensuring that all projects and committees include representation from multiple world regions is also an important criterion of the WHO, in order to recognize any document engaged by the WNF.

Purpose of the Project

As mentioned, the purpose of the terminology project is to have a global naturopathic document that succinctly clarifies key naturopathic terms. The goal is to establish bridges and increase collaboration with other healthcare professions by providing a clearer understanding of the core naturopathic terms that are used.

Many of the terms identified have been described in detail in the aforementioned WNF White Paper,[3] with the focus being on historical origins, contributors, and naturopathic practice.

Facilitating IPC is strongly encouraged by the WHO. The contribution of the WNF toward that purpose has been very intensive. For example, they conducted a survey exploring the attitudes of 7 T&CM (Traditional & Complementary Medicine) professions, with the goal of researching the status of IPC globally. Dr Iva Lloyd, President of the WNF, presented the results of that survey at the 71st World Health Assembly of the WHO, in a side meeting that included 2 WHO officials (Dr Zhang Qi and Dr Ruediger Krech).

The WNF Terminology Project is also in response to an initiative requested by the WHO. The WHO has been conducting similar projects aimed at defining professional terms in T&CM systems and facilitating IPC.

Methodology

The first step of the terminology committee members was to identify the key naturopathic terms to be defined. An important criterion was to choose terms that are commonly used in health care and that are defined differently in the various health professions. As mentioned, the focus was on key naturopathic terms that define important aspects of naturopathic philosophies, principles and theories.

The committee approved the following terms to be defined (in alphabetical order): Constitution, Doctor as Teacher, Emunctorology, First Do No Harm, Healing Power of Nature, Health Promotion, Holism, Homeostasis, Naturopathic Assessment, Naturopathic Diagnosis, Naturopathic Treatment, Prevention, Salutogenesis, Toxicity, Therapeutic Hierarchy, Treat The Cause, Treat The Whole Person, Vital Force, and Wellbeing/Wellness.

A Template for the definitions was established and approved by the committee. It includes the following sections: the term, definition, description, application in naturopathic practice, jurisdictional applications (if applicable), synonyms (if existing), antonyms (if existing), etymological origin of the term (if crucial), contributors and copyright, date of approval, and references.

Time Frame

Since its inception in November 2017, the committee has met every 2-3 months. Every committee member was given a number of terms to define as a first draft that was then edited and peer-reviewed by all committee members. Based on the feedback from committee members, second drafts for each definition will be created. Once the terminology committee has completed and approved the definitions of all the terms, the terms will be sent out for review to all WNF members. Consolidated feedback from all WNF members will compose the output document for the final draft.

This draft will then be presented for approval at the March 2019 WNF 3rd General Assembly in Melbourne, Australia.

Conclusion

Language serves as a gate to the world by bridging international understanding. Language and terminology help bridge nations, people, cultures, and professions – especially professions with the same intentions and field. In the case of health professions, it is the intention to increase and emphasize patient-centered health care.

Bridging through language is one aspect of a broader objective of the WNF, in its ongoing activities to unite the naturopathic profession globally. This also matches with a major topic of the upcoming 3rd WNF General Assembly in Melbourne, which is: "Bridging the Gap."

The WNF Naturopathic Terminology Document will serve to define and describe terms that are common in health care but used differently in different health systems. Its purpose is to facilitate interprofessional collaboration.

The WNF Naturopathic Terminology Document will open doors to other T&CM professions, to conventional medicine, and to global health subjects, as encouraged by the WHO.

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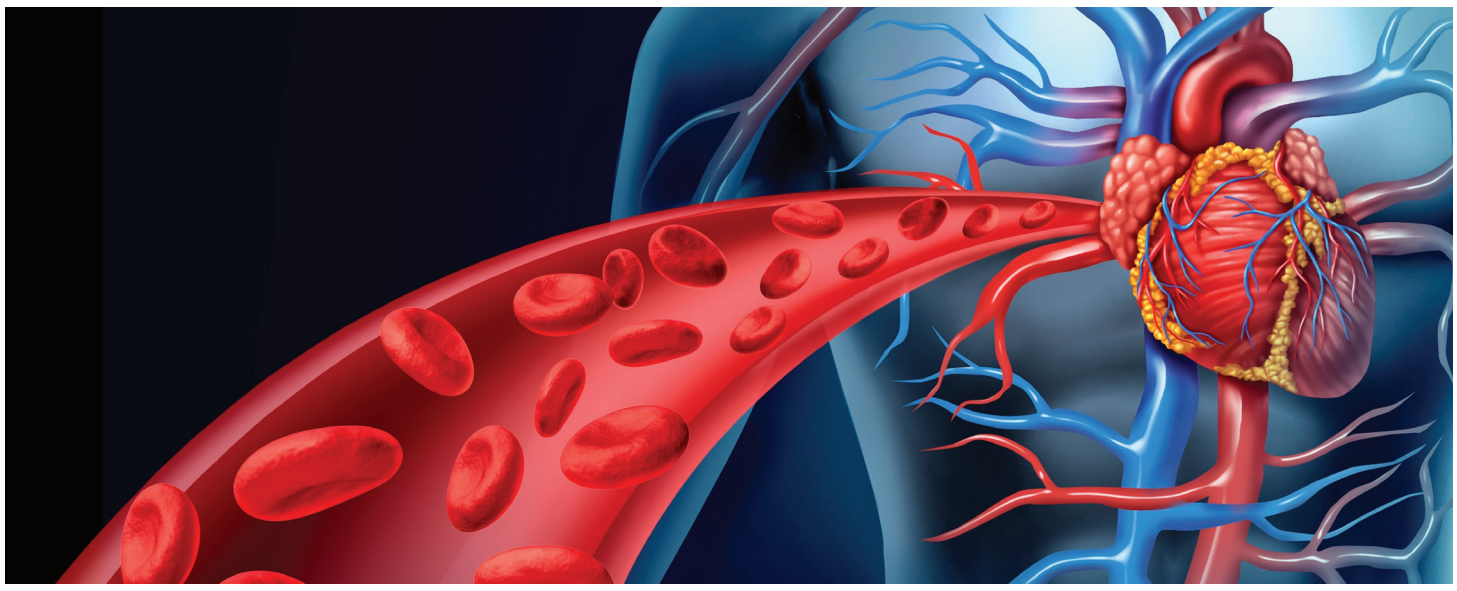
CVD & ABO Blood Types

