Digital Pulse Wave Analysis Offers Non-Invasive Early Heart Risk Assessment

By August West
Contributing Writer

Central Aortic Systolic Pressure (CASP) is one of the most powerful early predictors of cardiovascular risk. New digital pulse wave analysis technology is putting this valuable test in the hands of prevention-focused primary care doctors.

Safe and non-invasive, pulse wave analysis applies the principles of sonar to assess the pliability of the vascular tree, including the major central vessels as well as the small peripheral vessels. Central aortic vascular compliance—or lack thereof—is a key indicator of vascular health status.

“This is a really great test for people who are seemingly without symptoms, but who are about to have lots of disease,” explained J. Joseph Prendergast, MD, director of the Endocrine Metabolic Medical Center, Palo Alto, CA. Dr. Prendergast is among the pioneers of pulse wave analysis, particularly as it applies to the prevention of heart disease among people with diabetes.

He noted that diabetics show a pattern of atherosclerosis distinct from what one typically sees in non-diabetic CVD. “Diabetics get more long artery atherosclerosis, whereas in non-diabetics, you tend to see the plaque only in smaller branches, and at the points where the vessels branch off.” Pulse wave analysis promises the nation’s physical and fiscal health.

Noble Sentiments. No Bull!

With the Obama administration’s hints at major healthcare reform echoing through the halls, the air was ripe with optimism that the moment has finally arrived for a meaningful move toward preventive medicine and greater acceptance of nutrition, botanicals, mind-body techniques, massage, acupuncture and other non-allopathic approaches.

“For those of us who have been working for years to promote wellness, our time has come,” Sen. Tom Harkin (D-IA) told the roughly 700 delegates. He added that Pres. Obama “gets it,” about prevention, nutrition, and the need to change the focus from disease to health. **See Reimbursement p. 10**
analysis opens a window into the condition of the long vessels.

Measuring the Bounce
Arterial pulse wave analysis has been available as a research tool for about ten years, and has just begun to enter clinical practice. In essence, it measures reflection of pulse waves off the walls of the aorta and the peripheral vessels. As the pulse travels down the aortic trunk, it hits smaller arteries and is reflected back. This bounce-back wave runs headlong into the oncoming pressure wave from the subsequent heartbeat, augmenting pressure on the vessel walls.

Higher pulse reflection scores indicate stiffer, more plaque-bound vessels, and therefore greater imminent risk of cardiovascular events. “It’s like dropping a ping-pong ball on a carpeted floor versus a hard marble floor. The harder surface will give a stronger bounce, while the carpet will slow the bounce down,” Dr. Prendergast said.

Dr. Prendergast said current pulse wave analysis systems allow assessment of “all sorts of reflections and pressure subtleties.” But from a practical viewpoint, you really only need to look at two key measures: the central aortic pulse (CAPS) reflection, which shows the flexibility of the aorta and, by extension, the major vessels, and the pulse reflection in the small arteries. “The small vessels will tell you about metabolic syndrome. But the bigger vessels tell you about imminent cardiovascular risk.”

In a certain sense, pulse wave analysis is a modern elaboration of the ancient art of pulse diagnosis developed thousands of years ago, and still used by practitioners of traditional Chinese and traditional Indian medicine. TCM and Ayurvedic practitioners will spend considerable time evaluating the pulses, sensing in them subtle indicators of health or disease.

The new pulse wave technology is based on a similar premise, and measures the health of the vasculature, indicated by its degree of elasticity, as a key indicator of overall physical health. Pulse wave analysis quantifies the signals and opens up vast new dimensions of study in this domain.

“I Had to Re-Think Everything”
Dr. Prendergast’s interest in this field grew out of his effort to meet his own health challenges. Back in the 1970s, at the age of 37, he was diagnosed with advanced atherosclerosis, though he was asymptomatic and had fairly normal serum cholesterol. Given that his father had had a stroke at age 42, he became worried.

Now in his 70s and quite healthy, he reflected that “Medicine, at that time, really had nothing for me. I had to re-think everything. I knew I couldn’t rely just on pharmacology.”

A friend and colleague, Victor Dzau, MD, now chancellor for health affairs at Duke University, co-visited Dr. Prendergast to L-arginine, an amino acid which, when taken supplementally, boosts endothelial nitric oxide release. Many practitioners in India believe the aortic trunk is the point at which the heart’s original nitric oxide can be used properly, arginine improves vascular health and reduces CV risk. It quickly became a cornerstone not only in Dr. Pren- dergast’s own personal health regimen, but also in his treatment protocols for patients at risk.

He began looking at pulse wave analysis after meeting Stanford University researchers who were exploring the emerging technology to detect early signs of Alzheimer’s disease, diabetes and CVD. He saw in it the potential to be a noninvasive alternative to therapy. He is currently consulting with CardioGrade, LLC (www.cardiograde.com), a California company focused on bringing this emerging technology into wider clinical use.

Looking Upstream
Conventional treatment of cardiovascular disease—a comprehensive cardiometabolic disorder—is often guided by fairly simplistic measures: serum LDL, HDL and triglyceride levels, and blood pressure as measured by sphygmomanometer cuff readings at the brachial arterial.

Dr. Prendergast sees brachial artery pressure measurement as convenient but primitive. Over reliance on it is one reason that anti-hypertensive therapy often fails to prevent life-threatening CV events. “When you put the cuff on someone’s arm, all you’re really looking at is the downstream pressure back into the hands. All it really tells you is the condition of the vessels in the wrist. You need to go upstream into the central vessels and measure arterial pressure that anti-hypertensive therapy will often fail to prevent life-threatening CV events.”

Pulse wave devices also take readings from the wrist, but there is no arterial occlusion as with a standard pressure cuff. “The wave forms of the pulse tell you what’s going on in the aorta and the other vessels,” he said. It gives a very different type of information than standard BP measurements.

The discrepancy between peripheral and central arterial pressures and the central aortic trunk was underscored in the Conduit Artery Function Evaluation (CAFE) study. Researchers compared beta-blockers plus diuretics versus calcium-channel blockers in hypertensive, high-risk patients, and found that while both treatments gave similar and significant reductions in standard brachial artery pressure, the central aortic systolic and pulse pressures were substantially lower in patients on calcium-channel blockers (Williams B, et al. Circulation. 2006; 113[6]: 1213–1225).

“Your can get similar pressures in the arm but very different pressures in the central arteries, depending on what the drugs do to the wave reflection,” explained Dr. Robert Williams, MD, of the University of Leicester, UK, who led the CAFE study. “Beta blockers and diuretics, which we use very commonly, while they lower brachial pressure and reduce risk, are less effective . . . in preventing the reflected wave from coming back at the wrong time. You get a slightly higher central pressure with those drugs than you do with amiodipine and perindopril.”

Dr. Williams had high praise for pulse wave analysis, which in the CAFE trial was done with the Sphygmocor system (www.atcomedical.com). “I think this type of technology is going to be increasingly used in clinical trials because it gives us information that we haven’t had before. It can be easily used and can produce very effective results.”

A Surge of Research
Pulse wave analysis has attracted vigorous research interest of late, with well over 50 studies published just in the last 6 months.

Investigators at Fukushima University Hospital, Japan showed a strong correlation between aortic pulse wave velocity and the augmentation index, a type of pulse wave measurement, and severity of atheromatous plaques in a cohort of 96 patients with paroxysmal atrial fibrillation. High augmentation scores correlated with age, plasma LDL, aortic stiffness scores, and other risk indicators, leading the researchers to conclude that this represents “a novel tool for determining the severity of central aortic atheromatous lesions” (Sako H, et al. Circ J. 2009 Apr 16; epub ahead of print).

Augmentation index and central pulse pressure analysis are also in the spotlight, according to researchers at Dokkyo Medical University, Japan. They looked at 443 otherwise healthy normotensive men, and found that the augmentation index was higher in current smokers compared with never- and former-smokers. Central systolic pressure was higher in current and former smokers compared with lifelong non-smokers. The systolic pressure was not significantly different among these groups (Minami I, et al. Am J Hypertens. 2009 Mat 26, epub ahead of print).

The good news is that most aortic pressure risk markers will normalize when people quit smoking. A multicenter Portuguese study looking at pulse wave patterns in 71 long-term heavy smokers showed that after 6 months, those who quit had significant reductions in peripheral systolic pressure, augmentation index, pulse wave velocity and other risk indicators compared with the men who continued smoking (Polonia J, et al. Blood Press Monit. 2009; 14[2]: 69–75).

But pulse wave analysis is noninvasive, it is an excellent office-based tool for tracking patients’ response to treatment over time. In Dr. Prendergast’s clinic, therapy revolves around diet and lifestyle change, as well as its use of nutraceuticals like L-arginine, vitamin D, resveratrol, and others. “People still need to change their diets. You cannot totally over-ride a bad diet with arginine or any other supple- ment,” he said.

Currently, digital pulse wave analysis systems cost roughly $10,000, said Dr. Prendergast. But he expects the prices to come down as the technology improves and gains in popularity. Ultimately, he hopes to see the systems simplified for home use. “We’re not there yet, but we’re working on it!”
There is also evidence that pycnogenol can induce substantial reductions in c-reactive protein (CRP) as well as markers of inflammation (Asnacios et al. 2007; 28(2): 427–432).

