

A Change of Heart

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Institute of HeartMath Research Lab
Boulder Creek, California
Cactus in Bloom

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New Meaning to "Horse Sense"

How perceptive and sensitive are horses? "Horse sense" means "plain common sense," which, for researchers at HeartMath, means "the sense to respond to heart coherence."

The HeartMath research team recently partnered with Dr. Ellen Gehrke, a Qualified HeartMath Instructor and Professor of International Business and Management at Alliant International University in San Diego, to do a preliminary research project with horses. Dr. Gehrke, who has combined her twenty years of teaching leadership and management experience with her passion for training wild horses, teaches a course called Developing Coherent Leaders in Partnership with Horses.

It is well known that horses are very sensitive to and aware of their surroundings. They sense a storm coming long before it arrives and sense a predator long before we can see or hear one. Many people feel that certain horses mirror the emotions of the peo-

ple with whom they interact. These horses are often used in programs with alcoholics and children to help them with their personal growth. We have all heard the saying "horses can smell fear," but it may be more accurate to say that they can *feel* fear. We have found that our nervous systems are tuned to the electromagnetic fields produced by the hearts of other people and that a person's brainwaves can synchronize to another person's heart up to five feet away (see "The Energetic Heart" at www.heartmath.org/energeticheart).

It may be possible that horses are also energetically sensitive to the fields produced by the human heart—and that humans are sensitive to the fields produced by a horse's heart.

Continued on page 4



Shiloh placed his nose in Ellen's lap and hung out with her for the majority of the Heart Lock-In period.

Students' Scores Are Suffering...

EDITOR:

Sara Paddison

DESIGNER:

Sandy Royall

MEDIA CONTACT:

Gabriella Boehmer
(831) 338-8710

PRESIDENT:

Sara Paddison

RESEARCH DIRECTOR:

Rollin McCraty, Ph.D.

CHIEF FINANCIAL OFFICER:

Brian Kabaker

EXECUTIVE DIRECTOR:

Katherine Floriano

This newsletter is published quarterly by the Institute of HeartMath, 14700 West Park Avenue, Boulder Creek, California 95006; (831) 338-8500.

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This newsletter is not intended to provide advice on personal health matters, which should be provided by a qualified health care provider. We regret that we cannot respond to individual inquiries about personal health matters. PRINTED IN THE U.S.A.

MEMBERSHIP:
\$25/yr (US \$)
FOR MEMBERSHIP AND CUSTOMER SERVICE WRITE OR CALL:
The Institute of HeartMath
P.O. Box 1463
Boulder Creek, California 95006

1-831-338-8500
Toll-Free in US:
1-866-221-6339

E-MAIL:
info@heartmath.org

WEB SITE:
www.heartmath.org

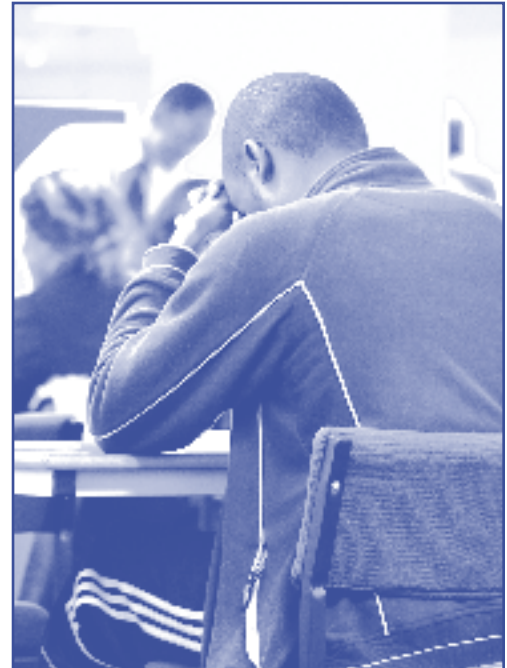
Students' test scores are suffering because of high test anxiety according to a new study conducted by the Institute of HeartMath in partnership with Claremont Graduate University's School of Educational Studies. The researchers found that although anxiety was a significant learning and performance block, students who received specific interventions for this problem were able to overcome test anxiety. The study, funded by the U.S. Department of Education, involved students in a range of grade levels (grades 3–12) from schools in eight states. On the basis of this randomized controlled study, the researchers found that 55% of the 10th grade students surveyed experienced high levels of test anxiety often or most of the time.