FAR RAHMAN
RALPH ESPOSITO, ND, LAC



An individual's blood type has a considerable influence on many aspects of health, including digestion of food, stress response, immunity, and, importantly, cardiovascular health. According to the World Health Organization, cardiovascular disease (CVD) is the #1 cause of death globally, affecting more than 17.7 million people.[1] Cardiovascular diseases include any number of disorders that affect the heart and blood vessels, including coronary artery disease, myocardial infarction, and peripheral arterial disease. Although the health of the cardiovascular system is influenced by various factors such as stress, physical activity, and nutrition, an important component commonly overlooked is the genetics of blood type. The molecules that define the blood groups A, B, AB, and O are ABH antigens, found on red blood cells. These ABH antigens are the enzymatic reaction products of glycosyltransferases. Polymorphisms of the glycoprotein structure of red blood cell surfaces, which affect the activity of glycosyltransferases, are what gives rise to the ABO system.[2] Each individual blood type can contribute different risk factors for CVD. Blood type has been shown to directly affect blood viscosity, which can influence the efficiency of blood circulation. It can also affect the attachment of white blood cells to blood vessel walls, leading to inflammation and, consequently, arterial damage.[3]

Type A

Those with Blood Type A have an increased risk of CVD. These individuals statistically have higher rates of myocardial infarction than any other blood type.[4] One of the biggest contributors to CVD risk in a Blood Type A individual is elevated cholesterol. This is due to decreased levels of intestinal alkaline phosphatase (IAP),[3] an enzyme which is produced in the small intestine and is responsible for the breakdown of cholesterol and long-chain fatty acids. In addition, Blood Type A individuals have high levels of clotting Factor VIII (aka Von Willebrand factor, or vWF),[3] which greatly increases blood viscosity and susceptibility to coronary artery disease via its role in platelet aggregation. In essence, Blood Type As tend to develop blood clots easily (hypercoagulability).

In addition, arterial inflammation is a concern for Blood Type As, due to elevated E-selectins (binding sites), which allow white blood cells to bind to blood vessel walls and thus migrate into tissues. This can initiate an endothelial inflammatory response, concomitant with even minor elevations in cholesterol and Factor VIII (vWF).[3] When serious blood vessel damage occurs, the number of platelets rise, increasing the risk of clotting, calcification, and constriction of the lumen. As a result, coronary artery disease and arteriosclerosis can develop.

One large-scale genomic study displayed the central role of ABO in

Blood Type A individuals have heightened levels of cortisol. This has adverse effects on health because cortisol is strongly associated with hypertension, insulin resistance, obesity, and heart disease. Psychological stress is reported to be one of the strongest risk factors for recurrent heart attacks in patients, thus putting Blood Type A individuals at increased risk.

selectin levels, particularly P-selectins, which are similar to E-selectins but which function as cell adhesion molecules on endothelial cell surfaces and platelets. P-selectins have a crucial role in platelet aggregation,[5] in that increased levels of P-selectins are associated with atherosclerosis, thrombosis, and other cardiovascular events. Of the 4115 participants in the P-selectin studies, Blood Type A was most associated with high platelet-bound P-selectin levels, as compared to other ABO groups. The conclusion drawn from the study was that "ABO blood groups may influence cleavage of the P-selectin protein from the cell surface (or clearance from the circulation), rather than its production and cellular presentation [like in Blood Group A individuals]."[6]

Blood Type A individuals also have heightened levels of the stress hormone, cortisol.[3] This has adverse effects on health because cortisol is strongly associated with hypertension, insulin resistance, obesity, and heart disease. Psychological stress is reported to be one of the strongest risk factors for recurrent heart attacks in patients, thus putting Blood Type A individuals at increased risk.

Type O

The 1962 Framingham Heart study (performed in Massachusetts) observed the relationship between heart disease and ABO blood type and found that Blood Type Os suffered much less from heart disease than their Type A counterparts.[7] Blood Type Os have naturally high levels of IAP and hydrochloric acid (HCl), helping them to easily break down dietary fats, oils, and animal protein.[8] Another beneficial factor that Type Os possess in regards to heart disease is relatively low amounts of clotting Factor VIII (vWF), resulting in less susceptibility to blood clots. Less viscous blood means less likelihood of depositing plaque that inhibits arterial blood flow in vessels. Therefore, Blood Type O individuals have a low risk of developing serious coronary artery disease based on genetic factors.

One genome-wide association study tested whether genetic factors like ABO blood groups contribute to the development of coronary atherosclerosis or myocardial infarction in individuals with an existing coronary atherosclerotic condition. The results of coronary angiographic phenotyping in European participants revealed that O blood groups had a lower likelihood of having angiographic coronary artery disease with myocardial infarction.[9] This suggests that Blood Group O patients with angiographic coronary artery disease possess a protective mechanism against myocardial infarction. These results can be explained by the glycotransferase-deficient enzyme that encodes the Blood Type O phenotype, which has been determined to protect against myocardial infarction.[9] Type Os have a deletion of certain glycosyltransferases (transferase A, α 1-3-N-acetylgalactosaminyltransferase; transferase B, α 1-3-galactosyltransferase), which causes a frameshift mutation that results in no glycosyltransferase function.[10] The type of glycosyltransferase expressed is a key determining factor in the development of the ABO blood group.