A second trial involving 944 patients with hip or knee OA, showed that those taking ASU for 6 months had greater reductions in Lequesne functional Index (from a mean of 7.2 at baseline to 6.8) compared with those on placebo (9.4 at baseline to 8.6 at 6 months). Pain level and NSAID use were also reduced among the ASU patients compared with those on placebo.

The improvement seemed to be strongest in patients with hip versus knee arthritis. The authors noted that the symptom reduction among ASU-treated patients persisted for as much as two months after they stopped taking the product (Maheu E, et al. Arthritis Rheum. 2002; 47(5): 50–58).

One of the most promising aspects of ASU is its apparent ability to increase chondrocyte collagen synthesis, said Dr. Theodosakis. He cited a radio-graphic study by Lequesne and colleagues showing that ASU reduces the progression of joint space loss in people with severe hip OA. This strongly suggests a true disease-modifying effect (Lequesne M, et al. Arthritis Rheum. 2002; 47(5): 50–58).

According to Dr. Theodosakis, ASU has anabolic and anti-catabolic effects: It increases collagen production, stimulates production of aggrecan and TIMP-1, and increases expression of transforming growth factor β and plasminogen activa-
tor inhibitor (PAI-1). It also suppresses TNF-α, IL-1β, COX-2 and other inflammatory cytokines.

ASU has won the favor of the notoriously rigorous Cochrane Collaboration, which noted in a 2008 report that “ASU has beneficial effects on functional index, pain, use of NSAIDs and global evaluation,” and that “The evidence for ASU in OA is convincing.”

It would be nice if one could obtain ASU by eating avocado and soy, but Dr. Theodosakis stressed that this is not possible. The unapportionable compounds are tightly bound to fiber within the plant tissue, and impossible to human digestion. The only way to get ASU is via supplementation. ASU is available in the US under the brand name, Avoc, and also in combination with glucosamine-chondroitin (Nutramax Laboratories, www.nutramaxlabs.com). Several other companies also sell branded products. Dr. Theodosakis sells his own private labeled brand, called Avo-Soy, via his website (www.drhso.com).

Bark Takes Bite Out of OA Pain

Pycnogenol, the standardized extract of French Maritime Pine bark, is the other emerging star on the OA horizon. It, too, is available as an OTC medication in Europe but sold as a nutraceutical in the US. In fact, it is one of the most widely-researched supplement ingredients, with documented benefits in reducing cardiovascular disease, decreasing inflammation, asthma and many other inflammatory conditions (see www.holisticprimarycare.net and read, Pycnogenol-Nattokinase Combination Promotes to Fight Simon Thrombus, from our Spring 2004 edition).

Research into pycnogenol’s potential for amelio-
rating OA began several years ago. In a 3-way inter-
national collaboration between the Arizona College of Public Health, the University of Munster, Ger-
many, and the Ghaem General Hospital, Mashhad, Iran, researchers showed that OA patients treated with 50 mg of pycnogenol, thrice daily for three months showed marked improvements in WOMAC scores, especially for pain and physical function by 90 days, compared with those taking placebo.


A subsequent study of 100 OA patients ran-
domized to either 150 mg pycnogenol per day or placebo, showed a 40% reduction in both pain and joint stiffness in the active-treatment group, and a 22% increase in physical function compared with those on placebo (Ciar D, et al. Phytother Res. 2008; 22(8): 1087–1092).

There are many sources of pycnogenol, including French Maritime Pine bark, Maritime Pine bark, and Maritime Pine bark. All three are widely used in Europe and are considered to be safe and effective. Pycnogenol is manufactured by Horphag, a Swiss botanical ingredient manufacturer with a strong commitment to clinical research (www.pycnogenol.com/health).
From “Clinical Facility” to “Garden of Healing”: Creating a Healing Environment for Your Patients

By Deb Andelt  Contributing Writer

Once there were three bricklayers. Each one of them was asked what he was doing. The first man answered gruffly, “I’m laying bricks!” The second man replied, “I’m putting up a wall.” The third man said enthusiastically and with pride, “I’m building a cathedral.” —Unknown

In many ways, it is no such thing what we do, but the vision and attitude we bring to what we do that makes the biggest difference in the quality of our lives and our experiences. So, to the cathedral builder in this little parable, each brick is more than just a brick; it is an element, an aspect of a larger experience—in this case, the cathedral experience. Change the color, texture, size or position of the brick and the cathedral will be different. He pays attention to detail, to the sensing, to the experience. Change the color, and the cathedral will be different. Change the texture, size or position of the brick and the cathedral will be different. He pays attention to detail, to the sensing, to the experience. Change the color, texture, size or position of the brick and the cathedral will be different. He pays attention to detail, to the sensing, to the experience.

Creating a medical practice is no different. Each aspect of a practice, each “brick,” really matters. The awareness with which each person engages in his or her role has an impact. And, the resulting experience is far more than the sum of its parts—for your patients, for your staff, and also for you.

Medical Clinic or Temple of Healing?

In your practice, do you feel like you’re laying bricks, or like you’re creating a sacred healing space? If you’re one of the 60% of doctors who say they would not recommend medicine as a career, you probably feel like an indentured servant laying bricks. It doesn’t have to be that way.

The key to creating an effective patient experience is to hold a vision that reaches below the surface. Neuroscience tells us that we absorb about one billion bits of data per second, yet we are only conscious of 11 bits. 95% of what we take in is processed below conscious awareness. To give patients a nurturing, healing experience, we need to create nurturing, compassionate input below their conscious radar.

As Bruce Lipton, PhD, author of The Biology of Belief says, “It’s the environment, stupid.” Our environment shapes our beliefs and our beliefs influence our biology. Our cells are programmable, downloading information from the environment. All this information creates our belief effects. Change the environment and you change the experience. Change the experience, and you change beliefs and biology.

According to Dr. Lipton, the “treatment” is only a small part of what a patient receives in a medical encounter. From this perspective, it can be interesting to ask yourself what, besides specific medical treatments, is your practice delivering, and how are these not-so-obvious factors delivered?

Don’t Do, More, Differently

Here’s the thing: you’re already creating a patient experience, whether it is consciously planned, haphazard, or simply the result of what things happen. Every decision, action, and attitude from you and your staff influences your patients, sending messages to them, below their conscious awareness.

Creating an experience with intention isn’t something extra to add to an already over-booked day. It’s about engaging in what you’re doing with a new vision—a vision of creating a healing garden, a temple of healing. A patient experience, or really any experience, is a combination of people’s attitudes and actions, and engaged processes (how things work), and the sensory environment. The goal is to design and align all three of these inputs and create a common vision.

Humans always respond to all situations emotionally first. The rational mind doesn’t catch up until six seconds later. No wonder we are stumped when people don’t seem to act rationally “Rational” satisfaction isn’t the determining factor in our behavior: what matters is how we feel. Your and your patients are in the hearts of the patients, determined by how they feel.

The Emotional Target

Start by determining how patients want to feel when they are at your clinic. Diving into research about healing, we uncover five core feelings that support healing: feeling comfortable, understood, cared for, valued, and respected.

The positive feelings you opt to focus on (hopefully with some input from staff, patients or both) become your “North Star” for everything you do. Awareness of these feelings will now guide the decisions, actions and attitudes of yourself and your staff. This is what infuses new meaning into everyday actions, so you’re building a cathedral, not just laying bricks.

Let’s explore “feeling comfortable.” If you’re aiming to create a sense of comfort for patients, here are a few examples of how everyday things take on new meaning, and changes naturally evolve:

• Look at your intake paperwork process through the eyes of a patient. Is there a physically comfortable place for patients to complete the intake forms? Are the questions worded in a way that people feel emotionally comfortable providing all the information you need to be an effective clinician? Is your paperwork so long that patients get bored or overloaded? A tell-tale sign is if patients tend to go clipped, less thoughtful answers toward the end.

• When you’re buying facial tissue, do you select the least-expensive scratchy kind or the cusby 3 ply version? Knowing you’re aiming for comfort makes this an easy decision. Yes, even the tissues are sending a message.

• When you’re examining a patient lying on the table, do you find yourself making suggestions about things for him/her to do at home? Many doctors do. But it’s actually not very helpful. Why? It obliges the person to try and remember what you said and make a note of it later. Further, patients pay more heed to things you tell them when they’re sitting up, face-to-face with you. Someone said casually when they’re lying down does not register as important.

Discuss what “comfortable” means with your entire staff! Consider the physical, emotional, spiritual, and sensory components of your environment. Take time to focus on one aspect of what happens in the office, and try to identify when patients don’t seem comfortable, and when they do. Brainstorm about what can be done differently. Together, you’ll find numerous ways to make small changes. It always helps to ask your patients for input!

Use the same process to look at the other core feelings that engender healing (i.e., feeling understood, strengthened, connected & renewed).

Metaphor & Medicine

This article began with a metaphor: bricklayers building cathedrals. Words alone rarely capture the unique understanding that it’s more than the bricks that make up a cathedral. Metaphor is a big movement, though much of it may seem routine to you as a practitioner. By recognizing that people move through a range of emotions that come up around illness, you help your patients feel understood. This, in and of itself, can be quite healing.

There are many ways to look at movement as you work with patients:

• Perhaps you sense a patient is resistant to a lifestyle change you’re suggesting. Talk about what that movement means to them. Maybe they naturally move in small steps. Ask, “What can you do today?”” Ask them how they turn things in your communication to create comfort for each patient, you can work together to find a way to “move” toward new habits.

