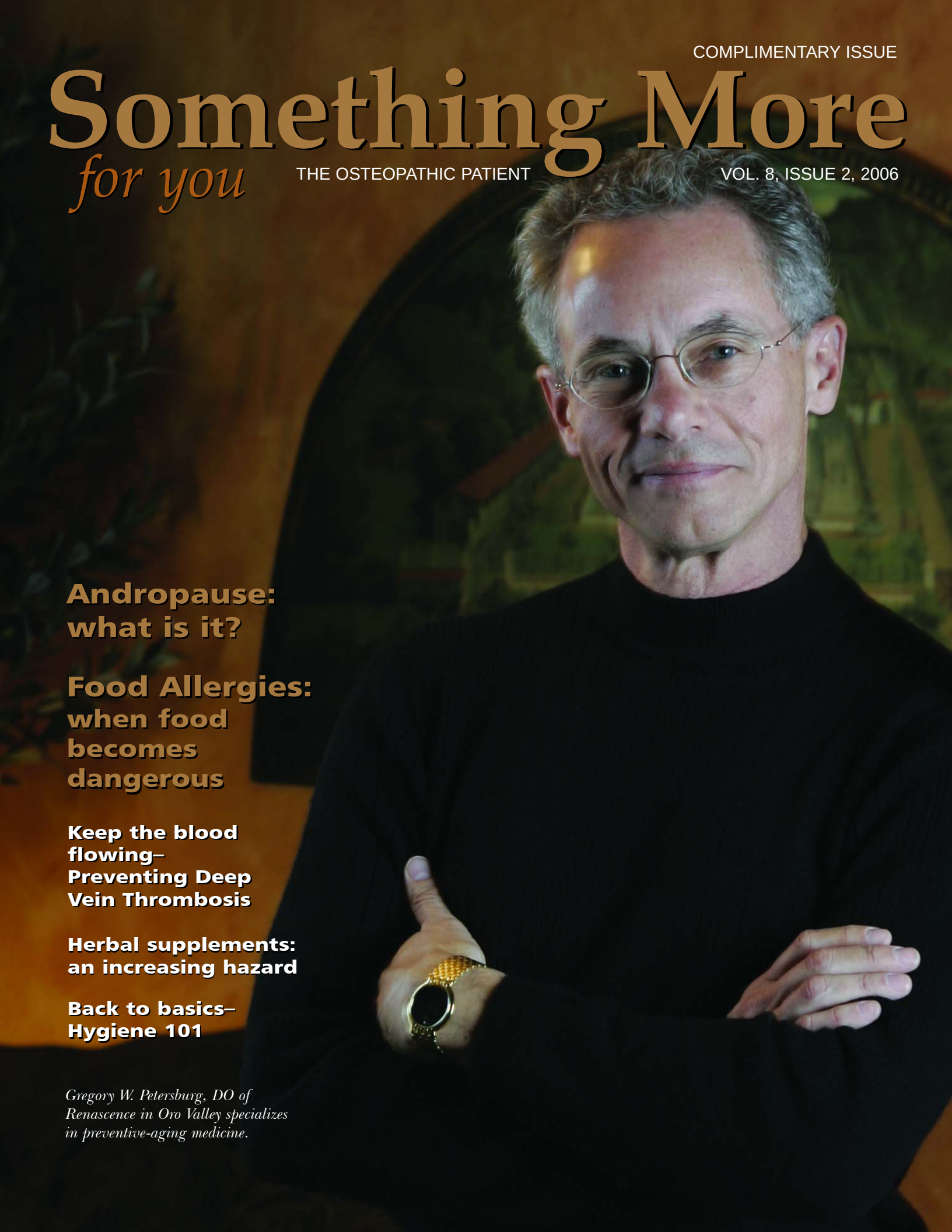
COMPLIMENTARY ISSUE

Something More *for you*

THE OSTEOPATHIC PATIENT

VOL. 8, ISSUE 2, 2006



Andropause: what is it?

Food Allergies: when food becomes dangerous

Keep the blood flowing– Preventing Deep Vein Thrombosis

Herbal supplements: an increasing hazard

Back to basics– Hygiene 101

Gregory W. Petersburg, DO of Renascence in Oro Valley specializes in preventive-aging medicine.

Tucson Osteopathic Medical Foundation

The Tucson Osteopathic Medical Foundation's mission in serving the seven counties of southern Arizona is to advance osteopathic medical education, to improve the public's understanding of osteopathic medicine, and to elevate through education the health and well-being of the community. In so doing, the Foundation has established itself as an innovative contributor to the development of a wide range of community projects, which impact the lives of many.

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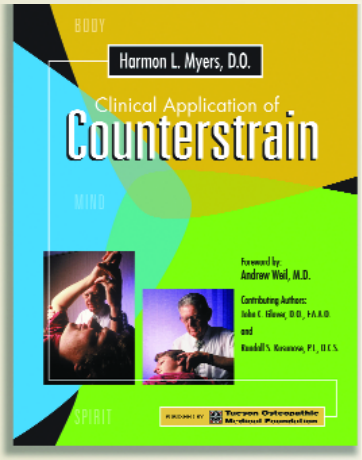

Clinical Application of Counterstrain

by Harmon L. Myers, DO

With genuine delight and pride, the Tucson Osteopathic Medical Foundation announces its publication by one of their own—Harmon L. Myers, DO—Clinical Application of Counterstrain.

Designed to be a hands-on reference, Dr. Myers' book features more than 200 treatment photos and medical illustrations, all in full color. Color-coded chapters in top–to–toe presentation enhance a concise and consistent text format. A foreword by Andrew Weil, MD, an introduction by John C. Glover, DO, a section on TMJ by contributing author Randall Kusunose, PT, and unfailing encouragement from William Devine, DO, combine, in this new work, to document and support Dr. Myers' lifelong approach to osteopathic manipulative treatment (OMT).

OMT offers a noninvasive method to circumvent the need for drugs and surgery in order to relieve pain, restore function, and maximize the body's natural inclination towards health. Dr. Myers is a national authority and teacher of the counterstrain method of OMT. He has been teaching courses for 20 years in Counterstrain method and since 1997 has been a preceptor for the program in Integrative Medicine at the University of Arizona.

Order information is available, on the website: www.tomf.org—just click on Books or contact the Foundation at (520) 299-4545 or info@tomf.org.

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Andropause, the male menopause

by Mark Flint

True or False: Men do not get menopause.

If you answered true, you are technically correct, but in fact men may experience the same symptoms as women who have menopause. The condition, popularly known as andropause, occurs when the body produces insufficient amounts of testosterone, or is unable to utilize the testosterone it produces. Another term, hypogonadism, refers specifically to insufficient production of testosterone.

Symptoms may include decreased libido, erectile dysfunction, loss of strength and stamina (muscle mass), hot sweats, decrease in body hair, fatigue and depression, or depression-like symptoms. Men with andropause may also tend to gain weight because of increased subcutaneous fat. Loss of bone density may also occur.

One significant difference between andropause and menopause is that men generally do not lose fertility, while ovulation ceases with menopause.

Another difference, notes Gregory Petersburg, DO, of Renascence in Oro Valley (www.RenascenceAging.com), is that the onset is more gradual for men, who may not even be aware they have the condition.

