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Fetzer Institute

Health, Mind, Body, Spirit

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HEALTH:



MIND



BODY



SPIRIT

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ADVANCES

Vol. 7, No. 3

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A publication of the Fetzer Institute

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CAN YOUR MIND HEAL YOUR BODY?

No one would deny that the mind can affect the body's health. The ancient Greeks knew it. So did Sir William Osler, the great 19th-century physician who was the father of modern medicine. ("The care of tuberculosis," said Osler, "depends more on what the patient has in his head than what he has in his chest.") In our own century, too, physicians have been intrigued by the mind/body connection, and have explored it under the rubric of "psychosomatic" medicine. But this venerable tradition has coexisted with a much more questionable one: a tradition of self-styled healers, some true believers and some outright charlatans, who have proclaimed that the mind has an almost miraculous power to cure disease.

Recently, physicians have developed a new interest in the mind's role in health—and so have the entrepreneurs. Ads for books and tapes promise that these products can "Trigger Your Body's Own Natural Immunities! For 21 Days Absolutely Free!" or claim that "Control of the Immune System Comes Into Your Hands!" One best-selling author now offers a tape of "Meditations for Enhancing Your Immune System."

Even worse is the dark side to these optimistic claims: If good thoughts can make you well, the logic goes, then bad thoughts might kill you. Several popular writers have

implied that people become ill because of their emotional problems, or even because they have "wished" themselves to be sick. This blame-the-victim philosophy has been particularly common—and particularly destructive—when it comes to cancer. One book of self-help tips for healing claims that cancer comes from "deep hurt. . . resentment [and] carrying hatreds." And some healers tell patients to ask themselves, "Why did I need this cancer?" as a standard exercise—one that can easily turn into an exercise in guilt.

In fact, the mind is neither a miracle cure nor a lethal weapon. There is no good evidence that any kind of

emotional distress predisposes people to cancer. And conversely, there is no evidence that meditating or listening to a special audio tape will make a tumor go away. Such claims are little more than wishful thinking about positive thinking.

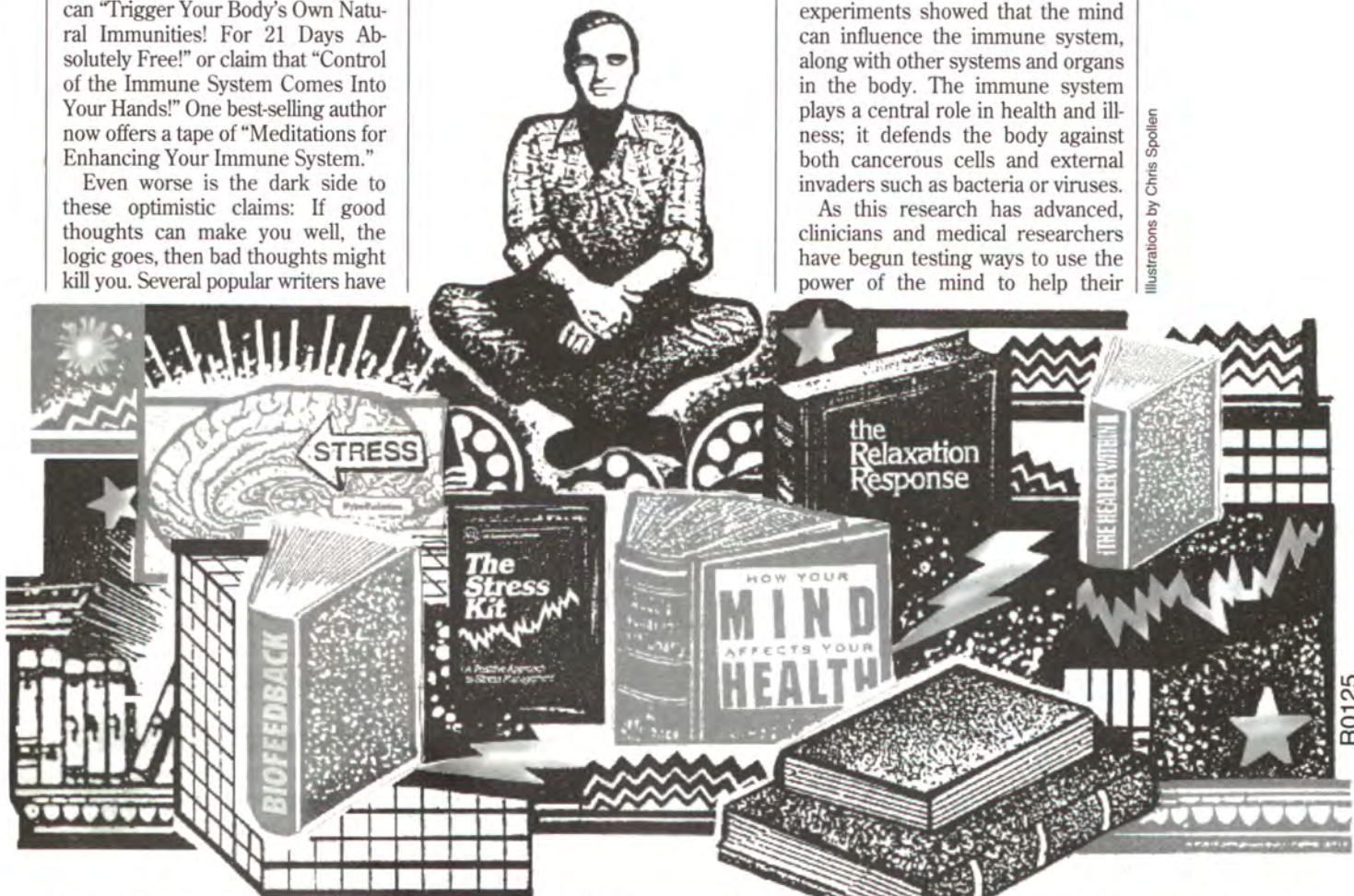
But these distortions mask an important medical reality. The evidence is rapidly growing that thoughts, beliefs, and emotions can have a major impact on physical health. And research is showing that relaxation, meditation, hypnosis, biofeedback, support groups, and psychotherapy may affect the course of physical illness. The result is a new synthesis in medical theory and practice that's coming to be known as mind/body medicine.

Today's upsurge of interest in mind/body medicine dates back to the mid-1970s, when a series of experiments deepened the scientific understanding of the ways in which the mind and emotions may affect physical health. In particular, those experiments showed that the mind can influence the immune system, along with other systems and organs in the body. The immune system plays a central role in health and illness; it defends the body against both cancerous cells and external invaders such as bacteria or viruses.

As this research has advanced, clinicians and medical researchers have begun testing ways to use the power of the mind to help their

Positive thinking won't cure cancer, and meditation won't supercharge your immune system. But the power of "mind/body medicine" may be greater than you think.

Illustrations by Chris Spollen



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AMERICAN JOURNAL *of*

Health Promotion

Volume 6, Number 4
March/April 1992

The Political Economy of Mind-Body Health

Charles R. Halpern

FETZER INSTITUTE



Robert F. Lehman
President

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Office of the President

March 18, 1993

Mrs. Hillary Rodham Clinton
Chairperson
The Presidential Task Force on Health Care

Dear Mrs. Clinton:

Thank you very much for the invitation to share information about mind-body medical practices with The Presidential Task Force on Health Care. Some major opportunities for enriching medical care, while controlling costs, are included in the attached background paper prepared for this meeting.

