

# MANAGING EMOTIONS

## Golf's Next Frontier



**Ground-Breaking Techniques  
for  
High Performance**

**Based on research by Doc Childre and  
the Institute of HeartMath®**

## ***Managing Emotions in the Game of Golf and the Game of Life***

The HeartMath® tools for managing emotions are surprisingly simple; yet every step in each technique has been *physiologically* researched for its performance effect. HeartMath emotion re-focusing techniques are based on over fifteen years of studies at the Institute of HeartMath (IHM) in Boulder Creek, California. Complex research on the heart, brain and nervous system has been crunched into a user-friendly format for easy understanding and application. IHM was founded by noted stress and performance researcher Doc Childre, author of numerous books on high performance, and inventor of technologies *powered by HeartMath* such as the emWave® PC software to enhance health and performance in the game of business, the game of sports, the game of relationships, and the game of life. —***Editor's Note, by Deborah Rozman, President and co-CEO, Quantum Intech, Inc.***

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“The emWave PC software (described in this book) gives golfers the ability to identify when their heart is racing and do something about it. It gives them techniques to control themselves while under pressure and in tense situations so they can use those situations to their best advantage, both athletically and in life. The HeartMath tools provide that skill set—emotional awareness and then how to work with it. This is important for high performance.” —***Laird Small, 2003 National PGA Teacher of the Year. Voted Top 50 Teacher for 2003-2004 by Golf Digest and Top 100 Teacher by Golf Magazine.***

“I use the Quick Coherence® technique (provided in this book) on the golf course, and it always makes my day. It helps me ‘get out of my own way,’ calm my mental chatter, release habitual anxieties, and swing with better rhythm and tempo. It also improves my putting. Thanks to HeartMath and the emWave PC technology, I am playing better and enjoying myself more on the golf course. I am confident it will work just as well for you, too.” —***Michael McTeigue, author of The Keys to the Effortless Golf Swing, Curing Your Hit in Seven Simple Lessons***

“HeartMath has knocked 10 strokes off my game over the 2 years I've been doing it.” —***Warner Woodley, retired Senior Vice President of Right Management of Canada***

*"Using the emWave Personal Stress Reliever has enabled me to recognize the effects of stress on my body at any given time, which then allows me to use the HeartMath techniques to immediately help relieve this stress position... My recent tournament performances in Germany and Holland were helped by the use of HeartMath... emWave can recognize stress levels not otherwise detectable."* —**Ian Woosnam, 2006 European Ryder Cup Captain and 1991 Masters winner.**

"The emWave PC shows my heart rhythms quickly becoming more ordered and coherent. But if I think about something unrelated to the moment, my heart rhythms get disordered quickly. My progress in staying present and sustaining coherent heart rhythms has been huge. This experience is allowing me to bring the coherent state right onto the course. I feel more free and confident during each shot. When I miss hit a shot, I can question where my emotional state and heart rhythms are going, and stop any negative attitude or frustration. My game is definitely improving as a result." —**Wendy Posillico, professional golfer, Phoenix, AZ**

"Early in my golf career, I was playing in a tournament and began to get very frustrated with my playing partner who was having a difficult day and acting out. I finally stood off to the side and used a HeartMath technique to calm and center myself. I realized that she was much more frustrated than I, and I was able to shift to a positive feeling of compassion for her. My next shot was the most perfect 6 iron I had ever hit—12 inches from my target!

"This was the most dramatic feedback I had experienced, and I just knew 'this really works.' It was unbelievably clear to me how powerful this whole approach can be. I was able to pull myself back to the present and perform at my best in a most difficult situation. I went on to win the tournament.

"I apply the HeartMath tools in all areas of my life with amazing results. This has given me the clarity to manage difficult situations in my relationship and the strength and confidence to make tough decisions. Practicing these skills on the golf course teaches me how to apply them in the game of life." —**Marlo Stil, golfer, financial planner, Solana Beach, CA**

# **MANAGING EMOTIONS: Golf's Next Frontier**

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for  
High Performance

Based on Research of the Institute of HeartMath®

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# Introduction

*by Peter Fox*

I've been known to hang out at the frontier of new potentials in sports.

I guess as ESPN's founding executive producer, I was often first to hear about the latest technique or gizmo that was supposed to be the next breakthrough or paradigm shift. Most of them never panned out.

The thing that I felt was the missing "X" factor in sports and especially in golf—where my passion continues—no one seemed to be addressing: emotional management.

*Emotional management is the next paradigm shift in sports—the next sports frontier.*

But I wasn't sure how we were going to get there. That is, until I began my association with a group of marvelous people who have developed reliable and measurable emotional management techniques and tools that work. Very simply, these proven tools enhance performance. They improve your game and your scores. More importantly, they improve the quality of life for all who apply them.

Right about now I figure I am in jeopardy of losing you to the denial demons. How do I know? I had them too. Stay with me.

This is how I came to know Doc Childre and his HeartMath phenomenon that I predict some day will win him a Nobel prize.

A while back, I was playing golf with one of Doc's friends, Ron Cruickshank.

“Hey, Peter,” he teased, as we both hit balls on a practice tee at a tournament in Las Vegas, “Suppose I told you I could get you ‘In-the-Zone.’”

“Get in line, there’s a dozen in front of you,” I sassed, since the term “In-the-Zone” has been rendered limp, by hype and abuse and mercantile avarice.

“Suppose I could prove it,” was Ron’s reply.

“Come to the front of the line,” was mine.

That was a few years ago.

The peak performance that occurs while athletes are “in-the-Zone” is best described in the seminal work on the subject entitled *Flow* by Mihaly Csikszentmihalyi, former Chairman of Psychology at University of Chicago.

The value of HeartMath is its simple, in-the-moment, any-time, anywhere, emotional management techniques and skills that allow and encourage peak performance to occur. The genius of HeartMath is the research and proof they spent years pulling together supporting the techniques.

It’s not for me to tell you how to use HeartMath. That’s what this booklet and others will do. It is for me to suggest to golfers and sports men and women that emotions and learning how to manage them is the next sports frontier.

OK, let’s just talk about THE YIPS. From my years of coaching, they’re all about emotions. And they go beyond sports.

The term is popularized in golf. Its most common form occurs in putting and is an uncontrollable hand twitch during the putting stroke. What most YIPPERS forget to describe is the moment of absolute panic which precedes the twitch. It is an excruciating nano-instant of virtual blackout.



Writers YIP and call it a cramp. First time kissers YIP and hit a nose. Actors YIP and blow a line. Moguls YIP and blow a deal.

You'll learn in this booklet about cortical inhibition. Cortical inhibition is a science term describing what occurs when emotions such as fear, anxiety or frustration dominate. Its first measurable symptom is impaired thinking. Its second measurable symptom is loss of coordination.

The flip side of cortical inhibition is cortical facilitation. It occurs when positive emotions, appreciation and coherence dominate. Cortical facilitation is a science term that describes enhanced reflex speed, focus, emotional control and clear thinking. That is peak performance. Good for YIPPERS. Want some? It's easy.

Here's a story. One of my students, John (not his real name), experienced performance anxiety (mega yips) so acute, I expected he would quit golf. HeartMath rescued not only a golf career, it may have saved a life. It had gotten to the point where John was so stressed when he golfed in front of other golfers that he could barely hit the ball at all. Left alone, John could smack it, long and straight. When HeartMath and emWave PC became part of John's life, two things happened:

- 1) he became a golf professional and now demonstrates his prowess before audiences, daily
- 2) his chronic high blood pressure lowered so much his doctor took him off his medication

Learn and practice the Quick Coherence technique in this work, and others that HeartMath has developed. When your golf game improves, your game of life will, too.

*Peter Fox, author of A Lifetime of Better Golf, penslinger, consultant, golf coach and producer resides in Naples, Florida and Avon, Connecticut and can be reached at [pfox@ceoexpress.com](mailto:pfox@ceoexpress.com)*





# Foreword

*by Pia Nilsson and Lynn Marriott*

To play your greatest golf, you need to manage your body, your swing, your mind and your emotions. To reach your fullest potential as a golfer, you need to integrate the physical, mental and emotional aspects of yourself and the game.

*All of these factors are part of you and the game of golf.*

The next frontier in the golfer's quest to master the game will be the training of the emotions. Training body, swing and mind have been the subjects of many golfing books and techniques. Until now, emotions have been talked about but not really addressed as something that golfers can train themselves to manage and direct.