Another important finding was that, on average, the students with high test anxiety scored 15 points lower in Mathematics and 14 points lower in English–Language Arts on high school exit exams, compared with those without high levels of test anxiety.

The Institute of HeartMath's Research Director, Dr. Rollin McCraty, says:

“There is a specific physiology associated with anxiety that blocks learning and performance by interfering with the cognitive processes required for problem solving, abstract thinking and memory recall. We call this ‘cortical inhibition.’”

For the study intervention, HeartMath implemented a program called TestEdge®, which is designed to minimize students' test anxiety by improving their emotional self-regulation skills. Based on more than a decade of research, the TestEdge techniques enable students to self-generate a beneficial psychophysi-



Standardized tests may not accurately represent the true ability of students who have high test anxiety.

ological state called coherence, which is activated by heart-based positive emotions. Coherence acts to restabilize the frenetic nervous system activity associated with anxiety, increases emotional stability and improves cognitive performance. By applying the TestEdge techniques and reinforcing them using the Freeze-Framer® coherence-building technology, the students learned to shift to an optimal-performance state during their classes, while studying, and when taking important tests. **Results showed that students who participated in the TestEdge program experienced a significant reduction in test anxiety.**


For more information, go to:
www.heartmath.org/pressrelease1 or call
Christiana Bishop at 831-338-8706.

Heart Rhythm Coherence Feedback...

is an exciting new technology that has broad-based applications in education. Using this technology to facilitate the learning and practice of positive emotion-focused techniques, students learn to enter a state of psychophysiological coherence. This is a highly efficient functional mode associated with increased nervous system harmony, enhanced emotional stability, and improved cognitive performance.



Research conducted by the Institute of HeartMath has provided new insights into the physiology of emotions, learning, and performance.

Classroom-based programs incorporating this innovative technology have facilitated improvements in emotional health, social behaviors, and academic performance in diverse student populations. 

For the full article go to: heartmath.org/media1, or to learn more about the Freeze-Framer coherence-building technology go to: heartmath.org/freezeframer.

What Is Contemporary Stress?

A response to stress expresses itself as resistance, tension, strain, or frustration that throws off our equilibrium, keeping us out of sync. Two people in identical circumstances may respond in very different ways (e.g., one gets stressed, the other inspired) depending upon how they perceive the situation.

What contributes to contemporary stress? We have always had earthquakes, hurricanes, and floods, but the increasing volume and severity of these events has become alarming. Weather devastation generates economic stress in skyrocketing prices for gasoline, heating fuel, and food. Epidemics of influenza and other infectious diseases aren't new, but drug-resistant strains of virulent organisms are new and threatening. The history of humankind is full of examples of conflicts, wars, and acts of terrorism. However, never before has there been such a great threat of death and potential mass destruction due to terrorist acts as there is now.


The public is understandably stressed by constant reminders from the media that any of these contemporary stressors could easily affect you or a loved one at any time. It is therefore not surprising that 8 or 9 out of every 10 visits to primary care physicians are for stress-related complaints. The World Health Organization recently

estimated that by 2020, clinical depression will outrank cancer and follow only heart disease as the second leading cause of disability in the world. Is it because contemporary stress is somehow different and more dangerous? What people want to know is what they can do about any of this. How can they learn to avoid and

cope with this avalanche of stress that seems to surround today's world?