• Journaling is a great tool to help patients identify their own movement patterns, and to bring what’s happening to their conscious awareness. Are they having Oprah “ah ha” moments? This is movement. Did they feel something different today, than yesterday? This is movement. Do they have a new lens to perceive on their lives? How is it working? Are their health challenges? This is HUGE movement. Whenever these steps occur for a patient, it marks a moment to acknowledge and celebrate that with them. It’s very important.

• Some patients will appreciate getting an outline of what will be done during an appointment, test process, or treatment—especially if it is a fairly complex multi-step process. In a sense, you’re tracing out the steps of the movement of that appointment. You can then use this to show the patient where s/he is at any point along the way, and what can be expected at each step.

Over the next week, look for movement in all you do. Notice what happens as you stand in line in the grocery store or how your child quickly moves through a range of emotions. You’ll start seeing movement in both your medical practice and the many places in your own life. It will give you ideas you can put to good use in your clinic.

What Are You Really Doing?

Just as your patients are on a healing journey, you and your entire staff are also on a journey to create the optimal patient experience. Nothing is set in stone. The “bricks” that make up your clinic experience can be shaped, painted and moved. You can evolve and adjust things as you get feedback from your patients, and as you observe how things work.

Creating an environment that communicates compassion, support, and empowerment is about aligning the many aspects of the patient experience with those things—especially the subtle aspects of the environment that register below patients’ conscious awareness.

Transformation (that’s another healing meta- phor) comes when we have a new view of ourselves, and our roles in life. Is the person at your front desk just answering the phone and handing out forms or offering warmth and comfort to someone who is hurried, anxious and fearful? Is your office manager merely administering the practice or setting the stage for healing encounters? Are you “providing” treatments, or facilitating the miracle of healing and transformation?

Ideally, you want everyone in your office, regardless of their specific tasks to respond with, “I’m helping people heal,” when someone asks, “So, what do you do?” If you set this as your goal, and work diligently but joyfully toward it, your patients will feel the difference, and your practice will benefit, both clinically and financially. Have your patients refer their family and friends. They’ll return when necessary, and they will actually demonstrate their appreciation.

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The Energetics of Foods for Health and Healing

By Susan Krieger, LAc, MS  Contributing Writer

Traditional Chinese Medicine (TCM) has much to teach us about how food influences health. The language of TCM may sound more like poetry than science, but it is grounded in careful observation of human function and detailed study of the plants and animals that make up our diets.

The lens of biomedical science has reduced foods to aggregations of calories, vitamins, minerals, fats and other micronutrients, and this view governs how most of us think about nutrition. Blueberries are “good” because they have anthocyanidins. Soy is “healthy” because it contains isoflavones. Fish are vehicles for giving us omega-3s. There are dozens of diets calling attention to the health value of their food at all; or so lacking in education that they don’t pay it any mind.

The idea that foods are nothing more than the sum of their biochemical parts has contributed to our culture’s near-obsession with calorie counting, fat-finding, and nutrient content measurement. At one extreme, people are so overwhelmed or so lacking in education that they don’t pay attention to the health value of their food at all; at the other extreme, people worry constantly about the amount of fiber in their diet, or whether they’re getting the right omega-3 to omega-6 ratio, or whether they should drink more wine to get more resveratrol.

It is important to be mindful of the nutrient content of what we eat, and it is great when we can apply the knowledge of biochemistry to understand how foods influence health. But there is another approach, an ancient way of looking at foods qualitatively in terms of their “energies” and healing properties that can balance the reductionistic view.

The Nei Jing Classic of Internal Medicine (aka, the Inner Canon of Huangdi or the Yellow Emperor’s Inner Canon) compiled over 2,000 years ago, may be the first known Chinese writings on the dynamic relationship between health and food. Like other traditional systems from around the world, TCM posits that we humans are intricately connected with and are fundamentally part of nature, and that our individual health is a reflection of the care we give to our environment, to others, and to our earth—an expanding spiral of inter-connections.

Yin, Yang, Qi, Shen

The TCM approach to nutrition is a rich, nuanced combination of art and science that takes years of study and practice. But if you get a grasp of a few basic concepts, you can really open the door to a new way of looking at food and counseling your patients.

In Asian Medicine, Yin and Yang are the two complementary yet antagonistic forces or principles that make up all aspects and phenomena of life. Yin describes all that is earthy, feminine, dark, wet, cool, passive, receptive and absorbing; Yang describes that which is “heavenly” or celestial, masculine, bright, active, expansive, dry, hot, and penetrating. Together they express the interdependence of opposites.

In relation to diet, fruits and vegetables are more Yin compared to meats and dairy foods which are considered more Yang. The balance of Yin and Yang in one’s body and environment is essential to one’s health.

Qi is our “nature” while the quality and vitality of post-natal Qi corresponds to “nurture,” and is highly dependent on our ability to digest and transform food.

When a Chinese medicine practitioner speaks of “stagnant Qi,” it refers to situations in which the Qi that nourishes a specific organ, muscle, body part, or meridian is being blocked and not flowing smoothly. In TCM, health is all about smooth and harmonious flow of Qi within and between the systems that comprise a human being.

Two other important classical Chinese medical concepts are: Jing, a person’s core essence, which, when strong gives potential for longevity; and Shen, often defined as “spirit,” and thought to represent the synergy of emotional, mental and physical health. Shen is sometimes referred to as “Heart/Mind.”

Location & Season

The idea of “eating locally” has had a lot of buzz recently. But it is really nothing new. Asian dietary philosophies have long suggested that we embrace, as much as is possible, native foods locally grown, and eat what is in season. When we over-consume food imported from very different climates or regions, we may lose adaptability to our immediate surroundings. This is especially true when someone living in a temperate or cold climate eats a lot of tropical or semitropical foods.

The point is that patterns of illness, according to TCM, are linked to seasonal climatic changes. For example, disorders of “Wind invasion” are linked to seasonal climatic changes. For example, disorders of “Wind invasion” often come in the Spring, manifesting in stiff neck, headaches, or the symptom patterns classified as “cold and flu.” Heat-related symptoms such as heat stroke and overexertion occur in Summer.

“Damp,” phlegm-related symptoms arise in late Summer, manifesting as colds, mucus in the chest, sluggish digestion and sinus problems. Symptoms related to “Dryness” occur in Autumn causing dry skin, dry cough, and difficulty eliminating from the colon. “Cold” syndromes in Winter show up as stiffness in the back and lower back, constipation, and difficulty in keeping warm.

A core principle of TCM-based nutrition is that one should eat to optimize the body’s adaptability to these seasonal changes. For example, in Spring and Summer, when physical activity tends to increase, Yang Qi flows outwards to the body’s surface, and a person’s internal Yang Qi may become depleted, thus requiring replenishment in the warm weather. At the same time, it is good to increase consumption of cooling Yin foods.

In the colder and dryer climates of Fall and Winter, it is important to keep warmer and prevent dryness, and we want to eat foods for nourishing Yang and warmth, building Yin, dispelling mucus and phlegm, and enhancing building the circulation of Qi, energy, blood, and bodily fluids for the present and coming seasons.

Health imbalances can result from the overconsumption of heavy animal-based foods in warm climates, since this quality of food is more suited to the colder regions. On the other hand, not having enough of these kinds of foods in cold climates can also be detrimental.

Taste & Cooking Style

In Chinese nutritional practice, the primary taste of a food is an essential aspect of its nutritive content. This is because the specific tastes send signals through the energy meridians—specific pathways of Qi in the body related to corresponding organs.

Sweet foods, which nourish the spleen and stomach, include: grains, milk, squashes, onions, sweet fruits, bananas, blueberries, oranges, figs, dates, honey, molasses, barley malt. Ideally, these are prepared by steaming, boiling, or Nishimi-style—a Japanese/macrobiotic slow-cooking method done over a low heat. (See recipe on page 6 for “waterless” vegetable stew.)

Sour foods, which nourish the liver and gallbladder, include: tomatoes, barley, vinegar, green apples, lemons, grapefruit, and other sour fruits. These are best prepared by pickling, steaming,
Foods for Healing
cont’d from page 5

and in pressed salads. A pressed salad is made by layering very thinly cut vegetables (e.g., Chinese cabbage, daikon root, onions, leeks) either in a "pickle press" or in a fairly deep dish, adding in a little pinch of sea salt and rice vinegar (optional) with each layering. Then put a second dish containing a heavy object over the contents thus pressing the veggies down.

After an hour or up to 3–4 hours, you will have a lot of excess water, which should be poured off. What you have now is a pressed salad, which has digestive enzymes from this partial pickling method. It is recommended to have a small portion accompanying a meal while savoring the fragrant aroma of the salad.

Pungent foods include onions, garlic, ginger, daikon, peppers, cayenne and other sharp, spicy foods. They are thought to nourish the lungs and large intestines. Optimal cooking methods include sauté, pressure-cooking and Kinpira, a Japanese method similar to braising. (See accompanying recipe for Kinpira burdock root.)

Bitter foods nourish the heart and small intestine, and include kale, lettuce, dandelion, broccoli, arugula, endive, collard greens, and most other leafy greens. These are best eaten raw, pressed, stir fried or blanched.

Salty foods like fish, miso, eggs, burdock root, sea vegetables (wakame, arame, hiziki, kombu, kelp), tofu and adults beans (even though they are not salty) are thought to nourish the kidneys and bladder. These are best prepared after stewing, frying, or Nabe-style (cooked in a ceramic pot, preparing the table).

