

# Put Your Heart Math Into It

Use this set of business tools to link your head and your heart—so you can think more clearly, perform better, and be healthier.

**Are you stressed?** Would you like to perform better at work? Could your health use a tune-up? If you answer yes to any of those questions (and who wouldn't these days?), read on. Techniques developed by the Institute of HeartMath may be just what you need; they harness the power of the heart, working in collaboration with the brain, to super-charge your work and home life.

By Eva Kaplan-Leiserson

How much have you thought about your heart lately? Unless your doctor has told you to take better care of it or it has just been broken, chances are that it's not much. But we'd like to prompt you in this National Heart Month to take a minute and thank your heart. It has done a lot for you lately.

The heart isn't just a dumb—albeit powerful—machine controlled by the brain. In fact, the heart begins beating in a fetus before the brain is even developed. Scientists don't know exactly how that happens

but think it's triggered somewhere within the heart itself. Transplants offer further evidence for that theory: A transplanted heart begins beating as soon as it's placed in the recipient's body and given a jump start although no nerves are connecting the heart to the brain.

Such is the research cited by people at the Institute of HeartMath and its sister company, HeartMath LLC, as evidence that the heart has its own intelligence, which is just as important, if not more important, as the brain to our day-to-day functioning. The two companies are founded on that premise of heart intelligence and the ways in which the organ not only works in harmony with other bodily systems, but also helps coordinate them.

Picture this scenario: It's 6:30 p.m. You were supposed to leave work an hour ago to pick up your daughter at soccer practice. But you have a report to turn in first thing tomorrow, and the writing isn't coming easily. Your mind keeps wandering. You're wondering whether you'll have a job in the next several months. Management said there will be cutbacks. You worry whether you'll be able to handle whatever happens. You're also thinking about threats of terrorism. The more you try to focus on the report, the more frustrated you become; your stomach tightens and your head pounds.

Sound familiar? Most likely you can see yourself in at least part of that scenario. We're living in stress-

ful times. If you feel like you're in a vise that's getting tighter and tighter, you're not alone. Many of us are having trouble focusing at work and at home, and may be experiencing stress-related health problems.

What's happening on a physical level, says the Institute of HeartMath, a not-for-profit research and education facility, is that the negative emotions you experience during times of stress (worry, fear, and so forth) create disorder in your heart rhythms. Those heart rhythms, translated into neural impulses, are the language the heart uses to talk back to the brain, according to physiologists. Chaotic rhythms send chaotic signals to the brain and impede cognitive and emotional processing. In other words, says HeartMath, when your heart signal is erratic, your mental functioning suffers.

But it doesn't have to be that way. When you're stressed, your ability to change what's happening around you may be minimal, but your ability to change your reaction is greater. According to HeartMath, you can calm your heart rhythms by changing your perception of events, thus increasing your mental clarity, creativity, and decision-making capabilities. Not only that, but your body's decreased reaction to stress will result in better immune function, hormonal balance, and cardiovascular flexibility.

There's more. By stopping your body's stress reactions, you can increase your effectiveness at work. A company full of people making such changes can expect productivity and morale to soar.

### The keystone, found

The techniques that can help you achieve those amazing benefits were developed through research at the Institute of HeartMath, founded in 1991 by Doc Childre, a researcher, consultant, and lifelong learner. For some time, Childre had been watching the world's stress level rise. He knew that people needed practical tools to manage their emotions, reduce stress, and improve performance, as well as increase overall health and quality of life.

Looking for a keystone in human physiology, Childre spent 20 years researching, personally and professionally. An instinct about the heart's importance was confirmed as his work progressed: He became more convinced that the heart wasn't only a critical factor in the physiological and emotional systems of humans, but also in human intelligence and performance.

### Amazing Heart Facts

κ In one day, the human heart beats 100,000 times (more than 2 billion times in a lifetime).

κ The blood the heart sends through the body travels 12,000 miles in one day, four times the distance across the United States.

κ In a lifetime, the heart pumps one million barrels of blood through the body, enough to fill more than three supertankers.