"We don't see it because it is a slow, steady decline rather than the 'crash and burn' that is associated with menopause," he said.

"Serum testosterone levels are at their highest between the ages of 20 to 30 and tend to progressively fall after age 40," says Ted Crawford, DO, an osteopathic physician with Pusch Ridge Family Medicine in Tucson

Dr. Gregory Petersburg says, "Some studies suggest that low testosterone is a better predictor of heart disease in men than high cholesterol."

DAVID SANDERS

(www.babyboomersdoc.com). For most men, the gradual decline in testosterone levels will not be significant, and their testosterone will remain within the normal range throughout their lifetimes. But roughly two in ten men age 60 and older have testosterone levels below the normal range.

While men may be able to live with the symptoms of abnormally low testosterone, Petersburg emphasizes that testosterone plays a role in many aspects of male health, including:

- Facilitating production of nitric oxide, a vasodilator that plays a role in preventing high blood pressure.
- Contributing to blood thinning, which in turn can help prevent clotting.
- Maintaining low levels of cholesterol, fibrinogen, triglycerides and insulin.
- Maintaining bone density.
- Reducing abdominal fat, which is a risk factor for heart attack.

The heart healthy hormone

The role of testosterone in heart health is not well understood by the general public, notes Petersburg.

"There are more testosterone receptors in the heart than any other muscle in the body," he says. "Some studies suggest that low testosterone is a better predictor of heart disease in men than high cholesterol. Testosterone increases anabolic function, improves arterial dilation, augments cardiac output and has anti-inflammatory activities."

Petersburg notes that tests of ejection fraction, a measure of the amount of blood pumped after each heartbeat compared with the amount of blood left in the heart, show the amount pumped to be lower in men with lower testosterone. Animal studies have shown that testosterone replacement relaxes coronary arteries in rabbits, which suggest a potential benefit for men suffering angina. The studies also showed that testosterone replacement significantly improved recovery from global cardiac ischemia, which in humans could mean improved chances of being revived following a heart attack.

"Testosterone replacement should improve libido, muscle mass, and well-being.

Testosterone, sugar and weight

Glycation, which results when sugar molecules bind with amino acids, results in altered protein structure and decreased biological activity. Glycated proteins, which accumulate in affected tissue, are reliable markers of disease. Many age-related diseases such as arterial stiffening, cataract and neurological impairment are at least partially attributable to glycation.

Men found with elevated glycation in the blood tend to have lower levels of testosterone, says Petersburg, adding that "these associations are independent of obesity and body fat distribution."

Obese men tend to have low testosterone and high estrogen levels, which is not surprising because fat cells, especially abdominal fat cells, convert testosterone to estrogen.

Prostate cancer and testosterone

Some studies point to a relationship between prostate cancer and testosterone, but Petersburg said a search of the literature through Medline revealed that 75 percent of the studies found that testosterone is not a factor, while 25 percent indicated that men with higher testosterone levels have a greater incidence of prostate cancer.

"In any case, testosterone replacement therapy should not be given to patients who have prostate cancer, because testosterone stimulates the proliferation of prostate cancer cells," Petersburg said. He added that men receiving testosterone replacement therapy should be tested twice a year for indications of prostate cancer, and the therapy discontinued if prostate cancer is discovered.

"It can enable a male to feel much more vibrant, improve his sexual desire, ability, and performance, and make life a lot more enjoyable overall."

Since prostate cancer becomes increasingly likely with age, and testosterone replacement therapy is generally given to men age 60 or older, monitoring for signs of prostate cancer is an important aspect of the therapy.

The nerve degeneration connection

Low levels of testosterone in men are associated with increased production of a protein called beta amyloid. These protein fragments attack the brain's nerve cells, creating the plaques and tangles that destroy memory function in Alzheimer's patients.

"Testosterone replacement should improve libido, muscle mass, and well-being. It can aggravate sleep apnea, cause mild acne, and gynecomastia (slight enlargement of the breasts), but not in everyone," says Crawford. "It can enable a male to feel much more vibrant, improve his sexual desire, ability, and performance, and make life a lot more enjoyable overall."

"We need to aim for the optimal physiological range of testosterone in the system, which is stratified by age," says Petersburg.

By evaluating and managing their testosterone levels, men can have a positive influence on many aspects of their health.

Crawford and Petersburg emphasize that testosterone replacement therapy is a treatment for a specific condition, not a "lifestyle" treatment or some kind of fountain of youth. We may, through diet, exercise, avoiding tobacco and drug use—and a certain amount of luck—minimize the effects of aging but we're not going to live forever, and our bodies "wear out" to some degree as we get older. ❖

Hormone Replacement Therapy

When treating a patient with low testosterone levels, Gregory Petersburg, DO, first looks to natural methods to increase production and utilization of testosterone.

Some of the foods we eat and drugs we take can impede testosterone production. Others may increase the conversion of testosterone to estrogen.

"I look at lifestyle, nutrition and behavior," he says. "For example, I look at factors that could reduce testosterone availability."

Those factors include:

- obesity
- lack of exercise (weight training is particularly beneficial)

- stress
- impaired liver function
- excessive alcohol consumption
- a high-fat diet
- corticosteroid use

- estrogen enhancing foods such as beef (Petersburg recommends beef from grass-fed cattle that have not been treated with hormones)
- medications that alter liver function or estrogen levels, including some anti-inflammatory drugs, antibiotics, some statins, some antidepressants, and some heart and blood pressure medications
- aging
- street drugs

Other factors that could inhibit testosterone utilization include Chronic Obstructive Pulmonary Disease (COPD), asthma, chemotherapy, malnutrition and zinc deficiency.

"Probably the best way for men to improve testosterone availability is to lose excess weight," says Petersburg. "The next is weight training."

Avoiding alcohol and drugs, high fat foods and drugs that impair liver function also can help improve testosterone utilization, and stress management is another important factor in managing testosterone availability.

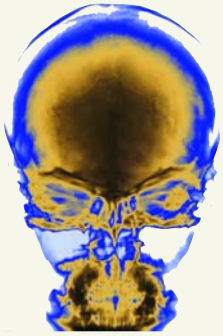
If hormone replacement therapy is indicated, topical application is usually the best option, say Petersburg and Crawford.

"Testosterone can be given by intramuscular injection, which is both painful and must be given rather frequently because the levels of the medication do not last long in the blood stream," says Crawford. Testosterone by injection is typically administered weekly.

Other replacement options include synthetic pills, pellets inserted under the skin and transdermal patches. The synthetic used for oral hormone treatments can have a harmful effect on the liver. Inserting pellets under the skin is somewhat invasive and is uncomfortable, with the added drawback that the pellets can fall out or be dislodged. It is also costly. Most people prefer using a cream to wearing a patch because it is simpler and invisible.

Health News Notes

Risky Auras



The auras that can precede migraine headaches may be more than an inconvenience. Middle aged women whose migraines include these "light shows" are twice as likely to suffer strokes and heart attacks as those who are either migraine-free or who experience migraines without auras, according to the *Journal of the American Medical Association*.

Coping with Social Jetlag

When your biological clock tells you to stay up late and sleep in, but your daily work routine forces you to get up early, the resulting "social jetlag" can cause the same grogginess as flying through multiple time zones. Sleepiness isn't the only downside, though;

according to researchers at Ludwig-Maximilian University in Munich, the socially jetlagged are also three times more likely than their more well-rested counterparts to smoke, and they're more likely to use caffeine and alcohol.

