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Stress: All together now ... breathe

Think you are stressed out?
Try being Emma Nance.
It must have been a bizarre sight — a 64-year-old woman confronting a man in a grocery store, yelling and screaming about a parking space he allegedly “stole” from her.

“I went inside the store and tracked him down,” she recalls. “I had to let him know.”

Nance admits she was short-tempered and prone to erupt at even the smallest provocation. It got to the point where Nance didn’t even recognize herself. She finally concluded, “That’s enough.”

Stress is a curious thing. It triggers what Walter Cannon, a physiologist at Harvard Medical School, called the

“fight or flight” response. Present in all humans since the beginning of time, the automatic response refers to the physiological transformation that occurs when a person is faced with imminent danger — real or perceived.

The threat causes certain hormones, such as adrenaline and cortisol, to flood the bloodstream. The heart pumps faster; the blood pressure increases; the pupils dilate to improve vision; the impulses quicken; the muscles are engorged with blood for increased strength and endurance; glucose abounds for additional energy; the immune system is suppressed — all in the name of survival.

The changes are not necessarily a bad thing. Some actually perform better under stress. Athletes welcome the “adrenaline rush” to increase their efficiency, while others flourish under deadline pressure.

But stress is one thing; being able to handle it is another, and stress is clearly winning the battle in America. In a 2001 newsletter, the American Institute of Stress reported that stress accounts for more than \$300 billion a year due to absenteeism, turnover and reduced productivity, as well as medical, legal and insurance expenses.

Dr. Ronald Dixon, an internist at Massachusetts General Hospital Beacon Hill, admits that many of his patients complain of stress.

“Stress is ubiquitous,” he says. “It’s a part of living. But how

you handle it can affect your health.”

Dixon says that some of his patients are not always able to make the connection between their stress and their physical complaints.

“A person might present with palpitations,” he explains. “They know that they are under stress because they lost their home, for example, but are unaware that the palpitations are often a result of the stress.”

Dixon warns that if a person tends to internalize things and not share or has no outlets, stress can build up and begin to negatively impact life.

Uncontrolled stress can take a heavy toll.

“Stress is ubiquitous. It’s a part of living. But how you handle it can affect your health.”

— Dr. Ronald F. Dixon



The death of loved ones and excessive demands on her time overwhelmed Emma Nance. She addresses her stress through liturgical dancing, a Christian expression of prayer through body movement.

“People lose behavioral discipline,” Dixon says. “Some people self-medicate and turn to drugs or alcohol.” Similarly, smokers who have kicked the habit can fall off the wagon.

The trick is to know when the stress is out of control.

“When stress hampers relationships with loved ones or the person loses control of things that he or she could previously manage,” Dixon says, “the stress is getting out of hand.”

By any objective standard, Emma Nance should have been stressed out.

She has four grown children, 22 grandchildren and 24 great-grandchildren. Most of them have her telephone number. Taking in her two foster brothers was something she says she had to do.

Her generosity comes, in part, from her deeply rooted Christian faith; it also comes from her inability to say “no.” Mak-

ing the problem worse was Nance’s desire to keep her feelings to herself.

“I’ve had to keep a clear head for everyone,” she says. “Everything was on me.”

Nance is happy to be alive. Six years ago, she was diagnosed with inoperable lung cancer. She was given five months to live. She survived, but tragedy still found her. A few years ago, she lost a daughter to AIDS a week before Christmas. A short time later, her mother died.

It is somewhat understandable, then, that Nance was likely to explode sooner or later.

The problem is that the body responds the same whether it’s reacting to a life-threatening situation or an argument with a child. The aftermaths are different, however. Once the life-threatening situation — like a near-miss car accident — has

Nance, continued to page 4

Balancing mind, body and soul

For years, Angela Hofmann refused to take a yoga class. Even though her friend was an expert and yoga instructor, Hofmann wouldn’t take her up on repeated offers.

Finally, about seven years ago, she went to her first class. She liked it but didn’t consider yoga an integral part of her life. All that changed about three years ago, when she explained that she started “feeling the benefits.”

She is now a convert.

“Now that I do it,” she said, “I will never not do it. The inner strength it gives me, I don’t want to be without.”

Hofmann knew about the health benefits for years. She knew that the low-impact exercise increases strength and flexibility, and affords emotional balance. She also knew that yoga helped with stress.

