

It's alternative medicine, but is it holistic? Look beyond the standard labels and determine whether your health-care model is based on quick fixes or balanced lasting solutions. **By Timothy McCall, MD**

# The Language of Healing

Many practitioners of yoga feel a natural affinity for complementary and alternative medicine (CAM). For one thing, yoga and its sister science ayurveda often get lumped into this category, and our direct experience—along with an increasing amount of scientific research—tells us they work. But consider this: The distinction between CAM and conventional medicine is by and large an arbitrary one. Historical flukes, political maneuvering, and marketing considerations, as much as logic or evidence, have often determined what has been deemed mainstream medicine and what has been shunted to the world of alternative healing.

How else could you explain why aspirin, a drug originally derived from willow tree bark, is considered a conventional medical treatment for pain relief, while willow tree bark itself is alternative? In the same vein, some human hormones remain firmly in the mainstream, available only by prescription,



**THE BIG PICTURE** Holistic health integrates all aspects of your being and reveals that the sum is greater than its parts.



**Reductionism focuses on single nutrients; holism recommends whole foods.**

while others are readily available in the supplement aisle at Whole Foods. If a chiropractor manipulates your spine, that's CAM. If an osteopath does it, it's conventional. If a physician prescribes chelation therapy, which entails infusing a synthetic chemical into your veins, to treat lead poisoning, it's considered conventional. If the same therapy is used for heart disease, it's alternative. And sometimes treatments flip in and out of the mainstream. At one point, homeopathy was part of conventional medicine; now it's relegated to the fringe. And in recent years some conventional doctors have rescued leeches from the oblivion of quackery by using them for difficult cases of wound healing—with impressive results.

Many in the medical community reserve the term “conventional” for treatments that have scientific evidence behind them and classify those that don't as “alternative.” But that argument doesn't hold up to careful scrutiny. A recent randomized controlled study, for example, demonstrates yoga's effectiveness in treating chronic back pain, whereas some commonly performed back operations lack such proof. Indeed, many aspects of modern medical care aren't supported

by good science. So the distinction between conventional medicine and CAM doesn't really tell us all that much. A more important distinction—and it's one that never changes—lies between holism and reductionism.

#### **Holism vs. Reductionism**

As its name suggests, reductionism seeks to narrow the complex nature of a disease process down to one, or at most, a few elements that can be studied and then treated individually. For example, some types of pneumonia, scientists deduced, were caused by specific bacteria, which were then later targeted with particular antibiotics. Similarly, the modern treatment of heart disease has centered on cholesterol, and made cholesterol-lowering medication a cornerstone of its approach.

Holism, on the other hand, tries to improve the overall functioning of an organism to facilitate both treatment and prevention. This involves more than just fighting a specific cancer or some other discrete condition. Holistic practitioners look at your overall life—your diet, exercise, posture, stress levels, as well as emotional, psychological, and spiritual factors—and often employ multiple safe

approaches simultaneously. From a holistic perspective all aspects of the individual are interconnected, and working on any of them improves the function of the whole body.

Think of reductionism and holism in terms of gardening. The holistic gardener undertakes various efforts to make the plant and soil hardier so they can better resist insects and other invaders. The reductionist grower would simply apply pesticides. That said, holism includes reductionist tools, such as drugs and surgery, when necessary, but it always strives to place them in a broader healing context.

Although our culture often assumes that conventional medical treatments work better, holistic approaches can be far more effective in certain instances, particularly for chronic health conditions where behavioral changes make a world of difference. In Western culture, poor diet, exercise, and sleep habits, drug and alcohol abuse, and inability

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to deal with stress all play a major role in everything from diabetes to arthritis. We've known for years that holistic lifestyle modifications such as those found in Dr. Dean Ornish's program—which includes yoga, walking, and a low-fat, plant-based diet—can halt and even reverse already-established heart disease. In recent years, Dr. Ornish has extended the program to men with prostate cancer and achieved encouraging results. Even more impressive, a 2008 study found that the men following the Ornish program turned off many cancer-related genes, while simultaneously turning on hundreds of healthy ones. No reductionist therapy has ever been shown to do that.

In cases where the Western medical diagnosis is uncertain or wrong—a more common occurrence than you might think—modalities like yoga therapy, ayurveda, and traditional Chinese medicine (TCM) are decidedly more effective than conventional medicine. Because these holistic approaches look for certain systemic mind/body imbalances (e.g., chronic misalignments, ayurvedic

*doshas*, yin/yang) and have a variety of techniques to correct them, they can put you on the path to better health without knowing precisely what, from a Western medical standpoint, you are “fighting.” And because holistic therapies correct imbalances that can affect or cause a wide variety of ailments, they often prevent or ameliorate other problems beyond the condition that caused you to seek treatment in the first place.