// Stress is a perception. Stress occurs when an individual's perception of pressure or challenge exceeds his/her perceived ability to cope. //

Stress is often misunderstood. Many people look at outside events as the source of stress, but, in fact, the experience of stress is actually caused by our emotional reactions to events. We can break the vicious stress cycle by taking a proactive

role in managing our reactions. Actively self-generating positive emotions when you start to react can favorably affect your physiological and psychological processes. Positive emotions help shift stress-producing perceptions, counterbalance the effects of stress reactions, and promote regeneration at both the psychological and physiological levels. As you gain increased management of emotions, the experience of stress then truly becomes more a choice than an automatic reaction. In learning to address and transform stress from within, you become an active contributor to your own health, balance, and fulfillment. 

"I can't express just how grateful I am to have the knowledge and experience of using the power and intelligence of the heart to get me through some of life's most trying moments. I've had more than my share the last few years. Truly, it is my heart that is the source of my strength." —Elizabeth Kolodziejczyk

Continued from page 1—New Meaning to “Horse Sense”

In this pilot study with four horses, we hoped to see if there was evidence that a horse’s inner state was reflected in its heart rhythm patterns, similar to what we have found in humans and other animals. Additionally, we wanted to determine if there were any indications that the horses were responding to a change in human emotional states.

In the study, we placed 24-hour ambulatory ECG recorders on Ellen and on each of the four horses so we could measure their heart rate variability during a series of different conditions and interactions. There were periods when each horse was alone, eating, in the corral during a Heart Lock-In® by Ellen, being groomed, and being ridden. This protocol was followed separately with each of the four horses.

The results were very encouraging.

It appears that heart rate variability patterns do indeed reflect a change in a horse’s inner state, although further research will have to be done to confirm this in a more scientifically rigorous manner. There were also clear indications that the horses responded differently to Ellen’s changing states. The most interesting example of this was during the Heart Lock-In periods. Three of the four horses spontaneously walked over to Ellen and nudged or licked her after she started the Lock-In. One of the horses, Shiloh, even placed his nose in Ellen’s lap and stayed beside her

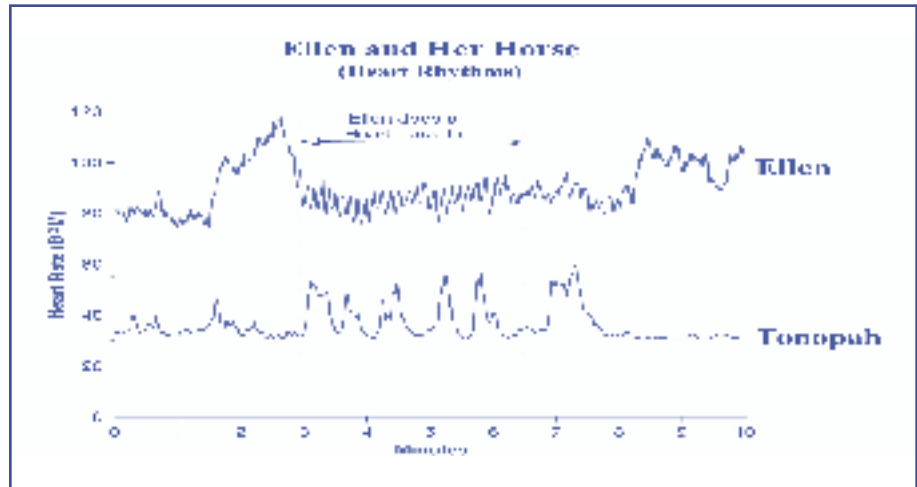


Figure 1 shows Ellen’s and Tonopah’s HRV patterns during the Heart Lock-In period.

for the majority of the Heart Lock-In period (see picture on page 1). More importantly, these three horses’ HRV patterns became more ordered.