Type B

Blood Type B individuals tend to have fewer risk factors for developing CVD compared to other blood groups. However, there are still various factors of which Type Bs should be cognizant. One factor is the inability to efficiently regulate nitric oxide in the body.[3] Nitric oxide is an endothelium-dependent relaxing factor that is released by the vascular endothelium and is responsible for vasodilation.[11] It also has other effects, including elevating cGMP levels and inhibiting platelet aggregation. Another contributing factor to heart disease in Type Bs is high levels of homocysteine, which can be a blood vessel irritant; this can lead to elevated oxidized LDL-cholesterol and blocked arteries. However, similar to Blood Type Os, people with Blood Type B have high IAP and decreased

clotting factors, which puts them at a lower risk of developing blood clots and arteriosclerosis.[3]

Type AB

Individuals with the AB blood type have aspects of both Blood Types A and B, which gives them more of a mixed profile in regards to cardiovascular health. Similar to Blood Type As, ABs have an increased susceptibility to high cholesterol levels due to lower levels of IAP. ABs also have more clotting factors and higher levels of E-selectin binding sites, which can increase platelet aggregation, leading to clots and blood vessel damage. Like Blood Type Bs, ABs tend to have ineffective nitric oxide regulation, which can result in vasoconstriction.[3] Overall, AB blood types are considered to be in the higher-risk category for developing CVD.[12] In 2 prospective cohort studies of ABO blood type and its relation to coronary heart disease, the data revealed that men and women with Blood Type AB had a higher incidence of coronary heart disease compared to any other blood type.[13]

Non-O Blood Groups

It has been shown that there is about a 5-23% increased risk of coronary heart disease for individuals with Non-O blood type compared with those with Type O blood.[14] In a study of 1.5 million blood donors in Scandinavia, statistical data analysis of a blood donor database was performed to identify the incidence and recurrence of thromboembolic events in patients. The data revealed that over 30% of venous thromboembolic and other cardiovascular events were associated with Non-O blood groups.[15] Further supporting the evidence that ABO blood groups have a profound effect on cardiovascular health, retrospective analysis found that, compared with Blood Type O individuals, acute myocardial infarctions occurred more frequently in individuals with Blood Groups A, B and AB; this was especially so for A and B.[16] A review that drew the same conclusion attributed this difference to the glycoproteins and glycosphingolipids on the surface of platelets that express ABH antigenicity.[14] The hypothesis is that modification of these glycans can affect platelet function and lead to thrombosis, which is apparent in Non-O blood types.

Conclusion

As discussed, the biological significance of ABO Blood Type in CVD is quite strong, with A and AB phenotypes have the highest risk of heart disease, and O phenotypes having the lowest risk.[12] Factors influencing the extent of coagulability in the blood include intestinal alkaline phosphatase and Von Willebrand factor. IAP aids in the breakdown of fats, whereas vWF plays a role in platelet aggregation. Other contributing factors to CVD include soluble endothelial cell markers called selectins (eg, E-selectins and P-selections), which are cell-cell vascular adhesion molecules.

Blood Type As are at increased risk of developing CVD due to low IAP levels, high vWF, elevated selectins, and increased cortisol. In contrast, Blood Type Os have the lowest risk for CVD as a result of protective mechanisms such as high IAP and HCl levels, and low vWF. Those with Blood Type B have less risk for CVD than Blood Type As, though may still have risk factors such as elevated LDL-cholesterol, high IAP, high homocysteine, and inability to regulate nitric oxide. Type AB has both aspects of Blood Types A and B. Nonetheless, Blood Type ABs are more susceptible to CVD than are Type Os, due to low levels of IAP, higher clotting factors (vWF), and high selectins.

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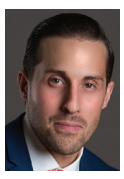

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Medical Resources for NDs

A review of current publications for the naturopathic industry

LENA KIAN, ND

Herbal Formularies for Health Professionals, Volume 2: Circulation and Respiration

Dr Jill Stansbury, a naturopathic physician and leading expert in botanical medicine, has utilized her 30 years of clinical experience to compile a complete reference guide and collection of comprehensive herbal formulations for healthcare professionals. This is the second volume in a 5-volume set, which focuses on cardiovascular, circulatory, and respiratory conditions. It is a great resource for any healthcare practitioner wanting to research and formulate tinctures specific to these systems.

Dr Stansbury has done a superb job, in a total of 3 chapters, of covering these systems by examining specific conditions and mechanisms involved. Chapter 1 discusses the foundational considerations in the art of creating effective herbal formulations. The practitioner will find a specific exercise called "The Triangle" helpful in achieving this goal. The triangle consists of the horizontal base, which correlates with the leading or directing herb, acting to tonify and restore the affected system. The 2 sides of this triangle correlate with the specific and synergist herbs, respectively. A specific herb is selected based on its action on the specific pathology involved, while a synergist herb takes underlying factors into consideration and acts to complement the actions of the specific herb (eg, for hypertension, *Rauwolfia* might be the specific herb selected; however, if the patient has insomnia and stress as underlying factors, synergistic herbs are chosen accordingly). Chapter 2 discusses the creation of herbal formulations for cardiovascular, peripheral vascular, and pulmonary conditions, and Chapter 3 discusses herbal formulations for respiratory conditions.

In Chapter 2, the reader will find a thorough discussion of hyperlipidemia, coronary artery disease, and chronic hypertension, including the use of botanicals that act to inhibit vascular proliferation and platelet aggregation, protect endothelial function, and enhance vasodilation. The herbs *Angelica sinensis* (considered a "blood mover," from a TCM perspective) and *Allium sativum* are known to have these cardioprotective properties and should always be considered in anti-hypertensive formulas. I found Dr Stansbury's all-purpose tincture for hypertension particularly helpful, as it reflects a multifactorial approach by including botanicals that act as vasodilators, nervines, and lipid-lowering agents, as well as protecting and restoring endothelial function. This chapter also offers a full series of formulas for congestive heart failure, arrhythmias, and peripheral and cerebrovascular insufficiency. The practitioner will find formulas for capillary fragility and varicosities, Raynaud's syndrome, lymphedema, iron deficiency anemia, and even hemochromatosis, impotence, and sleep apnea.