Moreover, by embracing the spiritual in those patients willing to take this route, holism addresses levels of healing that conventional medicine never touches. Developing forgiveness and compassion—for yourself as well as others—letting go of anger, finding calm and acceptance, and living your life with a sense of purpose may defy scientific measurements, but holistic practitioners know these practices can have a profound effect on quality of life, as well as on health and healing.

Reductionism, paradoxically, acknowledges the healing power of the holistic approach by appropriating many

of its therapies, particularly the beneficial nature of herbs and other plants. But, of course, reductionism does this by isolating one component (the “active ingredient”) of an herb's numerous phytochemicals, concentrating it and creating a drug that doctors can apply therapeutically. This is how scientists developed the heart drug digoxin from foxglove, a plant that herbalists had been using for hundreds of years.

Because drugs have highly concentrated ingredients and many doctors prescribe them in high doses, pharmaceuticals typically produce quicker and more powerful results than their herbal counterparts. But the more powerful an intervention and the faster it acts, the more likely it is to cause worrisome side effects. If a physician wants to lower cholesterol enough to affect a broader process like heart disease, for example, he or she will need to make a huge change, perhaps lowering the LDL cholesterol level by 100 points within weeks. Accomplishing this calls for a pretty big hammer. And big hammers sometimes break things. >>

# reductionism HOLISM

VS

Reductionist Approach	Holistic Approach
Therapies usually rely on one major mechanism of action	Therapies rely on many simultaneous mechanisms of action
Faster in onset	Slower in onset
High-tech	Low-tech
Side effects usually negative	Side effects usually positive
Effectiveness tends to wane over time	Effectiveness tends to increase over time
Patient is typically the passive recipient of care	Patient is typically actively involved in care
Correct diagnosis is usually required to treat successfully	Diagnosis is helpful, but effective treatment is possible without it
Minor emphasis on prevention	Major emphasis on prevention
Health equated with the absence of symptoms, signs of disease, or abnormal lab tests	Health defined as a high level of physical, emotional, and spiritual well-being



FROM A HOLISTIC PERSPECTIVE, ALL ASPECTS OF THE INDIVIDUAL ARE INTERCONNECTED, AND WORKING ON ANY OF THEM IMPROVES THE FUNCTION OF THE WHOLE BODY.

A study in the *Journal of the American Medical Association* estimated that over 100,000 people die each year in the United States from the side effects of pharmaceuticals—more than from breast and prostate cancer combined. Reductionist tools almost always have multiple effects in the body, and virtually all of them (beyond the desired therapeutic effect) are negative. Worse, many side effects remain unknown, downplayed, or unreported at the time of the prescription, and that’s particularly true of newly developed treatments. Given the therapeutic efficacy of pharmaceuticals, certain situations call for big reductionist hammers. If you develop meningitis, for instance, you want antibiotics, not herbs; if you’ve been seriously injured in a car accident, take an ambulance to an emergency room, not to a wellness center. As the ancient Greek physician (and dyed-in-the-wool holist) Hippocrates put it: “Extreme remedies are appropriate for extreme diseases.” But doctors too often prescribe drugs or surgery reflexively when gentler measures, given time, might prove sufficient.

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## A Road Map for Holism

*The best holistic approaches tailor their therapies to the individual. Two people may share a diagnosis, but their psychological state, physical stamina, personal preferences, other medical conditions, and readiness to embrace holistic work may vary significantly. Consider the following seven factors when formulating your plan:*

**Get Diagnosed.** If you have a condition that could be related to cancer, a heart problem, or another serious malady, get a diagnosis from a conventional practitioner before going too far with alternative approaches. You don’t want to be using yoga for your back pain only to learn six months later that you have cancer in your spine. Once you are diagnosed, proceed with whatever combination of holistic and reductionist approaches makes sense to you.

**Make Diet a Cornerstone of Your Approach.** In most of the top killers in the modern world—heart disease, diabetes, and cancer—diet plays a crucial, and often underappreciated, role. Most doctors and many alternative reductionists focus on the specific nutrients found in food, rather than on whole foods. This approach can be misleading because it is the complex

combination of nutrients, not just individual ones, which likely confer the health benefits. The holistic approach is also the simpler one: Eat a wide variety of primarily plant-based foods, as fresh and as unprocessed as possible.