The future success of your golf game might not be in the piles of balls you can hit, but rather how well you can learn to manage and direct your emotions. Emotion —*feeling*—is an important component of human functioning, and emotions are present in all aspects of human life, including sports and exercise. Golfers who are anxious before a shot or angry after one, parents who are disgusted over a decision or shot they saw their junior golfer make, fans who go “aghhh” when they see a player miss a three foot putt, or the embarrassment a tour pro feels as he projects his score being posted in the newspaper, are emotional moments that can significantly affect the outcome of the game.

Have you ever watched a golfer experience anger or irritation on the golf course, and then see his score blow up? Emotions are ever-present in our golf games, and it's time we become aware of how they impact our performance and potential.

What initially drew us to HeartMath was the idea of the heart as

a source of power and intelligence we could bring to our golf games and to those we coach. HeartMath has been conducting research on emotions and the heart since 1990 and the scientific support for the effectiveness of HeartMath tools and technology for managing emotions is abundant. Scientific studies have validated that the communication pathways between the heart, brain and nervous system can be cleared through managing the emotions in specific ways. As we do so, it is possible to create an internal state called “coherence” to take us into the high performance “Zone.”

Scientific evidence has shown that synchronized activity in the brain and nervous system can be achieved by self-generating a coherent heart rhythm pattern, which comes from managing and directing one’s emotional state. *In other words, the player who is most connected to his heart and harnesses that heart power will be the model of the future.*

When we ask a group of golf professionals what book has made the most impact on their careers, the majority respond, Ben Hogan’s *Five Lessons, The Modern Fundamentals of Golf*. We all know Hogan was forced off the tour because of an incurable case of the yips. If HeartMath tools had been available to him, he might have taken his swing, stroke and game to an even greater level.

HeartMath training enables people to maximize performance while reducing emotional stress *in the moment* they need it.

### **Results are:**

- ▶ Immediate—in one hour, or in one day, with a little practice.
- ▶ Measurable—you can watch your heart rhythms change in real time.
- ▶ Sustained—you continue to improve your ability to get in the “Zone” and advance in the “Zone” after three months, six months, twelve months, etc.

In short, HeartMath will give you the tools to slow down your emotional responses so the old patterns and reflexes stop controlling you.

This booklet is an excellent overview of how emotions affect you and your performance. It provides proven tools on how to start being your own best “emotional manager coach.”

If you care about being a great golfer and want to enjoy the game more, then ask yourself the following questions:

- How do I want to deal with being nervous, anxious, afraid, worried, or angry?
- How do I want to react after a golf shot?
- How can I be in my best emotional state during a round of golf?

When you practice the HeartMath Quick Coherence technique (provided in this booklet) to shift to heart focus and a positive emotional state, the heart rhythm pattern becomes smooth and coherent. As you practice, you can see your heart rhythm pattern change with the emWave PC software system. When the heart rhythm becomes smooth and coherent, it signals the brain and nervous system to operate in sync. Cortical function is facilitated and the brain opens to new possibilities. Golfers who use HeartMath tools find their perception in a difficult situation often changes in less than a minute to a more positive and resourceful outlook. Now that's performance!

By learning HeartMath techniques, then practicing them just like you do your golf swing, you can expect many benefits.

## Practicing HeartMath:

- ▶ Prepares a golfer for activities that require concentration and motor coordination
- ▶ Maximizes emotional calm, concentration and mental focus during competition
- ▶ Moves a golfer into the “Zone” for on-demand “personal best” performance
- ▶ Prevents performance anxiety and guides a golfer to transform feelings of stress and worry into productive energy
- ▶ Provides a golfer with instant feedback to stabilize emotions and balance the autonomic nervous system (ANS)
- ▶ Helps a golfer develop skill in creating a calm, dynamic internal state at will

The next frontier, in the golfer’s quest to master the game, will be the training of the emotions. You only need to look inside your heart for the answers.

With care and appreciation from the heart, may your golf game have a future full of one putts and birdies,

Lynn Marriott & Pia Nilsson  
*Coaching for the future...VISION54*  
[www.coachingforthefuture.com](http://www.coachingforthefuture.com)

*Lynn Marriott and Pia Nilsson were voted among the top 50 golf coaches in the USA by their peers in the September, 2003, issue of Golf Digest. Having developed a new philosophy of golf that embraces the physical, mental and emotional parts of the game, they focus not just on developing the player, but also on developing the human being. They run dozens of golf programs, called GOLF54, for players at all levels, encouraging them to learn to coach themselves and to aim high—for the perfect 54 game. They train other teachers and coaches, and they are licensed HeartMath providers. Through their COACH54 programs, they are changing how golf is taught around the world. Annika Sorenstam credited Pia Nilsson, her Swedish National Team Coach, for giving her the psychological tools to win 19 times over two seasons and shoot the first 59 in LPGA history. (Golf Digest, September, 2003, page 79)*

# 1 Riding the Wave

**T**hey are very fast, even faster than thought. They're invisible—we can't see them and often don't even know they exist. At other times, they're as loud as a thunderstorm booming inside us, visible on our faces and in the way we move. Without them, we can't enjoy food, have fun with friends, experience the passion of sports, or feel the stir of music. With them we can feel miserable and confused, or joyful and happy.

***What are they?***

***Our feelings  
and emotions!***

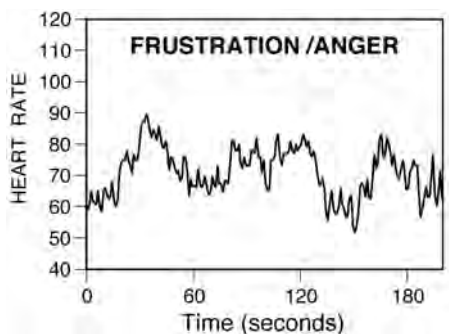
There has been much science and technology applied to golf. Most of it is about physical positioning, swing, motion, and so forth. This booklet is about the science of you—your emotions, attitudes, thoughts and moods. It's about your inner technology and how you can manage it. It's about empowerment on the golf course—and, of course, empowerment would have to include managing your emotions.

The word “emotion” can be defined as “energy in motion.” An emotion is a strong feeling—a feeling such as joy, sorrow, or anger—that moves us. The experience of emotion makes life matter. It transforms our world from a series of events and facts into a living, breathing experience. For instance, you've had a bad day on the golf course, you come home and your dog is wildly wagging his whole body because he loves you no matter what. Just seeing him, you start to ease up on yourself and forget about how badly you played.

You may not always be aware of your deeper feelings and how these feelings are affecting your body, energy, thoughts, and relationships. You might notice tension or an upset stomach or feel drained of energy. Sometimes, you might feel your heart racing or pounding in your chest. In fact, one of the easiest ways that scientists observe how feelings affect our bodies is in the effects they have on our heart rhythms. When emotions are strong, they can be detected



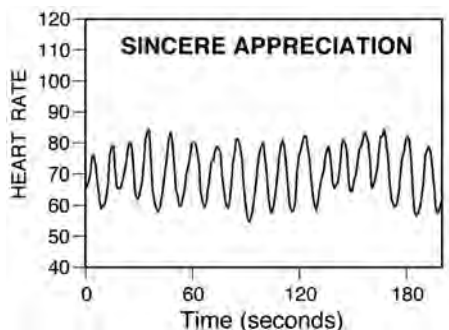
in the changing pattern of our heart rhythms. When people are frustrated, scared, worried, angry, or upset, their heart rhythms are uneven and irregular. When these uneven, irregular heart rhythms are viewed on a computer screen, they look like jagged mountain peaks.\*



*The graph to the left shows changes in the heart rate pattern. The random, jerky pattern is typical of feelings of anger or frustration. It is what scientists call an incoherent pattern.*

When we are stressed or upset, it's usually hard to think clearly. Making a wise choice is tough for anyone when they are emotionally upset. Have you ever said something to a friend in a moment of anger that you later regretted?

However, when we are feeling confident and secure, or appreciating someone or something, our heart rhythms are smooth and even like the ones in the diagram below. Scientists now know that the heart and brain are connected and that smooth and even heart rhythms make it easier to think clearly and make better decisions.



*The graph to the left shows changes in the heart rate pattern that are typical of feelings of appreciation and other positive feelings. It is what scientists call a highly ordered or coherent pattern, which is a sign of good health.*

\* These are not the usual heart rhythms that you see on an electrocardiogram (EKG). The technology used here is called heart rate variability (HRV), and shows how your nervous system and heart communicate to automatically adjust your heart rate.



### DID YOU KNOW?

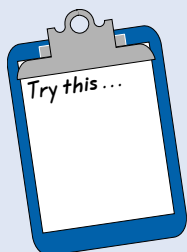
In recent years, scientists have discovered that the heart has its own independent nervous system—a complex system referred to as “the brain in the heart.” This system receives and relays information back to the brain in the head, creating a two-way communication between heart and brain.