Generally, in colder seasons one should lean toward longer cooking times and more salt. In warmer weather, lighter cooking methods and less salt is healthier. Steaming and Blanching-boiling help alter the nature of the food for more of a Yin-cooling effect. At the other end of the spectrum, deep-frying, stir frying and roasting and pressure cooking alter foods for more Yang-heating and body insulation effect.

Color and Signature

In TCM practice, the color of a food plays a role in its function. TCM also adheres to the doctrine of signatures: the idea that there is a synergy between the appearance of a food and the organs or parts of the body.

For example, red foods like apples and red peppers, which somewhat resemble a human heart in shape, are thought to nourish the heart, as well as the small intestine. The apple also nourishes the spleen because of its sweet taste, and the kidneys when it is baked and lightly salted.

A carrot, when sliced cross-wise, resembles an eye and is thought to be nourishing to the eyes. Lotus root, pale in color and containing many hollow tubular passages, somewhat resembles the lungs and bronchi and in TCM nutritional theory it is thought to nourish the lungs.

A bitter green vegetable like kale will nourish the heart because of its bitter taste, will also nourish the liver because of its green color, and the kidney and the bones, because of its rich minerals.

Recognizing Individual Needs

There are a few general principles that apply to everybody: eat in moderation, eat what is in season, cook for optimal nutritional value and great taste, eat mindfully and enjoy meals with appreciation. But TCM recognizes that every individual is unique, and that nutritional needs change over time.

A good nutritional evaluation takes into consideration a person’s present physical, mental, emotional and spiritual status, his or her baseline constitution, the current and the upcoming season, present dietary habits, social environment, personal desires, and the individual’s health condition and goals.

Like any other knowledge base, TCM describes many “textbook” patterns of imbalance. At the same time it admonishes us constantly to realize that in the real world, we are rarely dealing with pure patterns of imbalance that fit into neat pack-ages. There is no “one-size-fits-all” approach to nutrition.

By taking into consideration how our health is affected by qualities and properties of various foods, as well as the methods by which they are prepared, we can learn new ways to apply nutrition in clinical practice. This approach adds color and flavor and makes healthy-eating a joy, rather than a worry-ridden chore full of calorie-counting and fretting over package labels.

Susan Krieger, LAc, MS, is a Diplomate of the NCCOM in Acupuncture, and Shiatsu-Asian Bodywork Therapy. In addition to her thriving oriental medicine practice in New York City, she is an internationally acclaimed teacher and counselor specializing in Chinese Medicine, the Energetics of Foods, Medicinal Remedies, Contemporary-Integrative Macrobiotics, Whole Health Nutrition, Women’s Health, Qi-Gong, Shiatsu-Acupressure, and Meridian-Style Shiatsu. For her treatments, classes, and lectures and her Shiatsu Instructional DVD she shares on more than 30 years of clinical experience. Reach Susan at susankrieger@col.org or (212) 242-4215; www.susankriegerhealth.com

Nishimi & Kinpira: Cooking for Health

Nishimi “Waterless” Vegetable Stew

This is a warming dish—strengthens the Spleen, Stomach, Intestines.

Nishimi is restorative in times of fatigue & low vitality; it also strengthens digestion. Use organically-grown vegetables whenever possible.

1-2 Onions
1/2 Carrots (scrubbed, not peeled)
1/2 Green beans
1/2 Head of Broccoli
Miso (fermented soybean paste) or Soy Sauce

Cut all veggies into large pieces.

In a pot, boil approx. 1” of water, layer the vegetables in the order listed above lower the heat and cook for 30–45 min. Do not stir. Add a bit of miso or soy sauce near the end for flavor and digestive enzymes. Tofu, “Snow” tofu (i.e., dried, frozen tofu) or Tempeh can be added halfway through the cooking, if you desire more protein.

When Nishimi is finished there should be almost no water in the pot.

Kinpira Burdock
1/2 Burdock Root (scrubbed, not peeled)
1 Tablespoon Olive or Sesame Oil
1 Tablespoon Mirin (sweet Japanese rice wine) (optional) or 1 Tablespoon Barley Malt
1/2 Tablespoon Organic Miso
3 Tablespoons Water
3 Tablespoons Ground Toasted Sesame Seeds
2 Scallions or 1/3 Bunch of Watercress

Cut the Burdock into thin matchstick-sized pieces. Soak the matchsticks in water until you’re ready to cook them.

Heat the oil in a pot until hot. Saute the burdock for a few minutes. Add the miso or barley malt and stir. Add the miso and water, stirring until the miso is dissolved. Cover, turn down the heat, and simmer for a few more minutes. If you want the burdock to be soft, cook it for 5–10 minutes. When it’s cooked, add the ground toasted sesame seeds, scallions or watercress and stir before serving.

To toast sesame seeds, add them to a pan on low heat stirring the seeds with a wooden spoon, moving them at all times. They will smell like sesame when it’s done. To grind use a spice grinder, a pepper mill, a food processor, or you can grind the traditional way by using a mortar and pestle.

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Women’s Health Research Update: Rhubarb, Maca Benefit Menopausal Women

By Tori Hudson, ND
Contributing Writer

Several recent studies indicate that an extract of a specific form of rhubarb are highly effective in improving menopausal symptoms. A standardized extract of the root of Rheum rhabarbitum (Rhabarbit or Siberic rhubarb), known as ERr 731, has been used widely in Germany since 1993, for treating menopause symptoms. This species does not contain anthraquinone galactosides, which give other species of rhubarb their laxative effects. ERr 731 is available as Phytoestrol N, made by the Mueller-Goeppingen pharmaceutical company, Germany (www.mueller-goeppingen.de).

Researchers at the University of Frankfurt undertook an observational study of 363 symptomatic menopausal women, who took 1 ERr tablet (4 mg R. rhabarbitum extract) daily for 6 months. They used the Menopause Rating Scale (MRS) to evaluate symptoms, and a change in the MRS was the primary outcome measure. A total of 252 women seen at 70 gynecology practices comprised the study. There was a significant decrease in the total MRS score from an average of 14.7 points at baseline to 6.9 points at the end of the 6 months of rhubarb treatment (P < 0.001). This was a very substantial decrease of 7.8 points.

The most pronounced improvement was within the first 3 months of treatment, and in women who were the most symptomatic at baseline (those who had MRS scores > 18 points). Symptom improvement was greatest for hot flashes, irritability, sleep problems, depressive mood, and physical/mental exhaustion (Kaszkyn-Bettag M, et al. Altern Ther Health Med. 2008; 14(6): 32–38).

These encouraging findings prompted a just-published controlled study of ERr 731, in which 112 women were randomized to daily treatment with the rhubarb extract or placebo for 12 weeks.

Those taking ERr 731 showed a highly significant reduction of MRS total score, from 27.0 points to 12.4 points. In contrast, the placebo group showed a far smaller decrease, from 27 to 24 points (P < 0.0001). The rhubarb extract also produced significant reductions in the hot flush weekly weighted score, while the placebo did not (Kaszkyn-Bettag M, et al. Altern Ther Health Med. 2009; 15(1): 24–34).

Five women in the rhubarb group reported 11 minor adverse effects, versus 3 placebo-treated women reporting 3 AE’s. Overall, ERr 731 was well tolerated by the majority of patients, and deadly effective in reducing symptoms.

The Frankfurt studies echo an earlier trial involving 109 women randomized to placebo or 250 mg ERr 731 daily for 12 weeks. The MRS II composite score and each specific symptom score decreased significantly in the rhubarb extract group compared to the placebo group (P < 0.0001). The overall quality of life score was also significantly better in the treatment group compared with placebo. There were no adverse events associated with the rhubarb extract (Heger M, et al. Menopause. 2006; 13(5): 744–759).

We now have three solid studies demonstrating that this standardized extract of R. rhabarbitum is an effective treatment for common menopause symptoms. I look forward to incorporating ERr 731 into my practice.

Maca: Manly, Yes, But Women Like It Too
Maca, a tuberous root vegetable grown in the high Andes mountains, and widely promoted for enhancing male vitality and sexual health, also has benefits for post-menopausal women, according to a recent placebo-controlled study.

This double-blind crossover trial involved 14 post-menopausal women who took 3.5 gm of powdered Maca (Lepidium meyenii) for 6 weeks and then a matching placebo for 6 more weeks. The investigators at the University of Victoria, St. Albans, Australia, measured estradiol, follicle-stimulating hormone (FSH), luteinizing hormone (LH), and sex hormone binding globulin (SHBG) at baseline, and weeks 6 and 12. They also assessed severity of menopausal symptoms using the Greene Climacteric Scale (GCS).

There were no differences in serum concentrations of estradiol, FSH, LH and SHBG following either the maca treatment period or the placebo period. However, the GCS scores revealed a significant reduction in psychological symptoms including anxiety, depression and sexual dysfunction after maca consumption compared with baseline and placebo. These findings were independent of any androgenic or alpha-estrogenic effects of maca, based on assays to measure hormone-depen- dent activity (Brooks N, et al. Menopause. 2008; 15(6): 1157–1162). This new study adds to the growing body of evidence supporting the use of maca for menopause-related symptoms. Anything that has significant effects on menopause-related anxiety and depression is welcome, and many women will be pleased to know of this herb’s significant reduction in sexual dysfunction.