Chapter 3 discusses unique formulations for respiratory conditions, such as various types of coughs (ie, coughs from post-nasal drip, dry coughs, spastic coughs, moist coughs, etc). This chapter begins with topical applications, including instructions, for lung complaints, such as a topical lung plaster, mustard poultice, and liniment massages, which can be very soothing and provide pain relief to the patient when there is chest pain secondary to coughing, aches from the flu, or lung infection. Tinctures for respiratory rhonchi, stridor, dyspnea, hemoptysis, pneumonia, pleuritis, allergic rhinosinusitis, and acute bronchitis are discussed. I particularly appreciate the lengthy discussions about chronic respiratory conditions, including COPD and cystic fibrosis, which Dr Stansbury approaches with a multi-factorial perspective. In the case of the tincture for cystic fibrosis, the primary affected organs are considered (including hepatic, biliary, and pancreatic), as well as inflammatory pathways and cardiovascular and respiratory systems.

Overall, this is a great reference book for both beginning and advanced healthcare professionals who work with any patient suffering from various cardiovascular, circulatory, and respiratory conditions. Practitioners will find this book to contain precisely formulated and highly applicable herbal recipes that are useful in everyday clinical practice.

Just the FACTS

- Title: *Herbal Fomularies for Health Professionals, Volume 2: Circulation and Respiration*
- Author: Jill Stansbury, ND
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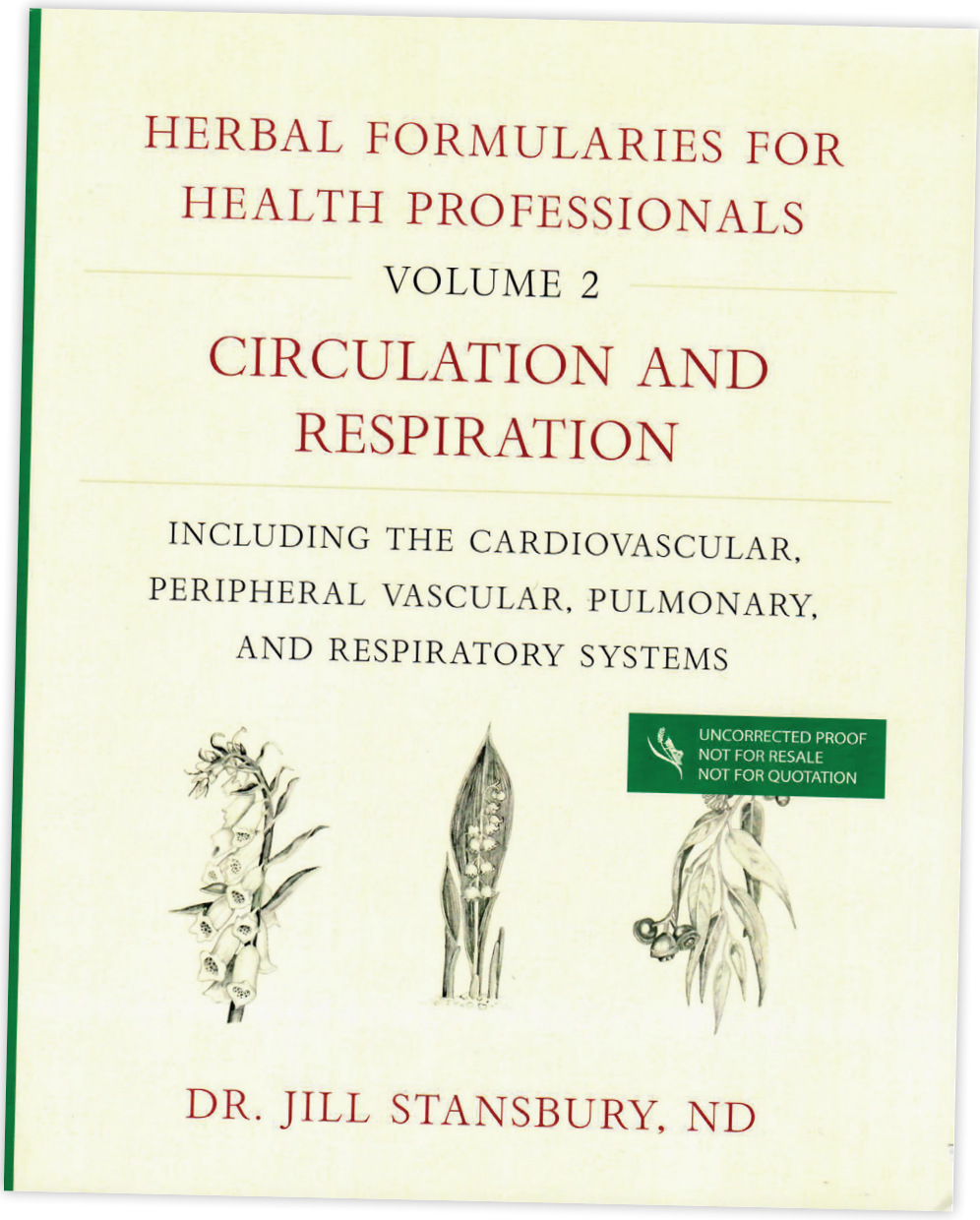