Source/[www.pbs.org/wgbh/nova/eheart/facts.html](http://www.pbs.org/wgbh/nova/eheart/facts.html)



Participants in a HeartMath seminar learn how to use the *Freeze-Framer* software.

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Convinced that his findings were worth exploring further, Childre founded the institute to collaborate with experts from around the world. From Boulder Creek, Colorado, he and his colleagues engaged the principles of mainstream science and medicine—for example, neuroscience and cardiology—to explore the physiology of human performance, especially as it relates to the heart. (The institute continues its research, although Childre has moved on to be chairman of the board of the for-profit HeartMath LLC.)

The institute began by studying heart rate variability (HRV), changes in pulse rate, which indicate the quality of signal a person's heart is sending to his or her brain. Ordered patterning in the signal was deemed *coherent*; in studies the institute performed, people whose systems were coherent performed auditory-discrimination tasks faster. It was a logical step, then, for the institute to attempt to adjust heart rhythms.

### The techniques

Although Childre and his colleagues immersed themselves in research and scientific data, the goal wasn't to create theories, but to create practical techniques. His goal was to make the techniques universal so that anyone could use them and simple and easy to learn so that people would use them frequently.

Two main techniques that developed out of the institute's research are the Freeze-Frame and the Heart Lock-In.

The *Freeze-Frame* technique is used to achieve quick coherence in times of stress. A person can do

it in as little as 15 seconds. The steps:

- Acknowledge the stressful feeling, and Freeze-Frame it (take time out).
  - Move your focus from your churning mind or boiling emotions to your heart. Pretending that you're breathing through your heart can help you concentrate on it. Do that for at least 10 seconds.
  - Remember a positive or fun time in your life, and try to re-experience the feelings.
  - Use your intuition, sincerity, and common sense to ask your heart for the best response to the stressful situation.
  - Listen to the answer from your heart.
- The **Heart Lock-In**, a five- to 15-minute process, can prolong the coherent state achieved by the Freeze-Frame. Here's how to Lock-In:
- Use the Freeze-Frame technique to gain coherence.
  - As you focus on the area around your heart, try to feel appreciation for someone or something in your life sincerely.
  - Practice spending more time focused on your heart than on what's in your head.

If those techniques seem a bit touchy-feely, keep in mind that they're based on the institute's more than 10 years of research in cardiology, neuroscience, and other data-driven fields. Companies throughout the United States and in Europe, Australia, and Hong Kong are convinced that the techniques work. HeartMath clients include Shell,



“The way I look at it is that every day, I get dressed. I don’t occasionally not get dressed. Every day, I eat. I don’t occasionally not eat. Every day, I breathe.”

—Bruce Cryer

Bringing one’s mind, body, and heart into coherence is fundamental.

Boeing, Motorola, Hewlett-Packard, and the World Bank. Over and over, people’s bodies and emotions have demonstrated the effectiveness of the tools.

#### Lab in the field

As the Institute of HeartMath trained more people in corporations, public agencies, military units, and so forth, its leaders decided that they wanted to expand that area of their work dramatically. So in 1998, the Institute of HeartMath spun off HeartMath LLC, a for-profit training, coaching, and consulting firm that continues to develop practical tools based on the institute’s research. In return, the institute gets a “lab in the field,” says Bruce Cryer, HeartMath LLC president and CEO.

The *Freeze-Framer*, called “a breakthrough” by one regular user, is a new tool that the for-profit company has developed. This software program used in combination with a finger-pulse monitor allows users to view their own heart rhythms and assess whether the techniques are working. Although people used the HeartMath techniques successfully for eight years before *Freeze-Framer* was developed, it can help accelerate users’ progress. By enabling people to view their pulse and heart rate variability second-to-second, the program offers continuous feedback. Bar graphs indicate percentages of *entrainment*, the synchronization of other bodily systems to the rhythms of the heart—a state that HeartMath says leads to “clarity, buoyancy, and inner peace.” The program also charts users’ progress over time and includes three games to make the process fun.