Food Allergies:

Ever since she was a toddler, Julie Caccavo has known the first question to ask when someone offers her food: "Does this have nuts in it?" That's because when she was 18 months old, a well-meaning shopkeeper gave her a hazelnut-filled chocolate. Caccavo threw up the candy—and broke out in hives—within just a few minutes.

She's been allergic to tree nuts ever since. That came as no surprise to her mother, Madeleine Robins, whose husband is also allergic to tree nuts; food allergies often run in families. "We were on the lookout, for sure," Robins says.

Allergies and Intolerances

According to the Mayo Clinic, nausea and hives are common food allergy symptoms, as are itching, swelling, wheezing, congestion, trouble breathing, abdominal pain, diarrhea, and dizziness. A rarer, but more severe reaction, anaphylactic shock, can even be deadly; its symptoms include trouble breathing, a rapid pulse, a drop in blood pressure, and loss of consciousness.

A bad reaction to a food isn't always an allergy, though. Such reactions can also occur when the body lacks the enzymes to digest a food (a common cause of milk sensitivity); as the result of conditions such as irritable bowel syndrome (IBS); or as a response to food additives such as MSG and sulfites.

These food intolerances can be just as serious as food allergies, and shouldn't be ignored. But it's only an allergy when the immune system plays a role—specifically, when the immune system "decides" that a food is harmful, and produces antibodies sensitive to it. Those antibodies keep a lookout for the offending food, and when they find it, they trigger the release of histamine and other chemicals. It's these chemicals that cause allergy symptoms.

According to the Mayo Clinic, adult food allergies are not very common, affecting only one percent of the population; however, that number is higher for children —five percent of whom are affected.

when food becomes dangerous

by Janni Lee Simner

Fayez K. Ghishan, MD, rates the occurrence in children even higher. "We estimate that seven percent of all kids have some form of food allergies," says Ghishan, who is head of the University of Arizona Department of Pediatrics and director of the Steele Children's Research Center. "It is an under-diagnosed problem."

While many foods can trigger allergies, the Mayo Clinic says the most common triggers in adults are eggs, peanuts, fish, shellfish, and tree nuts (such as hazelnuts, walnuts, and pecans). In children, cow's milk, wheat, and soybeans are also common triggers.

Tracking Down Food Allergies

Most food allergies kick in fairly quickly, within minutes or hours; however, Ghishan and his colleagues have recently found that an allergic reaction can be delayed by as much as three weeks. When these delayed reactions occur—and thus far they have only been studied in children—the immune system sends certain types of white blood cells (Eosinophils) to attack the esophagus or gastrointestinal tract, resulting in additional symptoms such as trouble swallowing, regurgitation, and refusal to eat.

Even when the allergic reaction takes place fairly quickly, some food allergies are easier to diagnose than others. "If a patient comes in and says, 'I ate this food for the first time, and my mouth swelled up'—that's a good indication they're allergic," says family practitioner Roderick Flowers, DO. Often, however, patients come to Flowers complaining of generalized abdominal pain, gas, diarrhea, or bloating without knowing the cause, and Flowers needs to look at a range of possible causes before determining a food allergy is to blame.

Diagnosis is further complicated by the fact that patients can develop allergies to new foods later in life, or develop increasingly strong reactions over time. When a food allergy looks possible, Flowers sometimes asks patients to keep a food diary, and to test whether eliminating various foods improves their symptoms.

An allergist can confirm a food allergy diagnosis with a simple skin prick test—or, when reactions are too severe to risk direct exposure, by drawing blood

and exposing it to possible allergens. Those who are severely allergic should be under an allergist's care regardless, Flowers says.

For delayed reactions, a skin prick test or blood test doesn't detect the offending allergen; Ghishan and other researchers at the Steele Center are working to make a test available for the delayed reaction; it will be available in January 2007. Ghishan also examines the esophagus and gastrointestinal tract of patients directly for signs white blood cells are present. He, too, usually then relies on a food elimination diet, cutting out the most common allergens—which account for 89 percent of all childhood food allergies—and seeing whether symptoms improve.

Coping With Food Allergies

The most important part of treating a food allergy is, of course, to avoid the triggering food. Antihistamines, inhalers, and anti-itching creams can also reduce some symptoms. Those in danger of anaphylactic shock should carry an epinephrine autoinjector (commonly known as an EpiPen). EpiPens allow users to inject themselves with a dose of epinephrine, which can stop anaphylactic shock long enough to get medical help.

Avoiding foods can sometimes be tricky. "You have to read every label, because there could be a hidden ingredient," explains Joy Kettler Gurgevich, a behavioral nutritionist for Behavioral Medicine, Ltd. Sometimes, ingredients are listed under unfamiliar names—casseinate is a milk protein, for instance; albumen comes from egg whites. Caccavo adds that eating out is challenging, too, especially when she's "trying to figure out if I can trust a waiter, because a lot of them don't take it [food allergies] seriously."

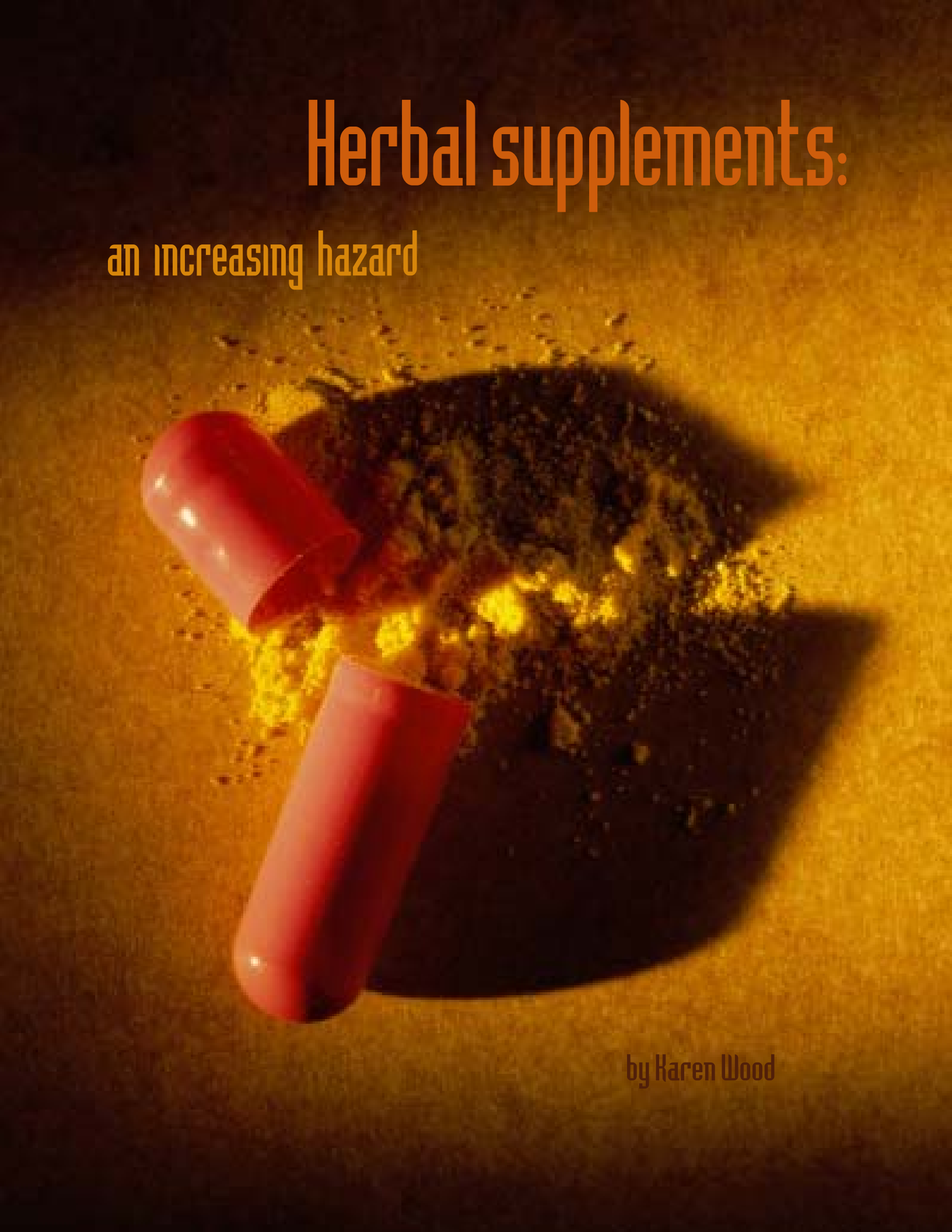
According to Gurgevich, making the effort to eliminate foods is worth it, even for mild allergies—not only because allergies can become more severe over time, but also because avoiding harmful foods frees the body up to better deal with other irritants and triggers—such as smog and pollen—which can't always be avoided.