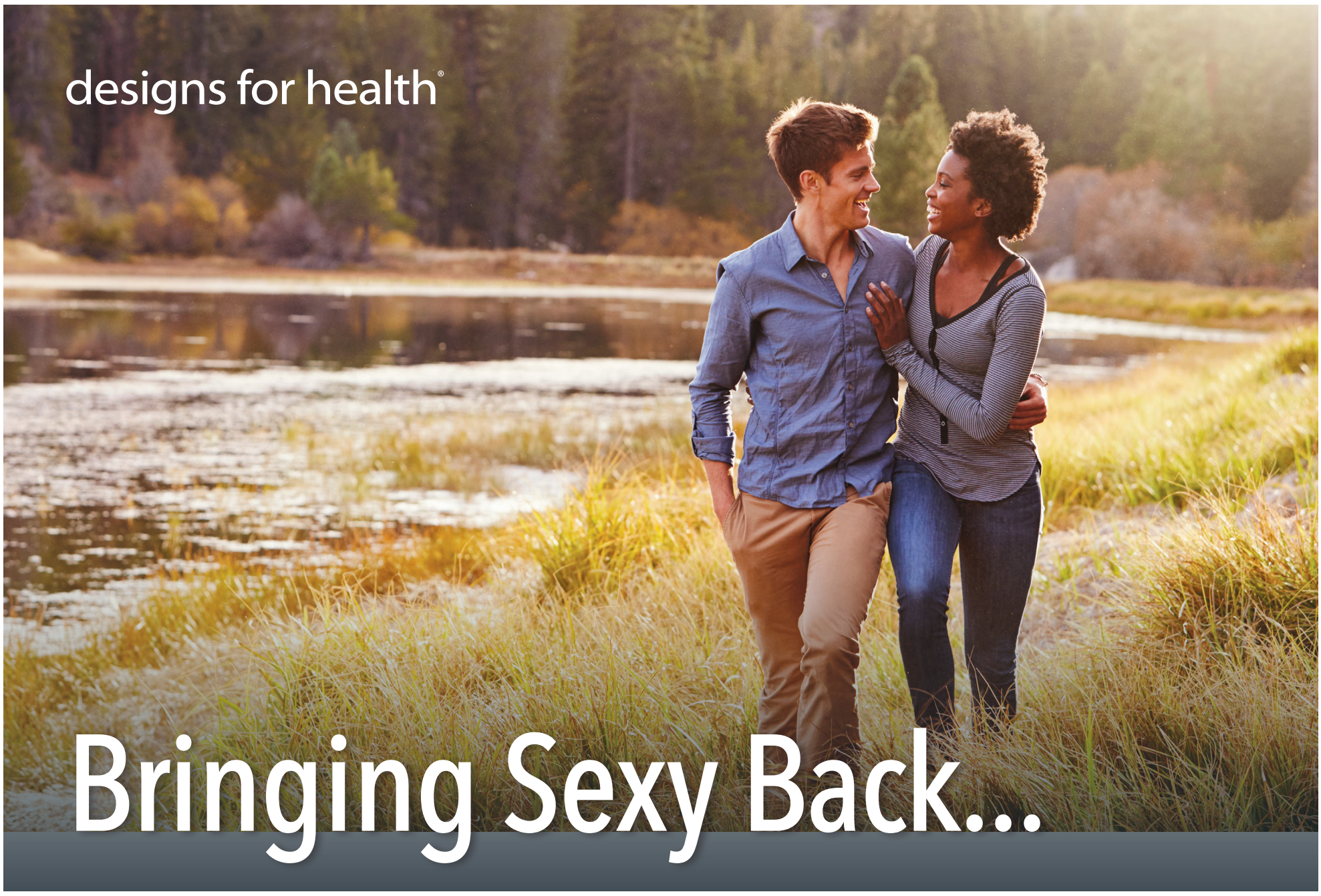

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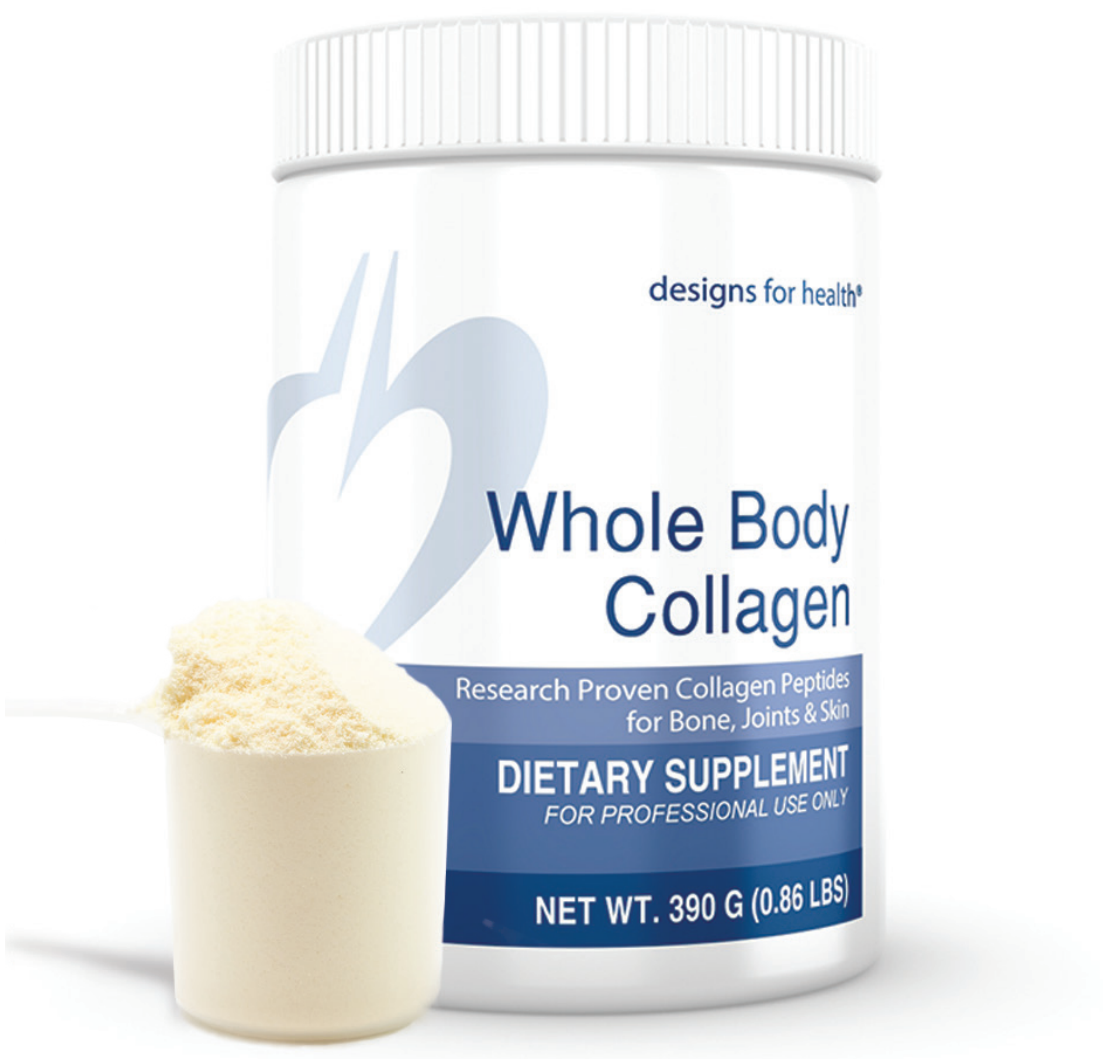