This short book is designed to give you the inside story on emotions and how they apply to your ability to play golf. You will get basic information on your inner mechanics: how different parts of your brain function and work together, how your heart and brain talk to each other, how emotional memories affect your behavior and performance, and how your emotions and nervous system are related. These facts will help you see why it is critical to learn to manage your emotions. You will also learn important techniques for managing and redirecting your emotions and how to use these techniques to improve at the game of golf. Not only will your golf game benefit, but so will your performance in other aspects of your life.

Wouldn't it be great to learn to ride the waves of emotion, instead of letting them engulf you or knock you over? That's what managing your emotions is all about. For many people, emotion is something that just happens to them. But what you'll learn in this booklet is that it's possible to take charge of your emotions. As you become skilled at this, you will feel better on the inside and become more self-confident, successful, and satisfied in what you do in your golf game. No matter what skill level you are starting at, you will benefit from learning this process. As you learn to ride the waves of emotion, you will have more of a sense of balance and poise that can improve your game and increase your enjoyment of life. You'll also find yourself thinking clearly more of the time. Important keys for you will be the Quick Coherence technique taught in this booklet and the emWave technology that lets you watch in real time what's happening to your heart rhythms as you shift your emotions. These tools offer

the opportunity for every golfer to learn to find the Zone and tap into a pool of performance wisdom inside yourself. As Tiger Woods once said to NBC's Jimmy Roberts, *"I think the guys who are really controlling their emotions are going to win."* Many people are aware that one of Tiger's strengths has been the emotional/mental side of the game, which his father helped him develop.

*"I shot an 83 right after learning HeartMath techniques. I'd never shot under 90 before."* —T.R., Phoenix, AZ



► **Remember a time you wish you could have managed your emotions better on the golf course and then write about it.**

*"...HeartMath is amazing. It allows you to use your breathing to get into 'the zone'—which is basically reaching that level of heart rate where we perform best. It does wonders out on the golf course and it works fabulously for jet lag and a whole lot of other things . . ."* —Nick Dougherty

*European Golf Tour Professional*

## 2 The Three-Part Brain

Let's talk about our equipment upstairs. The human brain is made up of many layers built around a central core. The diagram below shows the brain divided into three main parts. Some people refer to these sections as simply the 1st, 2nd, and 3rd brains.

### 1ST BRAIN: REFLEX / INSTINCT

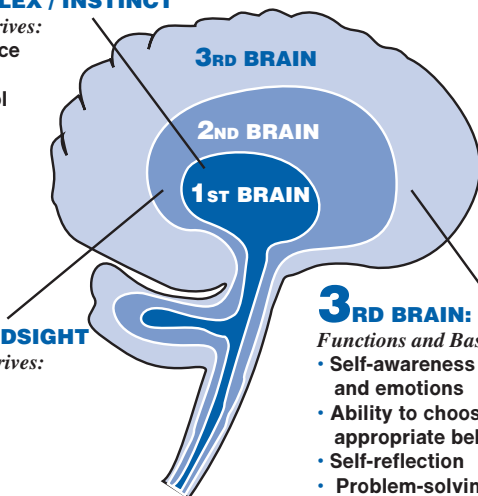
*Functions and Basic Drives:*

- Approach / avoidance
- Hormonal control
- Temperature control
- Hunger / thirst
- Reproductive drive
- Respiration and heart rate control

### 2ND BRAIN: HINDSIGHT

*Functions and Basic Drives:*

- Territoriality
- Fear
- Anger
- Maternal love
- Social bonding
- Jealousy



### 3RD BRAIN: FORESIGHT

*Functions and Basic Drives:*

- Self-awareness of thoughts and emotions
- Ability to choose appropriate behavior
- Self-reflection
- Problem-solving
- Goal satisfaction

## 1st Brain

The 1st brain controls your instincts, reflexes, and basic physical functioning and coordination. Amphibians (for example, frogs and salamanders) and reptiles (such as alligators, lizards, and snakes) have only this part of the brain. They act and behave mainly from their instincts. The 1st brain cannot solve math problems, but without it we could not survive. Our instinctive awareness of danger comes from this brain level. When we are hungry or thirsty, the survival instincts of the 1st brain will let us know and cause us to eat or drink. If this were the only brain level you had, instead of waiting patiently in a lunch line when you're hungry, you would rush to the food, pick it up, and gulp it down.'



## DID YOU KNOW?

Mice are born with an automatic avoidance of cats. It's instinct! This is an example of a first brain basic drive.

## 2nd Brain

This part of the brain is involved in many of our feelings and emotions. Without this brain, we could not have a sense of sadness or joy. Anger, anxiety, embarrassment, fear, territoriality (protecting our turf), as well as feelings of security, pleasure, and the joy of bonding with others, are examples of the feelings the 2nd brain helps to make possible. Many animals, such as dogs and cats, have this brain level as well. This part of the brain gives us memory of past events. When you and a friend see each other, memories of your last conversation and how you feel about each other are available to you because of the structures and circuits in the 2nd brain that store those memories.

Have you ever heard a golfer say, "I hate this course," or "I hate that hole"? When you play a course or hole you've previously played, the memories of that experience can affect how you play now. Stan hooks his tee shot on number 14 almost every time he plays it. Knowing this, he often compensates by hitting the ball to the right, which often lands it out of bounds. This is an easy par 3 for his usual partners, so Stan's personal embarrassment is compounded by the penalty stroke he frequently incurs.

Many of our habits on the golf course are due to repeated emotional experiences that have become imprinted in our neural circuits. When we get down on ourselves and mentally beat ourselves up for our mistakes, that negative emotional energy actually reinforces the mistake in our neural circuitry. It eventually becomes a nervous system habit that's hard to break. On the other hand, positive emotional imprints can help our performance. It's not uncommon for winners to play better at a course where they have won previously. Appreciating our successes redirects emotional energy to actually help us win.

The 2nd brain also makes it possible for us to have hindsight. This means that we can learn from past mistakes and successes. We can learn how to redirect our emotional energy to overcome negative emotional imprints that keep us repeating the same mistakes. We can also create positive emotional imprints to build on our successes. These are keys to empowerment.



#### DID YOU KNOW?

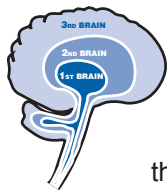
- The adult human brain weighs about 3 pounds.
- Bottle-nosed dolphin's brain: about 3 1/2 lbs.
- Elephant's brain: about 13 lbs.
- Cow's brain: about 1 lb.
- Great white shark's brain: about 1.2 oz.

## 3rd Brain

The 3rd level of the brain, sometimes called the cortex, is involved in thinking, problem-solving, goal-setting, and planning. This part of the brain provides you with foresight, an important ability that allows you to see ahead and consider the consequences of your decisions before acting on them. This is an advantage over the 2nd brain, where unmanaged emotions can push you to act without considering future results. Like when you get mad because you missed a two foot putt and you try to “kill” the next drive, only to watch it soar out of bounds. Or like the guy who always gets so annoyed at his playing partners for playing slowly, that his own routines get out of sync and become negatively affected.

The 3rd brain also monitors the 2nd brain's activity and allows you to name and sort out your feelings and emotions. It can then help you decide what the best course of action may be for any situation. For example, it's the 3rd brain that can remind you that if you let yourself get annoyed, you'll probably blow your next shot. It's the 3rd brain that helps you discriminate whether you want to go for the green on a par 5 or lay up short in front of a water hazard. It's what helps you determine if you

need to be aggressive and hit a driver off the tee, or play safe with a four iron. The 3rd brain can also help you notice when you are acting against what you feel is right. Some call this being aware of your *conscience*.



## How the Three Brains Work Together

While all three brains interact all the time, they need to act in harmony for optimal performance. In other words, they have to be **in sync** with one another. However, this is not always the case. Often we rely too much on one brain level. When we act mainly from the 1st brain, we react from instinct alone with no thought given to the consequences. Seeing the flagstick far off in the distance causes many of us to swing as hard as we can, but that rarely produces a shot we are happy with.

At other times, we may act primarily from the 2nd brain. In this case, unmanaged emotions can play too strong a role in our decisions and affect our performance. On number 6, Dick frequently hits his second shot into the water. He becomes so fearful he'll do it again, that he *does*. His fear and anger do not allow him to see the many ways he might play the hole differently, achieve a lower score, and enjoy himself a lot more in the process. We can keep worrying about something that is not really worth it or get angry over a situation—and that blocks us from seeing or obtaining all the facts.

If the 2nd and 3rd brains are not working together well, we may not even know what we are feeling, yet feelings can drive our actions and affect our thoughts and decisions. For instance, when you start worrying about your score, you begin to feel anxious. Your swings are more tentative, or rushed, and filled with tension. Your mind races with thoughts about how to fix your swing, but your score keeps rising.