Elizabeth Bennefeld, who is allergic to multiple foods and chemicals, agrees. After eliminating wheat from her diet, she says her reactions to artificial food dyes, and other substances also became less severe. She experienced other benefits, too. "I had violent mood swings starting in my mid-teens and ending when I eliminated wheat from my diet," Bennefeld says.

She adds, "If you have severe allergies, to avoid the allergens is to live a whole new life. And if you can avoid the major triggers, the body does a better job of coping with the ones you can't avoid." ❖

Herbal supplements:

an increasing hazard



by Karen Wood

It's herbal, it's natural, why worry? What could go wrong?

Chances are, you and lots of people you know are taking some sort of herbal product. Perhaps it's echinacea to protect you from catching something from your sneezy seatmate on the flight to Brussels. Or St. John's wort to ease a persistent blue mood. Maybe you take red rice yeast because you heard it's good for cholesterol and doesn't have side effects. Your cousin swears by aloe vera but you're not sure what he takes it for. It's herbal, it's natural, why worry? What could go wrong?

Troll through the Internet awhile and you might change your mind. Stay away from sites with misspelled words and amateurish graphics that are obviously trying to sell you something. Look at, say, the University of Michigan's Web site with its chart of "Selected Herb-Drug Interactions." Aloe vera, you read immediately, is a strong cathartic (purgative) that, when taken internally, can cause electrolyte imbalance (thanks to the liquid you'll be losing from all that purging, no doubt). Step away from that.

Or maybe you regularly pop a cranberry pill to ward off urinary tract infections. Don't try to cover all your bases by also taking something called bearberry. It basically cancels out the cranberry pills.

And should you suffer from impotence, here's yohimbe (also called yohimbine)—a kind of herbal Viagra. Studies show that it may be effective, but it's definitely not a do-it-yourself kind of remedy. On the mild end, it can cause agitation, upset stomach, and insomnia. On the serious side, dosing yourself with yohimbe can result in mania, kidney disorders, irregular heart beat, heart failure, and death. It interacts with caffeine (causing high blood pressure) and certain types of antidepressants and ephedra (causing low blood pressure).

Not online? If you happen to be in a book store, you might pick up a copy of Dr. Lane Johnson's book, *A Pocket Guide to Herbal Remedies*. Johnson, an MD, is a family physician and UA associate professor of clinical family and community medicine. He also has a master's degree in public health and a longtime interest in herbal products. His guide lists 185 of the most commonly used herbal remedies in an easy-to-read format: various names for the herb, what it's commonly used for, usual dosage, and any study results, contraindications, adverse reactions, and

medicine interactions. Sometimes, he includes a comment, such as "has significant potential toxicity and should not be used."

The guide is intended for physicians but is fairly easy for a lay person to understand. Johnson's entry on aloe says that it is used on burns, rashes, and wounds as a salve, and internally (which he does not recommend) for constipation. It's not a good idea if you are pregnant, breast-feeding, or have intestinal problems. Oh, and it can cause bowel obstruction. Also it might turn your urine red. All of these are things you might want to be aware of *before* you start taking it.

You can spend hours and hours looking things up on the Internet and if you're taking any herbal products, you probably should. That and talk to your doctor or pharmacist about everything you're taking. Especially if you're planning to have surgery—about one-third of the most commonly taken herbs can interfere with what doctors call the "clotting cascade," which means they could change the way your blood coagulates (read: possible stroke or hemorrhage). Take special care with herbs if you have a chronic medical condition like diabetes or heart disease.

Although you might not have all or even any of the listed adverse reactions, it's a complicated business, taking herbal remedies. And because you have most likely prescribed these herbs for yourself, independent of medical advice, knowing as much as you can is a good idea.

The basics about herbal products

Herbal products have exploded in popularity—just look at the hundreds of products in your grocery store or drug store. Use peaked in 1999, says Johnson, who estimates that some 15 million Americans use herbal products each year. Many of them also take traditional medicines for the same problems and, according to a Mayo Clinic study, 60 percent don't tell their doctors about their herbal use. A lot of people don't even know why they are taking a particular product.

The lure of a faster, cheaper, I-did-it-myself solution is a siren song for many, says Johnson. Plus, many physicians aren't knowledgeable about herbs or herb/drug interactions and may ridicule patients for taking herbs. "Most physicians say to their patients 'you're not taking any of that herbal crap are you?' and guess what, they're not," says Johnson.

some 15 million Americans use herbal products each year, and 60 percent don't tell their doctors

But even if your physician is open-minded, keeping current on the burgeoning number of herbal remedies is difficult for busy practitioners. Kevin Boesen, a Pharm.D. and certified specialist in poison information, recently fielded a call at the Arizona Poison and Drug Information Center from a woman who was taking an herbal compound called 5-HTP, in addition to an antidepressant. Her doctor hadn't heard of 5-HTP and suggested she call the poison center. The patient "had enough of a background to know that it would affect her serotonin levels," said Boesen. He told her that taking the two products together could indeed be dangerous and she stopped taking 5-HTP.

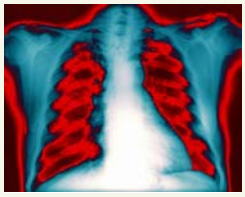
Basically, the dangers associated with taking herbal products come down to a lack of information, on several levels. Because they are considered supplements, herbs aren't regulated by the FDA for content, purity, dosage, or efficacy. That means you don't know exactly what is in the pill, what strength it is, whether it works, or whether it's contaminated. "I could come out with a product today and name it something, put all sorts of herbs in it that do nothing—basil, oregano—and put it into a capsule," says Dr. Frank LoVecchio, medical director of the Banner Good Samaritan Regional Poison Center in Phoenix. "The companies don't have to prove the drugs work," says Boesen. "They don't even have to prove they're safe. They don't even have to put the actual drug in the capsule that they say is in there. They just can't claim that their drug cures anything."

