



MARK HYMAN, MD

PRACTICING MEDICINE FOR THE FUTURE

Interview by Karolyn A. Gazella • Photography by Derek Goodwin

*Mark Hyman, MD, is co-medical director at Canyon Ranch in Lenox, Mass, an internationally acclaimed health resort. His practice at Canyon Ranch is affiliated with Harvard University's Brigham and Women's Hospital. He graduated from Cornell University with a Bachelor's degree in Asian Studies and Magna Cum Laude in Medicine from the University of Ottawa in Canada. He completed his postgraduate training at the University of California at San Francisco and is Board Certified in Family Medicine. Dr. Hyman has worked as a rural family physician, was the medical director for development and planning of an international medical center in Beijing, China, helped develop medical centers for expatriates in Asia, and has worked in an inner city emergency room. He is the author of *The Detox Box: A program for greater health and vitality* and the co-author of the *New York Times* best seller, *Ultraprevention: The Six-Week Plan That Will Make You Healthy For Life*. Dr. Hyman is also the Editor in Chief of *Alternative Therapies in Health and Medicine*.*

Alternative Therapies recently interviewed Hyman at his office at Canyon Ranch in the Berkshires.

Alternative Therapies: Why did you become a doctor?

Dr. Hyman: It was an evolutionary process for me. I initially wanted to be a writer. In college, as fate would have it, I ended up at a table with a group of students taking a course on Asian studies, particularly Asian religions. The professor, a Parisian Zen Buddhist, sounded intriguing. I took the course and it changed my life. I majored in Asian studies, particularly Chinese and Tibetan Buddhism. One of my professors was Raoul Birnbaum, author of the book *The Healing Buddha*, which is about the medicinal aspects of Buddhism. I began to discover the second layer of Buddhism: the healing of the mind. This addresses the therapeutics and phenomenology of the mind. Religion and medicine and spirituality are interwoven. I became fascinated with that whole phenomenon. Over

Shown here at his office in Canyon Ranch in the Berkshires, MA, Mark Hyman, MD, works within a framework of "New Medicine,"—a model of health, not illness.

time, through my study of Buddhism, I became increasingly more interested in healing. I thought that Buddhism was the ultimate healing art. I studied the Chinese language and the theoretical aspects of Chinese medicine, Tibetan Buddhism, and Tibetan medicine. On a personal level, I became interested in yoga. At one point, I was contemplating going to China to study Chinese medicine. I could both read and write Chinese. I realized, however, that I didn't want to spend my 20s living in a fascist dictatorship. I considered medical school, but it was really an after thought.

After I graduated from college, I went on a four-day hike by myself in the Shenandoah mountains to think about what I really wanted to do. Medical school seemed a noble path, and I thought to myself, I could always quit if I didn't like it—but I did like it. I had taken classes at Cornell on nutrition and studied diet. I read a book called *Nutrition Against Disease*, by Roger Williams, who is the father of individualized vitamin therapy and genotropic disease. I embraced the idea that we all have unique variations in our genes and biochemistry that can be used to help us facilitate healing through the use of nutrition and nutritional therapies. In my mind, I connected lifestyle, nutrition, and spirituality as core components of disease. Those thoughts and concepts were moving around in this big caldron, and that's what pushed me towards studying medicine. It helped that I was a vegetarian and already had an overall interest in herbs, yoga, spirituality, and healing. I was very involved and interested in the concept of integrative medicine.

However, as I got further into medical school, I basically got brainwashed. I went in knowing that I was going to be brainwashed, and had my guard up, but I was still brainwashed. Because the enormity of "swallowing" medicine as it was given to me, I put aside any predisposed direction towards integrative medicine. It was somewhat of a conscious decision because I could not yet reconcile both worlds simultaneously. Now I can. Now I've found they really are the same world. The science of medicine has become the science of systems, interconnections,

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webs, and information networks that create health. They're all involved in the healing process. I don't think it was really understood 20 years ago when I was in medical school.