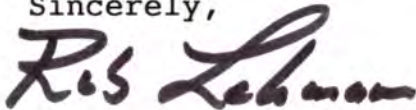
Several specific actions identified in the paper would make significant contributions to the goal of enhancing the efficacy and cost effectiveness of medical practice:

1. Expand the use of mind-body approaches with proven efficacy, safety, and cost effectiveness in prevention and treatment of illness and disease.
2. Increase research on mind-body approaches in prevention and treatment of illness that are widely considered, if not fully proven to be, efficacious, safe, and cost effective.
3. Conduct rigorous research on the efficacy, safety, and cost effectiveness of practices from other cultures, such as acupuncture, homeopathy, and herbal medicine.
4. Improve educational opportunities for: a) the public, to enable individuals to make informed choices from an expanding area of proven options for health care; b) health care providers, to help them make similar choices and to mobilize the power of individuals in the prevention and treatment of illness and disease; and c) local, state, and federal policymakers to help them provide incentives for sound research, education, and health care practice and to remove obstacles to their implementation.

Mrs. Hillary Rodham Clinton
Chairperson
March 18, 1993
Page 2

Again, your invitation to present these ideas for consideration by the Task Force is greatly appreciated. We and others, who share our concerns, welcome the opportunity to provide what we hope will be useful information about key developments in medicine. We also point to the special skills and interests of Philip R. Lee, M.D., Designate-Assistant Secretary for Health, in evaluating this area.

Sincerely,

A handwritten signature in dark ink, appearing to read "R. F. Lehman". The signature is written in a cursive, flowing style with a large initial "R".

Robert F. Lehman
President & CEO

RFL:kmc

FETZER INSTITUTE



Office of the President

MEMORANDUM

Date: March 16, 1993

To: Mrs. Hillary Rodham Clinton
Chairperson

From: Robert F. Lehman
President

Re: The Presidential Task Force on Health Care

Enriching Medicine and Strengthening Personal Responsibility

The American people are creating a new vision of health and health care that arises out of personal initiative and responsibility and provides the opportunity for the enrichment of medicine and health policy. Since the mid-1980s, polls have identified health as Number One among values of the American public. Gaining greater control over one's health is seen as the central way to living a full life.

We, in the Western world, see medicine as one of the principal means of improving the quality of our personal lives. It has become abundantly clear, however, that standard medical practice in the United States fails in many ways to meet human needs. People are increasingly seeking the benefits of "alternative" or "unconventional" medicine that their own doctors do not practice.

The recent public television series "Healing and the Mind with Bill Moyers" has become the subject of a national conversation, reaching millions of viewers, with its companion book rising swiftly to number one on the bestsellers' lists. A survey appearing in the New England Journal of Medicine on January 28, 1993, showed that in 1990 Americans paid \$10.3 billion out of pocket for alternative treatments, rivaling the \$12.8 billion paid out of pocket for all hospitalizations. In that year, one-third of Americans tried some "alternative" approach, either with the help of a practitioner or on their own. And fully 72 percent of those who did use such approaches did not inform their regular doctor about it.

The message is clear, and it is two-sided: first, people find that the mainstream practice of medicine does not offer the range of interventions to provide an adequately rich quality of life, nor does it provide the sense of being in control that they value so highly. Second, people desire to assume more responsibility

for choices about health care, and are willing to make changes in life-style and move to nonconventional sources to improve their own health.

Any health policy that hopes to improve the quality of life while controlling spiraling costs must take these messages into account and meet the American public on its own terms.

Toward an Enriched Medicine

What are the components that people seek in "alternative" approaches in health care, and what do they have in common?

The first thing to be said about them is that they are not truly "alternative" at all. Though they may require individuals to go to someone other than their regular doctor for treatment, most responsible alternative practitioners insist that their treatments are an adjunct to regular medical care, not a replacement for it. An increasing number of physicians are now recognizing the potential value of these approaches, and several are being studied by researchers at the nation's finest medical institutions.

The other distinctive feature of alternative medicine is that its treatments approach the individual as a whole person. They generally deal with emotional and psychological issues along with physical complaints. In fact, they see the mind and the body as inseparable parts of a whole, and concern themselves with the relationship between the two.

It's likely that Americans are turning to alternative medicine because they're missing precisely that dimension in their regular medical care: the dimension that treats them as a whole person. Surveys support the commonplace observation that many Americans find their doctors cold, uncaring, or mechanistic, while alternative practitioners may generally communicate a sense of caring about their patients more effectively. This is no small feat: research has shown that doctor-patient communication plays a major role in the healing process. Patients may know this intuitively, and may thus be choosing practitioners that they feel will best help them physically as well as emotionally.

That said, a major question remains: Is alternative medicine scientifically valid, and can it truly help the people who seek it out? In that form, the question is unanswerable, because alternative medicine incorporates such a large number of very different approaches. However, several approaches are promising. Most important, some are now so well established, and so consistent with regular Western medicine, that we believe it is time to make them part of regular medical practice; they should no longer be considered "alternative" in any sense.

At one end of the spectrum are approaches that do pose a significant challenge to Western medical science. Some of these, like chiropractic and homeopathy, were developed by Western-trained physicians; some, like acupuncture, come from other cultures. Despite the philosophical challenge they present, we believe these approaches warrant further study. At the other end of the spectrum are a group of approaches that pose no fundamental challenge to Western medicine, but build instead on principles that every doctor recognizes to some degree. These are the "mind-body" approaches: treatments that use the mind's power to heal. And these are the "alternative" treatments that, we believe, merit the most immediate attention and the widest use.

Though the concept of a mind-body connection is sometimes given a rather mystical connotation, there is, in fact, nothing mysterious about it. Physicians have known about the "fight-or-flight" response--the body's emergency reaction to stress--since shortly after the turn of the century. Many mind-body approaches are based on relaxation, and are basically geared to counteracting the physiological damage caused by the stress response. More recently, researchers have found good evidence that the nervous system is closely linked to the immune system, the body's basic defense system against disease--providing another means by which the mind could influence physical health.

The placebo effect--the healing power of a patient's belief in a treatment--has also been recognized for decades, and seems to alleviate symptoms in about a third of all cases. This effect is so well established, in fact, that all major medical journals require researchers to eliminate it as a variable before their work will be accepted for publication. The goal of "mind-body medicine," as many are now calling this, is to put the placebo effect and other similar phenomena to good use, and help people develop ways to use the mind's healing power intentionally and productively.

Mind-body treatments are now "alternative" treatments only because most American physicians know little about them and are, thus, unlikely to use them--not because they require a philosophical departure from basic medical principles. In fact, all of these approaches are now being used in major medical centers, and all have shown substantial clinical benefits for some people. Most significantly, these approaches can often help people in ways that existing drugs and conventional medical treatments cannot. For example:

- * In a landmark study at Stanford University, women with advanced breast cancer, who were enrolled in a support group,

survived twice as long as women with the same level of disease who did not get this emotional support. No known drug could have given them the same benefit.

- * At Harvard Medical School and elsewhere, relaxation training is being used to help people with a wide variety of problems, including hypertension and Type II diabetes. Relaxation often enhances the effects of medical treatment for these conditions, and sometimes makes drug treatment unnecessary.
- * At the University of Massachusetts Medical Center, a form of meditation called mindfulness meditation has been taught to many people with chronic pain and has offered them greater relief than pain-killing drugs have been able to.
- * In a study at Minneapolis Children's Medical Center, children with migraines who learned hypnosis had greater relief from their headaches than those who were given the most commonly used migraine-preventing drug.
- * Biofeedback, an electronic means of teaching the mind to control the body, is now being used to help stroke victims learn to use new muscles, as well as being used in a variety of ways for relaxation and pain control.