And whatever is inside the capsule might have been there awhile, too long to be effective

Health News Notes

Spicing Down Insulin

Can spicing up your meals bring down your diabetes risk? Healthy adults accustomed to non-spicy meals produced less insulin when their diets were spiced up with cayenne pepper, according to the *American Journal of Clinical Nutrition*. Excess insulin development can be a predictor of diabetes, a condition in which insulin either isn't produced or is no longer effective.

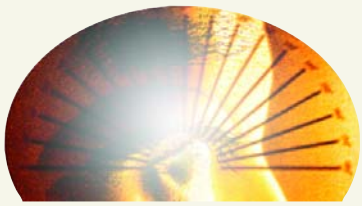


Fresher Air, Weaker Lungs

Could freshening our air hurt our lungs? Para-dichlorobenzene, a chemical used in air-freshening blocks and other household products, may be linked to slightly decreased lung function, according to the National Institute of Environmental Health Sciences.

Eye-Friendly Statins

Taking statins to lower your cholesterol? There may be another benefit as well—a lower chance of developing cataracts, according to the *Journal of the American Medical Association*.



Herbs are drugs, they work more slowly than traditional medicine, and they can potentially have side effects.

in any case. Johnson has found new expiration stickers pasted on top of old expiration stickers. Any herb that is more than two years past the day it was gathered from the field (unless it is a tincture) is too old to be helpful, he says.

So know that when you decide to take an herbal product, you're taking it on faith. There are two schools of thought on herbs, says Johnson, and not surprisingly, they're widely divergent. "On one side you have the people who firmly believe in this stuff and think everything works and nothing hurts. On the other side, there are folks who believe that everything has to be absolutely and totally scientific and always err on the side of nothing works and everything hurts." As a practicing primary care physician, he looks for a middle ground. "I look for resources that in my mind are fair and aren't just propaganda for one side or the other."

Herbs as medicine

"Anything that has the potential to alter the normal chemistry of the body is considered a drug," says Boesen. "If you're altering something in your body, you have the risk of having a side effect from it." Mild or serious, temporary or permanent—the chance is still there. Taking an herbal product might give you a stomach ache or it might destroy your kidneys.

To understand the differences between herbal and pharmaceutical products, Johnson tells his patients to think about it this way. "What we do for a living is we give people drugs that move their physiology along quickly. What herbalists do is give people drugs that move their physiology more slowly." Many medicines are derived from plants—look at digoxin (a cardiac drug) and aspirin—but pharmaceutical manufacturers isolate the specific chemical known to be therapeutic, and manipulate it so it stays in the body for a specific amount of time. In herbal products, you (theoretically, at least) get the plant itself.

A common belief is that herbs are safe because they're natural. "My saying is that I can give you a leaf of oleander and it will basically stop your heart," says Johnson. "Natural is not naturally safe." He laughs. "If natural is so good why do most people die of natural causes?"

That said, Johnson believes that herbs can be useful if people realize certain things: herbs are drugs, they work more slowly than traditional medicine, and they can potentially have side effects. "I have people who come in

Certain health problems increase your risk of dangerous reactions from herbal products

and say 'I don't believe in medicine and you need to use herbs and I've got asthma and I need to be better tomorrow.' And that's not going to happen."

Dr. Kate Worden, who often counsels her patients on herbal use, believes that herbal products have a place in medical treatment. "Anything can be potentially good or bad depending on how it's used. Everything we put in our body is potentially toxic and we depend on our body to detoxify everything we come in contact with." She, too, has had patients with adverse drug/herb interactions. One woman was taking kava kava, an herb supposed to help ease anxiety and insomnia, in addition to an antidepressant. "She slept for about a day," says Worden.

One of Johnson's patients narrowly avoided a bullet when he decided to substitute an herb called gugulipid for his cholesterol medicine. His cholesterol climbed and he subsequently suffered a heart attack, which fortunately was not fatal. Other patients decided to take St. John's wort instead of their prescribed medicine and became significantly more depressed.

The bad actors

In terms of herbs that harm, there are several categories: herbs that are harmful in themselves, those that are dangerous when mixed with other drugs, those that are dangerous before surgery, and those that—because of some quirk of body chemistry or pre-existing disease—are harmful to you but not necessarily to others.

Certain health problems increase your risk of dangerous reactions from herbal products, according to the American Family Physician Web site. These include high blood pressure, diabetes, heart disease, enlarged prostate, history of strokes, blood clotting problems, epilepsy, psychiatric problems, glaucoma, Parkinson's disease, or thyroid problems. If you have an autoimmune disease like lupus, rheumatoid arthritis, or multiple sclerosis, it might not be a good idea to take herbs (like echinacea) that stimulate the immune system. Your immune system is already malfunctioning—you don't want to rev it up—and the herb could counteract any immunosuppressive drugs you might be taking.

"Because most people self-treat with herbs, if someone has a complication or dies, how would we know?"

Here are some of the herbal remedies that experts think are the most dangerous:

- **aristolochia**—an ingredient frequently found in oriental medicines that can cause kidney failure. "People should not use it," says Johnson.
- **kava kava**—can cause liver failure. One of the top 10 most popular herbs, it's used for relaxation and generally thought to be harmless. Many physicians, says Johnson, don't know that it can be harmful to the liver. Because most people self-treat with herbs, "if someone has a complication or dies, how would we know?" he says.
- **ephedra** or **bitter orange** juiced up with caffeine, often found in over-the-counter weight-loss or performance-enhancing herbal products. Ephedra, also known as ma huang, was taken off the market for a while but is now back on the shelves, albeit at lower doses. It increases blood pressure and heart rate and is a major component of products that teenagers may take when going to underground music events called raves. It's especially dangerous, Johnson says, when used while lifting weights (which also raises blood pressure) or when dehydrated. "Young people are having strokes or heart attacks."
- **St. John's wort**—the drug enhances a part of the metabolic system that causes certain drugs to be excreted; most notably cyclosporine, some cardiac drugs, certain pulmonary drugs, and birth control pills. This is bad news if you've had a liver transplant and are taking anti-rejection drugs or are relying on birth control pills for contraception. It also should not be taken if you are taking other types of antidepressants because it may cause a potentially serious condition called serotonin syndrome.
- **drugs that affect blood coagulation**—include chamomile, garlic, ginkgo biloba, vitamin E, ginger, dong quai, feverfew, fish oil, ginseng, and St. John's wort. These should be discontinued two to three weeks before surgery and can be especially dangerous if you are also taking anti-coagulation medicines such as warfarin.

It's an individual thing

Although there are categories of drugs and illnesses that pop up more frequently in the bad outcome stories, reactions to any medication—whether herbal or prescription—vary widely. That's why the leaflet the pharmacy includes with every prescription you pick up includes many possible reactions, most of which will not happen to you. Herbal products may not come with those kinds of lists, so it's up to you to research them. You may be fine taking kava kava or St. John's wort, but it's best to know what can happen.