And stress relief was something that Hofmann knew she needed. Hofmann, 47, had suffered with uterine fibroids. The



Angela Hofmann credits yoga for her ability to manage stress. Here, she practices the cobra pose along the Charles River.

physical discomfort was at times overwhelming. She experienced abdominal swelling and excessive bleeding. And worse, she didn’t know how to resolve it — even after consulting with several doctors.

The stress of dealing with the uncertainty merely aggravated her physical symptoms.

And the personality changes didn’t help much either. Hofmann tells the story of a family trip to Nantucket. The setting was idyllic; everything was perfect. But you would have never known that from Hofmann’s attitude. She complained about everything.

“Everything was wrong,” Hofmann remembered.

The vacation proved to be a turning point. She began to take her yoga classes more seriously and was shocked at the results.

“Your mind is in a different place,” she explained. “Your mind is clear and

can focus better. I walk out of class with a different perspective. I even feel two inches taller.

“There’s a letting go of stress,” she added. “When you re-examine what caused the stress in the first place, you realize it wasn’t as bad as it seemed.”

What’s more, according to Hofmann, the impact lasts not for just an hour, but for a few days.

“The more you do it, the longer it lasts,” she said.

That’s music to the ears of Dr. Herbert Benson. Almost 40 years ago, he bucked the medical system when he publicly supported the mind/body concept and the relaxation response.

“At that time, medicine was only drugs and surgery,” he said.

But when Benson, a cardiologist, found that the relaxation response reduced metabolism, rate of breathing and heart rate and lowered blood pressure, he was hooked. Benson is now the director emeritus of the Benson-Henry Institute for Mind Body Medicine at Massachu-

Hofmann, continued to page 4

The distressing truth about stress

Stress is taking its toll, especially in economic times

Feeling stressed? You're not the only one. Americans have become increasingly stressed, especially with the downturn in the economy. According to a recent study by Gallup-Healthways Poll published in March in USA Today, more than 24 million Americans describe their lives as having shifted from "thriving" to "struggling." The poll reported that people's well-being plunged on days when the stock market lost big and when jobless claims numbers were high. The survey also showed that people between the ages of 30 and 55, who are in their prime earning years, may be suffering most from the tough economic climate.

Most of us can handle the day-to-day pressures caused by our jobs, our families, and our various tasks and responsibilities. In fact, it's been shown that moderate stress can be a good thing; a little stress can get your blood pumping and help you focus more on the tasks at hand. In fact, experts have determined that the stimulus caused by "good" stress can actually improve your memory, ward off infection and help heart function.

But too much stress is never a good thing.

Operating with a high level of pressure and anxiety can lead to a wide range of physical, emotional and behavioral problems. Depression and heart disease are two of the most serious problems caused by too much stress, but headaches, lack of sleep, stomach discomfort, overeating, chest pain and problems in relationships can often be traced to abnormally high levels of tension.

What can we do to manage stress? "The most important thing is to face your source of stress and then do something about it," said Dr. Joseph Schembri, a licensed psychologist who has run stress management seminars for Boston-area corporations. "People often don't attack

the source of the stress."

Dr. Kenford Nedd, a family practitioner who specializes in stress and is the author of the bestselling book, "Power over Stress," offers several tactics for beating stress:

"Stress is defined as the response to difficult life circumstances (stressors) that are perceived as beyond the control of the individual," Nedd says. "Stress comes from the perception that you cannot handle something. If you say to yourself that you can handle it, you will. For example, if you lose your job but tell yourself you can handle it, then you will work to remedy the situation and your stress will be lessened.

"African Americans do tend to have a plethora of stressors, as they need to deal with racism and reduced access to health care and their immune system is likely to suffer because of it," he added.

Whether it is the economy or other factors in your life that cause stress, the good news is there is an abundance of practical techniques that can be incorporated into your life — both in the long-term and on a short-term basis.

Doctors and mental health experts recommend a number of activities and behaviors to put your mind at ease to lift your tension. Here are some stress-reduction tips:

- **Try to exercise for at least 30 minutes, three times per week.** Take a walk, join a gym, or meet a friend to shoot baskets or play tennis. You can also take up proven stress-reducers like tai chi or yoga.