All of these approaches can have emotional as well as physical benefits. Relaxation training, for example, can be used to combat depression and anxiety, and thus improve an individual's ability to function. Conversely, psychotherapy and other treatments conventionally used for emotional problems can have physical benefits as well. In one major study, elderly hip-fracture patients who received counseling or psychiatric treatment to deal with their feelings about the illness left the hospital two days earlier, on average, than those who received no such help. In that study, \$20,000 worth of mental-health treatment for a group of patients saved \$168,000 in hospital costs.

There are several other indications that treating emotional and physical aspects of health together--the defining characteristic of "alternative" medicine--can be highly cost effective. For example:

- * By some estimates, chronic pain may cost \$100 billion a year in lost productivity and disability payments. Many mind-body approaches can minimize the effects of pain and improve productivity.
- * Psychological preparation for surgery reduces hospital stays by 2.4 days on average, according to several studies; in one study, it saved \$1,200 per patient.

- * Americans spend \$14 billion per year in heart bypass surgery. One-half of these patients must return within five years for another bypass. Evidence is available that life-style changes, involving low-fat diet, exercise, relaxation techniques and group support, can actually reverse coronary artery disease.

Even when mind-body approaches cannot reverse the basic process of disease, they may help people deal more effectively with their physical symptoms and lead more productive lives. For conditions as diverse as irritable bowel syndrome and arthritis, two people may have identical physical conditions but dramatically different levels of functioning; the person who feels in control of his, or her health and his, or her life will function well, while the one who feels out of control may be disabled. Fortunately, as research has shown, mind-body approaches can be used to effectively change attitudes toward illness. In the Arthritis Self-Help Course, developed at Stanford University, people with arthritis learn methods of relaxation, techniques for dealing with depression and fatigue, and other approaches that help them feel more in control of their medical situation and significantly improve the quality of their lives--all at a cost of only about \$20. This simple course reduces pain by 15 to 20 percent, alleviates depression, and can reduce doctor visits dramatically.

Finally, mind-body approaches have great proven value in improving the quality of life for patients, from children with chronic pain to cancer patients dealing with the rigors of chemotherapy. We believe that relieving needless suffering must be an intrinsic part of effective medical care, and mind-body treatments should play a major role in meeting that goal.

Strengthening Individual Responsibility

Mind-body approaches, such as psychotherapy, exercise, diet, relaxation, and biofeedback inherently call on the individual's active participation in taking responsibility for their own health.

Accordingly, individual responsibility is much more than an abstract philosophical concept. It is a tool with the power to improve the quality of life in ways otherwise unattainable. Prevention of illness cannot work unless the individual takes responsibility and gains the knowledge necessary to safeguard against illness. Similarly, the chronically ill person can learn to use the health system more effectively and at lower cost. Additionally, active participation by the patient in the treatment of disease can speed recovery and reduce medication--among other benefits.

The Tasks Ahead

Despite the existing momentum in the field, there are many major challenges yet to be met to achieve a practice of medicine that has been enriched to the fullest degree and to increase the responsibilities of individuals. These lie in the areas of research and education.

Research

In the area of research we need to develop a map of the territory of unconventional medicine identifying what is known and what is not, and searching for the most promising opportunities. We need to design and conduct randomized controlled clinical trials, testing not only the safety and efficacy of unconventional therapies, but also comparing them with mainstream approaches. One such trial might investigate the effects on chronic back pain of standard orthopedic and rheumatologic care with and without nonconventional medical interventions such as chiropractic, acupuncture, massage, and relaxation techniques. The investment of a few million dollars in such investigations might save billions of dollars lost annually in disability compensation and lost productivity.

Other opportunities include the use of acupuncture in the treatment of smoking or alcohol withdrawal and the use of Chinese herb preparations in reducing some side effects of chemotherapy. It will also be important to develop improved tools for the measurement of quality of life and other outcomes and to investigate the mechanisms of action of nonconventional interventions.

Safety and effectiveness are not the only concerns, however. We must also consider cost effectiveness. Will a new procedure reduce the number of visits to the doctor? Can it reduce the amount of medication required? Will it get the patient out of the hospital sooner? Back to work sooner? Will it enhance the quality of life? These key questions are not easily answered. We have little idea of the cost effectiveness of even well-established procedures such as surgery. It is already clear that there are opportunities to reduce health costs and improve the quality of life by enriching medicine. We cannot discover them, however, without a significant investment in research.

Education

Once a new discovery occurs, it is of no use unless the public and the medical community learn about it. An individual sharing responsibility for his or her health must be able to make informed choices among different therapies and preventive measures and must rely on those within the medical community for

the knowledge needed to make such choices. New knowledge must also be transmitted to individual and institutional health care providers by means of articles in scholarly journals, new medical school curricula, continuing education courses, and other forms of education. Policymakers must also be educated and informed in order to formulate policies that contain incentives for the enhancement of individual responsibility and the enrichment of medicine while removing barriers that hinder such developments.

Above all, we must pursue basic prevention education on a widespread level as called for in the 1979 Surgeon General's Report - Healthy People. The problem with prevention education and health promotion is that it is usually done on a low level, addressing only a person's head and his/her fears of illness. Were it offered based on mind-body unity rather than just addressing the person's thinking mind, the impact would be far greater and would satisfy people's needs for feeling honored and cared for by the health care system. At the same time, it would be more effective in mobilizing an individual to assume greater responsibility for his/her own health, life-style, coping strategies, and resources.

Proven mind-body prevention education programs should be offered in secondary and high school curricula and by hospitals. These could be offered at very low cost. The potential returns would be enormous in terms of teaching people how to honor their bodies, maximize the likelihood of staying healthy across the entire lifespan and, therefore, reducing dramatically the cost of taking care of people in the latter-third of life.

Conclusions and Recommendations

Health ranks at the top of the list of attributes that Americans value, followed by control over health. People perceive medical care as a principal source of improvements in the quality of life. They find increasingly, however, that the American medical establishment fails to provide a sufficiently rich quality of life and the desired participation in responsibility for health. As a result, they are turning toward medical practices that that they cannot get from their own doctors. These unconventional practices are diverse and come from many sources. A particularly rich source is the area of mind-body medicine derived from the recognition that these entities are inseparable. Techniques originating in this area are noteworthy for their involvement of personal responsibility. Growing evidence from scientifically sound studies also suggests that techniques developed within this area may be safe and effective, and may legitimately enrich medical practice.

There are many challenges ahead in achieving a truly enriched medicine and providing individuals with the greatest possible

responsibility for their own health. These are principally in the areas of research and education. It will be necessary to conduct carefully designed randomized controlled clinical trials of unconventional therapies, both alone and in conjunction with conventional approaches, to verify safety and efficacy. It will also be necessary to develop methods for measuring cost effectiveness of both new and conventional approaches. New educational efforts will be necessary to provide the public with the knowledge needed to make informed judgments, make health care providers familiar with new options, and aid policymakers in developing incentives and removing barriers to change. The opportunities for the enhancement of the quality of life through individual responsibility and enriched medicine are exceptional.