Although computers can represent information overload and stress, says Cryer, with the *Freeze-Framer*, the PC becomes an ally. He tells of companies whose employees bring their laptops to meetings to use the *Freeze-Framer* before they begin. Members of a Canadian insurance company’s executive team get on their *Freeze-Framers* before they make decisions. “They just sit there, quiet, with their eyes closed, focusing on their hearts,” Cryer says. “Would they have done that without the tool? Probably not.” But the technology that opens a window into a user’s physiology takes something that Cryer admits can be viewed as “a bit soft” and “gives people a license [to do it].”

Cryer himself uses the Heart Lock-In and Freeze Frame techniques daily. He has been working with HeartMath for 10 years, first at the institute and then as a founder of HeartMath LLC, and says that in those 10 years, he hasn’t used the techniques a total of six or seven days. (He’s not just the president, he’s also a member.) “The way I look at it,” he says, “is that every day, I get dressed. I don’t occasionally not get dressed. Every day, I eat. I don’t occasionally not eat. Every day, I breathe.” Certain things are fundamental, he says, and the idea of bringing his own system—his mind, body, and heart—into coherence is also fundamental.

#### In sync

As the Freeze-Frame and Heart Lock-In techniques change the heart rhythms, says HeartMath, they improve the functioning of the whole body: the autonomic system, including such functions as digestion,

blood pressure, and heart rate; the hormonal system, including the production of cortisol (called the stress hormone) and DHEA (the anti-stress hormone); and the emotional system, including feelings of security and maturity, and emotional intelligence. Achieving coherence, says HeartMath, enables you to access your peak energy and full intelligence.

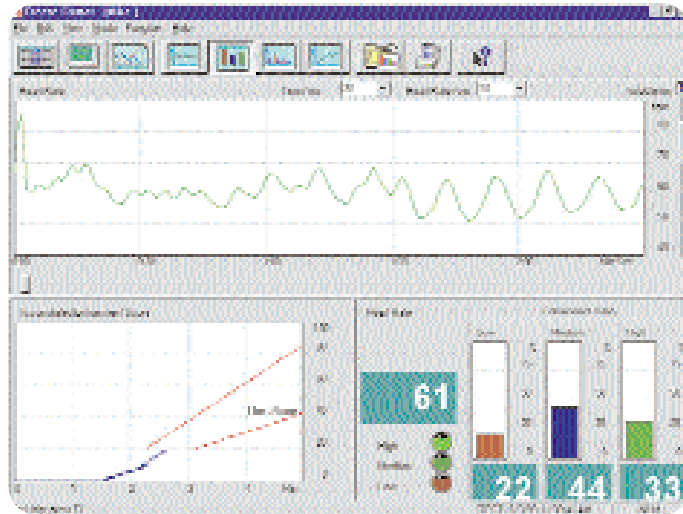
HeartMath claims that 85 percent of the people who attend one of its workshops can effect a demonstrable change in their physiology by the end of the session. With consistent and sincere practice—for instance, doing a Heart Lock-In five times a week—people have achieved dramatic health benefits. In one study, senior and mid-level managers at several global corporations demonstrated significant drops in blood pressure eight weeks after being trained on the HeartMath techniques. The executives also reported 65 percent less tension and 87 percent less fatigue even though they hadn't instituted any other lifestyle changes.

Organizations whose workers have been trained on the HeartMath techniques receive benefits as well. Among the same global companies, the number of people who reported anger or intent to leave the company dropped dramatically—by 65 and 44 percent, respectively. Ninety-three percent of employees at an international electronics company said their productivity and teamwork had improved after their HeartMath training. They also reported a 22 percent rise in the quality of their work.

◀ Find more in-depth information on HeartMath research at the Institute's Website, [www.heartmath.org](http://www.heartmath.org).

By improving individual performance, HeartMath believes, workplace performance improves as well. But you have to start with the individual, Cryer says. Many leaders focus on the organization at the expense of the people who make it up. He says, "They keep shifting this and downsizing that and realigning this and all that, but the individual, meanwhile, is feeling like a punching bag and hasn't been given any tools to deal with [his or her] emotional reactions."

