

office immediately.

Apart from the hurtfulness of the oncologist's coldness, did it matter medically that he would not deal with his patient's constant sadness? By the time a disease has become so virulent, it would be unlikely that any emotion would have an appreciable effect on its progress. While the woman's depression most certainly dimmed the quality of her final months, the medical evidence that melancholy might affect the course of cancer is as yet mixed.²⁹ But cancer aside, a smattering of studies suggest a role for depression in many other medical conditions, especially in worsening a sickness once it has begun. The evidence is mounting that for patients with serious disease who are depressed, it would pay medically to treat their depression too.

One complication in treating depression in medical patients is that its symptoms, including loss of appetite and lethargy, are easily mistaken for signs of other diseases, particularly by physicians with little training in psychiatric diagnosis. That inability to diagnose depression may itself add to the problem, since it means that a patient's depression—like that of the weepy breast-cancer patient—goes unnoticed and untreated. And that failure to diagnose and treat may add to the risk of death in severe disease.

For instance, of 100 patients who received bone marrow transplants, 12 of the 13 who had been depressed died within the first year of the transplant, while 34 of the remaining 87 were still alive two years later.³⁰ And in patients with chronic kidney failure who were receiving dialysis, those who were diagnosed with major depression were most likely to die within the following two years; depression was a stronger predictor of death than any medical sign.³¹ Here the route connecting emotion to medical status was not biological but attitudinal: The depressed patients were much worse about complying with their medical regimens—cheating on their diets, for example, which put them at higher risk.

Heart disease too seems to be exacerbated by depression. In a study of 2,832 middle-aged men and women tracked for twelve years, those who felt a sense of nagging despair and hopelessness had a heightened rate of death from heart disease.³² And for the 3 percent or so who were most severely depressed, the death rate from heart disease, compared to the rate for those with no feelings of depression, was four times greater.

Depression seems to pose a particularly grave medical risk for heart

attack survivors.³³ In a study of patients in a Montreal hospital who were discharged after being treated for a first heart attack, depressed patients had a sharply higher risk of dying within the following six months. Among the one in eight patients who were seriously depressed, the death rate was five times higher than for others with comparable disease—an effect as great as that of major medical risks for cardiac death, such as left ventricular dysfunction or a history of previous heart attacks. Among the possible mechanisms that might explain why depression so greatly increases the odds of a later heart attack are its effects on heart rate variability, increasing the risk of fatal arrhythmias.

Depression has also been found to complicate recovery from hip fracture. In a study of elderly women with hip fracture, several thousand were given psychiatric evaluations on their admission to the hospital. Those who were depressed on admission stayed an average of eight days longer than those with comparable injury but no depression, and were only a third as likely ever to walk again. But depressed women who had psychiatric help for their depression along with other medical care needed less physical therapy to walk again and had fewer rehospitalizations over the three months after their return home from the hospital.

Likewise, in a study of patients whose condition was so dire that they were among the top 10 percent of those using medical services—often because of having multiple illnesses, such as both heart disease and diabetes—about one in six had serious depression. When these patients were treated for the problem, the number of days per year that they were disabled dropped from 79 to 51 for those who had major depression, and from 62 days per year to just 18 in those who had been treated for mild depression.³⁴

THE MEDICAL BENEFITS OF POSITIVE FEELINGS

The cumulative evidence for adverse medical effects from anger, anxiety, and depression, then, is compelling. Both anger and anxiety, when chronic, can make people more susceptible to a range of disease. And while depression may not make people more vulnerable to becoming ill, it does seem to impede medical recovery and heighten the risk of death, especially with more frail patients with severe conditions.

But if chronic emotional distress in its many forms is toxic, the opposite range of emotion can be tonic—to a degree. This by no means says that positive emotion is curative, or that laughter or happiness alone will turn the course of a serious disease. The edge positive emotions offer seems subtle, but, by using studies with large numbers of people, can be teased out of the mass of complex variables that affect the course of disease.

The Price of Pessimism—and Advantages of Optimism

As with depression, there are medical costs to pessimism—and corresponding benefits from optimism. For example, 122 men who had their first heart attack were evaluated on their degree of optimism or pessimism. Eight years later, of the 25 most pessimistic men, 21 had died; of the 25 most optimistic, just 6 had died. Their mental outlook proved a better predictor of survival than any medical risk factor, including the amount of damage to the heart in the first attack, artery blockage, cholesterol level, or blood pressure. And in other research, patients going into artery bypass surgery who were more optimistic had a much faster recovery and fewer medical complications during and after surgery than did more pessimistic patients.³⁵