An important aspect in improving performance is getting the 2nd and 3rd brains to work together harmoniously. The 2nd brain involves acting on our impulses and emotions, sometimes without much awareness of how our feelings are affecting us. The 3rd brain allows us to gain more power to control our impulses and emotions. We see more clearly



what's meaningful to us in playing golf (or in life) and make more of our choices based on these values. As we've already said, the 3rd brain provides foresight that allows us to see ahead, so we are able to consider the consequences of our decisions before acting. However, when we are operating mostly from the 3rd brain, we can get trapped in **"looping thoughts"** that lead to excessive worry and anxiety.

## **What are “looping thoughts?”**

Thoughts that loop are the ones that keep coming up over and over again, often with a negative tone. We just can't seem to get rid of them. They can trigger feelings of fear and insecurity. The most damaging thought loops are ones in which we berate ourselves. “I'm so stupid,” or “I *always* miss these short putts” are perhaps familiar examples. But all the negative thought loops cause are ongoing fear and insecurity that block performance potential.

### ***Thought loops that block performance...***

- ▶ I am doing well, I hope I can keep it up...but when will the “wheels fall off?” (*self-defeating thought loop*)
- ▶ The wind is starting to blow, I hate the wind, I never play well in wind (*self-defeating thought loop*)
- ▶ My chipping is bad and this is a difficult lie (*self-defeating thought loop*)
- ▶ I might miss the cut now, what if I miss, I'm going to miss (*worried projection thought loop*)
- ▶ I'll be so embarrassed when they post my score for everyone to see (*worried projection thought loop*)
- ▶ Don't leave the putts short, don't leave... (*internal nagging*)
- ▶ I never hit it far enough (*internal nagging*)
- ▶ I am leading the tournament and I better not mess up now (*self-defeating thought loop*)

*"Being a relatively new golfer, the HeartMath approach has helped me to speed up my learning process. I was able to get down to a single digit handicap quickly. Applying HeartMath techniques has taught me to stay aware by being neutral on the shots that do not end up where I intended and anchoring all the good shots to use for future reference. When I am not blinded by frustration and anger I can get out of my own way and perform to my potential more consistently."* —M.S., Solana Beach, CA



#### **DID YOU KNOW?**

There is an average of 100 billion neurons in the human brain. Each neuron or nerve cell is connected to other nerve cells in the brain by sometimes hundreds or even thousands of connections, called synapses. It is estimated that there are over 1,000,000,000,000,000 (that's a quadrillion) connections in the brain, more connections than there are stars in the universe.

# 3

## Emotional Memories

Memories of how people have felt in the past are processed in the *amygdala* (ah-MIG-dah-la), an almond-sized structure located in the 2nd brain. Emotional memories can cause people to react automatically—based on things that happened in the past. Many of these reactions, however, may not be appropriate for the current situation.

### Here's how it works . . .

Emotional memories can be triggered by something that is happening in the present that is similar to something that happened previously. The feeling pops in so fast that the 3rd brain doesn't have time to think about what's different. Without thinking, we just react—for example, we get upset, scared, angry, or nervous—feelings that are “*triggered*” by the memory of a past situation.

When people feel a strong emotion, the amygdala remembers it, along with many other details connected with the event. Even things that are indirectly related to the event can trigger the old feeling without our even being aware that this is happening. The amygdala takes in all kinds of impressions like sights, smells, tastes, and sounds and uses a “*fast track circuit*” to try to find a match with something that happened before.

### For example . . .

You are standing over a 3-foot putt, and the smell of the grass reminds you of the green where you missed your last 3-footer. You haven't even started your putt, yet your body floods with fear and worry that you're going to miss again.

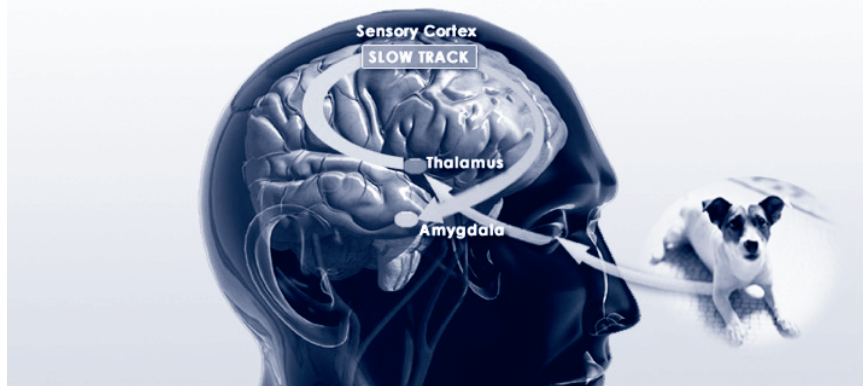
### Here's another example . . .

A young boy was bitten by a dog. The bite hurt, and the boy was frightened. The event became stored in his emotional memory bank. As a man, the sight of a dog—even a gentle one—still triggers a feeling of fear or hesitation.

Here's what goes on in the brain to make this happen. When the man sees a dog now, his brain instantaneously compares the image of the dog with strong past memories through the fast track circuit. The brain finds a match—with the memory of “dog” and getting bitten—and triggers a feeling of fear. This feeling then affects how his 3rd brain perceives the dog now. He reacts with a fear of dogs, and may not even know why.

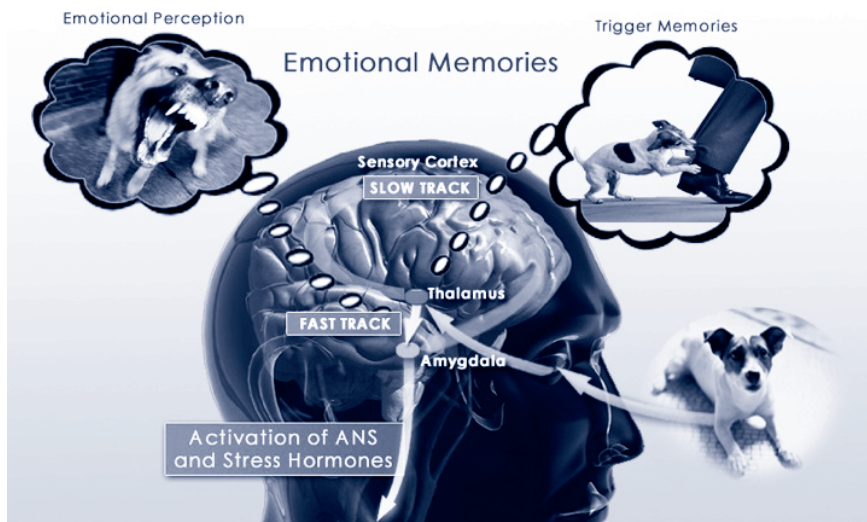
### How Emotions Affect Perception: *The Fast Track*

## Emotional Memories



The *information* about the dog also goes to the 3rd brain through another pathway—the “*slow track circuit*.” If the 3rd and 2nd brains are working well together, the 3rd brain can then tell the 2nd brain that everything is OK. It’s a friendly dog, and there is no reason to feel threatened. However, even if this happens, the initial fear reaction has already sent signals down the man’s nerves causing stress hormones to be released into his body. It is important to realize that the fast track circuits are wired into us to enhance survival. It’s really important for us to be able to react very quickly with all of our stress hormones if we are being physically threatened. It’s equally important for us to be able to release that stress reaction when we’re not.

## How Perceptions Affect Emotion: *The Slow Track*



### DID YOU KNOW?

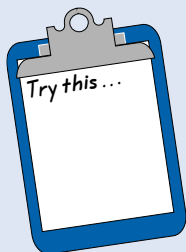
The only sensory input that goes directly to the amygdala is that of smell. Input from the other senses goes to another brain center—the thalamus—to be distributed. That's why smells can have such a powerful influence in triggering our feelings and emotions.

Of course, such memories do not happen just with dogs. They happen with all of our past experiences, including our relationships with other people, as well as places and situations that have left deep impressions on us. Have you ever been paired in golf with someone who made you feel anxious because he reminded you of someone you didn't like or someone who beat you badly in a prior match?

You can gain tremendous benefits once you recognize that your emotional memories are affecting you and, in many cases, controlling and limiting your performance. When you realize this, you can begin to reduce these inappropriate fears, anxieties, anger reactions, and other

unhealthy responses caused by emotional memories. One effective tool is the Quick Coherence technique taught in this booklet. This technique can help you deal with emotional memories from a more objective perspective and with increased balance between the 1st, 2nd, and 3rd brains.