"Truly, a lot of times when people have a bad reaction, it's like a perfect storm," says Worden, "in that several events have to come together for there to be a problem." Some people are "genetically predisposed to have problems" whereas others are not affected. These individual differences, she says, will shape the way medicines are given in the future. That maxim extends to the use of herbal products.

"Herbs are a relatively safe alternative, but they're not for everybody," says Worden. Because herbs are gentler forms of medication, tailor their use to the occasion. "There are people who are more advanced in their disease process where it's not appropriate. Herbs and supplements work best when someone has mild problems and you're trying to be preventative. When they are more advanced in their disease process, then they need medicine." ❖

What you can do

• First, tell your doctor and pharmacist what you are taking. What they don't know can hurt you. Discontinue herbs before any surgery.

• Research any herbs you're considering adding to your daily regimen. There are lots of Web sites out there—stick with the ones run by the FDA or the National Institutes of Health, a university medical school, the Mayo Clinic, or medical sites like WebMD or American Family Physician. Be skeptical of sites that are trying to sell you something.

• Take the herb regularly and follow the dosing directions. More is not necessarily better and less may not have any effect. Remember that herbs work more slowly and are more easily excreted than pharmaceutical drugs.

• Use a reputable brand—look up its Web site and see if it looks credible. If you are getting good results from a particular herb, stick with the same manufacturer, says Boesen. Switching brands may change the amount and type of chemicals that are in the medication.

• Be aware that side effects are possible and pay attention to how your body reacts to the product. Tell your doctor whether it works or not.

Preventing Deep Vein Thrombosis

by Mark Flint

This summer, Cheryl Edwards rode her bicycle across the country. Cheryl, who lives near Portland, Ore., was riding for a purpose: raising awareness of Deep Vein Thrombosis (DVT) and funding for research.

If you don't know someone who has had it, chances are you haven't heard of DVT. It's why some health care organizations refer to it as a silent epidemic, even though it occurs in an estimated two million people in America each year, according to the American Heart Association.

The American Public Health Association (APHA) describes DVT as "a common but under-diagnosed medical condition that occurs when a thrombus (blood clot) forms in one of the large veins, usually in the lower limbs, leading to either partially or completely blocked circulation."

Complications can be life-threatening

DVT can lead to health complications, the most dangerous of which is a pulmonary embolism, or PE. This occurs when a fragment of a blood clot breaks loose from the wall of the vein and makes its way through the heart to the lungs, where it blocks a pulmonary artery or one of its branches. If the clot is large

enough to completely block one or more of the vessels that supply the lungs with blood, it can result in sudden death.

An estimated 200,000 to 600,000 Americans will have DVT and PE each year.

Cheryl, an active, athletic person in her 40s, was diagnosed with a PE in 2003. She said her doctors were "bewildered" by the embolism. She was treated, given anticoagulants for a few months and sent on her way. Two years later she was back in the hospital with another embolism.

After months of tests that ruled out cancer and other possible causes of clotting, such as a hole in her heart, she was diagnosed with DVT, and put on blood thinners, which she will take for the rest of her life.

In Cheryl's case, researchers determined that a massive infection from an improperly performed jaw surgery led to her blood changing to hyper coagulation.

Risk factors and treatment of DVT

Among the factors that may increase your risk for Deep Vein Thrombosis (DVT), the National Heart, Lung and Blood Institute lists the following:

- Having an inherited blood clotting disorder
- Having slowed blood flow — resulting from injury, surgery, or immobilization — in a deep vein
- Having cancer and undergoing treatment for it
- Having other medical conditions, such as varicose veins
- Sitting for a long period of time, for example, on a long trip in a car or on an airplane
- Pregnancy, especially the first 6 weeks after giving birth
- Being over age 60 (although deep vein thrombosis can occur in any age group)
- Being overweight
- Taking birth control pills or hormone therapy, including for postmenopausal symptoms
- Having a central venous catheter, which accounts for almost 1 in 10 cases

The institute notes that the risk for deep vein clots increases with the number of risk factors. For example, a woman with an inherited condition for clotting who also takes birth control pills has an even higher risk to have a blood clot.

DVT signs and symptoms

It is critical to see a doctor right away if you have symptoms of deep vein thrombosis or pulmonary embolism. Deep vein thrombosis can cause very serious complications if not treated.

Only about half of the people with deep vein thrombosis have symptoms. The symptoms may include:

- Swollen area of the leg
- Pain or tenderness in the leg (the pain is usually in one leg and may be felt only when standing or walking)
- Increased warmth in the area of the leg that is swollen or in pain
- Red or discolored skin

In researching her condition Cheryl learned that DVT and PE, collectively known as venous thromboembolism (VTE), take more lives each year in the United States (as many as 200,000, according to the APHA) than motor vehicle accidents (42,116), breast cancer (40,200) or AIDS (14,499).

Awareness of DVT is limited

Nearly three-quarters (74 percent) of adults have little or no awareness of DVT, according to a national survey conducted on behalf of the APHA. Of those who were aware of DVT, more than half were unable to name any common risk factors or pre-existing conditions that could lead to the development of DVT. Ninety-five percent of adults surveyed reported that their physician had never discussed DVT with them.

...people, particularly those who engage in sports that may involve occasional tumbling and trauma, such as martial arts, skiing and mountain biking, may trigger DVT.

The condition got some media 'buzz' when it was described as "economy (or coach) class syndrome," referring to people who developed clots after sitting for extended periods. However, this is only one possible cause of DVT, usually occurring in people with a history of cardiovascular disease, stroke or thrombotic episodes (blood clots).

A challenge to doctors

Budi Bahureksa, DO, a Tucson osteopathic physician with the Arizona Heart and Vascular Institute in Oro Valley, said the unknowns about DVT make diagnosis and treatment a challenge for doctors.

"The problem with DVT is that a lot is still unknown, as far as etiology and the triggers," he said. "We can only follow statistics and the studies that have been done."

Bahureksa noted that active people, particularly those who engage in sports that may involve occasional tumbling and trauma, such as martial arts, skiing and mountain biking, may trigger DVT. That's one possible

Risk factors and treatment of PE

Pulmonary Embolism symptoms

Some people find out that they have deep vein thrombosis only after they have a pulmonary embolism, which occurs when a clot travels to the lung. The symptoms may include chest pain when you take a deep breath and shortness of breath. If you experience these symptoms, seek immediate medical attention.

Medicines

Anticoagulants, also known as blood thinners, decrease the blood's ability to clot. They are used to stop clots from forming in people who are at risk for clots and to stop already formed clots from getting bigger. They do not break up blood clots that have already formed. The body itself dissolves most clots over time.

Anticoagulants can be taken as either a pill (warfarin) or an injection (heparin). Heparin acts quickly, and warfarin takes two to three days before it starts to work. A doctor may start a patient on both, and discontinue the heparin after the warfarin starts to work. Pregnant women can't take warfarin and are treated with heparin only.

Thrombolytics are medicines given to quickly dissolve a blood clot. They are used to treat large clots that cause severe symptoms. Because thrombolytics can cause sudden bleeding, they are used only in life-threatening situations.

Thrombin inhibitors are medicines that interfere with the clotting process. They are used to treat some types of clots and for patients who can't take heparin.