- **Rest and relax.** Many stressed-out individuals go to sleep too late, get up too early and never make time for themselves. Figure out how much sleep you need, then make sure you get it. Schedule time to be with family and friends, and stick to the schedule. If you need to, try relaxation exercises or techniques like meditation.

- **Change your eating habits.** Cut down on foods and drinks containing caffeine (i.e., coffee, tea, cola, chocolate) and cut way down on fatty, sugary junk food. Also, be sure to eat a well-balanced diet and eat more slowly.

- **Don't be afraid to make changes.** Confront your problems head on and take steps to fix them. If you find yourself in a difficult job or a problem relationship, it

may be best to move on for the sake of your mental health.

"Don't put yourself in difficult situations," recommends Nedd. "For example, avoid inflammatory conversations with difficult people."

Rather than give in to negative thoughts and feelings, fight them. Look at things more positively and maintain a sense of humor.



These techniques work for many stressed-out individuals. However, there are cases when chronic stress must be confronted with the help of a medical professional. If you have any of the symptoms listed above and your attempts to correct them through behavioral changes have been unsuccessful, talk to your doctor. You may need to work with a mental health professional or take medication to get your stress under control.

For more information, visit the "stress center" on Blue Cross Blue Shield of Massachusetts' A Healthy Me web site: <http://www.ahealthyme.com/topic/stresscenter>.

Seven quick daily tips to de-stress

In addition to the long-term stress management techniques, there are plenty of quick and nifty stress management techniques that you can practice using on a daily basis. Select two or three to start with and see how they work for you. Some may be a better fit for you than others. Don't be afraid to try different ones and make sure it works for your lifestyle.

1. **Don't worry.** Take a step back and keep in mind that you cannot always control the circumstances around you, but you can control your reaction.

2. **Take a deep breath.** When people are anxious or upset, their breathing becomes shallower. Taking deep breaths and focusing on exhaling will make you feel more relaxed. It's amazing how something so simple can physically ease tension.

3. **Say no.** Learn to say no to things that don't contribute to your quality of life and long-term goals. Find ways to balance work and family.

4. **Live within your budget.** Spending more than you make can be a great source of stress. Cut up the credit cards and pay only by cash if you struggle with overspending. If your company has an Employee Assistance Program, take advantage of the financial counseling service.

5. **Be grateful.** When you wake up in the morning, think of five things that you are grateful for in your life, whether it is your spouse, children, job or a simple thing like playing with your pet. You'll be amazed at how this sets up a positive outlook for the day.

6. **Take care of yourself.** Getting enough sleep and eating well are good ways to beat stress. To maintain energy, eat a balanced diet that includes grains, fruits, vegetables, low-fat meat and dairy products. Choose foods high in protein and vitamins C, B and A.

7. **Take a break.** When things get too stressful, take a break. Even a five-minute break can help you be more effective and focused. Treat yourself to something you like — maybe it's a quick walk around the block, or simply stretching at your desk.



Life is full of ups and downs.

Everyone knows what stress feels like—no one is immune.

But sometimes the sum of life's challenges can become overwhelming, resulting in physical, emotional, or behavioral symptoms that negatively affect your health.

If you find yourself experiencing neck pain, headaches, depression, or some other symptom of extreme stress, take a moment to speak with your doctor.

He or she can recommend relaxation techniques like exercise, meditation, and deep breathing that can help you feel back on top by improving your symptoms.



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Questions & Answers

1. Why is exercise recommended to reduce stress?

Exercise is shown to increase the amount of endorphins our body produces. Endorphins, which are associated with the feeling of a “runner’s high,” are special chemicals that can reduce pain and improve our mood. Exercise — whether a walk during lunch or a game of baseball, basketball, football or soccer — can be therapeutic by helping distract us from the challenges and problems of the day. It also helps burn up some of that extra energy while we are in a high-stress state.



Joseph R. Betancourt, M.D.
Director of the Disparities Solutions Center, Massachusetts General Hospital

2. Do people get stressed about unpleasant events only?

Not necessarily. Any circumstance that requires a response or adjustment on our part can result in stress. Take Christmas, for example. Although the holidays are generally festive, many are stressed and overwhelmed by the amount of things that need to get done during this time. Even a new job, a move to a different city or the birth of a child can cause stress.