More specifically, we urge that The Presidential Task Force on Health Care act on these recommendations:

1. Expand the use of mind-body approaches with proven efficacy, safety, and cost effectiveness in prevention and treatment of illness and disease.
2. Increase research on mind-body approaches in prevention and treatment of illness, which are widely considered, if not fully proven to be efficacious, safe, and cost effective.
3. Conduct rigorous research on the efficacy, safety, and cost effectiveness of practices from other cultures, such as acupuncture, homeopathy, and herbal medicine.
4. Improve educational opportunities for: a) the public, to enable individuals to make informed choices from an expanding area of proven options for health care; b) health care providers, to help them make similar choices and to mobilize the power of individuals in the prevention and treatment of illness and disease; and c) local, state, and federal policymakers to help them provide incentives for sound research, education, and health care practice and to remove obstacles to their implementation.

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Healing & the Mind



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SPECIAL ARTICLE

UNCONVENTIONAL MEDICINE IN THE UNITED STATES

Prevalence, Costs, and Patterns of Use

DAVID M. EISENBERG, M.D., RONALD C. KESSLER, PH.D., CINDY FOSTER, M.P.H.,
FRANCES E. NORLOCK, M.P.H., DAVID R. CALKINS, M.D., M.P.P., AND THOMAS L. DELBANCO, M.D.

Abstract Background. Many people use unconventional therapies for health problems, but the extent of this use and the costs are not known. We conducted a national survey to determine the prevalence, costs, and patterns of use of unconventional therapies, such as acupuncture and chiropractic.

Methods. We limited the therapies studied to 16 commonly used interventions neither taught widely in U.S. medical schools nor generally available in U.S. hospitals. We completed telephone interviews with 1539 adults (response rate, 67 percent) in a national sample of adults 18 years of age or older in 1990. We asked respondents to report any serious or bothersome medical conditions and details of their use of conventional medical services; we then inquired about their use of unconventional therapy.

Results. One in three respondents (34 percent) reported using at least one unconventional therapy in the past year, and a third of these saw providers for unconventional therapy. The latter group had made an average of 19 visits to such providers during the preceding year, with an average charge per visit of \$27.60. The frequency of use of unconventional therapy varied somewhat among sociodemographic groups, with the highest use reported by

nonblack persons from 25 to 49 years of age who had relatively more education and higher incomes. The majority used unconventional therapy for chronic, as opposed to life-threatening, medical conditions. Among those who used unconventional therapy for serious medical conditions, the vast majority (83 percent) also sought treatment for the same condition from a medical doctor; however, 72 percent of the respondents who used unconventional therapy did not inform their medical doctor that they had done so. Extrapolation to the U.S. population suggests that in 1990 Americans made an estimated 425 million visits to providers of unconventional therapy. This number exceeds the number of visits to all U.S. primary care physicians (388 million). Expenditures associated with use of unconventional therapy in 1990 amounted to approximately \$13.7 billion, three quarters of which (\$10.3 billion) was paid out of pocket. This figure is comparable to the \$12.8 billion spent out of pocket annually for all hospitalizations in the United States.

Conclusions. The frequency of use of unconventional therapy in the United States is far higher than previously reported. Medical doctors should ask about their patients' use of unconventional therapy whenever they obtain a medical history. (N Engl J Med 1993;328:246-52.)

UNCONVENTIONAL, alternative, or unorthodox therapies are difficult to define, because they encompass a broad spectrum of practices and beliefs. As Murray and Rubel have written, "Many are well known, others are exotic or mysterious, and some are dangerous."¹ From a sociological standpoint, unconventional therapy refers to medical practices that are not in conformity with the standards of the medical community.² Here we define unconventional therapies as medical interventions not taught widely at U.S. medical schools or generally available at U.S. hospitals. Examples include acupuncture, chiropractic, and massage therapy.

Studies based on samples in limited geographic areas suggest that the use of unconventional therapy is widespread.³⁻⁵ In particular, unconventional therapies are frequently used by patients with cancer,⁶⁻¹¹ arthritis,¹¹⁻¹³ chronic back pain,^{3,14} the acquired immunodeficiency syndrome,¹⁵ gastrointestinal problems,^{16,17}

chronic renal failure,¹⁸ and eating disorders.¹⁹ Little is known, however, about the overall prevalence, cost, and patterns of use of unconventional therapy in the United States.^{1,20}

To improve our understanding of the use of unconventional therapy, we conducted a national telephone survey focusing on 16 interventions found, on the basis of pilot research, to be representative of unconventional therapies used commonly in the United States. Our study focused on the following questions: What is the extent of use of unconventional therapy in the United States? How much is spent annually on these therapies, including out-of-pocket and third-party payments? What sociodemographic factors distinguish users of unconventional therapy from nonusers? For what medical conditions do people most commonly use unconventional therapy? And to what extent are medical doctors responsible for or informed about the use of unconventional therapy by their patients?

METHODS

Sample

We conducted our survey by telephone between January 18 and March 7, 1991. The sample was selected by means of random-digit dialing.²¹ We limited eligibility to English-speaking persons, 18 years of age or older, in whom cognitive or physical impairment did not prevent the completion of the interview. We designed the survey with a target sample of 1500. Assuming an estimated prevalence of use of unconventional therapy between 10 and 50 percent, we calcu-

From the Division of General Medicine and Primary Care, Department of Medicine, Beth Israel Hospital and Harvard Medical School, Boston (D.M.E., T.L.D.); the Institute for Social Research, University of Michigan, Ann Arbor (R.C.K., C.F.); the Division of General Medicine, Department of Medicine, New England Deaconess Hospital and Harvard Medical School, Boston (D.R.C.); and Chicago College for Osteopathic Medicine, Chicago (F.E.N.). Address reprint requests to Dr. Eisenberg at the Division of General Medicine and Primary Care, Beth Israel Hospital, 330 Brookline Ave., Boston, MA 02215.

Supported by a contract with the John E. Fetzer Institute and a grant from the Nathan Cummings Foundation.

**By Leading Authorities
from the Nation's
Top Medical Centers**

MIND BODY MEDICINE

**How
To Use
Your
Mind
For
Better
Health**

**Edited by
Daniel Goleman, Ph.D.,
and Joel Gurin**

**A Project With
THE FETZER INSTITUTE**

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MIND BODY MEDICINE

HOW TO USE YOUR MIND FOR BETTER HEALTH

Edited by Daniel Goleman, Ph.D.,
and Joel Gurin

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WHAT IS MIND/BODY MEDICINE?

BY DANIEL GOLEMAN, PH.D., AND
JOEL GURIN

- AT THE UNIVERSITY OF MASSACHUSETTS MEDICAL CENTER, 30 patients with diverse medical conditions—including heart disease, cancer, diabetes, chronic back pain, and colitis—sit meditating with eyes closed, focusing in utter stillness on the feeling of their breath moving in and out of their bodies. Most people who make this simple practice a part of their daily routine report a lessening of their distress and even relief from many medical symptoms.
- At the Ohio State University College of Medicine, second-year students undergoing the stress of final exams are taught a relaxation technique. Blood tests of immune function show that the stress of exams weakens the students' resistance to viruses. But those who practice the relaxation method most diligently show the least impairment of resistance.
- At a hospital in Cleveland, children with chronic, intractable pain from cancer are being taught to escape it by visualizing themselves in a relaxed, happy place.

Such studies are producing an ever-growing body of evidence that portends a sea change in the way health-care professionals and patients are viewing the role of the mind in the treatment of illness. Relaxation, hypnosis, and other mind/body approaches have been used in Western medicine for decades, even centuries, and very possibly for millennia by traditional healers.

DANIEL GOLEMAN, PH.D., writes for *The New York Times* on health and human behavior. JOEL GURIN is the science editor of *Consumer Reports*.