As you will learn later in this booklet, the **heart** is involved in how we feel and how efficiently the different levels of the brain talk to each other. The heart and brain **do** communicate with one another, and the messages they send back and forth affect us in many important ways. But before we explain this further, you need to know a little bit about the nervous system—the pathway through which these messages travel.



- ▶ **Ask two friends to tell you where they were and what they were doing when they first heard about the terrorist attack on the World Trade Center.**
- ▶ **Then ask them to tell you what they ate for lunch three days ago.**

**They may find it is easier to remember the first fact than the second. Why? It's because their emotional reaction to the attack on the World Trade Center was significantly stronger than their experience at lunch**



# 4

## Emotions and the Nervous System

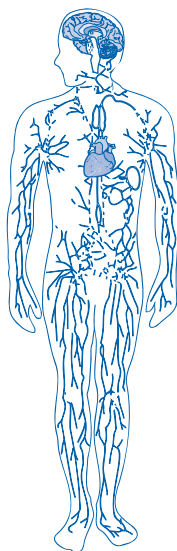
You can think of the nerves in your body as wires that carry electrical signals from one part of the body to another. For instance, nerves carry information from the eyes, ears, nose, and other parts of the body to the brain, so that we can perceive the world.

This group of nerves is called the sensory portion of the **central nervous system**. The central nervous system also carries the signals from the brain to the body so that we can walk, talk, and do all the things we do. This group of nerves is called the motor system. It is the motor system that we have conscious control over.

Another major part of the nervous system is called the **autonomic nervous system**. It operates at a subconscious level and controls many of the functions of the internal organs and the glands, which secrete hormones. The autonomic nervous system is also very much involved in our ability to feel and experience emotions.

Exciting new research has recently challenged several longstanding assumptions about emotions. For years psychologists maintained that emotions were purely mental expressions, generated by the brain alone. We now know that this is not true. Emotions have as much to do with the heart and the rest of the body as they do with the brain. Emotions are produced by the brain and body acting together. Today the idea of separating the brain from the body is rapidly becoming out of date. It is the autonomic nervous system that connects the brain, heart, and body.

The picture on the next page shows how the autonomic nervous system affects different organs or bodily functions, utilizing two branches of nervous system activity.



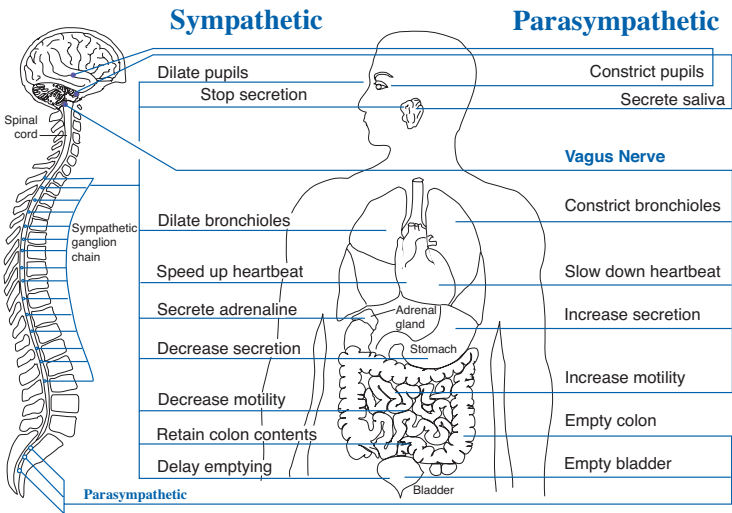
*It is the autonomic nervous system that connects the brain, heart, and body.*

One branch is called the **sympathetic nervous system**, which prepares the body for action by speeding up the heart rate. It can be compared to the gas pedal in a car.

The other branch, the **parasympathetic nervous system**, can be compared to the brake pedal in a car because it slows the heart rate.

For example, when we run or exercise, the sympathetic nervous system speeds up the heart rate. When we rest, the parasympathetic nervous system helps slow down the heart rate.

This diagram shows how the autonomic nervous system regulates different organs or bodily functions. A number of health problems can arise in part due to improper function or balance in the autonomic nervous system. For example, anger causes activity in the sympathetic system to increase and activity in the parasympathetic system to decrease. If a person is angry or stressed a lot of the time, an imbalance develops in his system, which can lead to high blood pressure and *even* heart attacks.



Different emotions cause different messages to be sent through the nervous system to many parts of the body, including the heart, skin, face, etc. In the research laboratory, one of the easiest ways to see how different feelings and emotions affect the nervous system is to look at how

the heart speeds up and slows down. The changes in the heart's rhythms reflect the activity in the two branches of the autonomic nervous system.

Emotions like frustration, anger, anxiety, or worry can cause the signals going down the two parts of the autonomic nervous system to get out of sync with each other. This can be likened to having one foot on the car's gas pedal (the sympathetic nervous system) and the other on the brake (the parasympathetic nervous system) at the same time—this creates a jerky ride and burns more gas. Just as it would cause extra wear and tear on the car, the same process also causes extra stress in our bodies. This stress takes its toll. It can deplete our energy, interfere with our ability to think, cause nervous system disorders and other health problems. It can block our performance capacities and diminish our quality of life. Many people call emotions that lead to this inner disorder, “unhealthy” or “negative” emotions because of the harmful effects they have on our bodies, health and performance, especially when experienced often.

Everyone has negative emotions occasionally, and we can learn from having them—but over time too many of these emotions become a habit and take a toll. For our happiness and well-being it's important that we become aware of our feelings and take charge of our emotional experiences.

## **Research shows the following consequences of unhealthy emotions.**

- ▶ **Less ability to think clearly**
- ▶ **Less efficiency in decision-making**
- ▶ **Less ability to communicate clearly**
- ▶ **Reduced physical coordination**
- ▶ **Higher risk of heart disease**
- ▶ **Higher risk of high blood pressure**



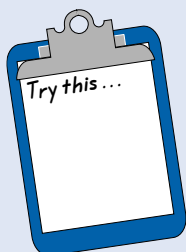
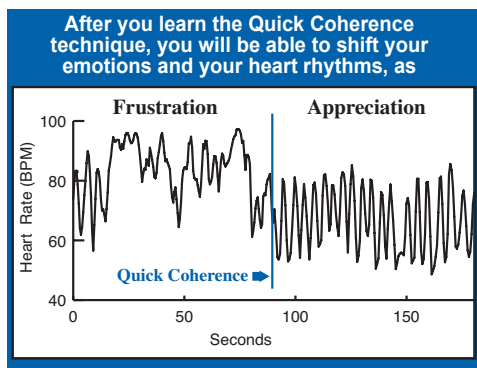
**DID YOU KNOW?** Anger suppresses your immune system. In a recent study, researchers asked healthy individuals to focus on two different emotions—anger and care—while a key *immune system antibody, secretory IgA*, was measured. IgA (*immunoglobulin A*) is the first line of defense in the immune system, acting as a protective coating for the cells against invading bacteria or viruses. Stress is known to decrease IgA levels, leaving us more vulnerable to respiratory problems such as colds or flu. The study found that simply recalling an angry experience caused a six-hour suppression of the immune system. On the other hand, feelings of care or compassion boosted IgA levels.

When we feel uplifting emotions, such as appreciation, care, and compassion, the signals sent through the nervous system are very different from the signals sent when we are feeling upset. The enriching emotions, allow the two branches of the nervous system to get in sync with each other. Then the body's glands and organs work together in harmony and the heart's rhythms become smooth and even. Thinking clearly, making better decisions, and playing at our best becomes easier. This is why emotions such as appreciation, care, and compassion are called "healthy" or "positive" emotions.

Do positive emotions just happen to us—are they random—or can we choose to create them? At times, when we are with family or friends or doing something enjoyable, we just feel good. At other times, finding a positive emotion could feel as likely as discovering water in the desert. But, with practice, you can learn to create positive feelings yourself. Then you don't have to be a victim of emotional memories, circumstances beyond your control, or "a bad golf game." These skills are valuable. Researchers now say that learning to handle your emotions can make a big difference in whether or not you are successful in life. In fact, it can have a more important influence on your success than your I.Q.!

## Research shows the following consequences of healthy or positive emotions:

- ▶ Improved performance and achievement
- ▶ More creativity and innovative problem-solving
- ▶ Better decision-making
- ▶ More flexibility in the way you think
- ▶ Improved memory
- ▶ Improved immunity to disease
- ▶ Improved hormonal balance
- ▶ Longer life span



- ▶ Make some notes about a time you felt balanced, uplifting emotions while playing golf.

Did you notice that you felt calmer or more confident about your thinking and decision making?