**Do Something Physical.** Our bodies are designed to move, and we pay a steep price, both physically and psychologically, for a sedentary lifestyle. Include activities such as yoga, tai chi, and aerobic exercise like walking and swimming in your daily routine. In addition, consider doing some kind of bodywork—from Roling to craniosacral therapy—both as preventive medicine and for relief from a wide variety of conditions.

**Deal with Stress.** More and more evidence links stress to heart attacks, high blood pressure, diabetes, immune system dysfunction, depression, and more. Yoga, in particular, pays

### Short-term vs. Long-term Results

One crucial difference between holistic and reductionist treatments develops over time. When you do something like yoga, its benefits accumulate, growing like a savings account with compound interest. In the first few weeks, you may feel more relaxed and have a bit more energy. Over the months, your posture may improve and you may withstand the stresses of day-to-day life a little better. After years of steady practice, yoga can transform your body, mind, and spirit.

Of course, to achieve good results with yoga, tai chi, or meditation, you have to make a commitment to practice. As my brother Ray puts it, “Your bulletproof vest only works if you wear it.” In general, holistic approaches take effort on our part, a commitment we’re not always willing to make, especially since our culture has conditioned us well to abdicate all personal responsibility and simply seek out a doctor when a problem arises. It can be a rude awakening to learn that doctors don’t always have good solutions, though this can often spur people to broaden their approach to health and healing.

Reductionist treatments may act fast, but they tend to become *less* effective over time—a downside that is rarely discussed. The pain pill stops working after a while, and you need a higher dose. Bacteria develop resistance to the once-powerful antibiotic, rendering it useless. After a few months on blood pressure medication, your readings start edging up, and the doctor needs to add a second drug. This phenomenon, known medically as tachyphylaxis (pronounced TACK-ee-fill-AX-iss), is widespread in the world of reductionism. A similar phenomenon can occur with surgery: After a number of years, the hip replacement wears out or the bypasses around blocked arteries in the heart get clogged. Drugs and surgery may come out of the gate faster than something like yoga or ayurveda, but a broad-based holistic approach can be the tortoise that wins the race to better health.

### Alternative Reductionism

Contrary to popular belief, pockets of holism do exist in conventional medicine. Good nursing is holistic. Doctors

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who spend time getting to know their patients, and who use that information to inform the care they prescribe, are practicing more holistically. Perhaps the best examples of holism within modern medicine are hospice and other forms of palliative care, which employ a wide variety of measures—from the physical to the spiritual—to relieve the suffering of those facing serious illness or death.

What may be even more surprising is that a high percentage of CAM practices rely on what I call “alternative reductionism,” treatments that target specific and isolated symptoms or issues. Megadose vitamins, bioidentical hormones, and a wide variety of dietary supplements—just like conventional drugs—contain a single chemical in high doses. These alternative “magic bullet” approaches are often safer than drugs (though sometimes less effective) and many are important additions to our therapeutic toolbox, so I’m not suggesting that you *never* use them. (continues on page 72)

enormous attention to the state of the body’s nervous system, and has powerful techniques to counter stress. Also key: Don’t shortchange sleep, vacations, or time with people you love. Your body, mind, and spirit need downtime in order to function optimally.

**Do Your Emotional/Spiritual Work.** Holism teaches us that the mind and body aren’t merely connected—they are two aspects of the same thing. Study your mind using meditation, psychotherapy, and/or journal writing. Cultivate compassion and forgiveness. Intentionally go against the grain of your habits (*samskaras* in Sanskrit) to affect change in the body and mind—a central tenet of yoga. Spiritual work is about doing stuff that’s hard. Yoga talks about *tapas*, the ardor or discipline that keeps you practicing even when you don’t feel like it. As your *tapas* grows through regular practice, it can spread to other areas of your life, including your health—making changes that once seemed impossible a reality.

**Use Holistic Systems, Not Just Remedies.** In general, you would be much better off consulting a good ayurvedic or

traditional Chinese medical practitioner and following his or her advice than self-prescribing an herb or patent medicine from these systems. These healers prescribe based on a sophisticated analysis of your current condition, not on the basis of your medical diagnosis or symptoms alone. A good practitioner may see things about you that you don’t see, or be aware of treatment options that you otherwise might not consider, and can help you personalize your approach.

**Add Reductionist Approaches with Care.** Don’t ask your doctor for a prescription or start taking a supplement just because you’ve heard something favorable about it. Always consider the source of information (and the possibility of hidden marketing influences on the message) and any scientific backing for the claims, and weigh the potential downsides. In evaluating research, keep in mind that many promising holistic therapies don’t have an industry to fund studies, or a terribly receptive research establishment. Even if therapies lack scientific proof that they work, as long as they are safe, you face little risk in trying them.