We may have just recorded the first example of horse heart coherence! Figure 1 shows Ellen’s and Tonopah’s HRV patterns during the Heart Lock-In period. Figure 2 shows an example of the state shift Rusty made while Ellen was riding him. In this example, after she pets and hugs him, his HRV pattern shifts to a more coherent pattern.

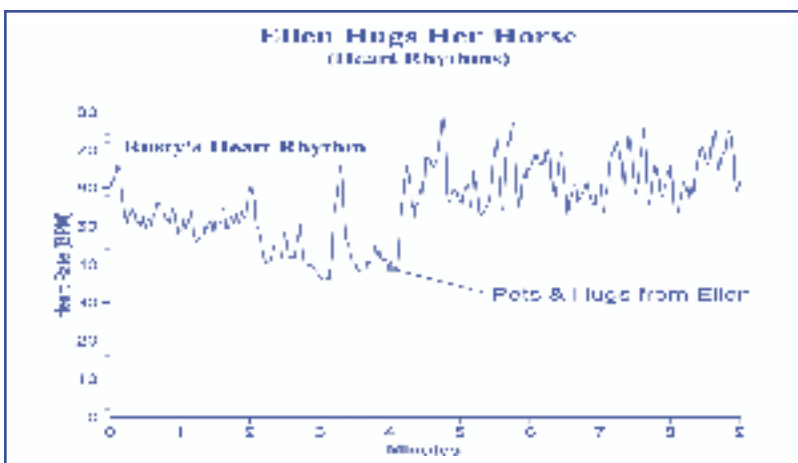



Figure 2 shows an example of the state shift Rusty made while Ellen was riding him.

We cannot make any definitive conclusions without first doing more rigorous research, but this initial pilot study does indicate that a horse’s HRV pattern reflects its inner state and that horses are sensitive to changes in human emotions, reflected as a change in the horse’s HRV patterns. It is likely that this emotional connection is mediated by an energetic form of communication. We hope to address this question and several others in future studies with Dr. Gehrke and her horses. 🐾

Global Outreach

HeartMath Alliances

One of the most exciting aspects of our growth has been in the international expansion of HeartMath. Today, HeartMath LLC provides products to customers in more than 50 countries, and HeartMath books have been translated into more than a dozen languages. Most important, however, is the growing network of HeartMath international licensees. These companies, operating under HeartMath LLC-licensed agreements, are closely aligned with our mission and act as representatives of HeartMath in their respective regions. They provide a full range of HeartMath products and services from Europe to Asia, and with great success.

Howard Martin, Executive Vice President of HeartMath LLC, says, "We receive many requests from people and organizations around the world seeking a business relationship with us. This is much appreciated. Our plan for international expansion allows for managed growth, and we use great discrimination in determining when it's best to engage in a new partnership. We've been developing our international presence with care, and I'm very happy to say we have agreements with great partners who have become an important part of our global mission." 

For more information on HeartMath Alliances, go to: www.heartmath.com/alliances



To learn more about HeartMath LLC's International Licensees, visit their websites at:

- **Australia**, HeartMath Australia
Go to: www.macquarieinstitute.com
- **France**, HeartMath France
Go to: www.pi-conseil.fr
- **Netherlands**, HeartMath Netherlands
Go to: www.heartmath.nl
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Go to: www.heartwaregroup.com
- **Sweden**, HeartMath Sweden
Go to: www.heartmath.se
- **United Kingdom**, Hunter Kane Ltd.
Go to: www.hunterkane.com

Programs for Giving

What's a Deferred Gift Annuity?

Dear Member,

Here is a creative and simple way to support the Institute of HeartMath. In the months to come you'll see even more.

Sincerely,
Katherine



"Even though I'm saving for retirement, I was still able to make a gift to HeartMath."

—Sandra, Teacher, Kentucky

Here's how:

We offer a gift plan that can help you do both. The Deferred Gift Annuity begins lifetime payments when you want them—most donors choose retirement as the starting point.