It is interesting that the effects observed in this study appear to be independent of any measurable influence on sex hormones or SHBG, and presumably, independent of any action related to the beta-sitosterol found in the maca root. These findings diverge somewhat from those reported by Meissner et al., who found an elevation in LH and estradiol and a decrease in FSH in women taking maca daily (Meissner H, et al. Int J Biomed Sci. 2005; 1: 33–45). However, Meissner and colleagues were using a slightly different type of maca (L. peruvianum, not L. meyenii), and in a gelatinized preparation rather than as a powder. The variation in findings between the studies may also be due to differences in dosage, extraction protocols and delivery techniques.

The observed positive effects on depression and anxiety are consistent in several other studies, and some researchers have suggested that the flavonoids in maca inhibit monoamine oxidase activity, which could account for the benefits. The improvement in sexual function in postmenopausal women observed in this study is consistent with research on maca use in men.

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Dr. Edward Bach, a noted British physician, developed the system of 38 Bach Original Flower Remedies, over 75 years ago. Derived from flowering plants and trees, these all-natural, safe and gentle remedies have been used as a natural way to lead emotionally balanced and healthy lives by millions of people in over 66 countries worldwide.
A Role for Probiotics in Preventing, Treating Bacterial Vaginosis

By Brad J. Douglass, PhD
Contributing Writer

Say the word “probiotic” and people think, “gastrointestinal health.” That’s natural, since probiotics are invaluable in the management of digestive system problems. But they are also helpful for other health challenges, including infections of the female genital tract, like bacterial vaginosis, vulvovaginal candidiasis and related problems.

This should not come as a huge surprise. Although the vaginal tract is not internally connected to the alimentary canal, the two are intimately related. Bacteria that pass through the digestive system can ascend via the perineum to the vagina. It’s totally reasonable to expect that what promotes GI health would also have relevance for urogenital health.

But while the intestinal and vaginal microbiota are similar, they are not the same. Simply restoring and maintaining healthy gut flora may not be enough to ensure urogenital health.

Vaginal Microbiota: What Is It?

Healthy vaginal microbiota consists of large numbers of lactobacilli (gram-positive rods), small numbers of gram-negative rods, and gram-positive cocciobacilli. A milliliter of vaginal fluid contains, on average, around 100 million organisms from 5–10 species, 95% of which are lactobacilli (Anukam KC, et al. Sex Transm Dis. 2006; 33(1): 59–62).

Lactobacillary flora are surprisingly similar in women around the globe, indicating that these commensal relationships were established long ago and have remained robust over time. From an evolutionary perspective, this suggests an adaptive advantage for both the bacteria and the women: the bacteria get a warm, moist place to live; the women gain protection against vaginal pathogens.

Microbiologists have long held that lactobacilli promote vaginal health by helping to maintain an acidic vaginal pH through production of lactic acid. The logic seems sound: vaginal infections are characterized by elevated vaginal pH and decreased numbers of lactobacilli, *H. vaginalis* lactic acid-producing lactobacilli likely prevent infection by maintaining a low vaginal pH. This rationale is behind the common recommendation that women eat yogurt: the lactobacilli, particularly *L. acidophilus*, and other “active cultures” should promote vaginal health.

Poking under the hood of this theory led to some interesting observations. It turns out that the interaction between vaginal microorganisms is complex and depends on more than just pH. This came to light when researchers found healthy women who seemed to lack lactobacilli. If large numbers of lactobacilli were necessary to maintain vaginal pH and inhibit pathogens, why were these women healthy?

It turns out that they weren’t entirely devoid of lactobacilli, but those organisms only made up a minute, almost inconsequential portion of the vaginal flora. Something else besides the presence of large numbers of lactic acid-producing bacteria was involved in maintenance of vaginal health.

Lactic acid does play a role, but it seems that a critical factor is the presence of strains that produce *bacteriocins* and other specific regulating factors that inhibit adherence, growth, and survival of undesirable organisms. Such specific factors can have prominent effects even at very low concentrations. Strains that produce them can be present in tiny amounts while still having a large effect.

Bacterial Vaginosis: Under the Radar


BV is characterized by a shift in the vaginal microbiota from predominantly commensal organisms like lactobacilli to pathogens such as species of *Gardnerella*, *Atopobium*, and *Prevotella*. Some of these organisms produce enzymes that raise the pH in the vagina and cause a “fishy” smell.

The symptoms of BV are somewhat similar to those of a yeast infection. Since this is a sensitive area, embarrassing topic, and because over-the-counter anti-fungals are readily available, many women try to self-treat BV with anti-yeast remedies. Unfortunately, these won’t help because the situation is different.

Be aware that levels of lactobacilli tend to track with estrogen levels, meaning that even women who seem healthy may be at increased risk for BV when estrogen is low, like at the beginning and end of the menstrual cycle, or after going into menopause.

BV, Preterm Labor & STDs

On face value BV may seem more like an annoyance than a serious medical condition. This is a fallacious and short-sighted view. BV can lead to invasive local inflammation and increased susceptibility to sexually transmitted infections.


None of these studies prove a definitive causal relationship between BV and STDs, but the strength of the correlations warrants serious clinical scrutiny.

BV is also linked with a heightened risk of preterm labor. In the US, 7–10% of all babies are delivered preterm, and the number has risen steadily over the last 10 years. Women at risk for preterm labor cost the healthcare system roughly $360 million annually.


Pregnant women are frequently treated with antibiotics to fend off group B streptococci and also as a precautionary measure when the amniotic sac ruptures prematurely. But this increased use of antibiotics causes more frequent assaults on the vaginal microbiota and a greater overall risk of BV. Antibiotics used to treat BV or other conditions can cause complications during pregnancy and severely disrupt the vaginal microbiota, thus facilitating future BV episodes.

This is problematic not only for the mother but also for the baby. Because bacteria, transmission of endogenous bacteria from mother to newborn occurs during birth, helping to establish the newborn’s own gut flora and immune system. Interruption of the newborn flora by antibiotic therapy interferes with this process.

Clearly, antibiotics treatment for pregnant women has drawbacks. Some researchers have suggested that orally administered probiotics specifically formulated for vaginal health could help eliminate the conditions that cause preterm labor and help avoid many of these problems (Reid G, Becking A. Am J Obstet Gynecol. 2000; 182: 1209–1208).

An Ounce of Prevention

Given the short external distance between the anus and the vagina and the fact organisms naturally migrate across the perineum, it stands to reason that a healthy urogenital environment is not only beneficial to the health of the genital tract, but also prevents BV. For example, if the healthier the intestinal microbiota, the lower the odds that disruptive organisms will pass from the digestive tract to the vagina.

Commercial probiotics are more apt to flourish on a diet high in fiber (especially prebiotic fibers) and low in simple sugars and refined carbohydrates. In contrast, a diet rich in simple sugars can seriously harm the flora when the diet is high in simple sugars and low-fiber processed foods.

Eating yogurt with live active cultures may help, although the clinical evidence to support this is somewhat equivocal. Digestive health may be better served by taking a probiotic supplement that contains multiple strains clinically documented to support gut health.

Women may be able to prevent BV with probiotic products specifically formulated and tested for vaginal health. Ideally, these should contain strains originally isolated from a healthy woman and well characterized to act against vaginal pathogens. Two strains that actually meet these standards are *Lactobacillus crispatus* CR1 and *Lactobacillus reuteri* RC-14. Used together, these have been shown to promote healthy vaginal microbiota (see “Research Review”).

Probiotics & BV Treatment

Standard treatment for bacterial vaginosis involves oral or intravaginal antibiotics. The most common are metronidazole or clindamycin for one week. Intravaginal treatments include metronidazole gel or 2% clindamycin cream and are applied daily for a week. Regardless of which antibiotic is used, statistics show that roughly 30% of BV infections recur within one month and approximately 80% within 9 months. Also be aware that local use of clindamycin is contraindicated for pregnant women because of a possible connection to birth defects.

Many physicians will recommend probiotics following antibiotic therapy, to bolster beneficial GI bacteria killed off during treatment. The same advice applies to the urogenital tract: the vaginal commensals are just as susceptible to broad-spectrum antibiotics as the ones in the intestines.

Although there is not yet any solid evidence that probiotic monotherapy is effective against existing BV infections, probiotic supplementation can provide dividends before, during and after antibiotics. Some probiotic strains can also improve the efficacy of antibiotics (see “Research Review”).

Vulvovaginal Candidiasis: Bacteria vs. Yeast

About 75% of women have vulvovaginal candidiasis (VVC), aka “yeast infection,” during their lives. BV and other disruptions of normal bacterial flora make VVC more common, recurs more likely, and outbreaks more difficult to treat.