I did my residency in family medicine in California in a very open family practice. Family practice is a "systems" type of medicine, encompassing the whole person and encourages thinking in systems: the family and biological systems that support the bio/psycho/social model of health. Then I went to practice in a rural town in Idaho as a family doctor and did everything. That was a wonderful experience, and I really learned how to practice medicine from soup to nuts—delivering babies, running the emergency room, caring for nursing

home patients, and helping my patients die at home surrounded by those they loved. After working really hard, I took some time off to go to China for a year. Upon returning from China, I realized I wanted to get back into integrative medicine. At the time, I was having some personal health issues. A friend from Cornell asked me to attend a nutrition course in California. It was quite an amazing experience. That course helped me clarify that this is how I wanted to practice medicine. Within a

month after completing the course, I was hired as the co-medical director at Canyon Ranch. Within three months of getting the job, I got sick with chronic fatigue. I didn't even know what it was at first. I discovered that my illness was a result of toxin overload and my inability to metabolize excess toxins. In China I was exposed to a lot of coal fumes and coal is full of mercury; I grew up on tuna fish; and I got severe food poisoning on vacation. I had horrible digestive problems, food allergies, muscle cramps, severe fatigue, brain fog, and insomnia. My whole system collapsed. At the same time I was being introduced to a new form of medicine through a nutritionist at Canyon Ranch who was exploring functional medicine and Jeffrey Bland's work. Jeff has been an important funnel for a lot of this work and has been able to crystallize many of these concepts.

The process of transformation for me was 1) being sick and having to get myself well and 2) discovering this new world of scientific medicine that nobody in conventional medicine was paying attention to. I used functional medicine concepts to get better. I realized that there were only a handful of people

who were exploring this new form of medicine, so I began interacting with that group. I was able to explore this system not only from an academic point of view, but also to experience it personally. I could clearly see the role of lifestyle, stress, diet, toxins, digestive function, and food allergy. I discovered a whole new world. This has been an amazing experience personally, professionally, and intellectually. I had become disenchanted with medicine since my work in the ER. I realized then that we're not helping people. Our patients at Canyon Ranch provide us with a living laboratory of people who are motivated, committed, and interested to do everything to get better. I have the resources to explore all kinds of testing, evaluations, and

other services that would not be possible in the real world of conventional medicine.

AT: When you refer to "new medicine," are you speaking of functional medicine, Canyon Ranch medicine, integrative medicine, complementary and alternative medicine (CAM), or a combination of these styles?

Dr. Hyman: Well, those are all really labels to describe the same thing. It's like the story of the five blind men and the elephant.

Each of them touched a different part of the elephant, and, therefore, described the object differently. In fact, they were all touching the same thing even though they were "looking at" different aspects of the elephant such as the trunk, the tusk, or the body. New medicine is a model of health, not illness. It is based on asking a different set of questions: What is health? How do we define it? How do we measure it? And, how do we help people create it? Our present system focuses on how we name and define diseases and treat illnesses. The new medicine is a very different approach.

During my exploration, I read *Consilience: The unity of knowledge*, by Edward O. Wilson. It describes his philosophy regarding the interconnectedness of all disciplines from the physical sciences, to the biological sciences, to the social sciences. He describes the fundamental unifying concepts and organizing principles that help us understand life. These themes and concepts are present in every one of these disciplines. Medicine, however, has really been adrift without a compass for a long time. What I realized is that medicine is not the sacred body of knowledge I had previously thought. It is merely a collection of data points that

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have no relation to one another and are really meaningless memorization. Nothing fits anywhere and there is no framework. The knowledge is present, but understanding is missing. There is no matrix or lattice structure to organize our observations in basic and clinical science. After reading that book, I realized this is what's going on in medicine right now.