- ▶ The deferral allows us to offer you a higher payment rate than we can for immediate-payment gift annuities, and
- ▶ It generates a larger charitable deduction.

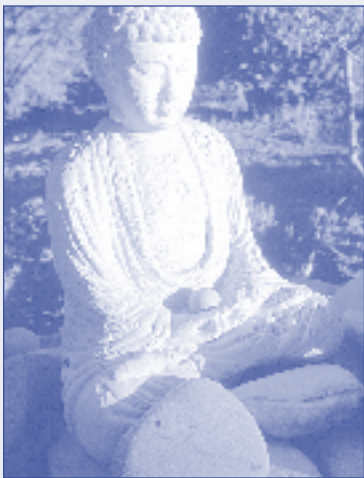
These features make the deferred gift annuity an attractive option for donors in high-earnings years, who are looking for a significant tax deduction now and an additional source of retirement income later.

Let us tell you more!

Discover the benefits of giving wisely. Call Katherine Floriano today at 800-711-6221 or visit www.heartmath.org/give

A New Arena

HeartMath is entering a new transdisciplinary and cross-cultural arena! Peter Chen, a doctoral student at Claremont Graduate University, will be introducing the HeartMath system to participants at the Annual Sakyadita Buddhist Women's Conference, the largest gathering of Buddhist women in Asia. The 2006 conference will take place in Kuala Lumpur, Malaysia. Peter's presentation, delivered in Mandarin, will discuss the findings of research in neurocardiology and on heart coherence in relation to Buddhist teachings. 🇺🇸



Peace in Prison

Over a year ago in this newsletter, Dr. Ira Katz gave a remarkable report of his clinical work using the Freeze-Frame with hundreds of at-risk prisoners in the psychiatric wing of Salinas Valley State Prison. Now he has moved across campus to an outpatient infirmary where, as a clinical psychologist, he treats lower-security level prisoners who have depression, anxiety, or some kind of neurological impairment. All of these inmates are men, ranging in age from late teens to mid-50s, and unlike Dr. Katz's previous clients, they are not bound by handcuffs or chains. Although many of them have impulse control or anger management issues, they know if they cause trouble, they are going back to the more restrictive, maximum-security site next door.

"They have responded very well to HeartMath, like ducks in water," shared Dr. Katz. "They get a sense of peace through HeartMath and other practices. It is very important for them to learn emotional con-

trol. They have normal emotions and also emotions that are way beyond that. Typically, these prisoners have a lot of freedom to educate themselves. Because they live in a relatively boring environment, they want stimulation. Being able to study a system like HeartMath is seen as a wonderful opportunity."



Dr. Ira Katz

Dr. Katz added, "The inmates love all the materials, especially Doc Childre's music, which they find very soothing. Most of the HeartMath materials in the library are dog-eared from so much use." Dr. Katz summarized his feelings: "We have a lot of hope in this prison and we really appreciate what you do for us."

We have sent new books, learning programs, and music to Dr. Katz so he can place these resources in the prison library. 🇺🇸

"It is a very stressful time for me, but the tools, especially, are really helping me through it. After an explosive situation yesterday, I did a Freeze-Frame®. Though it took longer, I did change and I did feel better."

—Anonymous Prisoner

Calendar of Events:

talks/workshops/exhibits/conferences around the country

March 10–13, June 23–26, July 17–20, Oct 13–16, 2006
Qualified Instructor Program—Resilient Educator Course, at IHM Conference Center, Boulder Creek, California
 —Go to www.heartmath.org/educator for more information or contact Christiana Bishop at 831-338-8706.

March 28–April 1, 2006
National Association of School Psychologists Conference, at Hilton Hotel, Anaheim, California—IHM exhibiting and presenting:

Understanding the Physiology of Emotional Stability and Academic Success—For information, contact Marcia Harvey at 301-347-1667 (toll-free 866-331-6277) or go to: www.nasponline.org/conventions

April 6–9, 2006
Council for Exceptional Children Annual 2006 Convention and Expo, at Convention Center, Salt Lake City, Utah—IHM exhibiting and presenting: Freeze-Frame in Education—For more information, call 888-232-7733 or contact: contedu@cec.sped.org.