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Vital Burnout

A Call to Give Agency to the *Vis*

ALEXIA GEORGOUSIS, ND

Burnout is becoming more and more prevalent in our community and the healthcare profession at large. According to the *Ottawa Citizen*, "In Canada, approximately 46% of all doctors are affected by moderate to severe burnout."[1] This rate is likely very similar to that within the naturopathic community. You only need ask yourself how many naturopathic physicians you know are either currently experiencing symptoms of burnout or have actually burned out?

Is it possible, however, that burnout is much more than a state of collapse? As naturopathic physicians, we know that any "dis-ease" is indicative of a misalignment of one's vitality – the vital force. We treat the person, not the label. So, it is not a coincidence that the ICD definition of "Burn-out" (ICD Z73.0) includes the word "vital": *A state of vital exhaustion*.[2] There it is, right there in black and white – "vital" is connected to "burnout."

Symptom vs Condition

This merits further exploration as to root cause. After all, we are proponents of the vital force, and as Dr Benedict Lust has stated, "Naturopathy, with all its various methods of treatments, has always one end in view and one only: to increase the vital force."[3]

- **Vital:** Of utmost importance, Characteristic of life, Source of life [4,5]
- **Vitality:** Energy, Spirit, Passion, Dynamism, Verve [6]
- **Vital Force:** Innate wisdom, Divine intelligence[3]
- **Vis Medicatrix Naturae:** Healing Power of Nature; also known as God, Spirit, Universe, Allah, One, Buddha, Krishna, Great Mystery, Source, Love, etc[3]

Given this connection between Vital and Burnout, could Burnout actually be a symptom versus a condition? Viewing Burnout as a symptom of the *Vis* awakening (rather than a condition) creates a paradigm shift. Burnout becomes an incredibly purposeful and empowering experience intended to evolve our consciousness, as opposed to being a condition associated with disempowering terminology, such as nervous breakdown or collapse. The latter terms may well even contribute to feelings of shame, guilt, and victimization. Instead, we have the opportunity to embrace our spiritual expansion so that we may serve humanity for whatever is to come.

Choose the more empowering view:

Break Open	Break Down
"Come open suddenly and violently, as if from internal pressure"[7]	"Reduce, collapse, destroy, demolish"[7]

Further expansion of the words within the definition of Burnout (*a state of vital exhaustion*):

State	Vital	Exhaustion
Existence/ Being	Spirit/Vis	Depleted/ Weary

Thus, consider instead a naturopathic definition of Burnout as: ***Spiritual Existence Depletion***. There are many ways to interpret or arrange these words, but, ultimately, the essence remains the same. The cause of Burnout is rooted in the Spiritual realm – in what makes us Vital. It is a misalignment of our vitality, the Vis within us. As a reminder of the connection between spirituality and naturopathy, Dr Benedict Lust said, "Naturopathy comes from the heart of nature through the heart of (hu)man to the heart of God."[3]

A Different Approach to Burnout

How would our approach to Burnout change if we looked at it as symptom of conscious evolution instead of a "syndrome of psychological distress?"[8]

Consider Wayne Dyer's famous quote: "Change the way you look at things, and the things you look at change."

From the comparison chart below, choose the more empowering view.

Conscious Evolution

What better way for the *Vis* to wake us up as a collective than to shatter our sense of identity and make us question, re-evaluate and re-align ourselves with our essence? By choosing to approach Burnout as a process of spiritual evolvement rather than a collapse, we embrace our conscious evolution.

The *Vis* is speaking – are YOU listening?

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The cause of Burnout is rooted in the Spiritual realm – in what makes us Vital.