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But alternative reductionism may cause more problems than holistic measures. And just as with drugs, many of the side effects may not be apparent at the time of prescribing.

With most dietary supplements, as with any drug, you are trying to goose some natural body system in a desired direction without causing unwanted effects. But that's almost impossible with reductionist treatments, whether labeled as conventional or alternative, synthetic or all natural. Just because a chemical is natural or part of every cell in the body doesn't mean that it's not a drug when given in pharmacologic doses.

Most of us think that vitamins and the components of various healthy foods (lycopene in tomatoes or beta-carotene in carrots) are just as beneficial and free of serious side effects when we take them as dietary supplements in high doses. Those are big assumptions, and the bulk of the scientific evidence suggests that they are often wrong. In recent years, numerous studies—often to the great disappointment of the researchers—have concluded that certain vitamins, minerals, and nutrients found in foods known to confer health benefits don't necessarily have the same benefits when used as supplements. They do cause side effects, though, and in one instance the antioxidant vitamin E was found to increase the risk of lung cancer in smokers. Of course, sometimes, as appears to be the case with vitamin D, the benefits of taking megadose vitamins outweigh the risks. But be careful not to assume that all supplements necessarily provide benefits or that taking any amount of something “natural” is risk-free.

That same caution applies to the reductionist use of herbs. Consider ma huang (ephedra), which has been used safely for thousands of years in TCM—typically as part of herbal combinations. But concentrated in pill form, it created

headline news and was finally banned by the Food and Drug Administration (FDA) after dozens of deaths were reported. Instead of using it in the traditional manner, people were taking huge doses of the supplement to boost energy, enhance sports performance, or lose weight—and the side effects were sometimes dire.

Holists should care deeply about the boom in this type of alternative reductionism because it threatens to taint the reputation of many traditional holistic therapies unfairly. Conventional doctors complain that most CAM therapies are of unproven benefit and may be risky. But when you look carefully, almost all the serious side effects and reported deaths in CAM come from alternative reductionist approaches. Very few people suffer from doing ayurveda, TCM, gentle yoga, meditation, bodywork, or most other traditional and mind-body approaches. I'm not saying *no* harm, of course, but considering the tens of millions of people who have embraced these practices on a regular basis, we see a very low incidence of side effects.

## Taking a Holistic Approach to Your Health Care

Drug therapy dominates modern medicine, and increasingly varied forms of reductionism have begun to dominate CAM. Money, of course, is a driving force—there are billions to be made in the dietary supplement industry. But there are other factors: Doctors believe in reductionism, so this form of CAM is more familiar than traditional holism. And both doctors and the public like magic bullets. It's as if all of human health could be reduced to molecular chemistry. Used in isolation, such an approach ignores the breath. It ignores the mind. It ignores the role of posture. It ignores stress and its effects on the nervous system. It ignores the effects of love and community on health. And it even tends to ignore the synergistic effects of chemicals acting in combination—for better or worse.

Regardless of whether you choose to employ reductionist tools (and I *do* recommend them, just more selectively than most other physicians), they almost always should be complemented by a variety of holistic measures. Indeed, for long-term health and well-being, one could argue that holism should be the foundation of your health care and reductionist approaches the complement.

Better still, there is evidence that holistic treatments make conventional ones work better with fewer side effects. Yoga, for example, has been demonstrated in randomized controlled trials to reduce the nausea, fatigue, and depression so common with cancer chemotherapy. Holistic approaches often allow doctors to discontinue some drugs or lower the doses prescribed, reducing side effects and saving money.

Giving folks a pill for every ill, whether conventional drug therapy or alternative reductionism, assumes that people can't be motivated to do much of anything for themselves. It's faster for a doctor to hand you a prescription or sell you a supplement than to explain dietary, exercise, or stress-reduction practices. And remember: Taking 27 different supplements and vitamins does not equal holism. It equals a truckload of reductionism.

Once again, health care reform has dominated the news this year. But if we want fundamental reform, I think we must do more than just change who gets covered or how we pay for it. And even integrating more CAM into conventional health care won't be sufficient if that merely opens the floodgates to alternative reductionism. Real reform will happen when all health care incorporates a holistic sensibility. That won't mean abandoning reductionist approaches—they are vital tools in our efforts to fight disease and relieve suffering. But when we use these approaches in a balanced way, within the framework of holism, our health care will both cost less and foster greater well-being. Now that's a prescription for lasting change. ■