Various species of Candida are present in the healthy vaginal environment, but at very low levels. VVC is an over-proliferation of *Candida albicans* for 85–90% of cases. A Candida bloom causes inflammation and can lead to vaginal discharge and irritation. VVC is characterized by a thick, whitish, non-uniform discharge that does not typically possess a “fishy” odor. Irritation during sexual intercourse and itchiness of the vagina and surrounding area are common. One can easily see the Candidal hyphae via Maximize the benefits of your...
Urogenital Probiotics: A Research Review

A number of published studies and case reports show the value of probiotics in preventing and treating vaginal infections and other urogenital problems in women. Here are a few key papers:

Effects on Urogenital Microbiota

Forty-two clinically healthy women were randomized into four groups: three active treatment groups that received various oral dosages of an L. rhamnosus GR-1/L. reuteri RC-14 (GR-1/RC-14) probiotic supplement, and a control group receiving L. rhamnosus GG every day for 28 days. All three treatment groups saw a significant increase in healthy vaginal microbiota, while the control group showed no change. The twice-daily treatment group accrued the most benefit, with 90% of patients showing normal vaginal microbiota two weeks after treatment. The study suggests that a daily dose of about 1 billion (10^9) live GR-1/RC-14 organisms is adequate as a preventative regimen (Reid G, et al. Clin Immunol. Microbiol. 2001; 32: 37–41).

Lactobacilli, Yeast & Coliforms

Sixty-four healthy women were randomized to receive either a once-daily oral GR-1/RC-14 supplement for 60 days, or a calcium carbonate placebo. Microscopic analysis on Day 28 showed that the treatment group had an almost 10-fold increase in lactobacilli over baseline, while the placebo group showed a lactobacillus decline. The placebo patients also showed a significantly greater presence of yeast and coliform bacteria (Fig. 1) (Reid G, et al. Clin Ther. 1992; 14(1): 11–16).

Bacterial Vaginosis Prevention

In the previous study, blinded observers used Nugent scoring to assess the development of BV. Of those possessing a healthy vaginal microbiota at the outset, none of the women on the GR-1/RC-14 probiotic (0/23), but 24% (6/25) of those in the placebo group developed BV by Day 35 (Reid G, et al. Clin Ther. 1992; 14(1): 11–16).

Probiotics Plus Antibiotics for BV

In women with BV, the combination of GR-1/RC-14 probiotic (1 capsule, 10 billion CFUs), twice daily, plus oral metronidazole (500 mg), twice daily, more than doubled (88% response rate) the efficacy of metronidazole alone (40% response) (Fig. 2) (Anukam KC, et al. Microbes and Infection. 2006; 8: 1450–1454).

Preventing Preterm Labor

Thirty pregnant women with BV and at high risk of preterm delivery, were randomized to a once-daily oral GR-1/RC-14 capsule for 15 days, or standard care without any BV treatment. After one month, the treatment group showed decreased indicators of BV. But more importantly, 100% of the mothers in the treatment group delivered at term, as opposed to 67% of the controls. There were no adverse events (Dobrokhotova YE, Sci Microecology Therapy. 2009; 23: 32–45).

Efforts to Increase Resistance to Antibiotics

They first treated the women with either norfloxacin or co-trimazole (the UK name for trimethoprim-sulfamethoxazole, and not to be confused with the antifungal, clotrimazole). Recurrence rates were 29% in the norfloxacin group and 41% for those on co-trimazole. Afterward all women were then randomized to either a GR-1 probiotic suppository or sterilized skim milk as a pessary, twice a week for two weeks, with two additional instillations at 4 weeks and 8 weeks. The GR-1 group had a recurrence rate of 21% over the ensuing 6 months; for the skim milk group it was 47% (Reid et al. 1992). In another randomized trial, a weekly GR-1 combination probiotic (10 billion CFUs) was given as a pessary for one year. This decreased UTIs from a mean of 6 infections in the year prior to the study, to only 1.6 per year during the study (Reid G, Bruce AW, Taylor M. Microecology Therapy. 1995; 23: 32–45).

Treating Vulvovaginal Candidiasis

Sixty-eight women with VVC were randomized to either fluconazole, 150 mg/day plus 2 capsules of GR-1/RC-14 (10 billion organisms), once daily, or fluconazole plus placebo. After 28 days, the treatment group showed more than a three-fold decrease in yeast levels and vaginal discharge compared to the control group (Martinez RC, et al. Lett Appl Microbiol. 2009; 48(3): 269–274).

Preventing Urinary Tract Infections

Reid and colleagues compared UTI recurrence rates in 41 women treated with either standard 3-day antibiotics alone or antibiotics followed by a GR-1 probiotic. They first treated the women with either norfloxacin or co-trimazole (the UK name for trimethoprim-sulfamethoxazole, and not to be confused with the antifungal, clotrimazole). Recurrence rates were 29% in the norfloxacin group and 41% for those on co-trimazole. Afterward all women were then randomized to either a GR-1 probiotic suppository or sterilized skim milk as a pessary, twice a week for two weeks, with two additional instillations at 4 weeks and 8 weeks. The GR-1 group had a recurrence rate of 21% over the ensuing 6 months; for the skim milk group it was 47% (Reid et al. 1992). In another randomized trial, a weekly GR-1 combination probiotic (10 billion CFUs) was given as a pessary for one year. This decreased UTIs from a mean of 6 infections in the year prior to the study, to only 1.6 per year during the study (Reid G, Bruce AW, Taylor M. Microecology Therapy. 1995; 23: 32–45).
late stage disease treatment to life-long health promotion.

While the main goal of the Obama reform is universal insurance coverage, Sen. Harkin said prevention and wellness are central to the president’s approach. “It’s not enough to talk about extending coverage. It means making it available.” It makes no sense to try to figure out how to pay the bills on a system that’s broken and unsustainable. If we pass healthcare reform without infrastructure for cost control and prevention, we will have failed America,” Mr. Harkin said. Though he is confident about the ultimate triumph of wellness-centered reform, he was also very frank that the entrenched interests of the pharmaceutical, insurance, and mainstream medical industries will likely oppose major change.

You Say You Want a Revolution . . .

According to Ralph Snyderman, MD, Chan- cellor Emeritus of Duke University, and head of the planning committee, the most significant change is significant bias. He said we are on the verge of “a new revolution in health care,” driven by advances in genomics, proteomics, metabolomics, systems biology, and nutrition science. “This is a sea change, a new understanding of how gene expression and disease development are driven by environmental and lifestyle factors.

Snyderman is skeptical about the notion that disease is caused by a single factor and that your job (as a doctor) is to find that factor and fix it. This reductionist approach has its place, but it is not sufficient. He is concerned that thinking of preventing disease, we ought to be talking about enhancing health and well-being.” That, he added, would be a paradigm shift into clinical thinking.

Dr. Snyderman wasn’t the only one talkin’ bout revolution. In a burst of surprisingly populist rhetoric, Reed Tuckson, MD, Execu- tive VP and Chief of Medical Affairs for University HealthSystem Consortium, “It’s time for a revolution. We’re all in this together.” He said UHC is committed to evidence-based, well- ness-based care.

However, he was equally in forceful in stating that integrative medicine advocates are dreaming if they think insurers—and the large employers who pay them—are going to cover anything new without a cost-benefit analysis. Snyderman said he is “cyanite” when it comes to the US Chamber of Commerce. “You’re all, all your colleagues, are united in the belief that health is influenced not just by physical or genetic factors but equally by environmental, social, and economic factors. The difficulty will be in determining who gets paid, by whom, and how.

The interdisciplinary struggles for inclusion and recognition in the integrative world are not so different from similar battles in conventional allopathic medicine. They are sometimes successful, sometimes not. Mr. Donohue’s observations were true enough for the Summit: “We try to do what we think is best for our patients. In many cases, they sounded like they were making impassioned pleas for inclusion of their professions under the big top.

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Think Globally, Go Out & Play Locally!

People view healthcare professionals as leaders, and this affords us the opportunity to have a profound influence on our communities. As “Green” healthcare givers, we can serve as an essential resource for people looking to understand how their environment influences their health. There’s no better way for us to cultivate that connection than to develop a regular habit of spending time outdoors.

It is easy to talk in generalizations about what’s “good for the planet.” While there are many recommendations that apply broadly, it is important to recognize that “the planet” is made up of diverse communities, each of which has its own specific climate, geography, and environmental challenges.

As integrative practitioners, I believe we are obliged to understand environmental issues as they specifically affect our communities. We have a vital role to play in promoting the benefits of a healthy environment—both personally and globally.

It is really important to continually inform yourself about common environmental issues in your area. This is easily done through websites such as Environmental Scorecard (www.scorecard.org) that allow you to enter your zip code and pull up a detailed report of local environmental hazards. One physician I know does this for every patient, placing the scorecard in the chart and giving a copy to the patient! Other useful websites include the EPA (www.EPA.gov), Environmental Working Group (www.ewg.org), AERNow (www.aernow.gov), and The Pesticide Action Network (www.panicinfo.org).

Keeping track of local environmental risks allows you to better recognize environmental illnesses among your patients.

To promote environmental wellness and provide leadership you must take the time to regularly connect with the outdoors. There’s no substitute for personally experiencing your local environment. If there are noticeable pollutants in the air, you will understand more directly the ill effects on your health, and through that, you’ll be better able to relate to patients facing environmental health challenges.

Sadly, most Americans spend 80% of their time indoors, so if you want to get your patients outside, you will have to get outside yourself and serve as a role model. Besides, outdoor recreation can be great fun.

People often ask me if they have to go to a park or some other specially designated place. I say that any outdoor space is good for you health. For vitamin D production we need at least 30 minutes a day of sunlight, best caught in the middle of the day. The time you spend outdoors allows you to better appreciate where you live, and to connect with other outdoor enthusiasts, which makes the whole thing more enjoyable.