Approach	Conventional (general)	Naturopathic
Where to Start?	Acknowledge and get help	Acknowledge and get help
Root Cause	External factors &/or personal disposition	*Vis* is awakening within you Your Spiritual Self is evolving External factors &/or personal disposition serve as guides and mirrors, to show you where you are misaligned
Perspective	Happens TO YOU • You are separate from Oneness • You are breaking down • You are shrinking	Happens FOR YOU • You are part of Oneness • You are breaking open • You are expanding
Treatment Approach	Treat the Symptoms Change/shift external factors from a place of blame or victimization • Learn to manage internal responses	Treat the Root Cause • Consciousness Evolution: Shed unhealthy ego identities and patterns; strengthen and cleanse your energetic spiritual field Change/shift external factors from a place of self responsibility and empowerment • Giving agency to the Vis within allows you to shift internal responses
Intention/Goal	Get back to how you were Manage stress	Become wiser and more whole Allow a shift in consciousness
Cultural & Personal View	Shame, fear, inadequacy, grief • Stigma; don't talk about it	Renewal, Re-Alignment, Growth • Share your wisdom and experience with others

Mind the Gap

The Value Proposition in Naturopathic Medical Education

DAVID J. SCHLEICH, PHD

There are more naturopathic students and graduates at this end of the decade than there were at the beginning. That's a fact.

Recently, I spoke with a focus group of freshly minted grads, for whom the national licensing and entry-to-practice board exams (NPLEX) are looming, alongside 6 NDs with an average clinical practice experience of 15 years. Their conversation, feedback, and impressions are summarized below.

We had 3 questions in the hopper in the 4 hours we spent together:

1. Would you do it again (that is, study naturopathic medicine)?
2. How is it really going, where you are in the continuum?
3. What's actually going on out there, do you think?

Doing the Numbers

Over the course of a single generation, the number of students either headed into or enrolled in CNME-accredited naturopathic programs has grown impressively. Another fact: there are just over 2500 students in process right now, down from over 2700 two years ago. What is fascinating about these hundreds and hundreds of mostly young people is that their choice doesn't slide snugly into the usual higher education choices in America, or into the comfort zone of joining the well-beaten path of the professions.

The cost of an ND degree and the prevailing levels of income are out of whack compared to medical degrees in biomedicine (such as the MD, DO, NP, PA, and related credentials). Even so, comparisons across primary-care professions provide little evidence of exactly synonymous motivation for choosing naturopathic medicine, as contrasted with allopathic counterparts.

The so-called "graduate premium" [that is, the differences in average earnings among these professions, after accounting for tuition, ancillary fees, and opportunity cost such as income, foregone while studying] boils down to the ROI (return on investment) conversation we often hear these days. Overall, the ROI for higher education was quite robust between 1980 and 2000 here in the United States, baseline years for students coming into matriculation age between 2000 and 2018. However, our "naturopathic medical education" graduate premium is flawed because of unequal access to employment and because of the slower uptake of private practice for ND graduates in many American states.

Despite the friendly news in recent months about labor market conditions (unemployment and underemployment rates) improving for recent college graduates, especially in the first quarter of 2018, our focus group respondents broadly pointed to other motivators for their commitment to their 4-year degrees. Their observations are really inspiring. But first, let's do a few numbers. They are very telling.

A recent study (University of Minnesota, 2018) – which harmonizes microdata from the monthly US labor force survey, and more specifically, in the material consulted, folds in analysis from the current population survey (IPUMS CPS) including demographic information, employment data, program participation, and related information – revealed that among about half of the occupations examined (including health professionals), there were higher shares of graduates today than 50 years back. Note, though, that among these occupations, *real wages have fallen*. (*Economist*, 2018)

In fact, the *Economist* further reports that many graduates end up doing work that used to be done by non-graduates. Within this phenomenon, there is the reality that degree completion in naturopathic programs has more content volume, more robust assessment, and more complex entry-to-practice requirements than 50 years ago. Even so, arithmetically, there have been more naturopathic students in the queue than ever. Why do they do it, given the "graduate premium"? Are they minding that gap?

Now, let's survey some of the qualitative data, comprised of statements made by our focus group. Herewith, a distillation of comments.

They are very telling, too.

1. Would you do it again?

Overwhelmingly, ***yes.*** *Although we were disappointed at first by the unexpectedly significant inclusion of didactic and clinical information from biomedicine. We are also aware of the profession's multi-decade drift into biomedicine theory and practice, and understand that this was probably inevitable given the rise in interest among orthodox providers, manifesting as "functional," "holistic," and "integrative" medicine. The profession needs to "label itself better" and to "identify how it is different" and to do these things immediately, since we are losing identity, turf, and momentum. Worrying is that the key agencies of the profession aren't communicating often enough with students and docs in practice and/or working in the field in some form, about what they're focused on. Glad for the digital presence of the AANP and the AANMC and the INM in our lives. Happy for the choice I (we) made, but worried about making a living after NPLEX. PAs and NPs make more money than I (we) might, although their professional boundaries are tighter. There is so much I (we) can do to influence patients around true prevention (not some weird version of "more tests, sooner").*

2. How is it really going right now, where you are in the continuum?

Current students:
I (we) got worried when we saw attending and primaries default to pharmaceuticals so much. Too rare for attending and primaries to prescribe nature-cure solutions. Is there training for our teachers to be teachers? Wish our professors wrote more books and articles. Worried that our teachers have given up on our traditions. Everybody is in some kind of rush to diagnosis. Patients are in a hurry too, in that they don't like it that foundational therapies like hydrotherapy or nutrition are labor-intensive and take willpower. Actively participating in the healing process is hard for patients to do because they are so conditioned to passivity by the monetized system out there. We are doing okay, but the volume and pace of content delivery is bruising. We don't practice what we preach about balance and being present. I (we) figure that medical school has to be hard, and it is. Worried about debt.

Recent grads:
I (we) have more options now than setting up my own clinic. Setting up on our own is so expensive and iffy. But, there are lots of jobs showing up, if you look or if your school has a good data/info referral service. There are jobs out there in integrative clinics, for supplement companies, as part-time teaching. Money is not great, but it will get better, I (we) think. Awful that grads setting out in unlicensed states get hassled by the MDs all the time. Wish that the AANP could get licensing everywhere so we can just get going and not have to watch our backs all the time. It's great in Oregon and Vermont and Washington, where we're better known as primary care. No real money in nature-cure, except in rare instances. More of us should get together and co-found multi-discipline naturopathic clinics. We should hire MDs and DOs who are attracted to genuine "holism." That AIHM thing was annoying to see happen because those allopaths are trying to be us even though they don't think like us. Anyway, have been working for 4 years now with an MD and a DO, and they're great because they know more about what they don't know because of me. Finally making progress on getting the loan down. Residencies don't pay enough, but I (we) had one and I'm glad because it beefed up my confidence.