Now, we see that there are these organizing themes and concepts emerging illuminating medicine in a clearly different way, providing a different framework for thinking about health and illness. The framework is inclusive of functional medicine, integrative medicine, mind/body medicine, and traditional (medicines like) Ayurveda, homeopathy, Traditional Chinese Medicine, and energy medicine. They are all part of this new framework of thinking. There are different places to push on that system to help create healing. You can help create healing through falling in love or help the biological system shift by detoxifying someone from mercury or providing a certain kind of diet or treating somebody with antioxidants. There are different tools as a part of the system, but the tools are used in the

context of this new organizing framework about how we get sick, and how we can stay healthy. This is really about the science of health. One of the most exciting developments in medicine right now is the creation of the National Institutes of Health (NIH) Roadmap: Building blocks & pathways presented by the new NIH director. There are basic operational components of the body we need to understand in order to sustain and create health. There are a lot of different ways to support and enhance those components but we also need to understand them from a scientific point of view. That's where there is a crossover between conventional and integrative medicine. That's where all the boundaries start to blur because we are all talking about the same thing.

AT: Is that the goal, to have the boundaries blur?

Dr. Hyman: Yes, and the boundaries are definitely blurring. I know this because my colleagues at Harvard Brigham and Women's from the highest level all the way down are completely passionate and committed to advancing this model. In fact, Peter Libby, Chief of Cardiovascular Medicine at Harvard, has just been given a grant to study inflammation in heart disease. He recently told me he is putting on a conference on nutrition,

genomics, and inflammation. This conference looks at how we modify our genes and inflammation through nutrition. This is a radical concept, but it is the future of medicine. This is a field known as nutrigenomics, which is the ability to modify gene expression through the types of foods we eat—to turn on or off the genes that turn on or off different messages that lead to disease or help create health.

AT: Does this involve only the study of foods?

Dr. Hyman: No, anything we do basically talks to your genes—what we eat, think, or feel, exercise, stress, toxins in our environment—all of these

influence our genetics. The whole purpose of the double-blind, randomized trial tries to make everyone the same, but everyone is not the same. There are different gene expression profiles or fingerprints of different conditions. Understanding how the same disease is different in different people is going to be the key to unlocking individualized, more successful treatments and therapies. Roger Williams will be shown to be a brilliant

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visionary on this concept of biochemical and genetic individuality and applying therapies to match our genetic profile. We do that now on a limited basis. For example, there is a gene that regulates folate metabolism that helps control homocysteine levels, which when elevated can lead to heart disease, cancer, and dementia. By providing a special form of activated folate we can overcome this genetic impairment. People who have a problem with detoxification may have a glutathione S transferase polymorphism, which is the major detoxifying enzyme and antioxidant that helps prevent toxin overload. I was unable to regenerate this molecule, which led to high levels of mercury in my system. The key final pathway protecting us from oxidative stress, which is the key cause of most illnesses, is the glutathione pathway. We see this over and over again in many chronic diseases. Addressing individualized gene expression at the patient level becomes critical.

AT: In your medical career, you've had quite a diverse patient population—in China, in the emergency room, in family practice, with the indigent population in California, and now with the higher income guests of the Canyon Ranch. Have these different populations influenced how you practice medicine, and have you learned significant lessons from each group?

Dr. Hyman: Yes, having experience with these diverse populations has had a big impact on me. Witnessing the health effects of different backgrounds, ethnicity, lifestyle, and genetics has been important. The most profound lessons came when I worked in the ER. I have always been interested in prevention. My family practice was focused on preventive medicine from a very conventional point of view, which was early detection—mammograms, PAP's, colonoscopies. This is not true prevention because it does not address the lifestyle aspects of illness. When I worked in the ER, I would play a mental game attempting to reconstruct the events that brought the person to the ER at that moment. What lifestyle did they lead that could have created this disaster? It was a very interesting exercise. I began to realize I was basically standing at the edge of a cliff, rescuing people before they fell into this abyss of severe consequences or even death. I also realized that this is where conventional medicine really excels—at rescue medicine. What interested me more than rescuing people at the edge of a cliff, discovering how to help people earlier on in the spectrum of illness.