I’m always pleasantly amazed at how many people meet during outdoor activities and then naturally build partnerships in support of their shared world. This can be done in a more formal way, say by building a house with other folks through Habitats for Humanity (www.habitat.org), purchasing food at local farmers markets, or even gardening at a local community garden. But it’s always nice when these things come about serendipitously.

Some might consider these suggestions as mere “chores,” another thing to try and fit into an already overextended schedule. If it is difficult to find the time to participate in scheduled outdoor activities, consider how you can incorporate more outdoor time into your current schedule, like walking or riding a bike to work. The single largest contributor to air pollution in the US is automobiles, and a commitment to get out of your car can have a big impact on your personal wellbeing and your community’s health.

If you yourself are taking time outdoors, then it is much easier to educate patients about the various options and benefits of connecting with nature. It helps to have a list of local organizations that can help your patients engage in outdoor recreation. You might also do a bit of public advocacy work by keeping up with local or regional ordinances, writing letters and articles for local papers, websites or blogs, or speaking at public hearings about the benefits of outdoor activity and the need for a clean environment.

The three foundations of Green Health Care are: 1) working in a green clinic, 2) advocating for a healthy environment, and 3) practicing medicine sustainably. Of these three, advocating environmental health is the simplest to implement. It might begin at the local playground or at a town council meeting.

Find out what is happening—environmentally—in your area and get involved. By doing this regularly you will increase your own personal health, create a healthier world around you and make lasting friendships. You’ll also be role-modeling healthy living and community engagement, and that can go a long way in empowering your patients to do likewise.

Resource List

Scorecard: The pollution information site, www.scorecard.org
Environmental Protection Agency, www.epa.gov
Environmental Working Group, www.ewg.org
Teleosis Institute, www.teleosis.org
Practice Greenhealth, www.practicegreenhealth.org
Habitats for Humanity, www.habitat.org

Joel Kreisberg, DC, MA, a chiropractor and clinical homeopath, is the founder and senior director of the Teleosis Institute, Berkeley, California, a program of Practice Green Health. Teleosis is dedicated to reducing healthcare’s footprint while broadening its ecological vision.
Natural Medicine & Healthcare Reform: Taking Our Places, Raising Our Voices

As I prepared to write this column, I read a front-page New York Times (April 27, 2009) article about how healthcare reform could be stymied by the shortage of primary care providers—a trend that has reached crisis proportions. What will universal healthcare insurance solve if there is a severe lack of practitioners?

It is unlikely that the government can provide sufficient incentives to lure more MDs and DOs into primary care. Conventional medicine seeks to close the gap by relying more and more on “physician extenders” like physician assistants and nurse practitioners. Part of the solution could come from recognizing the value of naturopathic physicians, chiropractors, and acupuncturists/doctors of oriental medicine and incorporating them into academic institutions, in federal healthcare programs. This would enable us to bring a wellness orientation to primary care that a lot of conventional practices are not able to provide.

In February, Drs. Mehmet Oz, Mark Hyman, Dean Ornish, and Andrew Weil testified before the Senate Health, Education, Labor, and Pensions Committee. They advocated for training a new cadre of integrative physicians to incorporate health and wellness throughout the continuum of care, to prevent more expensive interventions and cut the costs associated with treating preventable conditions.

These are worthy goals, to be sure. But there was a glaring oversight in their testimony: there are thousands of licensed (or license-eligible) providers fitting that description, already trained in preventive and therapeutic interventions based in lifestyle change, environmental health, mind-body modalities, nutrition, botanicals and other natural approaches.

It is essential that the holistic/CAM professions be involved in the early planning stages of health care reform if we hope to achieve lasting, effective change. We are the professions that responded to the explosion of public interest in nutrition, botanicals, acupuncture, physical medicine, and mind-body approaches more than 30 years ago. We represent the disciplines that embodied the kind of relational care that patients sought but rarely found from conventional physicians working under managed care. The allopathic profession systematically denigrated and excluded these approaches for most of those years, using all its power in research, academia, and media to do so. I believe it is inappropriate, therefore, to put allopathic physicians in sole or primary charge of a reform process that should involve—and will greatly impact—diverse practitioner groups. All parties should be at the table.

During a hearing chaired by Senator Mikulski on Feb. 23, there was discussion about establishment of an Office of Wellness & Prevention that would help to incorporate integrative healthcare into federal programs. This idea first surfaced in a recommendation from the National Policy Dialogue on Integrated Health Care (http://ihpc.info/resources/resources.shtml). It is still a great idea, but this new office must have the power to direct action, not just report on it. It will need independent funding and an overarching mission. System-wide reform will involve many federal agencies and offices. A Office of Wellness & Prevention needs to have authority and visibility that facilitates effective leadership.

To really solve the healthcare crisis, we must recognize that the current federal healthcare system is not committed to the ultimate principles of good medicine, but to the narrow interests of conventional medicine, the pharmaceutical industry, and private insurance companies. The two congressional committees—two in the Senate and three in the House—are working on reform legislation. The consensus emerging from the two Senate committees echoes key elements of Massachusetts’ state-level reforms, including a requirement that all residents purchase health insurance, with premium subsidies for the poor, and an insurance exchange from the National Policy Dialogue on Integrated Health Care (http://ihpc.info/resources/resources.shtml). It is still a great idea, but this new office must have the power to direct action, not just report on it. It will need independent funding and an overarching mission. System-wide reform will involve many federal agencies and offices. A Office of Wellness & Prevention needs to have authority and visibility that facilitates effective leadership.

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National health insurance has considerable support within the medical profession, but it overlooks the degree to which patient empowerment, individual choice, competition, and market incentives could be used and are being successfully used to solve healthcare problems. More than 10 million US families are managing some of their own healthcare dollars through Health Savings Accounts (HSAs) and Health Reimbursement Accounts (HRAs). More than half the states have Medicaid Cash & Counseling pilot programs, allowing disabled people to manage their own supportive care budgets.

Support for universal insurance-centered reform is based on a narrow construal of selected data, while all too often ignoring contrary data. The reform discussion would benefit greatly from careful examination of the successes and future potential of reforms outside of insurance-based solutions.

Naturopathic Primary Care readers should be aware of various opportunities to participate in healthcare reform:

Wellness Initiative for the Nation (WIN) created by the Samueli Institute in collaboration with the Integrated Healthcare Policy Consortium and many other visionaries.
H. Con. Res 58, introduced in August 2008 in the U.S. House of Representatives by Congressman Langevin (D-RI): “Congressional reform of our disease-based system must incorporate patient-centered care that addresses the underlying causal factors associated with chronic disease and facilitates the inherent ability of the human body to maintain and restore optimal health. This definition of sustainable wellness is essential to any and all reform initiatives.” Supported by the American Association of Naturopathic Physicians, American Holistic Medical Association, American Holistic Nurses Association, American Medical Student Association, Citizens for Health, Consortium of Academic Health Centers for Integrative Medicine, Integrated Health Policy Consortium and the Natural Products Association.
Americans Living Life Well (ALL WELL), an alliance that will be walking to Washington together in Spring 2010 to promote this fundamental and essential change. Contact Karen.howard@naturopathic.org
There appears to be a strong correlation between teenage obesity and exposure to phthalates—endocrine-disrupting compounds found in many personal care products and a myriad of plastic and vinyl products.

A recent study of pre-adolescent girls living in Harlem showed that the heaviest girls in the cohort of roughly 400 kids, aged 9–11, had the highest levels of phthalate metabolites in their urine, reported Philip J. Landrigan, MD, chairman of the Department of Community & Preventive Medicine, Mount Sinai Medical Center, New York. The study is part of a large scale project titled, “Growing Up Healthy in East Harlem,” that looks at determinants of health and illness among children in this predominantly poor, Black and Hispanic neighborhood.

The phthalate-obesity findings were published in the journal Epidemiology, and received considerable attention when New York Times reporter Jennifer Lee covered the study in the April 17 edition.

The data so far suggest that kids in this community are growing up anything but healthy. Roughly 40% of all school-age children in East Harlem are overweight or obese. Dr. Landrigan and colleagues found that even among normal weight girls, phthalate metabolite levels were markedly higher than national averages reported by the Centers for Disease Control and Prevention. The girls are most likely being exposed to phthalates through cosmetics and nail polish, but also from plastic water bottles, vinyl pacifiers, and processed food packaging.

The Mount Sinai investigators stressed that this is simply a correlation not a causal link between phthalate exposure and obesity and they urged caution in jumping to premature conclusions. Still, given what is known from animal studies about phthalates and other plastic-derived endocrine disruptors like Bisphenol-A, the issue warrants more to the obesity equation than the right organisms in the proper balance. Probiotic strains that have been shown to support urogenital health are an excellent option for promoting a balanced urogenital microbiota and preventing infection.

This deserves serious consideration, since drug treatments for vaginal infections are of limited efficacy, especially for recurrent infections. Urogenital probiotics can also be a helpful adjuvant to standard treatment in many cases, helping mitigate side effects and in some cases bolstering treatment efficacy. Women are often very relieved to learn that there is more they could be doing to prevent and treat troublesome vaginal infections. Make sure to tell them!

Brad Douglass, PhD is a Technical Specialist for Jarrow Formulas. He obtained his PhD from USC in Organic Chemistry where his research efforts concentrated on drug discovery. He was also a postdoctoral fellow at USC where he investigated novel blood-brain barrier transport methods for use in drug delivery to the brain.