*"With the Quick Coherence technique I'm able to approach each shot with a fresh, new attitude of balance and confidence. I've learned to quickly put poor shots behind me and focus on the upcoming one with more clarity and poise. It's improved my overall shot making and I'm enjoying the game more as a result. It's lowered my handicap by about five strokes (my handicap is now ten) and I'm continuing to improve on a weekly basis as the Quick Coherence technique has become a natural part of my swing preparation. I can spot and correct subtle flaws more quickly and make the necessary adjustments more easily."*

—L.S., San Jose, CA



#### **DID YOU KNOW?**

The human face is a remarkable system consisting of 44 separate muscles; four are devoted to chewing and 40 to facial expression. One group of muscles is usually activated by positive feelings and another group by negative feelings.

Your facial muscles respond naturally without your conscious choice. It's an important way that people sense what you're feeling. You can try to cover up your feelings, but it's hard to do. As you know, it's easy to recognize an insincere smile. Really good actors learn to generate the true feelings involved in the roles they play. Then their feelings are naturally reflected in their facial expressions and their acting has the power to move us.

# 5

## The Heart-Brain Connection

There is a nervous system pathway that carries signals from the heart to the brain, as well as one that carries messages from the brain to the heart. Surprisingly, the heart sends more signals to the brain than the brain sends to the heart!

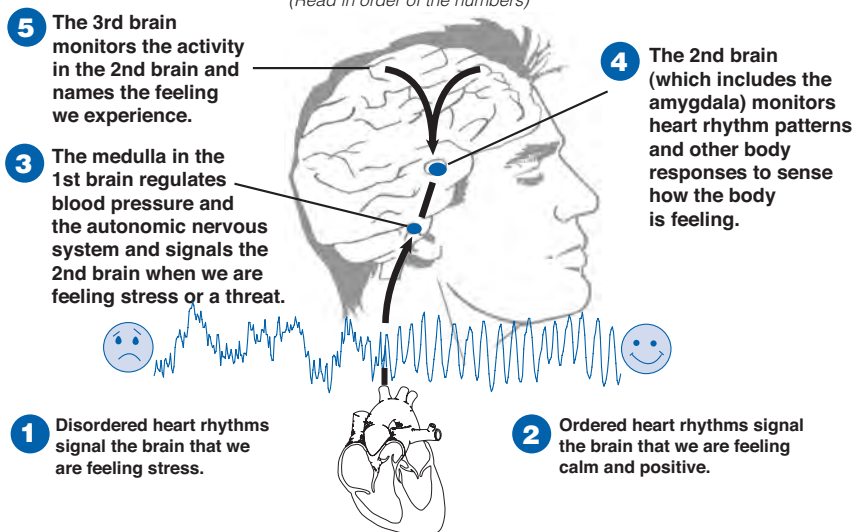
In a way, we could say that the heart and brain “talk” to one another—and together they “talk” with the body. The signals they send, whether harmonious or chaotic, can make all the difference in how we feel and act.

Nerve impulses from the heart are received first at the 1st brain level, then move into the brain’s higher centers (2nd and 3rd levels), affecting how we feel, think, perceive, and perform.

Jagged and irregular heart rhythms send a message to the brain that indicates we are out of sync. On the other hand, smooth, harmonious heart rhythms send a signal to the brain that tell it everything is okay and working in harmony.

### How Heart Activity Affects How We Feel

*(Read in order of the numbers)*

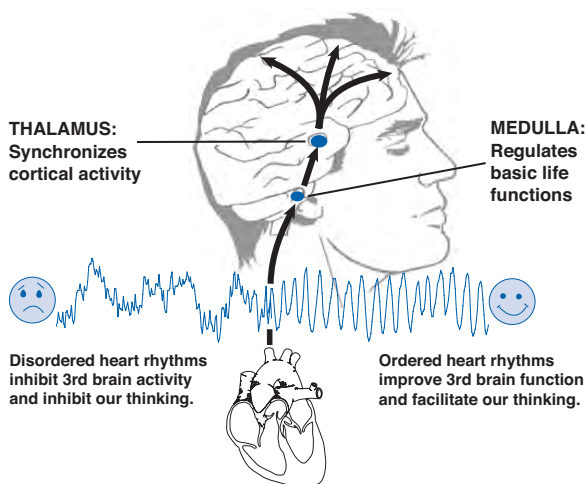




These messages are sent through the nervous system pathway that is shown below. The pathway starts in the heart and goes to the 1st brain, then to the amygdala in the 2nd brain. The pattern of the signal tells the 2nd brain what the heart and body are experiencing, while the 3rd brain monitors the 2nd brain and categorizes and names the feeling of fear, anger, joy, appreciation, or whatever it is—after we're already experiencing it.

When we imagine we are breathing through the area of the heart and generate a positive feeling—appreciation, for instance—we can actually change the signals the heart sends to the brain, influencing the brain's perception and improving how we feel. This signal affects how the brain perceives and is an important way that the heart influences how we are feeling.

### How Heart Activity Affects Our Ability to Think



Another important pathway, shown above, is mainly related to the activity of the 3rd brain and our ability to think clearly. It carries information from the heart to the *thalamus*, a key structure in the 2nd brain that has many crucial roles. One of its roles is to distribute incoming sensory information to the different sections of the 3rd brain and ensure that the signals are in sync. Another function that the thalamus performs is to help synchronize the activity in the 3rd brain itself.

When the heart's signals to the thalamus have a jagged and irregular pattern, they interfere with the ability of the thalamus to perform this function. This results in what is called *cortical inhibition*. In this state the brain is not working as well as it could—your reactions are slowed and you cannot think as clearly. This is why when you get anxious, angry or upset, you can blow a shot or make poor decisions. You hear yourself say, “What happened? What was I thinking?!” What happened was that stressful feelings caused the signals in your nervous system to get out of sync, creating disordered heart rhythms and reducing your brain and body's ability to perform well. Over time, your body gets accustomed to being out of sync and has to be retrained to get back in sync.

Positive feelings and smooth, even heart rhythms facilitate or improve the brain's ability to process information; this is called *cortical facilitation*. This means that our physical reflexes are faster and we can think more clearly. We can see more options and solutions to problems and situations than we could before. This is important not only for tasks that require us to be able to focus, think, and make decisions, but also for ones that require us to have good coordination and rhythm—swinging a golf club, for example.

If we get upset while playing sports, not only do we drain our energy reserves more quickly, but our ability to perform is affected as well. This is because of the disorder and chaos caused in the nervous system by feelings like frustration, worry, and anxiety, and also because of the “noise” they create in the brain. An excess of mental and emotional noise in the brain can make it difficult to perceive what's going on. It overloads the circuits the brain needs for focus, coordination, learning, remembering important details, and maintaining mental stability. The whole brain system goes into overload.

This is what happens when people get frustrated or anxious while playing golf. Anxiety drives up the mental noise to such a pitch that they cannot see as much of the world around them, since the brain circuits usually available for recognition and understanding are busy with the internal noise. They will totally forget to do a normal pre-shot routine and

their swing gets all out of sync. They will pull out a nine iron instead of the six iron they need because they can't "see" the clubs as they are in the bag, which can further upset them. They will read a putt and have no feel for the distance. The putt is executed with perfect direction but ends up ten feet short. If they aren't able to get back to a neutral feeling, they can literally have a memory lapse and not remember how many strokes they had on the hole, or don't know what their playing partners have tried to communicate to them.

Getting back to a neutral or even a positive emotion quickly is not so difficult. You can find neutral fast by engaging the power of the heart. The Quick Coherence technique in the next chapter will show you how. Simply practicing Steps 1 and 2 of Quick Coherence and telling yourself, "Go to Neutral," will quiet the inner noise and take you there.

*"Because of Quick Coherence I'm able to concentrate more effectively and my touch and accuracy around the greens has improved dramatically. I use the technique to steady my nerves and that has resulted in a much smoother stroke. The yips have almost disappeared. Quick Coherence has also been extremely effective at helping me to manage the performance anxiety and tension. I can feel the science behind it, which is really balance in the autonomic nervous system, and how the nervous system is 'hard wired' to my motor skills and reflexes."*

—J.W., Santa Cruz, CA



## Quick Coherence®: A Positive Emotion-Refocusing Technique

Coherence is a highly efficient psycho-physiological state where all the systems of the body work together in harmony. Coherence is also a natural state, which can occur spontaneously, especially when we are feeling positive and upbeat or doing something we truly enjoy. However, for most people in today's high stress world, it is rare for sustained periods of coherence to occur without practicing techniques like Quick Coherence.