3. How does stress affect the heart?

When we get stressed, our bodies respond by releasing certain hormones into our bloodstream to help us deal with the stress. These hormones, such as adrenaline and cortisol, cause our heart to pump faster; speed up blood flow, which increases blood pressure; and increase the release of stored fats into our bloodstream. If you are continually stressed (chronic stress), over time these responses can cause our heart to overwork, which may contribute to high blood pressure (hypertension) and heart disease. Although stress alone will not cause hypertension or heart disease, it can exacerbate the symptoms in those who have the conditions.

4. Why do some people who are stressed gain weight?

Everyone responds to stress differently. While some may lose their appetite, others may overeat. It is not uncommon to see changes in lifestyle when we are stressed. For instance, we often exercise less, have irregular eating habits and/or overeat foods high in fat and calories. After a hectic day, it is sometimes easier and more relaxing to order the take-out pizza for dinner instead of preparing our meals. Managing your stress is an important way to fight off weight gain. If you are feeling stressed, try meditating (even if it’s just 10 minutes to yourself) or praying, or even doing something that makes you laugh. Also, try to keep some healthy snacks like carrots and water in easy reach, while keeping up with some physical activity like taking the stairs at work or planning one day of the week to go to the gym.

5. Is a person more likely to get sick when he or she is stressed?

Yes. When we are stressed, our body releases a chemical that gives us more energy to fuel our muscles, but also slows down our digestive and immune systems. The immune system helps the body fight bacteria, viruses and other unwanted intruders. When we are stressed and our immune system is compromised, we become more susceptible to various illnesses, such as the common cold. That is why it is important to manage your stress properly.

6. Why does deep breathing help relieve stress?

When we are under stress, our body revs up, increasing our heart rate and getting our muscles ready for physical activity (think of the saying “nervous wreck”). By taking deep breaths (about five seconds to inhale and five seconds to exhale), we restore the balance in our body. Deep breathing relaxes our muscles, restores our heart rate and helps relax the mind. If you are feeling overwhelmed, take a few minutes to focus on your breathing. This is a simple stress management tool that can be done anywhere, from the office to the parking lot or at home.

Marina C. Cervantes of the Disparities Solutions Center participated in the preparation of these responses.

The stress response

Stress is the body’s reaction to a circumstance that requires a response or adjustment. It’s not necessarily bad. The stress response allows us to avoid life-threatening situations — we quickly jump out of the way of an oncoming automobile. But stress can be harmful when psychological or emotional stressors bombard us daily and we have no outlet to counter the physiological changes that occur.

Blood pressure increases

Heart beats faster

More blood flows to muscles

Immune and digestive systems slow down

The pupils dilate for better vision

Stored fat is converted to energy

Blood clots faster

Metabolism increases

Breathing becomes shallow



Symptoms of chronic stress

If stress is allowed to build up without an outlet, such as walking, tai chi or deep breathing, it can result in physical, emotional and behavioral symptoms.

- Frequent headaches
- Indigestion, stomachaches
- Insomnia, fatigue
- Back pain
- Tight shoulders and neck
- Racing heartbeat
- Sweating
- Frequent colds
- Excessive smoking and drinking
- Compulsive eating
- Clenched jaw or teeth grinding
- Trouble thinking clearly
- Forgetfulness, memory loss
- Loss of sense of humor
- Restlessness, nervousness
- Irritability, quick temper
- Feelings of depression and anxiety
- Inability to make decisions

Healing the racial divide in health care

Dr. Joseph Betancourt wrote the book on health care disparities. Now he’s trying to erase them.

When Joseph Betancourt was in medical school, he often saw children acting as interpreters for family members who did not speak English. Originally from Puerto Rico, and as the only Spanish-speaking medical student on his team, he had to interpret for hospitalized patients.

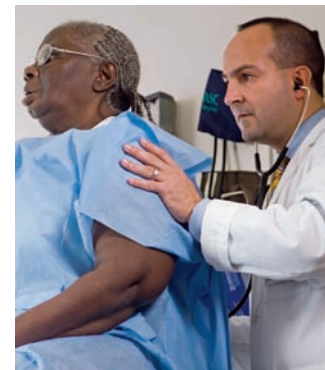
Years later, Joseph Betancourt, MD, MPH, co-authored a landmark study by the Institute of Medicine that found striking inequities in health and health care for racial and ethnic minorities across the US.