**Do These Phthalates Make Me Look Fat?**

*cont’d from page 8*

Microscopic examination of a vaginal smear treated with 10% KOH.

Maintenance of healthy urogenital microbiota decreases the risk of VVC. Prebiotic probiotic use is one way to support the healthy bacterial flora that can inhibit uncontrolled growth of yeast (Reid, G., et al. FEMS Immunology and Medical Microbiology, 2003; 35: 131–134).

Oral antifungals like B tacozole, daily for two weeks, are the standard first-line drug treatment for VVC. Prescription and OTC antifungal creams and pessaries are also commonly used. But keep in mind that these treatments can inhibit not only the fungi, but also the endogenous lactobacilli in the vagina, predisposing a woman to repeated Candidal overgrowth.

There are several published reports showing that standard antifungal drug treatment in combination with a vaginal probiotic containing *L. reuteri* GR-1/L. reuteri RC-14 significantly reduces symptoms of yeast infection as compared to standard drug treatment alone (see “Research Review”).

The key to understanding urogenital health is to realize that it is not about the absence of bacteria, but rather the presence of the right organisms in the proper balance. Probiotic strains that have been shown to support urogenital health are an excellent option for promoting a balanced urogenital microbiota and preventing infection.

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**Oximation in Practice: Clearing Acne & Related Skin Disorders**

By Roby Mitchell, MD

Contribute Writing

Hopefully, over the last few parts of this series, I’ve presented the hypothesis of Oximation: you in a vial with the beneficial organism, or yeast. That’s all well and good, but the hypothesis only means something if it can help you to practice better medicine, especially in these difficult economic times.

Certainly your patients are looking for ways to get better outcomes from less expenditure—particularly those who’ve recently lost their insurance. To meet these needs, you’ll need to acquire what computer programmers call “killer apps,” that is, applications or skill-sets that give such fantastic results that it just about kills somebody.

Let’s begin to talk about using health and beauty without using toxic substances is one such medical “killer app.” It’s one that patients will appreciate for its own sake, but the good news is that it will also have many other health benefits, including reducing the risk of many other common chronic diseases.

Let’s face it: no one really cares much about high LDL cholesterol or elevated C-reactive protein. Who would notice that at a dinner party? But no one wants to show up with a big patch of psoriasis or a face full of zits.

Skin cells reflect the overall health of the body. I have yet to see a patient with rosacea who did not go on to develop serious cardiovascular disease! So, skin problems make for excellent teaching moments that can help patients make the connection between diet and health. This is especially true for teenagers.

The Dermal Ecosystem

There is a very strong correlation between dermatologic autoimmune disease and other diseases of oximation, such as diabetes, Alzheimer’s, stroke, heart disease, etc. The reason is that they all share a common pathophysiology: when a tissue becomes hypoxic or there is a compromise in the process of cellular energy production, cells start to die, or they change their pattern of DNA transcription (keratoses, cancer, moles).

In this process, what you are seeing is the same thing happens in the human body as happens in any other ecosystem: saprophytic predators are attracted to the deteriorating tissue. In the human body’s ecosystem, fungi and fungi-like saprophytic predators or recyclers. As fungi proliferate, they release mycotoxins that act as immune-suppressants. This immune suppression will open the door for other microbes to invade, and this can then lead to more salient disease.

The invasive microbes are not esoteric. Antoine Beauchamp, Louis Pasteur’s contemporary (and detractor) is famously quoted as saying, “The primary cause of disease is in us, always in us.” Once there is a breach in the fragile balance of the human ecosystem, microbes that are normally commensal or even symbiotic, can become pathogenic (not unlike elected officials).

The manifestations can range from vaginal yeast (see A Role for Bioflavonoids in Preventing Treatable Bacterial Vaginosis, page 8) to acne, to bladder infections, to flesh-eating streptococcus.

Prevention and reversal hinges on maintenance of immune system integrity.

Let use acne as an example. There is controversy in the dermatology literature about exactly which microbes cause acne. But we know that the disease process involves proliferation of resident bacteria—microbes that are “always in us.”

The mucosal lining of the GI tract. In still other’s it’s the skin. Problems don’t necessarily manifest until there’s a big hurricane, but almost everyone has certain built-in weaknesses where disease is most likely to manifest when under stress.

Consider this: there are literally miles of arteries in the body. Why does a fatty streak and then an atherosclerotic plaque develop only at specific loci? There are miles of Texas highway. Why all the buzzards at one particular spot? The answer’s simple: Saprophytes and scavengers gather where there is dead or dying tissue.

When someone is under stress, there is increased adrenal output. This increases blood sugar. If there is a weakened immune system, yeast starts to proliferate. They secrete mycotoxins that compromise macrophage response. This opens the door for native bacteria to proliferate, which in turn initiates an immune cascade and we’re off! The same basic sequence occurs in acne, asthma, coronary artery disease, and many others.

Plaques and Plaques

I’m certainly not the only one who believes there is a connection between inflammatory skin disorders and cardiometabolic disease. Researchers first posted a correlation between acne and diabetes in 1908!

Over 100 years later, Abrar A. Qureshi, MD, MPH, and colleagues at Brigham and Women’s Hospital and Harvard Medical School, Boston, MA, contributed to this link.

Dr. Qureshi’s group studied 78,061 women involved in the Nurses’ Health Study II. The women ranged in age from 27 to 44 years in 1999 at the outset of the study, and all were free of diabetes or hypertension. In 2005, they were given a survey that included a question about lifetime history of psoriasis. They were also evaluated for diabetes and hypertension during the 14-year follow-up. A total of 1,813 subjects (2.3%) reported having psoriasis, 1,560 (2%) developed diabetes, and 15,724 (20%) developed hypertension over the 14-year period. Those with psoriasis were 63% more likely to develop diabetes and 17% more likely to develop hypertension than women without psoriasis. The associations remained strong even after controlling for age, body mass index, and smoking (Qureshi AA, et al. Arch Dermatol. 2009, 145(4):379-382).

There are many other studies that support the hypothesis of Oximation as the common factor underlying all three conditions. "These data illustrate the importance of considering psoriasis a systemic disorder rather than simply a skin disease," they conclude. I couldn’t agree more heartily. And isn’t it curious that both psoriasis and atherosclerosis are characterized by plaque formation?

Callin’ Quits on Zits

It is important to understand that whenever a process begins to arise in a particular tissue, the predisposition for “compromise” is already there. It is related to generic polymicrobial, and dysbiosis, and presents an opportunity for ambient resident microbes to proliferate and trigger further inflammation.

Buzzards on the Highway

Before and After photos of a patient with severe acne

Photo courtesy of Dr. Roby Mitchell

Acne is certainly more common than psoriasis, and while I won’t go so far as to say all teens with acne are at risk for heart disease, it is important to realize that the zits reflect an inflammatory process that could pose more serious problems later in life. Bear in mind that the atherosclerotic process begins relatively early in life, many years before it manifests as overt heart disease.

When teens come to see me for treatment of acne, I take that opportunity to make the connection with them between diet and disease. I promise them that we can make the acne go away if we work as a team. My job is to make sure that any hormonal or nutritional deficiencies are addressed. Immune system function can be compromised by deficiencies of thyroid hormone, zinc, selenium, vitamin D3, iodine/iodide, essential fatty acids, stomach acid, and beneficial gut flora.

Suboptimal levels of thyroid hormone, which can occur in teenagers, will impair conversion of β-carotene to vitamin. This may manifest as carotenemia in palmar or plantar surfaces. Adequate levels of vitamin A are critical for optimal immune function. If a patient has been chronically hypothyroid and manifests carotenemia, I will usually recommend 100,000 IU of micellized vitamin A (American Biologics) for 1 month.

I put the onus on the patient to not throw gasoline on the fire—and remember that “inflammation” is derived from the Latin word meaning “on fire”—by eating foods that promote fungal overgrowth. Native, benign yeast such as Candida albicans and C. glabrata can, given the right conditions, pleomorph into filamentous, migrating, pathogenic fungi. As they proliferate, these organisms produce immunosuppressants that then pave the way for other microbes that can then cause acne, or set up the cascade for an atheromatous plaque.

I encourage my patients to get off high glycemic foods such as suga, grains, cow’s milk, sodas, fruit juice and other sweetened beverages. I advise them to eat more blue, purple and dark red fruits and vegetables that are imbued with phytochemicals that inhibit fungal overgrowth. Regular consumption of these healthful foods helps maintain a homeostatic microbial balance in the skin and internally.

To get immediate resolution of the acne (or rosacea, for that matter), I have patients start using my “Touch My Face Masque,” a combination of natural plant antifungals, cell nutrients, and collagen promoters.

The Masque is very simple to use: patients simply apply a few fingertip-fulls after washing their faces with a mild soap and hot water. The masque will need to set for 2 hours, and it is easily removed with a mild soap. It can be worn overnight, but make sure patients know to rub it into the coin over so it doesn’t stain fabrics. After washing off the masque, patients should apply a healing oil, such as castor oil (my personal choice), organic coconut or extra virgin olive oil.

These topical treatments are not a cure, but they will clear up acne break-outs pretty quickly. The effect will not last, however, until that component of the immune-system augmenting protocol discussed above. It took awhile, but the patient shown in the accompanying pictures went through enough cycles of recurring acne that she finally cleaned up her diet. Now she only has to use the Touch My Face Masque before dates.

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By Roby Mitchell, M.D. (DR. FITT)

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