Like its near cousin optimism, hope has healing power. People who have a great deal of hopefulness are, understandably, better able to bear up under trying circumstances, including medical difficulties. In a study of people paralyzed from spinal injuries, those who had more hope were able to gain greater levels of physical mobility compared to other patients with similar degrees of injury, but who felt less hopeful. Hope is especially telling in paralysis from spinal injury, since this medical tragedy typically involves a man who is paralyzed in his twenties by an accident and will remain so for the rest of his life. How he reacts emotionally will have broad consequences for the degree to which he will make the efforts that might bring him greater physical and social functioning.³⁶

Just why an optimistic or pessimistic outlook should have health consequences is open to any of several explanations. One theory proposes that pessimism leads to depression, which in turn interferes with the resistance of the immune system to tumors and infection—an unproven speculation at present. Or it may be that pessimists neglect themselves—some studies have found that pessimists smoke and drink

more, and exercise less, than optimists, and are generally much more careless about their health habits. Or it may one day turn out that the physiology of hopefulness is itself somehow helpful biologically to the body's fight against disease.

With a Little Help From My Friends: The Medical Value of Relationships

Add the sounds of silence to the list of emotional risks to health—and close emotional ties to the list of protective factors. Studies done over two decades involving more than thirty-seven thousand people show that social isolation—the sense that you have nobody with whom you can share your private feelings or have close contact—doubles the chances of sickness or death.³⁷ Isolation itself, a 1987 report in *Science* concluded, “is as significant to mortality rates as smoking, high blood pressure, high cholesterol, obesity, and lack of physical exercise.” Indeed, smoking increases mortality risk by a factor of just 1.6, while social isolation does so by a factor of 2.0, making it a greater health risk.³⁸

Isolation is harder on men than on women. Isolated men were two to three times more likely to die as were men with close social ties; for isolated women, the risk was one and a half times greater than for more socially connected women. The difference between men and women in the impact of isolation may be because women's relationships tend to be emotionally closer than men's; a few strands of such social ties for a woman may be more comforting than the same small number of friendships for a man.

Of course, solitude is not the same as isolation; many people who live on their own or see few friends are content and healthy. Rather, it is the subjective sense of being cut off from people and having no one to turn to that is the medical risk. This finding is ominous in light of the increasing isolation bred by solitary TV-watching and the falling away of social habits such as clubs and visits in modern urban societies, and suggests an added value to self-help groups such as Alcoholics Anonymous as surrogate communities.

The power of isolation as a mortality risk factor—and the healing power of close ties—can be seen in the study of one hundred bone marrow transplant patients.³⁹ Among patients who felt they had strong emotional support from their spouse, family, or friends, 54 percent survived the transplants after two years, versus just 20

percent among those who reported little such support. Similarly, elderly people who suffer heart attacks, but have two or more people in their lives they can rely on for emotional support, are more than twice as likely to survive longer than a year after an attack than are those people with no such support.⁴⁰

Perhaps the most telling testimony to the healing potency of emotional ties is a Swedish study published in 1993.⁴¹ All the men living in the Swedish city of Göteborg who were born in 1933 were offered a free medical exam; seven years later the 752 men who had come for the exam were contacted again. Of these, 41 had died in the intervening years.

Men who had originally reported being under intense emotional stress had a death rate three times greater than those who said their lives were calm and placid. The emotional distress was due to events such as serious financial trouble, feeling insecure at work or being forced out of a job, being the object of a legal action, or going through a divorce. Having had three or more of these troubles within the year before the exam was a stronger predictor of dying within the ensuing seven years than were medical indicators such as high blood pressure, high concentrations of blood triglycerides, or high serum cholesterol levels.

Yet among men who said they had a dependable web of intimacy—a wife, close friends, and the like—*there was no relationship whatever* between high stress levels and death rate. Having people to turn to and talk with, people who could offer solace, help, and suggestions, protected them from the deadly impact of life's rigors and trauma.

The quality of relationships as well as their sheer number seems key to buffering stress. Negative relationships take their own toll. Marital arguments, for example, have a negative impact on the immune system.⁴² One study of college roommates found that the more they disliked each other, the more susceptible they were to colds and the flu, and the more frequently they went to doctors. John Cacioppo, the Ohio State University psychologist who did the roommate study, told me, "It's the most important relationships in your life, the people you see day in and day out, that seem to be crucial for your health. And the more significant the relationship is in your life, the more it matters for your health."⁴³

The Healing Power of Emotional Support

In *The Merry Adventures of Robin Hood*, Robin advises a young follower: “Tell us thy troubles and speak freely. A flow of words doth ever ease the heart of sorrows; it is like opening the waste where the mill dam is overfull.” This bit of folk wisdom has great merit; unburdening a troubled heart appears to be good medicine. The scientific corroboration of Robin’s advice comes from James Pennebaker, a Southern Methodist University psychologist, who has shown in a series of experiments that getting people to talk about the thoughts that trouble them most has a beneficial medical effect.⁴⁴ His method is remarkably simple: he asks people to write, for fifteen to twenty minutes a day over five or so days, about, for example, “the most traumatic experience of your entire life,” or some pressing worry of the moment. What people write can be kept entirely to themselves if they like.