HeartMath Energy-Savers

Truth of Your Feelings


Life can be fast-paced and filled with grumbles or dissatisfying attitudes. These negative attitudes can go unnoticed in your feelings, yet be draining your energy. Pausing to acknowledge the truth of your feelings gives you the ability to see stressful attitudes and do something about them.

An Example: Jenny felt constantly drained and stressed out. She couldn't figure out why. Things seemed to be going pretty well; nothing disastrous was happening. During a Heart Lock-In one day, Jenny asked her heart why she felt constantly drained. Slowing down to get to the truth of what she was feeling helped her find a

more objective view. Jenny found that she was unaware of everyday grumbles creating constant anxiety, even when her life was going well. By acknowledging these unnoticed grumbles and bringing in her higher intent, Jenny was able to clear them. She said, "I saw how grumbles like, 'That's just the way he is' and 'Nothing's going to change' were stacking up stress and draining my energy. I also saw new ways to approach situations."

You can practice "Truth of your Feelings" any time by asking yourself where your attitude is. Be honest and acknowledge what you are truly feeling; then make an attempt to shift your attitude.



Use Neutral to help shift perception and your feelings will soon follow. Finding the truth of your feelings is not a hunt for something bad; it's an inner listening to yourself so you can take responsibility for what you are creating. Treat feelings genuinely and with ease. Be glad things are being tilted up instead of clammed up. **Real intelligence comes from addressing feelings with heart integrity.** 

New Products

New TestEdge® Interactive CD—Coming Soon


A new and fun TestEdge Interactive CD is scheduled for release in the spring of 2006.

TestEdge effectively bridges the academic and emotional connec-



tion. Using the TestEdge tools and techniques, students improve their academic performance and test scores, as well as their ability to overcome peer pressure and relationship problems.

Students learn as they view bright and breezy video segments with four teen actors who, in the course of preparing to perform an after-school play, end up teaching the TestEdge program to each other. The vivid colors and upbeat music enhance the learning experience. There are five lessons, each about 15 minutes long. As students progress through the program, they learn several HeartMath techniques which include: *Neutral*, *Attitude*

Breathing®, and *Freeze-Frame*®. They discover how to apply these techniques in both school and home situations, and how to transform the emotional chaos and stressors that get in the way of their learning and overall fulfillment. At the end of each lesson, students respond to a variety of questions that help them further internalize the material they have learned. The program is best suited for students in grades 9 and above. **Students who practice with TestEdge have easier success in learning, test-taking, and life.** 



For information or to preorder, go to: www.heartmath.org/testedgedcd



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A Newsletter from the Institute of HeartMath®

In This Issue

New, Exciting Horse Research

It may be possible that horses are energetically sensitive to the fields produced by the human heart.

Contemporary Stress

The public is understandably stressed. But, we can break the vicious stress cycle by taking a proactive role.

Global Outreach

HeartMath is active in more than 50 countries, with books translated into over a dozen languages.

New TestEdge® Interactive CD

Students who practice with TestEdge have easier success in learning, test-taking, and life.

Some Students Were Scared...

“Thank you so much...I left early last night because we had tornadoes all around us. Just wanted you to know that we spent about an hour in our crisis (emergency) stations because of tornadoes yesterday. Some of our students were scared. I reminded them to use their HeartMath tools. One of my little girls said, ‘I’m too scared to use that now!’ I said, ‘This is what it’s for.’ The child next to her said, ‘She’s right!’ They snuggled together; both closed their eyes, focused on their heart, and started their heart breathing. A few minutes later they were laughing and messing around. —Pammy, Teacher”