Two things are different today. First, the use of these approaches is becoming more widespread and they are gaining more respect and interest from researchers in major medical institutions. And second, evidence is mounting that mind/body techniques may not only improve the quality of life—particularly for someone dealing with a serious illness—but actually affect the course of disease itself.

The most compelling study to date was done at Stanford University by David Spiegel, a psychiatrist who never anticipated that his work would show that the mind has an impact on physical health. In the mid-1970s, Spiegel had led support groups for women being treated for advanced breast cancer that had spread throughout the body—a pattern that carries the grimmest of prognoses. His intent was to show that women placed at random into these groups, which allowed them to talk over their day-to-day troubles in a supportive setting, would suffer less from the emotional distress that accompanies cancer than other women in the same medical situation. The experiment was a success: The data soon showed that the groups did improve the women's quality of life.

The surprise came a decade later, when Spiegel went back to the women's records to see how long they had survived after the groups disbanded. As he recalls in Chapter 20, his original intention was to *disprove* the notion, spread by some popular books in the mid-1980s, that mental and emotional factors could influence the course of cancer. Instead, he was surprised to find that the women in the support groups had survived twice as long as the others. The added months of life—18 months, on average—were more than even cancer medications could have been expected to provide at that point in the women's disease. When Spiegel published these findings in the journal *The Lancet* late in 1989, they stunned the medical community and inspired many investigators to look more closely at the possible clinical effects of mind/body treatments. At least half a dozen research teams are now in the process of repeating his study to see if his results can be replicated.

Other scientists, laboring to unravel the physiology of the mind/body connection, have begun to outline plausible ways in which the mind and emotions could affect physical health. They have deepened our understanding of the effects of stress on the body and are accumulating convincing evidence that the immune system, along with other organs and systems in the body, can be influenced by the mind.

Taken together, these research efforts and clinical experiments suggest that the split between mind and body, long taken for granted in Western philosophy, is illusory indeed. The studies are also part of a new synthesis in medical science. They are part of *mind/body medicine*: an approach that sees the mind—our thoughts and emotions—as having a central impact on the body's health.

For patients, this new synthesis has a very practical significance. It means that by paying attention to and exerting some control over emotional and mental states—your worries, hostility, habitual reactions, pessimism, and depression—you may help yourself stay healthy or recover more rapidly from being sick.

From the perspective of doctors, nurses, and other health-care professionals, this new way of seeing things suggests there is much to be gained if they go beyond attending to physical disease and attend as well to the overall experience of illness—the way the disease affects a patient's spirits and the emotional reactions it calls forth.

In short, one basic tenet of mind/body medicine is that it is best to treat the whole person: Treating emotional distress should be an essential complement to standard medical care. Another tenet is that people can be active participants in their own health care and may be able to prevent disease or shorten its course by taking steps to manage their own psychological states.

Of course, these principles must be tempered with a realistic view of the many other factors at work in health and illness. No one is promising that people can cure themselves of disease just by thinking happy thoughts. That simplistic idea ignores the complexities of biology and the wired-in destiny of our genes. Worse, it can leave people feeling guilty about being sick at all. That is not the message of mind/body medicine.

But the evidence is growing stronger that states of mind can affect physical health. And while that effect may not be as dramatic as, say, the power of penicillin to fight a strep throat, it can be meaningful nonetheless. Mind/body approaches can certainly reduce the severity and frequency of medical symptoms. For example, they can make chronic headaches less frequent, reduce the nausea that accompanies chemotherapy, speed recovery from surgery, and help people with arthritis feel less restricted by their pain. Moreover, the same approaches may help strengthen the body's resistance to disease.

THE QUIET BEGINNINGS

The research that laid the basic scientific foundation for modern mind/body medicine began with an accidental discovery that attracted little attention at first. That discovery was made one day in 1974, in a laboratory at the University of Rochester School of Medicine and Dentistry. It led to research that would redraw biology's map of the body.

On that day, psychologist Robert Ader analyzed data from an experiment showing that the immune systems of white rats had learned a specific conditioned reaction. The results were startling because the prevailing wisdom held that the immune system should not have been capable of "learning" anything. Learning was something done only by the brain and central nervous system—certainly not by the immune system, the body's disease-fighting network of cells.

The discovery was serendipitous. Ader had been conducting a classic Pavlovian conditioning experiment, trying to teach the rats to respond with aversion to saccharin-flavored water. His study had a simple design. The rats were given a drink of saccharin-laced water and then received an injection of the drug cyclophosphamide, which Ader gave them to produce nausea. One shot should have been enough to condition them to associate saccharin water with nausea and avoid it.

But there was a problem. For some reason, many of the rats—though young and healthy—were getting sick and dying. Looking into the problem, Ader realized that the drug he was using to nauseate the rats also suppressed their immune systems. In particular, it lowered the number of T-cells, immune system cells that fight viruses and infections as they circulate through the body (see Chapter 3).

It seemed to Ader that giving the rats the saccharin water alone, *without* the immunosuppressive medication, was decreasing the number of T-cells in the rats' bloodstreams. Classical conditioning had triggered a learned association between the taste of the saccharin and the suppression of T-cells, so that later—when the rats tasted the flavored water alone—their immune systems reacted as though they were exposed to the drug itself. And that, in turn, made them more susceptible to disease.

But that just should not have happened, according to what was then the best scientific understanding of how the brain and immune system function.

Immune system cells travel the entire body, contacting virtually every other cell. Those cells they recognize, they leave alone; those they do not recognize, they attack—defending the body against tumors and virus-infected cells.

Until Ader's experiment, anatomists, physicians, and biologists all believed that the brain and the immune system were separate entities, neither one able to influence the functioning of the other. They were not aware of any pathway that connected the brain centers monitoring what the rats tasted with the areas of bone marrow that manufacture T-cells.

Ader himself could not quite believe his findings. To test the possibility of a connection, he teamed up with Nicholas Cohen, an immunologist at Rochester. In an elegant series of studies, they demonstrated that aspects of the immune system can, in fact, be conditioned, just as Pavlov had shown that dogs can be conditioned to salivate at the sound of a bell after food had been paired with the sound.

Ader's experiments have now been repeated successfully, and his discovery has opened the way to identifying the links between the immune system and the central nervous system. As a result, science is finding that there are many physiological connections between these two systems. These findings have generated the field of medical science known as *psychoneuroimmunology*, or PNI: *psycho* for mind, *neuro* for the neuroendocrine system (the nervous and hormonal systems), and *immunology* for the immune system.

While no one is yet quite sure just how the connections among these areas function, few medical researchers now doubt that such connections exist. Ader likes to quote a basic immunology textbook, published in 1991, that teaches that research studies in PNI now "confirm the long-standing belief that the immune system does not function completely autonomously." In the last decade, he says, the reaction of the scientific community to PNI "has gone from, 'It's impossible,' to, 'We knew it all along.'"

An explosion of interest in PNI has brought about renewed research on a whole range of physiological mechanisms, some of them known for decades, by which the mind and emotions may affect physical well-being. As scientists learn more about the hormones and neurotransmitters that brain cells use to communicate with each other and with the rest of the body, they are developing a deeper understanding of the stress response. They are learning more precisely how the physiological changes that occur under stress—or with emotional distress—may, for example, raise the risk of heart disease, make

diabetes more difficult to control, or make it harder for some women to conceive.

Research is now revealing a range of likely avenues through which our mental states may influence our health. Although it will take years of work to piece together the precise biological mechanisms involved, the research done so far provides the beginnings of a sound scientific basis for mind/body medicine.