We need to practice “upstream medicine,” which is simply walking upstream from the problem finding where it started discovering the true causes. I think that concept fundamentally shifted my consciousness as I asked the question “why?” This question was really discouraged in medical school. In medical school everything is simply black and white—this is what the science is, memorize these facts, learn how to properly diagnose, memorize the treatment, and that's it. It was cookbook medicine. There were a lot of facts to remember and a lot of things in the recipe, but that was it. I have always been able to think creatively and discern the important aspects from the unimportant. When I began to ask in medical school, “What causes this illness,” the response was, “We don't know, just diagnose it and treat it.” I thought it was bizarre that the cause was never really discussed. The idea that lifestyle could have something to do with illness was just not a part of the discussion either. Asking the question “why?” was a part of my nature but it was further enhanced during my time in the ER. The foundation of my work is to ask “why?” It is the basis of this new model of medicine. It is an attempt to pinpoint the concepts describing the why of illness, not just the what. We see the same picture but with a different lens. This gives us a whole new set of data points to consider. For example, I had a patient on 15 different medications when he first came into my office. During the initial visit, when I asked how he was doing, he said he was great. I told him I was surprised to hear that because he was taking all of these medications for a variety of conditions including asthma, colitis, high blood pressure, alopecia, and he was over weight, which also put him at risk for heart disease. He was seeing five different specialists. At the initial consult, I recognized he had several inflammatory conditions. They were not different diseases needing different treatments, but rather different manifestations of the same condition requiring the same treatment. I discovered he had celiac disease, which has been shown to cause all his diagnosed conditions. We changed his diet, eliminated gluten, and within six months his asthma was gone, his blood pressure came

down, he lost 25 pounds, his hair is growing back, and he is off most of his medications. I saw the same diseases and symptoms as his conventional doctors, but asked a different set of questions, leading with “why?”

I don't really even think in terms of diseases any more. I categorize symptoms into concepts that help guide my thinking. Medicine doesn't really have any of those concepts or that creative thought process. It's my goal to help create the necessary shift. The goal of the NIH Roadmap is to help us understand those pathways, building blocks, and connections, as well as identify the organizing concepts surrounding health. These can include malnutrition, inflammation, impaired metabolism, impaired detoxification, oxidative stress, and more. This is a work in progress. This is what has guided us at Canyon Ranch and provided us with such impressive clinical outcomes.

AT: How does your practice at Canyon Ranch differ from your previous conventional medical practices?

Dr. Hyman: I would say the biggest difference is the time I spend with my patients. The amount of time I can spend with my patients has been an incredible gift. The biggest therapeutic tool I have is time spent with patients. The average amount of time a conventional doctor spends with a patient is only six



minutes. That can be a very frustrating experience for patients. On average, I spend nearly an hour with a patient and sometimes even more time than that. Here at Canyon Ranch we try to give people the tools to live a healthy life. From a medical standpoint, that includes helping them understand their internal milieu, individual biochemistry, and how the body works. We then want to give them practical tools they can use to take care of themselves. I want to help solve their problems so they don't need me anymore. A doctor can spend six minutes four times a year with a patient simply renewing a prescription or spend 30 minutes once a year really understanding the patient's complete health picture. The gift of time creates a powerful therapeutic encounter.

AT: Is it realistic to think that time spent with patients is going to increase?

Dr. Hyman: Canyon Ranch is certainly an exception. People come here who can afford it. They can get a comprehensive educational experience. This has really become more of an educational institute. And, that's the new model of healthcare: a focus on education. Healthcare is not a hospital or doctor's office. It has to be a different model of delivering healthcare, a model that focuses on education. Healthcare facilities, includ-

ing the doctor's office, need to be considered educational institutions. So, when a patient visits a health clinic there should be a cooking class, movement exercise, or educational seminars on mind/body. Herbert Benson, Jon Kabat-Zin, and Dean Ornish have created examples of that model. That's the shift that needs to take place, where one doctor can talk to 20 or more people versus simply spending a quick six minutes with each patient.