By using the Quick Coherence technique, you can learn to take charge of your emotions—and refocus them—so that they work for you rather than against you. This HeartMath tool was created by Doc Childre, a leading authority on reducing stress and increasing emotional balance. HeartMath tools to get in sync have been the subject of years of scientific research and are used by CEOs of corporations, doctors, nurses, performing artists, firefighters, police officers and people in the military, as well as athletes. The steps of this technique are simple, yet they will quickly stop the chaos in your nervous system and increase your heart rhythm coherence so you will feel and perform better. Once you have completed the steps, you can ask yourself, “How could I handle this in a better way?” With practice, you'll find you have more intuitive choices or options for what you might do next—even right in the middle of a challenging or high pressure situation.

The rhythmic heart breathing portion of the technique helps shift your nervous system into coherence because the rhythm of your breath affects the rhythm of your heart rate. In fact, this is why for thousands of years breathing techniques have been used to help people reduce stress. When we take a few deep breaths, especially during a stressful time, the new breathing rhythm changes the heart's rhythm, which in turn has a powerful calming and balancing effect on the brain and entire body.

However, heart breathing is only part of why Quick Coherence is so effective. When we choose positive feelings like care, love or appre-

ciation while breathing through the heart, we create both physical and emotional coherence. This provides a far wider range of benefits than simple breathing techniques alone. Holding a positive feeling also makes it easier to sustain coherence for longer periods so that it becomes natural and familiar to your system. This makes it much easier to get in sync and balanced during challenging situations anywhere.

You've probably heard the sayings, "play with your heart," and "put your heart into it." These are not just metaphors. They are physiological keys to coherence and high performance. Quick Coherence will show you how.

*"Quick Coherence and the emWave PC have become an indispensable part of my golf game. By practicing Quick Coherence as I address the ball, I'm able to quiet my internal voices and focus on the subtle adjustments I need to make to improve ball striking."*

—R.S., Orlando, FL

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*"I'm a professional golfer. When the emWave PC software was introduced to me, I sat with it for 10 minutes, breathing and picturing good thoughts, but I never left the red zone. I had a lot on my mind that day and nothing was helping me free my mind. The next try I was more relaxed. This time I used the HeartMath technique and it took about 10 minutes for me to get into the blue zone and see some coherence in my heart rhythm. I was trying hard to think of things that gave me appreciation but found myself jumping from situation to situation and never staying with one thought or picture. I realized that is what I do when I am playing golf and especially when under pressure. I have so many different thoughts of wind, club, lie, etc., trying to analyze everything. I am never just present in the moment and my game suffers tremendously when I am in that state. With a few more practice tries on the emWave PC, I could reach a little into the green zone, and could feel the high performance state coming in. I just relax, breathe, and be with my feeling of appreciation, staying away from thinking in my mind."*

—W.P., Phoenix, AZ

## The Three Steps of Quick Coherence

### Step 1—Heart Focus

The first step is to focus your attention in the area of your heart. You can focus your attention on any part of your body, so let's start with this simple exercise. Focus on your left big toe and wiggle it... Okay, now focus on your right elbow... Now, gently focus on the area in the center of your chest, the area of your heart. If you'd like, you can put your hand over your heart to help.

### Step 2—Heart Breathing

In Step 2, as you focus on the area of your heart, imagine you are breathing through your heart. Imagine your breath is flowing in and out through that area. Breathe slowly and gently.... in through your heart (to a count of 5 or 6)... and slowly and easily out through your heart (to a count of 5 or 6)... Do this until your breathing feels smooth and balanced—not forced... As you continue to breathe with ease for a few moments, you will find a natural inner rhythm that feels good.

### Step 3—Heart Feeling

The third step involves positive feelings and attitudes. Continue to breathe through the area of your heart and find a positive feeling, like appreciation, care or compassion. You can recall a time you felt appreciation or care to make it easier to find a positive feeling now. This could be the appreciation or care you have towards a special person, a pet, a place you enjoy, or an activity that was fun. If you can't feel anything, it's okay, just try to find a sincere attitude of appreciation or care. Once you've found a positive feeling or attitude, you can sustain it by continuing your heart focus, heart breathing and heart feeling.

### **In summary, to do Quick Coherence...**

- ▶ **Focus your attention in the area of your heart.**
- ▶ **Imagine you are breathing slowly and gently through your heart to a count of 5 or 6.**
- ▶ **While continuing to breathe with ease and rhythm through your heart, find a positive feeling or attitude like care, compassion or appreciation.**

You can use Quick Coherence anywhere, on the golf course, at home or at work, before meetings, while you are driving, or whenever you just want to feel more ease and inner clarity.

### ***Use Quick Coherence in the following situations:***

- On the way to the course while driving in the car
- As part of your warm-up routine on the driving range
- In your pre-shot routine to make sure you are heart-focused and target-connected as you address the ball
- As a post-shot routine, after you hit your drive and approach the second shot
- While waiting to hit on the tee of each hole in order to resynchronize your system

It's especially important to use Quick Coherence whenever you feel nervous, anxious, strained, irritated, or just out of sorts on the course. It will help you quickly get back in sync and recoup drained emotional energy.



**TRY THIS:** Put your hand on your heart. Did you place your hand on the left side of your chest? Many people do, but the heart is actually located almost in the center of the chest, between the lungs. It's tipped slightly so that a part of it sticks out and taps against the left side of the chest, which is what makes it seem as though it is located there.

Research shows that when you practice Steps 2 and 3 and imagine to feel the breath flowing through the heart area while generating a positive feeling, there is a calming and balancing effect on your entire nervous system. There is also an improvement in how your nervous system, heart, and brain work together. By using the Quick Coherence technique, you can shift the pattern of signals the heart sends to the brain, reducing the inner noise and helping your three brains work together in harmony. This will stabilize your emotions and start to recharge your energy. Then you're less stressed and can think better, perform better, and have more fun. If you practice managing minor irritations, anxieties, or angry reactions, you are creating a habit that can make a tremendous difference not only in your game, but in your day-to-day experience and enjoyment. You're also building strength you can use in case you have to deal with a big crisis, challenge or unexpected change in your game or in life.

When life really throws you for a loop (e.g. loss of job or position, disaster, severe illness in a loved one), it can be very hard to bring balance back to your emotions. That's natural when the rug seems to be pulled out from under everything you feel secure about. But it's important that you try. Once your emotional energy reserves are exhausted, you're operating on raw nerve energy and your nerves feel frayed. Next come the cycles of fatigue, despair, and depression. By learning how to take charge of your emotions, you start the process of renewing your emotional buoyancy, which helps reenergize the nervous system. This can take



time, but using a tool like Quick Coherence will help you restabilize more quickly. Any time one person manages their emotions, everyone involved in the situation benefits.

Junior golfers also benefit from HeartMath techniques. Golf instructor, Melanie Trowbridge explains, “As the kids learn to drive a golf ball, they also learn ways to tame their feelings when the ball goes awry.” Ashley shanked a shot at the practice range. She tightened, flustered by the sight of the ball skipping crazily across the green. Melanie reminded her to start Quick Coherence and breathe through her heart. A moment later she said, “OK, I’m fine now.” Her next chip-and-run shot terminated with the ball three feet from the cup. “Yes!” Ashley exclaimed. “If I miss a ball and get all upset, I do HeartMath. It works. It makes you feel better. It puts a smile on your face and you do better the next shot.”

Quick Coherence is the first step in stabilizing mind, body and emotions. More advanced HeartMath techniques are available in other HeartMath books and learning programs.

*"I continue to use HeartMath and have great success with the programs. This year my students received the # 1 junior player nationally and the # 7 player as well. Many won their state's High School Golf Championships and our Husky team this past week finished 5th in a tough, tough college event. We are ranked nationally and I used HeartMath at night and used it each morning right after breakfast before they warmed up for their rounds. In Japan we use it for our elite schools every day. I am always grateful for you."*

—Joe Thiel, Master PGA Professional  
Joe Thiel Worldwide Golf Schools

# 7

## **Developing Your Coherence Skills: The emWave PC and emWave Personal Stress Reliever (PSR)\***

To play great golf you want to be in a coherent state, physically, mentally, and emotionally. In the coherent state you will be in sync and able to manage yourself emotionally, be present, think clearly, and react intuitively. This state can become an automatic part of your pre-shot routine. From the coherent state you have the greatest chance of making your best swing to get the golf ball to the desired target.

Ideally you want to train yourself to be in the coherent state every time you address the ball. In other words, you want smooth access to all of your abilities: your emotional power, technical skills, intuition, clear thinking, coordination and focus. A great way to start developing your coherence skills is to practice Quick Coherence with the emWave PC and emWave Personal Stress Reliever (PSR) before your golf game. The emWave is used by competitive athletes to develop hand-eye coordination, manage emotions, and to recover and store energy. In the military, the emWave is used to help develop focus and neutralize anxiety that can come up prior to performance tests. Swimmers use the emWave for help practicing the internal state needed to perform for extended periods under water. In many sports, players have only a few minutes between rounds to recover their energy and store energy for the next round. The emWave helps them practice the coherent internal state where the body can recover and store energy fast.