Other Treatments

Vena cava filters are used for patients who can't take medicines to thin their blood, or when patients continue to develop clots even after taking blood thinners. The filter is inserted inside a large vein called the vena cava, catching clots that break off in a vein before they move through the bloodstream to the lungs. The filter will not prevent development of new clots.

Graduated compression stockings can reduce the chronic swelling that can occur after a blood clot has developed in a leg. They are worn on the legs from the arch of the foot to just above or below the knee. Graduated compression stockings are tight at the ankle and become looser as they go up the leg. This causes a gentle compression up the leg, which keeps blood from pooling and clotting.

Wearing the stockings can be uncomfortable when worn all day, they can be hot, and they may be difficult to put on, especially for older adults and overweight people.

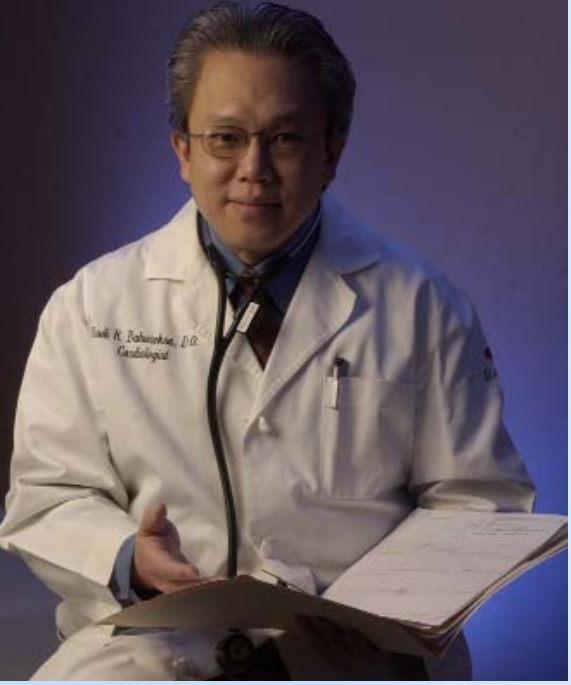
Health News Notes

Maintaining Memory

The ability to form memories naturally deteriorates with age—but one day, we may be able to reverse that deterioration, thanks to a class of proteins known as ampakines. In tests on aged rats, a specific ampakine restored lost memory-making abilities, according to the *Journal of Neurophysiology*. Other ampakines are currently being tested on humans with Alzheimer's disease.

Harmful Body Image

Can a poor body image do any harm? A study of 185 patients with body dysmorphic disorder—a psychiatric condition whose sufferers are unrealistically convinced of their own ugliness—revealed that more than half those patients had suicidal thoughts; nine of them attempted suicide and two were successful. That's not only a higher suicide rate than in the population at large, but also a higher rate than depressed patients, according to the *American Journal of Psychology*.

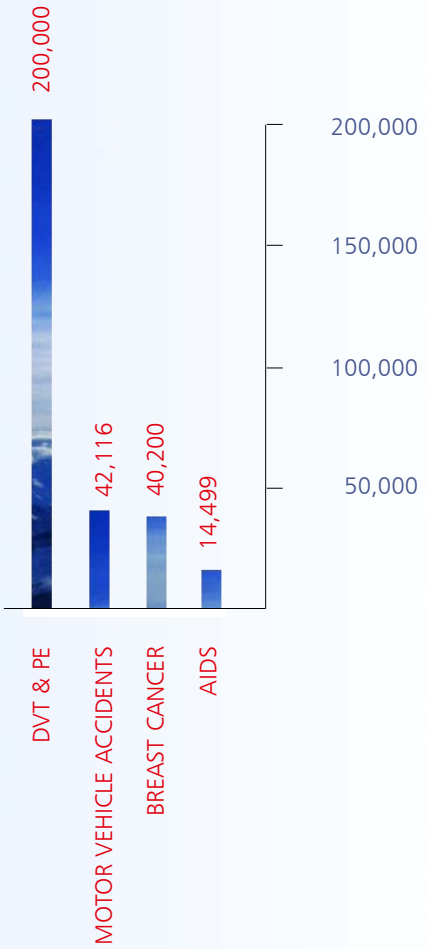


DAVID SANDERS

"The problem with DVT is that a lot is still unknown, as far as etiology and the triggers. We can only follow statistics and the studies that have been done."

—Budi Bahureksa, DO

Comparison of deaths by cause each year in the USA



reason for a patient of his, a young woman who had DVT and a PE, "and the only risk factor was taking a birth control pill," he said.

"We did a coagulation study to make sure nothing was making her blood easier to clot, and the tests came up negative," he said. The patient went off the birth control pills, but Bahureksa was not convinced it was safe to go off anticoagulation.

Two years later, the patient remains on anticoagulation drugs.

"My clinical suspicion is that people who are physically active may have a daily occurrence of physical trauma that they don't even think about, and these could form a trigger for a clot," he said. "A lack of fluid could set just enough response in the venous system to form a clot. This is just a theory, and very difficult to prove, but if all the other usual suspects are not there, clots don't form for no reason.

"My patient was a black diamond skier," he said, adding that she likely had falls from time to time, "and wouldn't recall most of them."

Treating DVT

For many patients, an anticoagulant, usually coumadin (warfarin) is the treatment of choice. However, some people who have problems with profuse spontaneous bleeding, such as nose bleeds, or who have ulcers, may be at serious risk from taking an anticoagulant.

In these cases, Bahureksa said, the doctor must decide which risk is highest.

In Cheryl's case, researchers determined that a massive infection from an improperly performed jaw surgery led to her blood changing to hyper coagulation.

The sporadic nature of DVT makes it harder to identify risk groups, Bahureksa said. "In younger people it doesn't occur as often. In older people it can relate to many scenarios, including post-surgery, malignancy, sedentary lifestyle and chronic venous insuffiency."

Bahureksa recommends maintaining healthy eating habits, staying hydrated and exercising regularly to reduce the risk of DVT.

"Those who have had some kind of clot and are not on anticoagulation should be on aspirin," he said. "Aspirin is an anti-platelet, making the formation of clots less likely. Even a baby aspirin a day will help."

Physicians, he added, "should find out all they can about known causes, use judgment and communicate with their patients." ❖

Hygiene 101

If you washed your hands today, you did so because of Ignaz Semmelweis.

by Janni Lee Simner

Never heard of him? Most people haven't, but this 19th-century physician was the first to insist that medical students wash their hands after handling dead cadavers and before tending to living patients. The practice was considered radical at the time, but it cut deaths at Semmelweis' hospital dramatically.

It was also the first step toward understanding how infectious diseases spread: through the transmission of microbes too small to see with the naked eye.

Most microbes—meaning most bacteria, viruses, fungi, and protozoans—are harmless; some even help with processes such as growing food, digesting meals, and removing carbon dioxide from the air. Only a relatively small number are to blame for spreading disease—or everything from mild infections and common colds to food poisoning, strep throat, the flu, and more.

Modern hygiene is, essentially, all about finding ways to avoid these harmful microbes.

Hand Washing: A First, Best Defense

As in Semmelweis' day, basic hygiene begins with basic hand washing—our first, best defense against harmful microbes, commonly known as germs.