AT: Is that model getting more recognition through your affiliations, collaborations, and continuing medical education (CME) programs?

Dr. Hyman: In general, the health resorts are one way to continue to enhance the model. These are healing resorts, not fluff and puff spas. Visitors can get high quality medical care. That fans out as visitors spread the word. We also have partnerships with Harvard Medical School and Brigham and Women's Hospital where we do staff exchanges. Their physicians come to Canyon Ranch to teach and to learn, and we send our physicians to their programs to teach and to learn. Just recently, we brought in leading experts in the areas of insulin resistance and innovative researcher on Alzheimer's disease. We use Brigham and Women's Hospital as a referral source for some of our patients. We have worked closely with David Eisenberg and his



staff at Harvard. We are also working on research projects together to effectively utilize our living laboratory here at Canyon Ranch. We want to help create an integrative research model in healthcare. This is getting a great deal of support. This collaboration and exchange helps us communicate these ideas to a wider circle. In addition, the University of Arizona has an affiliation with Canyon Ranch in Tucson, AZ and provides CME courses and accreditation. We are working with the Joslin Diabetes Center and we've created cancer risk assessments in partnership with the Harvard School of Public Health. We have many of these collaborations in progress.

For a long time we focused on building these relationships in an effort to not only expand our message, but also help our staff be truly cutting edge. As a result, we have some of the world's experts in lifestyle medicine practicing here at Canyon Ranch. That's why these organizations reach out to us. We provide comprehensive tools. To just tell someone to exercise more and eat better is not really effective. We have to show them how and teach them how so they understand how to shop, how to cook, how to exercise, how to deal with stress in a new way. We give them the visceral experience to see what it's like to feel

good, which captures their attention and motivates them. What's exciting is that these organizations like Harvard and Tufts are hungry for the information, they really want it. We have not really been chasing them; they have reached out to us. There is a sincere interest to in collaborating about this new way to practice medicine. They respect the research. I didn't create the research—I am not a research scientist—I am a practicing physician using the research. A lot of the work on inflammation has come out of Brigham and that is one of our key partners. I'm merely taking their work and applying it. I take the science and use it to practice medicine. I'm exploring the edges of this new world of medicine. I don't presume to say we have all the answers and we know everything, but I think it is important we begin to ask the right questions. For example, we understand that the best option for inflammation is not necessarily to take aspirin. We understand there is an inflammatory lifestyle that must be addressed.

AT: Are there plans for Canyon Ranch to do research?

Dr. Hyman: Yes, absolutely. We have not only talked about it, we are working on it and we are developing those types of collaborations. Although still in its infancy, we have the Canyon Ranch Institute. The goal of this division is to create an area of research and education that further expands the concepts and methods we have been honing over the past 25 years in the area of lifestyle medicine. There is a desire to create research projects out of that work.

AT: Will you have the same problem other CAM researchers have had because the present conventional medical research model is so single treatment focused?

Dr. Hyman: I have been communicating with David Eisenberg about this very issue. It has been a problem. You can't tell people to just eat broccoli and expect them to get better. Even though broccoli has a lot of benefits, that's just not how health and healing works. It's not like a drug where you can have a single action and a single effect. I think there is a new way of thinking about integrative medicine research methodology that allows us to get out of that old randomized controlled trial box.

We need to look at a systems approach and focus on research outcomes. We can have a control group that gets the typical conventional care and have a group that gets the integrative care. We will see not only that this approach is medically effective but also cost effective. The people who are in this field at the research level totally understand this and are very sophisticated about approaching this problem and improving the research model involving integrative medicine.

AT: What can the average practitioner do to help move the field forward?