The net effect of this confessional is striking: enhanced immune function, significant drops in health-center visits in the following six months, fewer days missed from work, and even improved liver enzyme function. Moreover, those whose writing showed most evidence of turbulent feelings had the greatest improvements in their immune function. A specific pattern emerged as the “healthiest” way to ventilate troubling feelings: at first expressing a high level of sadness, anxiety, anger—whatever troubling feelings the topic brought up; then, over the course of the next several days weaving a narrative, finding some meaning in the trauma or travail.

That process, of course, seems akin to what happens when people explore such troubles in psychotherapy. Indeed, Pennebaker’s findings suggest one reason why other studies show medical patients given psychotherapy in addition to surgery or medical treatment often fare better *medically* than do those who receive medical treatment alone.⁴⁵

Perhaps the most powerful demonstration of the clinical power of emotional support was in groups at Stanford University Medical School for women with advanced metastatic breast cancer. After an initial treatment, often including surgery, these women’s cancer had returned and was spreading through their bodies. It was only a matter of time, clinically speaking, until the spreading cancer killed them. Dr. David Spiegel, who conducted the study, was himself stunned by the findings, as was the medical community: women with advanced breast cancer who went to weekly meetings with others survived *twice as long* as did women with the same disease who faced it on their own.⁴⁶

All the women received standard medical care; the only difference

was that some also went to the groups, where they were able to unburden themselves with others who understood what they faced and were willing to listen to their fears, their pain, and their anger. Often this was the only place where the women could be open about these emotions, because other people in their lives dreaded talking with them about the cancer and their imminent death. Women who attended the groups lived for thirty-seven additional months, on average, while those with the disease who did not go to the groups died, on average, in nineteen months—a gain in life expectancy for such patients beyond the reach of any medication or other medical treatment. As Dr. Jimmie Holland, the chief psychiatric oncologist at Sloan-Kettering Memorial Hospital, a cancer treatment center in New York City, put it to me, “Every cancer patient should be in a group like this.” Indeed, if it had been a new drug that produced the extended life expectancy, pharmaceutical companies would be battling to produce it.

BRINGING EMOTIONAL INTELLIGENCE TO MEDICAL CARE

The day a routine checkup spotted some blood in my urine, my doctor sent me for a diagnostic test in which I was injected with a radioactive dye. I lay on a table while an overhead X-ray machine took successive images of the dye’s progression through my kidneys and bladder. I had company for the test: a close friend, a physician himself, happened to be visiting for a few days and offered to come to the hospital with me. He sat in the room while the X-ray machine, on an automated track, rotated for new camera angles, whirred and clicked; rotated, whirred, clicked.

The test took an hour and a half. At the very end a kidney specialist hurried into the room, quickly introduced himself, and disappeared to scan the X-rays. He didn’t return to tell me what they showed.

As we were leaving the exam room my friend and I passed the nephrologist. Feeling shaken and somewhat dazed by the test, I did not have the presence of mind to ask the one question that had been on my mind all morning. But my companion, the physician, did: “Doctor,” he said, “my friend’s father died of bladder cancer. He’s anxious to know if you saw any signs of cancer in the X-rays.”

“No abnormalities,” was the curt reply as the nephrologist hurried on to his next appointment.

My inability to ask the single question I cared about most is repeated a thousand times each day in hospitals and clinics everywhere. A study of patients in physicians' waiting rooms found that each had an average of three or more questions in mind to ask the physician they were about to see. But when the patients left the physician's office, an average of only one and a half of those questions had been answered.⁴⁷ This finding speaks to one of the many ways patients' emotional needs are unmet by today's medicine. Unanswered questions feed uncertainty, fear, catastrophizing. And they lead patients to balk at going along with treatment regimes they don't fully understand.