When Massachusetts General Hospital president Peter Slavin, MD created the Disparities Solutions Center at MGH, he chose Dr. Betancourt to lead it. “It is time to move from diagnosing the problem to treating it,” said Dr. Slavin.

The MGH Center is the first hospital-based Disparities Solutions Center in the country to move disparities beyond research into policy and practice. It has \$3 million in support from MGH and Partners HealthCare.

The Disparities Solutions Center will:

- advise MGH in its efforts to identify and address racial and ethnic disparities in care;
- develop and evaluate customized solutions to



eliminate disparities in the health care community in Boston and beyond;

- educate, train and expand the number of leaders working to end disparities nationwide.

Perhaps most important, the center will transfer what it learns to hospitals and health centers, community groups, insurers, medical schools, educators, government officials, and of course, physicians and nurses across the country.

One of the Center’s first efforts is the new Diabetes Management Program at the MGH Chelsea Health Care Center, where more than 50 percent of patients are Latino. Latinos are more likely than whites to die from diabetes complications including kidney failure, blindness, heart disease, and amputations.

MGH Chelsea health professionals will help patients control their diabetes, get regular screenings, and prevent complications through telephone outreach, individual coaching, and group education sessions in English — and Spanish.

Translating talk into action is what Dr. Betancourt has been doing all his life.

More information at Boston Public Health Commission at www.bphc.org

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passed, the body returns to its normal state. But the day-to-day stressors or problems — psychological and emotional — are another story. If there is no outlet for the stress, it becomes chronic.

“... When the stress response goes on for too long,” explained Dr. Esther Sternberg of the National Institute of Mental Health in a recent published interview, “... hormones weaken the immune system’s ability to fight disease. That’s when you get sick.”

Not only can stress cause backaches and headaches, it can also prolong wound healing, decrease response to vaccines, and increase the frequency and severity of upper respiratory infections. It also aggravates existing health problems, such as asthma, acid reflux and irritable bowel problems.

But backaches are the tip of the iceberg. Research has indicated a link between chronic stress and heart disease. The relationship is not clear; it is possible that stress itself is a risk factor of heart disease, or that it worsens other risk factors, such as high cholesterol or high blood pressure. Studies also link stress to blood clots that increase the threat of heart attack.

In addition, unresolved chronic stress can result in anxiety and depression, which require more intense psychological intervention.

Stress does not result from only unpleasantness. Major life changes — good or bad — such as the birth of a baby or marriage can rev up the hormones.

In 1983, Time Magazine cited stress as “America’s number one health problem.” At the time the article was written, 55 percent of those surveyed said they were under great stress every week. Thirteen years later, a similar survey found that 75 percent cited great stress at least one day a week.

The problem has increased over the years. The American Institute of Stress estimated more than 10 years ago that 75 to 90 percent of all visits to primary care physicians are related to stress. It’s safe to assume that the percentage remains high today.

For some, stress has become a never-ending way of life with long-term consequences. In a recent study conducted at the University of California at Los Angeles,

the researchers concluded that repeated responses to discrimination may be a factor behind higher rates of hypertension, diabetes and obesity in blacks.

When a person experiences discrimination — real or perceived — the body sets into motion a protective response very similar to the physiological changes triggered by stress. The repeated influx of these chemicals can damage systems in the body that are associated with disease and obesity, the researchers explained.

Although it is not always possible to prevent stress, the good news is that it is possible to control our reaction to it.

Diana Freeland is a licensed clinical social worker and conducts stress management techniques for major corporations. Freeland

offers a few hints on how to recognize and manage stress.

“Know where your shoulders are,” she says. “If your shoulders are hiked up to your ears, that’s a sure sign of stress.”

Freeland advises her clients to practice deep breathing, even during business meetings.

“Place a hand over your stomach as you breathe in,” she explains. “Your stomach should rise. That’s diaphragmatic breathing. If your stomach does not rise, your breathing is shallow.”

And a symptom of stress.

But if none of these measures work and people are unable to devise a strategy that works for them, it is best to seek professional help.

That’s what Emma Nance did. She started talking to a therapist.