Dr. Hyman: There are many important areas to focus on. Most of us who practice have a tendency to get bottled up in our own offices and practice one-on-one medicine. One of the pillars of change is to have more healthcare professionals engage in this new medicine so we can cause a chain reaction. Patients who get

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better will tell others. By practicing this new type of medicine, practitioners will create change. They will see the positive effects in their patients, feel more empowered in their work, and become impassioned to deliver the message not only in their offices but also in their communities. I would suggest practitioners offer community lectures and get involved in educational initiatives. They can talk to the local fitness centers and other community businesses and groups. We need to offer information and be a part of the community. For example, practitioners can offer to write articles for the local newspaper or become a resource for the local television station. Talking to local political leaders is also critical. It has astounded me how little information our political leaders have. They are really operating at a deficit. One of the biggest problems I see is that there is no powerful lobby for scientists promoting scientific research and its application to public health policy. This is a huge problem.

AT: When can we expect to see this shift in medicine advance more significantly?

Dr. Hyman: Well, I'm working on different levels to try and impact the change as quickly as possible. Along with other people in the field of integrative medicine, I am working with the government, the surgeon general, senators, academic institutions, consumers, and teaching professionals, to try and create the energy to encourage the shift. We don't really know when it will happen, but I can say sooner rather than later. Change at the government level is very important. My testimony to the White House Commission emphasized the need for this shift, the need for a healthcare system focused on health promotion, health education, and an understanding of how the body works. We can then use that knowledge to create programming around particular public health education initiatives. We need to change the nutritional policies at the US Department of Agriculture. My testimony also discussed obstacles to making the necessary changes. There is no question that the food industry is a huge force that needs to be dealt with. The food industry spends \$35 billion a year on advertising and our government spends \$300 million on health education. The good news is, when I speak to people who are pinnacle in academic medicine and scientific research, I am encouraged. There is an eagerness to create this new medicine.

AT: You seem to have a very hopeful view of this shift taking place and the future of medicine.

Dr. Hyman: Absolutely. This is such a huge transformation in medicine. It's like an earthquake below the surface. People are

not noticing it, but there are huge cracks that are opening up in medicine right now. The cracks are letting in critical rays of light that are going to completely illuminate a whole new field of medicine. This earthquake is occurring because of the multiple fault lines in our healthcare system. The first fault line is the completely disgruntled healthcare consumer. The second fault line is the disenfranchised, disillusioned physician. Doctors are frustrated because managed care has taken away their autonomy and their ability to make decisions. There is this need to see more patients as they get less reimbursement. The control of their practice is completely in the hands of insurance companies. My wife is an orthopedic surgeon, and she has said that she can't even schedule surgery on a day that is good for her patients because the

insurance company has to be brought into the equation.

The next fault line is that our healthcare system is a broken model. It delivers healthcare for chronic problems that is better applied to acute illnesses. The consequences are extremely disastrous. We spend \$1.6 trillion in healthcare and we are 12th out of 13 industrialized nations in 16 major health indicators. We are 27th in life expectancy and Cuba is 28th. We spend over \$5,000 per person annually on healthcare they spend \$186.

Not only do we spend a lot and get very little, healthcare itself has become dangerous. Our healthcare system is the number one cause of death in this country. There are more than 750,000 deaths every year from our healthcare system. So we have a healthcare system that is costly and ineffective with both patients and doctors unhappy. And yet, at the same time, it's like a Phoenix rising from the ashes. There is a scientific model surfacing in many academic institutions that makes more sense. It is being crystallized into an entirely new way of viewing our healthcare system. The NIH Roadmap is the beginning of the institutionalization of that phenomenon. The Consortium of Academic Medical Centers for Integrative Medicine (CAMCIM), a collaboration of 23 medical schools with programs in integrative medicine, is also leading the way in education, research and clinical integrative medicine.

The scientific community is now admitting that the old medical model does not work. The body is not constructed in specialties. It is a complex web of immune function, nutritional status, molecular, energetic, and genomic functioning. We have to understand the function before we can use the tools. The tools have secondary importance as long as we are successful at creating balance and enhancing health. This new medicine is a unified theory of health applying a comprehensive mix of tools to facilitate the healing response. It's very exciting. Right now, this is the fastest growing and most exciting field in medicine.

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