There are many ways medicine can expand its view of health to include the emotional realities of illness. For one, patients could routinely be offered fuller information essential to the decisions they must make about their own medical care; some services now offer any caller a state-of-the-art computer search of the medical literature on what ails them, so that patients can be more equal partners with their physicians in making informed decisions.⁴⁸ Another approach is programs that, in a few minutes' time, teach patients to be effective questioners with their physicians, so that when they have three questions in mind as they wait for the doctor, they will come out of the office with three answers.⁴⁹

Moments when patients face surgery or invasive and painful tests are fraught with anxiety—and are a prime opportunity to deal with the emotional dimension. Some hospitals have developed presurgery instruction for patients that help them assuage their fears and handle their discomforts—for example, by teaching patients relaxation techniques, answering their questions well in advance of surgery, and telling them several days ahead of surgery precisely what they are likely to experience during their recovery. The result: patients recover from surgery an average of two to three days sooner.⁵⁰

Being a hospital patient can be a tremendously lonely, helpless experience. But some hospitals have begun to design rooms so that family members can stay with patients, cooking and caring for them as they would at home—a progressive step that, ironically, is routine throughout the Third World.⁵¹

Relaxation training can help patients deal with some of the distress their symptoms bring, as well as with the emotions that may be triggering or exacerbating their symptoms. An exemplary model is Jon Kabat-Zinn's Stress Reduction Clinic at the University of

Massachusetts Medical Center, which offers a ten-week course in mindfulness and yoga to patients; the emphasis is on being mindful of emotional episodes as they are happening, and on cultivating a daily practice that offers deep relaxation. Hospitals have made instructional tapes from the course available over patients' television sets—a far better emotional diet for the bedridden than the usual fare, soap operas.⁵²

Relaxation and yoga are also at the core of the innovative program for treating heart disease developed by Dr. Dean Ornish.⁵³ After a year of this program, which included a low-fat diet, patients whose heart disease was severe enough to warrant a coronary bypass actually reversed the buildup of artery-clogging plaque. Ornish tells me that relaxation training is one of the most important parts of the program. Like Kabat-Zinn's, it takes advantage of what Dr. Herbert Benson calls the "relaxation response," the physiological opposite of the stress arousal that contributes to such a wide spectrum of medical problems.

Finally, there is the added medical value of an empathic physician or nurse, attuned to patients, able to listen and be heard. This means fostering "relationship-centered care," recognizing that the relationship between physician and patient is itself a factor of significance. Such relationships would be fostered more readily if medical education included some basic tools of emotional intelligence, especially self-awareness and the arts of empathy and listening.⁵⁴

TOWARD A MEDICINE THAT CARES

Such steps are a beginning. But for medicine to enlarge its vision to embrace the impact of emotions, two large implications of the scientific findings must be taken to heart:

1. *Helping people better manage their upsetting feelings—anger, anxiety, depression, pessimism, and loneliness—is a form of disease prevention.* Since the data show that the toxicity of these emotions, when chronic, is on a par with smoking cigarettes, helping people handle them better could potentially have a medical payoff as great as getting heavy smokers to quit. One way to do this that could have broad public-health effects would be to impart most basic emotional intelligence skills to children, so that they become lifelong habits.

Another high-payoff preventive strategy would be to teach emotion management to people reaching retirement age, since emotional well-being is one factor that determines whether an older person declines rapidly or thrives. A third target group might be so-called at-risk populations—the very poor, single working mothers, residents of high-crime neighborhoods, and the like—who live under extraordinary pressure day in and day out, and so might do better medically with help in handling the emotional toll of these stresses.

2. *Many patients can benefit measurably when their psychological needs are attended to along with their purely medical ones.* While it is a step toward more humane care when a physician or nurse offers a distressed patient comfort and consolation, more can be done. But emotional care is an opportunity too often lost in the way medicine is practiced today; it is a blind spot for medicine. Despite mounting data on the medical usefulness of attending to emotional needs, as well as supporting evidence for connections between the brain's emotional center and the immune system, many physicians remain skeptical that their patients' emotions matter clinically, dismissing the evidence for this as trivial and anecdotal, as "fringe," or, worse, as the exaggerations of a self-promoting few.

Though more and more patients seek a more humane medicine, it is becoming endangered. Of course, there remain dedicated nurses and physicians who give their patients tender, sensitive care. But the changing culture of medicine itself, as it becomes more responsive to the imperatives of business, is making such care increasingly difficult to find.

On the other hand, there may be a business advantage to humane medicine: treating emotional distress in patients, early evidence suggests, can save money—especially to the extent that it prevents or delays the onset of sickness, or helps patients heal more quickly. In a study of elderly patients with hip fracture at Mt. Sinai School of Medicine in New York City and at Northwestern University, patients who received therapy for depression in addition to normal orthopedic care left the hospital an average of two days earlier; total savings for the hundred or so patients was \$97,361 in medical costs.⁵⁵

Such care also makes patients more satisfied with their physicians and medical treatment. In the emerging medical marketplace, where patients often have the option to choose between competing health