THREE LINES OF EVIDENCE

The scientific evidence for the mind's influence on the body now comes from three converging areas of research:

- Physiological research, which investigates the biological and biochemical connections between the brain and the body's systems.
- Epidemiological research, which shows correlations between certain psychological factors and certain illnesses in the population at large.
- Clinical research, which tests the effectiveness of mind/body approaches in preventing, alleviating, or treating specific diseases.

Each of these areas, taken alone, is incomplete; each has produced promising findings, but also raised unanswered questions. Taken together, however, the different kinds of research in mind/body medicine are beginning to show a coherent picture—like a jigsaw puzzle that still has many pieces missing, but that is starting to form a recognizable image.

Physiological research in mind/body medicine (described in detail in Chapters 2 and 3) dates back to Walter B. Cannon, who discovered the “fight-or-flight response” to stress during World War I. But the modern study of mind/body physiology began in the 1940s, when the pioneer researcher Hans Selye investigated the physical effects of psychological stress. This avenue of investigation was a precursor of current physiological research, which ranges from studying the intricacies of PNI to examining the ways in which emotions like anger may lead to biological changes that raise heart attack risk.

The key question for physiological researchers is whether the biological changes that stem from psychological factors actually make a difference to health. For example, even if stress or depression does lower the effectiveness of the immune system, is the drop great enough to increase the risk of illness?

In addition, because many physiological studies are done on experimental animals, their relevance to humans may be uncertain.

Epidemiological studies in this field look for relationships between psychosocial factors and patterns of illness in large populations. They date back to the early 1960s, when a study done for the U.S. Navy showed that men who had gone through serious life changes—a divorce, move, job loss, or the like—had an increased chance of becoming seriously ill within the months following those upsets. A more recent, and very significant, series of studies covering thousands of people has shown that men and women with few social ties are significantly more likely to become ill and die than people with a rich network of family, friends, and other social involvements.

The provocative findings of studies like these often suggest avenues for both physiological and clinical research. For instance, some researchers are now trying to unravel the reasons why upsetting experiences may be associated with illness and why strong social networks are linked to better health.

Clinical research provides the third major line of evidence, one that is now getting increased attention. David Spiegel's work with support groups for women with breast cancer is a paradigm of the new research in this area. The main shortcomings here are that such studies, while promising, must be seen as preliminary until they can be repeated by other, independent scientific investigators. And even then, without carefully designed follow-up studies of the people treated, it is by no means clear how and why such interventions may work. For instance, support groups for patients may work because they encourage patients to comply better with what their physicians tell them to do, or because the emotional changes the groups produce help boost immunity directly—or for both reasons.

The issues become even more complex when social support and relaxation training are combined with changes in diet and exercise, as they were in one of the most impressive clinical studies in this field. Internist Dean Ornish, director of the Preventive Medicine Research Institute at the University of California, San Francisco, conducted a study with patients who had severe coronary heart disease. He placed them in groups and led them through several significant life-style changes, combining mind/body approaches with a very-low-fat diet (one in which fat accounted for less than 10 percent of total calories). After one year in the groups, patients showed actual reversal of their severe atherosclerosis, something that had never previously been accomplished without the use of medication. Ornish's further research is showing

that, in general, an even greater degree of reversal occurs in people who stay on the program over several years.

But the success of Ornish's patients cannot be attributed to any single, isolated part of the program, even though each part of the program was correlated independently with reversal of heart disease. The patients made full use of several mind/body approaches: They met weekly to share their emotional concerns and offer each other support; they changed their life-styles to lead less stressful, more fulfilling lives; and they practiced yoga and meditation. They also began to exercise several hours a week—a change that, in itself, can have significant effects on mood and the mind.

A large number of new clinical studies are now under way at leading U.S. medical institutions to measure the effects of mind/body techniques and to explore the physiological basis for those effects. Here are just a few examples of those studies (all related to work described in later chapters of this book):

- At Harvard Medical School, a series of ongoing studies suggests that a simple technique for eliciting the body's "relaxation response" can help patients with diseases ranging from hypertension to migraine headaches to irritable bowel syndrome.
- At Duke University, men and women with cardiovascular disease participate in groups that help them control their feelings of hostility and anger. (Earlier studies at Duke and elsewhere had shown that hostility is a risk factor for heart disease.) The researchers will follow the patients over time to see whether these emotional changes directly help their hearts.
- At the University of California, Los Angeles, a prospective study has been designed to follow up on David Spiegel's groundbreaking findings. Support groups for cancer patients at UCLA have already been found to strengthen key elements of the immune system. These patients are now being studied further to see whether the immunological changes are correlated with better clinical results, such as longer survival.
- At the University of Miami, the focus is on AIDS. There, in a comprehensive stress management program, men with HIV infection meet on Monday and Thursday nights to talk over the stresses of the week, to practice relaxation methods, and to help each other find ways to improve how they handle the range of life's demands. Again, early results are promising: heightened emotional resilience, positive effects on the

immune system, and a delay in the onset of the more serious symptoms that signal AIDS.

Mind/body medicine is still far from being an exact science, and many perplexing questions remain. But the areas of uncertainty are no greater than one would expect in a complex, evolving field. And the volume of well-designed research now under way or just beginning attests to the scientific excitement the field has generated in a fairly short period of time.

For most people, the question is not whether mind/body medicine is a legitimate field for research (it is), or whether its potential has been fully defined and proven (not yet). The immediate, practical question is whether mind/body medicine as it now stands can be of value to people dealing with a range of serious illnesses and to healthy people who want to stay that way.

We believe that it can. Although mind/body medicine is still evolving, enough is now known to make it worth trying in a number of situations. It may do a great deal to improve patients' quality of life, and possibly to improve their physical health, with very little risk.

A key reason is that mind/body medicine is not so much an "alternative" approach as a complementary one. It is perfectly compatible with standard medical treatment and can be a powerful way of augmenting it, not challenging it or replacing it. In fact, the mind/body approach harkens back to some of the best traditions of Western medicine—although some of those traditions have been ignored in the expanding, high-tech era of modern health care.

BEYOND THE PLACEBO

Long before research in PNI began, the mind's power to affect the body was well known in medicine. In the centuries before antibiotics and other "miracle drugs," caring physicians hoped that a reassuring bedside manner would mobilize hidden resources within their patients to fight their illness, and they consciously used the power of the mind to help heal the body. This approach was essential in the days when physicians had relatively few effective medications or procedures to offer; indeed, a motto of medicine until a century ago was, "Comfort always, cure seldom."

But the tradition drew on a deeper wisdom that can be traced back to Hippocrates: the understanding that the physician's manner is as potent as many a medicine. For centuries, wise doctors tried to capitalize on the *placebo*

effect, the power for healing that can stem simply from a patient's belief that a treatment will be effective.

Offering patients hope and reassurances may seem quaint in a day when, finally, the doctor's bag contains medications that are truly effective and the tools of medicine daily grow more technologically dazzling. Yet the power of the placebo is still very real. In fact, it is implicitly acknowledged by every major medical journal in the world, as well as the U.S. Food and Drug Administration. The scientific method now requires that every new drug must be tested against a placebo, a dummy medication given to patients as if it were a real drug.

The optimum study is prospective, randomized, and double-blind. Patients are divided at random into two groups: One receives the real drug, the other receives a look-alike placebo, and neither the patient nor the physician knows which is which (a necessary precaution because that knowledge itself could affect the outcome). If the placebo effect were not a powerful one—powerful enough to derail an otherwise careful medical experiment—such elaborate precautions would be unnecessary.