Germs can be found many places, including within our own bodies. When we have a cold and cough or sneeze, we send harmful microbes out into the air, where they can infect people nearby who inhale them. According to the Centers for Disease Control (CDC), coughing and sneezing can also deposit germs onto surfaces such as tables, doorknobs, and desks, where they can survive for up to two hours—and where others can catch them by first touching those surfaces, then touching their own noses, eyes, or mouths. It's for this reason we cover our faces when we cough or sneeze—ideally with a tissue, but with a hand if necessary.

Health News Notes

Bacteria-Fighting Garlic

Want to cut down on food-borne bacteria? Try tossing in some garlic. Garlic extracts kill a wide range of bacteria, according to New Mexico State University researchers, who add that raw garlic packs a stronger punch than cooked garlic.

Obesity's Ups and Downs

Obese individuals are more likely to suffer from mood disorders such as depression—but also less likely to abuse drugs and alcohol, according to the *Archives of General Psychiatry*.

Bullying's Lingering Effects

Children bullied during their first couple years of school are more likely than their peers to be withdrawn, anxious, and depressed, according to *Pediatrics*. Bullying others in turn only makes things worse—children who were both bullies and victims had more problems than those who were only victims.

Washing laundry in hot water may help slow the spread of infection in general; using bleach may also help.

Yet germs can reach us and the surfaces we touch in other ways, too, especially when we work with raw, uncooked foods or come into contact with human or animal feces. We can't fully avoid meeting these microbes, but by washing our hands, we can at least remove them.

The National Institute of Allergy and Infectious Diseases (NIAID) recommends hand washing before preparing food, before eating food, after coughing or sneezing, after using the bathroom, and after changing diapers. The Mayo Clinic adds that we should also wash our hands before and after treating wounds or cuts, before and after touching anyone sick or injured, after touching animals or animal waste, after touching trash, and after preparing food (not just before). The Mayo Clinic also recommends teaching children hand washing early—and making sure day care providers encourage the habit as well.

Ordinary soap and water are generally enough to get hands clean, so long as one takes the time to scrub everywhere, including under the fingernails. Experts generally agree that fifteen seconds is long enough to wash—about the amount of time needed to sing "Row, Row Your Boat." Hand sanitizers have no effect on visible dirt, but they do kill microscopic bacteria and viruses; they're a good option when soap and water aren't available, so long as they're alcohol based.

Skip the antibacterial soaps, though. According to the Mayo Clinic, antibacterial soaps are no better at getting rid of germs than ordinary soap and water; it's the physical act of scrubbing with soap that actually loosens microbes and removes them from skin. Antibacterial soaps might even make microbes harder to get rid of in the future, by encouraging the spread of bacteria that are resistant to such soaps.

Coughing and sneezing can also deposit germs onto surfaces such as tables, doorknobs, and desks, where they can survive for up to two hours.

Dry Skin Dangers

There's a reason germs enter the body mostly through the nose, eyes, and mouth: our skin serves as a barrier against germs almost everywhere else. Healthy skin is intact skin, free from the nicks, cuts, scrapes, and rashes that can let microbes in, says the Association for Professionals in Infection Control and Epidemiology (APIC). Dry skin is particularly susceptible to such damage—and germs latch on to even intact dry skin more easily.

Dry skin is especially common in Tucson, though, where humidity drops into the single digits much of the year. The American Osteopathic College of Dermatology (AOCD) says the fight against dry skin begins in the wettest part of the house: the shower. The AOCD recommends sticking to lukewarm showers and baths, as hot water more readily dries the skin; keeping showers and baths down to about 15 minutes a day, because frequent bathing removes natural oils from the skin; and patting down with a towel afterwards, rather than rubbing vigorously.

Other things can help keep skin from drying out as well, including using oil-based moisturizers, applying sunscreen daily, avoiding harsh deodorant soaps, and drinking plenty of water.

Beyond the Bathroom

Good hygiene doesn't end with the bathroom or shower. The College of American Pathologists (CAP) says to also take care when preparing food, especially raw meat, poultry, and fish: wash counters, cutting boards, and utensils in hot soapy water between the steps of food preparation, and change hand and dish towels daily, laundering them in hot water.

Washing laundry in hot water may help slow the spread of infection in general, according to the National Institute of Nursing Research (NINR); using bleach may also help. The National Institute for Occupational Safety and Health (NIOSH) rates the danger of disease transmission through laundry lower, however, and deems cooler temperatures sufficient, so long as laundry chemicals designed for low-temperature washing are used.

In the end, it's unlikely we can ever completely avoid contact with harmful microbes, but we can lower the risk.

Thanks to Ignaz Semmelweis and those who came after him. ❖

PRACTICING TUCSON OSTEOPATHIC PHYSICIANS BY SPECIALTY

Information obtained from:
AOA Yearbook and Directory of Osteopathic Physicians and the *Arizona Board of Osteopathic Examiners in Medicine and Surgery—Directory of Licensed Osteopathic Physicians*

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Neil S. Freund, DO *
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Tedd M. Goldfinger, DO *

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Bridget T. Walsh, DO *

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Shawn Stevenson, DO

UROLOGICAL SURGERY
Kenneth M. Belkoff, DO

**Indicates that the physician is listed more than once under different specialties.*

The Tucson Osteopathic Medical Foundation's mission in serving the seven counties of southern Arizona is to advance osteopathic medical education, to improve the public's understanding of osteopathic medicine, and to elevate through education the health and well-being of the community. In so doing, the Foundation has established itself as an innovative contributor to the development of a wide range of community projects, which impact the lives of many.

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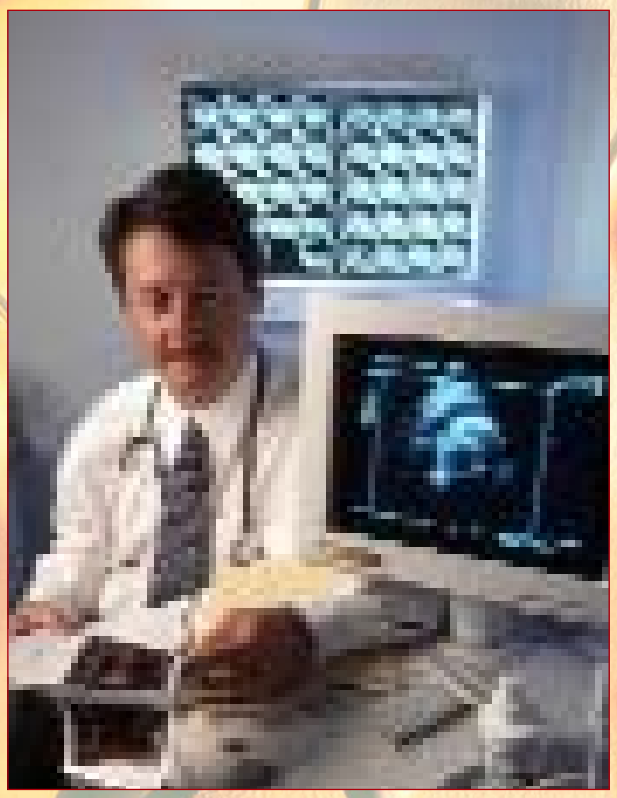

DAVID SANDERS

Jeffery A. Palen, DO, specializes in obstetrics and gynecology at Palen & Decker PC.

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