She learned to not overextend herself. She remembers the first time she could bring herself to say no to one of her grandchildren. “It felt so good,” she said.

And singing has been a boon to her. She sings in the choir at Union Baptist Church in Cambridge.

“If I can’t sing, I’m lost,” she says. “It’s a great medication for me.”

She also does liturgical dancing, a Christian expression of prayer or worship through body movement.

Nance says she has seen results. Her temper is now a thing of the past.

“That has gotten so, so, so much better,” she says.



Ronald F. Dixon, M.D.
Internist
Associate Medical Director
Massachusetts General Hospital
Beacon Hill

Are you stressed out?



Drew Waddy, 17,
Student

What stresses you? When people don’t understand and I have to repeat myself over and over.

What are your symptoms? I get angry.

How do you handle it? I watch a good TV show and talk to friends.



Ruby Hill, “50-something,”
Administrative Assistant

What stresses you? My grandson was in an accident.

What are your symptoms? I felt out of control and overwhelmed; my blood pressure spiked; I became fatigued and lost my appetite.

How do you handle it? I pray and give it to God; I fish and commune with nature, and talk to someone who understands.



Roxanne Fernandes, 42,
Executive Assistant

What stresses you? When I get caught in traffic and am late for work.

What are your symptoms? My palms get sweaty and my temperature rises.

How do you handle it? I turn the music up loud and sing; I do deep breathing; I vent to friends; I walk and play.



Gregory Day, 61, Sales

What stresses you? Public speaking and personal confrontations.

What are your symptoms? I feel anxious.

How do you handle it? I do deep breathing to calm myself and step away from whatever’s stressing me.

A quick fix

The next time you are under stress — you are caught in traffic or standing in a long line or someone annoys you — practice diaphragmatic, or deep breathing. It’s a simple technique that can help reduce stress and tension immediately.



INHALE



EXHALE

Put your hand on your stomach.

Breathe in through your nose. The hand on your stomach should rise.

Breathe out through your mouth. Your stomach should fall.

Your chest should move very little. Excessive chest movement indicates shallow breathing.

The advantage to deep breathing is that you can do it anywhere, any time and no one even knows you are doing it.

Hofmann *continued from page 1*

sets General Hospital (MGH).

According to Benson, the relaxation response balances the physiological changes that occur in response to stress. The core of the response is repetition — of a sound, word or phrase, prayer or movement — and the setting aside of intruding thoughts.

An example is sitting quietly twice a day for about 20 minutes, completely relaxed, and breathing deeply while repeating your chosen focus.

“This in essence breaks the train of everyday thinking,” said Benson, and enables a person to respond to stressful situations more effectively. “No drug or surgery can compete with that.”

Research continues to support the relaxation response. In a recent study conducted at MGH and Beth Israel Deaconess Medical Center, researchers found that the relaxation response impacted the expression of certain genes that control inflammation in the body as well as the handling of free radicals that can damage cells and tissues — the same genes responsible for stress-associated changes in the body.

According to Benson, this research suggests that the relaxation response not only works but may have lasting physiological effects on the body.

Benson is quick to point out that there are many techniques available to

help elicit the relaxation response — deep breathing, meditation, yoga, tai chi, exercise, religion, laughter. Even singing can be therapeutic.

“If one technique does not work for you, try another,” he advised. “Some people really can’t sit still too long. They

will probably do better with yoga that allows them to move.”

It’s hard to get Miriam Eubanks of Yoga with Mimi to stop for a few minutes — she’s a blur of motion and activity. But when it comes to yoga, she always makes time.

“Yoga means union,” explained Eubanks, a yoga instructor. “It’s a bringing together of mind, body and spirit or breath. Breathing is a very important part of yoga and the postures

help balance the hormones. It makes you calmer.”

The key is the deep breathing. “It brings oxygen to the blood and energizes the body,” she said. “Breathing helps relax you and makes you focus better. It helps settle you down.”

Hofmann knows exactly what Eubanks is talking about.

She practices every day by herself and attends two classes a week. She’s a walking ad.

“I’m reprogrammed,” she explained. “I can take things in stride.”

She also remembered another benefit. “I don’t get sick anymore,” she said.



Herbert Benson, M.D.
Director Emeritus
Benson-Henry Institute for Mind
Body Medicine
Massachusetts General Hospital