The placebo effect has long puzzled medical researchers, who were at a loss to explain it but unable to dismiss it. Study after study showed that, for virtually any disease, a substantial portion of symptoms—roughly one-third, by most estimates—would improve when patients were given a placebo treatment with no pharmacological activity. Patients simply believed that the treatment would help them, and somehow, it did.

Although some medical researchers may think of the placebo effect as the experimental "static" that can interfere with an otherwise clean study, it is a striking demonstration of the mind's effect on health. In many ways, mind/body medicine is an attempt to harness the same forces that are behind the placebo effect, but in ways that enable patients to become active partners with their physicians in helping to heal themselves.

REHUMANIZING MEDICINE

Unfortunately, the development of modern medicine has made that kind of partnership more difficult to achieve. Over the last few decades, medicine has become more centered on high technology, physicians have become ever more specialized into narrow niches, and economics has forced doctors to spend less time with each patient. Physicians are not reimbursed as well for

talking and listening to their patients as they are for performing tests and administering treatments. Although many physicians and nurses still offer their patients sensitive care, too many lack both the time and the training to help patients deal with their anxieties and other emotions—even though a patient's emotional state can be closely related to his or her physical health and can influence the course of treatment and recovery.

There is now a growing movement within medical schools and medical specialty organizations to improve the doctor/patient relationship. That movement has been fueled largely by evidence that many people find their physicians insensitive to their needs: Surveys show considerable dissatisfaction with conventional medical care, and the growing interest in "alternative" practices like chiropractic, acupuncture, and homeopathy certainly reflects it. There is also increasing evidence (described in Chapter 25) showing that good communication between doctor and patient can have a direct, beneficial effect on physical health.

Because the doctor/patient relationship has long been considered a major part of medical care, many physicians should welcome this return to traditional values. But effective, caring communication is only part of mind/body medicine, although an important part. Mind/body medicine also includes a number of specific self-help techniques—such as relaxation training, meditation, hypnosis, and biofeedback—that physicians may be unfamiliar with and may view with suspicion. In general, these approaches are barely covered in medical school, if they're mentioned at all.

Physicians are also likely to be unaware of the research that has made mind/body medicine a more credible field within the last decade. Older physicians may have received some exposure to "psychosomatic" medicine during their training. But many psychosomatic theories of disease—such as the notion that specific personality types predispose people to different kinds of illness—have not held up over time. Younger physicians may have learned something about the concepts of psychoneuroimmunology, but only if they were recent medical school graduates—and only if they had the interest to pursue those concepts.

Even physicians who follow the medical literature faithfully could have missed the development of mind/body medicine. Much of the research in this field has been published in journals of psychiatry or psychology or in journals that cover individual medical specialties. Relatively few research papers have been published in the most widely read journals, such as *The Lancet* and *The*

New England Journal of Medicine, although some recent key papers in those journals have brought mind/body medicine to more general attention. As the quality of mind/body research continues to improve—and it has improved dramatically in the last few years—the number of reports in major mainstream journals should also increase.

Ultimately, many physicians may be hesitant to use mind/body approaches for a fundamental reason: The new field of mind/body medicine is still in search of a comprehensive, unifying theory. Psychoneuroimmunology, which comes closest, is still incomplete from a scientific point of view. The working hypothesis for much PNI research is that psychological distress can suppress the immune system; that this effect can be great enough to increase the risk of physical illness; and that people who learn relaxation, stress management, or other mind/body approaches can increase their immunological resistance to disease. But although that hypothesis is consistent with a growing body of evidence, it is still far from proven.

THE CERTAIN BENEFITS

If research in PNI were the only justification for using mind/body approaches, it would certainly be premature to use them widely. But because there is other strong evidence supporting their use, we believe that physicians, psychologists, and other health-care professionals should be using these approaches more extensively than they are doing now, for several reasons:

- Many of the links between mind and body have little or nothing to do with the immune system. As later chapters in this book show, psychological stress can also affect the endocrine (hormonal) system and the circulatory system in ways that can create or worsen medical problems. Mind/body approaches can be useful in managing a number of illnesses related to those systems, from migraine headaches to diabetes.
- There is abundant evidence that psychological factors affect the way people *experience* medical symptoms, even when the mind does not affect the underlying disease process. Two people with chronic pain, for example, may have precisely the same underlying physical problem, and yet, for psychological reasons, one may function reasonably well while the other is incapacitated (see Chapter 6). The same can be said of people with arthritis or irritable bowel syndrome. In some cases (see

Chapter 13), psychological problems can lead to debilitating physical symptoms in people who have no diagnosable medical illness at all. Psychotherapy, stress management, and other mind/body approaches can do a great deal to help these people reduce their symptoms—and their medical bills.

- It is now indisputable that mind/body approaches can greatly improve the quality of life for people with physical illnesses. This is especially clear for people with cancer, a terrifying disease and one whose primary treatments, radiation and chemotherapy, have extremely unpleasant side effects. Relaxation methods, hypnosis, psychotherapy, and support groups like David Spiegel's have all been shown to help cancer patients deal effectively with their fears and anxieties about the disease and the treatments they must take. Even if these mind/body approaches did not extend the life of a single cancer patient, their emotional benefits would make them a valuable part of every cancer patient's care.
- Finally, the physical and emotional risks of mind/body techniques are virtually nonexistent. Even if some of their benefits are still hypothetical, no one is likely to be harmed by giving these approaches a try—as long as they're not used in place of conventional medicine.

WHAT DOES IT COST?

Mind/body approaches are generally inexpensive; some are even free. It costs next to nothing, for example, to learn the "relaxation response" (Chapter 14)—a basic method of meditation that is now used to treat a range of physical problems. Participation in groups that teach other forms of meditation, such as "mindfulness" meditation (Chapter 15), generally costs little or nothing. If you want to use relaxation or meditation to help you deal with a medical problem, however, you should discuss your specific program with your doctor, at the cost of a medical consultation.

Self-help groups for people with different medical problems offer social support, now recognized as a major psychological aid—and these, too, cost little or nothing to join. Some groups offer specific education in dealing with a disease, which can have both practical value and the psychological value of helping you feel a greater sense of control. A model for this approach, the Arthritis Self-Help Course, is now offered at hundreds of locations by the Arthritis Foundation, at an average cost of about \$20 (see Chapter 10).

Hospital-based stress management courses can be considerably more expensive. One well-respected program costs just over \$500 for eight weekly group sessions plus two individual sessions. Other programs may cost twice as much, or more.

At the high end of the scale are the individualized approaches: hypnosis, biofeedback, and psychotherapy. Costs for these treatments can range from around \$50 a session to over \$100. Biofeedback and hypnosis, however, are designed to help you learn to regulate your mind and body on your own; you will need only a limited number of sessions with a professional. And many physical problems that can be helped with psychotherapy require only a few months or less of weekly sessions.

Anyone thinking of trying a fee-based approach will naturally want to know how much of the cost is covered by medical insurance. There is no clear answer. In fact, the level of insurance reimbursement can vary from nearly complete to nothing at all. It depends on such factors as the policies of the insurance carrier, the nature of the mind/body approach, the setting in which the treatment is given (such as a hospital or a private office), and the reason for the treatment. For example, someone who learns biofeedback to help control Raynaud's disease—a circulatory problem for which biofeedback is a well-recognized treatment—will be more likely to be reimbursed than someone who enters psychotherapy to deal with more general emotional problems (even though those problems may affect physical health).

Overall, mind/body approaches are generally not reimbursed at the same rate as conventional medical treatments. Most insurance companies, for instance, pay only 50 percent of the cost of psychotherapy (as opposed to 80 percent for other procedures). In addition, they set low limits for the allowable cost per session and for the total amount that will be reimbursed for therapy over the life of the policy.