HeartMath's program includes four dynamics, two of which focus on the individual and two on the organization. The first two, internal self-management and coherent communication, are taught together in



Freeze Framer displays heart rate variability and entertainment percentages.

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HeartMath's flagship program, The Power to Change Performance. People who go through that training learn the Freeze-Frame and Heart Lock-In techniques, as well as how to apply the emotional balance they've achieved with those tools to one-on-one or group communication. The second two dynamics, boosting the organizational climate and strategic processes and renewal, examine specific business issues, giving organizations the tools to fight "emotional viruses" and helping employees think strategically about renewal in a world that grows more challenging every day. Training in those dynamics is also available, although many organizations opt for the shorter program.

### The applications

Two hundred people are licensed to teach the HeartMath techniques, although the company's staff is nowhere that big. In addition to employing full and part-time trainers, HeartMath offers a train-the-trainer program that immerses people in the techniques and software over about a week. Attendees practice

**Fast Fact**  
According to the American Institute of Stress, 75 to 90 percent of doctor visits are stress-related.

◀ Source/From *Chaos to Coherence*, by Doc Childre and Bruce Cryer

presenting the material and then become certified to teach the principles at their own corporations, health-care organizations, public agencies, and military departments.

Terry Adelman, training manager at Bay Area Rapid Transit (BART) in San Francisco, went through the certification program with two of his staff. That makes three out of four people in his performance and learning department able to teach the HeartMath techniques. He says that it's the health connection that draws people in first rather than the hope for business results. They "get an awakening," he says, and realize the toll that stress is taking on them.

Adelman learned of HeartMath at an emotional intelligence conference, where he was looking for practical, in-the-moment tools rather than abstract theories. That's exactly what he found in HeartMath, he says. "I've always had a problem with... the 10 steps of this and the seven habits of that. It's all very esoteric. This is one technique that's loaded with good science."

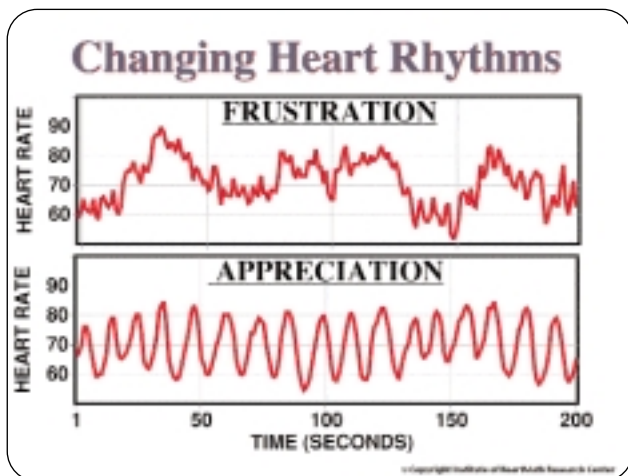
Other organizations agree. Delnor Community Hospital in Chicago has put 500 of its staff through the training, half of its total workforce. Employee turnover was 28 percent per year; of the group that went through the HeartMath training, turnover dropped to less than 6 percent. Medicare expenses, related to how long patients stay, dropped 9 percent and saved the hospital \$1.4 million. At the same time, patient satisfaction rose from 73 to 93 percent. Two nurses are now full-time trainers in HeartMath for the hospital and local community.

Cryer says that people are sometimes surprised that the HeartMath techniques can be applied to so many different types of organizations. "You might assume hearing about HeartMath that we work with [companies such as] Patagonia, progressive companies only." However, even organizations often considered conservative have been recognizing the importance of dealing with employee stress issues, Cryer says, and want to help people perform not only at a higher level, but also in ways that "honor their humanity."

The appeal of that approach is one reason Cryer was selected as a speaker for the Lessons in Leadership program, a series of talks by business leaders that include Tom Peters, Ken Blanchard, and Stephen Covey. Wyncom, the sponsor of the series, continually searches for people developing new business ideas that relate to a range of companies. Cryer and his company have a strong draw, says Paul Sanders, Wyncom's president of public programs. A person can use the techniques right away and then can take them back to his or her company to apply on a wider scale.