Longer-term grads:
The new grads default to pharmacy and parenteral therapies too much. Where has homeopathy gone, anyway? Once I (we) got traction, it grew steadily. I make 8 times more in year 10 than I did in my first 2 years. At first, I worked for a chiro, but then got my own space and paid myself; wish I had done that in the first place. The profession keeps talking about evidence – we need more evidence about what we're doing, why we're doing it, and how effective we are. Didn't Bastyr start off getting more science into the art of our medicine? I (we) hate the confusion out there about how we're different from the integrative MDs, who really only dabble in natural medicine. The MDs get going faster because the turnstiles aren't closed to them. Amazing what grads can do these days that we couldn't back in the day, because now they come out with not only their ND degree and license but also with grad credentials in nutrition, mental health, and more. It's better now for grads, but not everywhere. The southwest is doing well, but I worry about grads in the southeast. Wouldn't trade what I do for an MD's job, ever. They're scrunched by the HMOs, insurers, pharma, and SOCs [standards of care], which led nowhere, and really rotten iatrogenic data. No wonder so many MDs and DOs want to soften that reductionist reputation.

3. What's actually going on out there, do you think?

The allopaths are just moving in and taking our medicine; except that they're hijacking it only to dumb it down into the same thing they have always been doing, which is rushing to diagnosis, hi-tech-testing everything to death, and not relying enough on their own intuition and training and their connection with the patient. We aren't growing fast enough. We need more NDs in the field right now. What, we have 6000 out there and the allopaths have a million? More

"Wouldn't trade what I do for an MD's job, ever. They're scrunched by the HMOs, insurers, pharma, and SOCs, which led nowhere, and really rotten iatrogenic data. No wonder so many MDs and DOs want to soften that reductionist reputation."

books, more articles, now. What the hell, that Davis wrote ***Wheat Belly*** *and Perlmutter wrote* ***Grain Brain****; we should have done that because we have been doing that for decades and decades, and now they get the credit for being "integrative" and "holistic." Bill Mitchell used to say, "It's the gut, stupid" when I was a student in short pants. He was right, and we need more teachers like him, but teachers who write for the mass market as well as for medical school curricula. The AMA knows that we're a far bigger threat to their control than the functional medicine docs, but the AMA knows that it's all a matter of scaling and messaging. If we ever got those right, there'd be no stopping us. I know I can't make as much money as the MD up the street, and that's alright with me; what isn't alright is that my lease costs are the same and the playing field is unfair. I care that my patients don't get lassoed by opioids or stuck in endless tests and insurance pressure. I care that the mothers who come to our clinic don't want to rush into medicalized birthing, and we can do a lot about that. We're moving forward: gawd, half a dozen states in the family in the last decade alone. The southeast is a desert for naturopathic medicine. Our hats go off to the NDs in Florida, Georgia, Texas, and Louisiana. Gutsy. Are there any NDs in Mississippi, do you know? Why did that university in Baltimore drop its new ND program? Good grief, they had Beth Pimentel – what more could you want? She would have had 100 docs a year graduating in no time. Can't we get into the Match? We've been talking about that since I started naturopathic school 35 years ago. What's the hold-up? We need new schools everywhere; let's start with New York, Ohio, Florida, Texas, and North Carolina. We're here to stay, damn it.*

Qualitative and anecdotal data do not a trend make

Or do they?

The summary of thematic, leitmotif feedback from our little focus group is indeed telling. Considered against the backdrop of actual information about potential careers in health care, the future is indeed friendlier than might appear on first blush. Minding the gap between expectations and where our grads land and thrive, is only good sense. In a culture where dental hygienists make more money than chiropractors, and physician assistants make 6 figures right out of the gate, and naturopathic physicians don't even make it onto the Healthcare Occupations list in the *Occupational Outlook Handbook* (Bureau of Labor Statistics, 2018), we have a long way to go. However, doing the numbers and doing the data, qualitative or not, requires closer analysis. The reality is that the median annual wage for healthcare practitioners (including NDs) was at $64,770 a year ago, compared to the median annual wage for all occupations in the American economy, which is $37,690. (Bureau of Labor Statistics, 2018) The value proposition weighs well in our direction.

Other data in the gap may seem worrying, but on closer inspection, are not. If our focus group is any indication of morale and vigor, we are faring not badly, notwithstanding our numbers. Our students, their teachers, and their colleagues already in the field are indeed minding the gap. The value proposition for naturopathic medicine includes passionate conviction about doing something about a healthcare terrain in America which is not only massively expensive, but whose outcomes are not the definitive answer for the health of a wildly transforming planet where even the oil industry cannot expect to run the energy show much longer. One just has to do the environmental, health outcomes, and ethical math.

If our focus group is any indication of morale and vigor, we are faring not badly, notwithstanding our numbers. Our students, their teachers, and their colleagues already in the field are indeed minding the gap.

David J. Schleich, PhD, is president and CEO of the National University of Natural Medicine (NUNM), former president of Truestar Health, and former CEO and president of CCNM, where he served from 1996 to 2003. Previous posts have included appointments as vice president academic of Niagara College, and administrative and teaching positions at St. Lawrence College, Swinburne University (Australia) and the University of Alberta. His academic credentials have been earned from the University of Western Ontario (BA), the University of Alberta (MA), Queen's University (BEd), and the University of Toronto (PhD).

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