Such limits are unfortunate, because there is increasing evidence that psychological interventions can not only alleviate suffering but also reduce the overall cost of treatment. A number of studies, described in Chapters 13 and 22, have shown that people with medical problems who undergo psychotherapy lower their medical bills enough to pay for their therapy, and more. Similarly, certain kinds of psychological preparation for surgery can speed a patient's recovery enough to save many dollars in hospital costs—\$1,000 or more, according to studies of some procedures (see Chapter 24). Although these studies are not definitive, the evidence so far suggests that mind/body approaches may be highly cost-effective.

On top of that, no one has even begun to estimate the potential savings, both in illness and in dollars, of using mind/body approaches to *prevent* disease as well as treat it. Preventive care in general has gotten short shrift from our medical institutions and third-party payers, which largely follow a disease management model, one that focuses on the treatment of symptoms and diseases only after they emerge. As a society, however, we are being forced to confront the economic costs of slighting disease prevention. In 1992, health-care costs in the United States exceeded \$800 billion. By the year 2000, at the present rate of increase, that figure would more than double, and make up roughly 20 percent of the projected gross national product.

Something has to change. And one reasonable alternative, among many, is to emphasize disease prevention by encouraging a healthy life-style—including mind/body methods—particularly for groups of people at risk for specific diseases. To the degree that emotional turmoil and stress speed the disease process, mind/body interventions might well save money as well as protect health. Although these benefits are not yet proven, the possibility is already leading forward-looking insurance companies, health-care organizations, and corporations to examine mind/body methods as one way to decrease the cost of medical care.

THE BOTTOM LINE

Mind/body medicine includes a variety of treatments and approaches, ranging from meditation and relaxation training to social support groups, that are designed to enlist the mind in improving emotional well-being and physical health. A growing body of research now supports the use of these techniques. Nevertheless, they are probably being used by only a fraction of the people who could benefit from them.

Although many questions about mind/body medicine remain to be answered, we believe mind/body approaches can and should become much more widely used as a regular part of medical care, for several reasons:

- Mind/body approaches have shown great potential for improving the quality of life and reducing the pain and difficulty of symptoms for people with various chronic diseases.
- They may help control or reverse certain underlying disease processes.
- By reducing the effects of stress, they may help to prevent disease from developing.

- The physical and emotional risk of using these techniques is minimal, while their potential benefit is high.
- The economic cost of most mind/body approaches is low; many can be taught by paraprofessionals and involve no high-tech interventions.
- These techniques can easily be applied in the context of conventional medicine, rather than standing in opposition to it. They can and should be used along with standard medical care.

Despite encouraging trends, both physicians and insurance companies are lagging behind the needs of ordinary patients. More and more people are looking for medical care that takes into account their thoughts and emotions as well as their overt medical problems—in short, mind/body medicine. Informed consumers who want to try a mind/body approach often want answers to a number of questions that their doctors may not be able to help them with: What actually works? What is known about these methods and their strengths and limitations? And how do you find a reliable practitioner?

This book is designed to answer such crucial questions, as fully as current scientific knowledge allows.

Helping Docs Mind the Body

Medical schools are adding more unconventional therapies to their required curricula. Slowly.

At the University of Louisville, medical students dance, play-act, joke and meditate their stress away. At Georgetown medical school, an instructor suggests a multiple-sclerosis patient take up dance to relieve the anxiety exacerbating his disease. At Harvard, med students learn to decrease the pain of a patient's breast biopsy through yoga and breathing exercises, and to lower blood pressure in a heart patient by teaching her to meditate.

This is medical school? Well, yes and no. Last week's popular PBS series, "Healing and the Mind" with Bill Moyers, gave many viewers the impression that American medicine in general, and medical education in particular, wouldn't know biofeedback from hypnosis if its stethoscope depended on it. And in fact, training programs for the vast majority of specialties don't include so much as a seminar on the connection between mind and body, and only a dozen or so schools have specific programs in alternative medicines such as acupuncture. But an estimated one half of medical schools now offer some sort of mind-body instruction, says Dr. Herbert Benson of Boston's Deaconess Hospital, who has showed how "the relaxation response" can treat insomnia, hypertension, infertility and other ills. And lately the pace has been speeding up. Benson is setting up affiliates of his Mind/Body Medical Institute at hospitals across the country. Mercy Hospital in Chicago opened the first one last year. Harvard will offer other schools the "unconventional medicine" course developed by Dr. David Eisenberg of Beth Israel Hospital, in which he teaches about homeopathy, acupuncture and massage. Georgetown will soon be the first medical school with a comprehensive program of mind-body studies. And last year the National Institutes of Health launched an office to encourage research and education about "unconventional medicine."

Med schools have been slow to catch on to all this, however. By all accounts, Americans—especially the educated and well off—are clamoring for alternatives to

drugs, surgery and doctors who treat them as nothing but bags of symptoms. Eisenberg and colleagues recently reported that 34 percent of the people they surveyed had used at least one unconventional therapy in the past year, mostly for chronic conditions such as back pain, insomnia and headaches. That works out to 61 million Americans. "Healing and the Mind" scored



Beyond pills and scalpels: Moyers in a Beijing hospital

ratings almost double PBS's usual ones for this time of year, and the accompanying book soared to the top of best-seller lists.

Patients who feel they are participating in their treatment do better—lowering their blood pressure, for instance—than patients who get nothing but orders from a doctor who barely listens to them. To exploit this link, Michigan State University, Tufts, Harvard, Louisville and New York University offer intensive instruction in doctor-patient relationships. At MSU, all residents in family practice and

internal medicine spend one month exclusively on the doctor-patient relationship, learning "new ways to listen, not take control, and follow the patient's agenda," says MSU's Dr. Robert Smith. Through open-ended questions—"how did that make you feel?"—the approach gives patients a sense of self-worth and empowerment. "The mind and body can't be separated," says Smith. "This puts them back together."

At Georgetown, Dr. James Gordon has taught about alternative medicine for 10 years. Some gets integrated into other courses in psychiatry and in community and family medicine. But last year he taught a 16-week introduction to mind-body studies, and a course this spring on "healing partnerships," required of first-year students, will teach how to interview patients and evaluate the scientific literature on relaxation and meditation.

His message sinks in: one anesthesiology resident in the mind-body course came away determined to reduce the amount of anesthetic patients need, perhaps by offering them meditation. "The students see there are limits to what medicine can do, especially for chronic illnesses," says Gordon.

Heart attack: But they don't see it right away. Says MSU's Smith, "We're trained to be very biomedical and reductionist; the students are imbued with that." At Rochester, Susan McDaniel has developed a family-medicine curriculum for residents that examines such mind-body factors as how a patient's family relationships influence her symptoms. (Asthma, heart problems and hypertension all improve with family therapy.) "The students groan, 'Not another psychosocial thing! I have to learn to save someone from a heart attack!'" she says. But there are other impediments. Researchers best versed in mind-body connections are not always associated with med schools (many work at independent institutes). Also, adding "doctor-patient interview skills" to the curriculum may mean crowding out something else.

Nontraditional offerings are bound to increase, though. Recent research shows that biofeedback, stress reduction and support groups can reduce pain, alleviate hypertension and even increase life expectancy for breast-cancer patients. But there's another motivation. To any M.D. who offers only a prescription slip and a date in the operating theater, the popularity of alternative medicine is a threat to a sensitive part of the anatomy: the wallet.

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