The techniques work in educational settings as well. The institute was asked to participate in a study in Minnesota, one of 19 states that require high school seniors to pass an exit exam. Failure rates for the exam were high, and some kids failed repeatedly. A school psychologist, who was also a certified HeartMath trainer, created a study in which a group of children spent three weeks learning to use the HeartMath techniques. They had no extra help or practice in reading skills, math, history, or other subjects. The theory was that the kids were failing the test because they were panicking, which shut down their brains. If they could be taught to manage their emotions better, their true intelligence would help them succeed. Sure enough, after the three weeks, the kids' reading and math skills rose by one or two grade levels and the passing rates on the exam climbed.

Children and adult learners who manage their emotions with HeartMath techniques "unlock the entrance and the exit doors to learning," says Cryer. In corporate education, the entrance door is the day-to-day information coming in—all that stuff that contributes to info overload. If you're not emotionally balanced, you may have difficulty absorbing it all



Gaining coherence: Feelings of appreciation smooth jagged heart rhythms.

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and, on the exit side, communicating about it clearly and effectively.

Tina Sung, ASTD president and CEO, is one person who has a vested interest in how people in companies learn. She first heard about HeartMath in the mid-90s and sees the “value of this in helping people learn and be creative.” A regular user of the techniques, Sung believes that if people used HeartMath techniques consistently, the ROI in learning would “shoot way up. You do learn more,” she says, “when you’re relaxed and having fun. Just think if we created learning environments like that how much nicer it would be.”

Sung says that last quarter was the most stressful of her life—full of national crises like everyone as well as business challenges and personal catastrophes. If she didn’t have a tool like *Freeze-Framer* to remind her to stop and regroup, she says, she might not have been able to cope.

Some people, despite reacting positively to HeartMath’s Power to Change Performance workshop, report that they can’t find time to use the techniques in the midst of their pressure-cooker lives. But Sung says her experience has demonstrated that taking the time to go through the steps saves time in the end. Once she became focused with the HeartMath tools, she was able to work more efficiently. “I think it can only help individuals and organizations perform better,” she says, “but it’s only a tool if you use it.”

One ASTD staffer has done just that. Jolene Cook, traffic coordinator in the circulation and fulfillment department, has been using *Freeze-Framer* fairly regularly in the mornings and some evenings. She says, “Taking the time to think about my heart, taking deep breaths and filling my thoughts with positivity, is something that I should do naturally. The exercises get easier because I’m getting conditioned to relaxing and changing my attitude about things that I have no control over.”

### The future

Getting the message out about their tools is even more important to the folks at HeartMath after September 11. Since

then, Cryer says, people have been less excited about their work or where their company is going. He says HeartMath has tried to stay flexible with clients, “really listening to what their needs are and doing the best by them that we can.” The techniques and software can help people, Cryer says. Depression results from feeling victimized and powerless. But once people realize that they have more control than they thought, by being able to change their responses to events, “that’s exciting and hopeful.”

What’s next for HeartMath? Cryer sees great opportunity to help organizations grow and become more innovative and resilient. He says that his company is committed to the long haul: “We know the world is in a transition right now that’s not going to be resolved overnight. So, tools based on the heart that can help organizations and families regain their balance and their hope are very important.”

Adelman sums up: “It wasn’t long ago that we initiated HeartMath in what we called recertification training. We were pulling people off the front line after they’d become combat weary of dealing with customers. I saw a group coming out at the end of a day’s worth of HeartMath training, and they were bright-eyed and happy about what they were experiencing. I told my trainers that we should call it rejuvenation training instead. That said it all.” TD

◀▶ More info, [www.heartmath.com](http://www.heartmath.com) (HeartMath LLC) and [www.heartmath.org](http://www.heartmath.org) (the Institute of HeartMath)

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Participants react enthusiastically to the Power to Change Performance training program.

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