### **Using the emWave techniques for Golf**

During a round of golf there are many situations, externally and internally, that can create “noise in the system” and lead to a noncoherent state. It could be your own doubt, impatience or anxiety. It could be a nervous twitch or the yips. It could be challenging weather, an opponent saying something that rattles you, or an unlucky bounce. The key is to first be aware of the stress or interference. You can develop this aware-

\*In this chapter the term emWave refers to the emWavePC and/or the emWave Personal Stress Stress Reliever (PSR)

ness by finding a quiet place to practice creating a coherent heart rhythm using the Quick Coherence technique with the emWave. Quick Coherence will help you find a feeling of ease and inner harmony, that will be reflected in your heart rhythms, which you can see change in real-time on the emWave PC screen. You will begin to see smooth, coherent heart rhythms.

## Your Coherence Score

Practicing Quick Coherence with your emWave will make it easier to increase your coherence scores calculated by the emWave. Most people start out in 100% low coherence (red) and this is normal. It is progress to get to medium coherence (blue). With practice over time you will increase your score and get in the Zone, high coherence (green). Sustaining a positive emotional state while breathing rhythmically through the heart will help you stay in the Zone for longer periods of time. You might want to collect one minute of baseline data, then practice Steps 1 and 2 for one minute, and then activate a positive emotion or attitude for one minute (find something to appreciate). Creating coherence at will is a new skill that you are learning and requires practice. Realize that coherence is a choice—you can choose to feel that way. You can learn to de-stress at any moment, and find a calmer place inside.

You can train with the emWave at home or work, before you go to play or before a big tournament. Play the coherence-building software games that come with the emWave PC, and enjoy a wide range of mental, emotional and physical benefits. We suggest, if possible, having the emWave PSR with you on the practice tee. As stressful or irritating thoughts and emotions arise, turn on your emWave PSR and practice. After practicing with the emWave PSR, go back to hitting shots and making putts. Notice the difference in your rhythm, feel, and focus after practicing to achieve a coherent state. The key is to notice the shift in your state and then build an internal reference to go back to. It will increase your awareness and intimacy with the state you want and need to get in the Zone and to play your best golf. It is this keen awareness and ability

to shift to the heart that training with the emWave provides to facilitate being able to coach yourself when you want and need it most.

Build emWave techniques into your practice plan for golf (and for improved performance at work or anywhere). Practice with it for ten minutes a day, as part of your plan for improving as a golfer.

Golfers who suffer from the yips often make the problem worse by their anxiety. The anxiety reinforces the nervous system response which reinforces the anxiety in a closed loop. Practicing heart rhythm coherence can change the nervous system response. Consider Jim, for instance, a golfer who played for high stakes and won regularly, but got the yips when his pride was on the line. Whenever he was matched with or against a golfer whose respect or admiration he sought, the yips would show up on almost every green. Once Jim came to understand and use HeartMath techniques and the emWave, his yips disappeared. The source of appreciation he used was a memory of a photo of himself as a 3 year old, with a golf club in hand, being coached by his dad.

### ***Golf situations the emWave can help you improve:***

- ▶ pre-shot routine
- ▶ post-shot review
- ▶ anxiety over a particular shot or particular hole
- ▶ nervousness over an important tournament
- ▶ learning the golf swing and other shots in the game
- ▶ frustration over a missed shot or penalty situation
- ▶ emotional disappointment and drain of a bad hole or round
- ▶ having the yips or other nervous twitches
- ▶ giving a victory speech

## Don't Be Discouraged

After you've practiced Quick Coherence and trained with the emWave, you should see a better way to handle a challenge. But don't be discouraged if your emotions flare back up from time to time. The truth is you are bound to hit some bad golf shots. It's how you "bounce back" from those shots and how you manage the perspective you have about them that makes the difference.

You can redirect how you emotionally react to stressors in your game as they occur, by learning to shift to the heart and sustain a coherent heart rhythm. From a coherent state, you automatically perceive from a larger perspective. You quickly recoup lost energy and rebound. Real passion comes from your heart and is reignited. Challenges become opportunities you look forward to. Your system becomes energized, clear and focused.

By training with the emWave you will enter into and become aware of the physiological high performance state of the Zone and how you can create it more often at will. You will become more emotionally resilient and realize more of your potential as a golfer. You will develop the intuitive sensitivities of golf that give you leverage. The old cliché is "learn to play one shot at a time." With Quick Coherence and the emWave you truly understand what that feels like. With focused practice you will increase your ability to sustain a balanced emotional response that comes from the heart and keeps you in the game.

## Using your emWave PSR at the Golf Course

### Tip 1

Before a round of golf and before a practice session use the emWave PSR and the Quick Coherence technique. Try to sustain the green level/high coherence for 3-5 minutes. To get started, set the emWave PSR on Challenge Level 1 and use the ear sensor. Find a place at the range or around the clubhouse where you can sit quietly. Shift your attention to the area around your heart breathing in through your heart as the lights in the light strip ascend, out through your heart as the lights in the light strip descend. Breathe a little deeper than usual. Continue breathing in this fashion throughout the entire session. After 30 seconds or so, start to feel appreciation for the opportunity to play and the fun of the experience. It should be a quiet, peaceful, easy feeling remembering to feel appreciation throughout the session. Create the attitude you want to maintain throughout your round or practice session – an attitude of calm, clarity and focus.

### Tip 2

Before a practice session; Use the emWave PSR for 3-5 minutes as described in Tip 1. Hit 5-10 balls, then use the emWave PSR and sustain green/high coherence for 2 minutes. Hit another 10-15 balls, followed by the emWave PSR for 1-2 minutes. You can do this while standing or sitting on a bench on the range if one is handy. After these first two sessions hit 15-20 balls using the Quick Coherence technique for about 15-20 seconds before each shot integrating this into your pre-shot routine. Every tour professional knows that you should repeat the same routine during practice that you intend to use during play. Experiment with how to most easily integrate the Quick Coherence technique into your pre-shot routine and learn what works best for you. It may be just before you walk up to address the ball, or as you are planning your next shot.

Use the Quick Coherence technique after your shot to appreciate the emotional high of a great shot or to refocus your attitude and energies after a poor shot.

### Tip 3

Use the emWave PSR throughout the round for 1 minute or so:

- ▶ while waiting to tee off
- ▶ waiting for your partners to hit
- ▶ as you approach the green
- ▶ every two or three holes
- ▶ while riding in the cart to your ball
- ▶ especially when you feel yourself getting frustrated, angry or dejected after a poor shot

You may also use the Quick Coherence technique without the emWave PSR throughout the round remembering the attitude you set before the round. Especially use the technique during your pre-shot routine and as much as possible between shots as you are walking or riding to your ball. Use the technique in particular around the green where more delicate motor skills are required.

## The Real Story

When you get really comfortable with Quick Coherence and the emWave you'll enjoy the feeling of having more control in your golf game and in the game of life. Surveys reveal that one's sense of control over the sources of stress and tension in life is a big factor in one's ability to cope with that stress and tension. But what's more important is to realize that while you can't always control what events will happen on the course or in your life, you can control how you respond or react to them. That's empowerment.

Now you have the inside story on the three-part brain, emotional memories, your nervous system, and heart-brain communication. You have seen how emotions can help you and how they can hurt you when playing golf. You've also learned that it's possible to change the way you feel by generating uplifting feelings that allow your nervous system, heart, and brain to work together harmoniously. And you've been introduced to a powerful technique and a technology that are designed to help you do that.

What you do with all this information to improve your golf game and your life is the real story. It's your story.

**For additional information on HeartMath technology and training to improve your golf game, go to [www.heartmath.com/sports/training/](http://www.heartmath.com/sports/training/) and fill out the questionnaire.**



# Afterword

by **Bruce C. Wilson, MD**

*(Cardiologist first, golfer second)*

Now that you have read this book, you may be wondering, “Why haven’t I heard of this before” or “Does this really work?”

Don’t worry. I’m a board certified cardiologist, trained at a prestigious university, and have been on the faculty of three prominent medical schools. I’ve also served as chairman of departments of cardiology and medical education at community hospitals and am currently chairman of the board at a heart hospital in my community. In spite of my background, I had *never* heard of this research nor been taught about heart-brain communication. Like most everyone else on this earth, it was my opinion that except for a few reflexes relating to heart rate and blood pressure, all communication between these two structures went from north to south.

*But that’s why we do research—to learn new things.*

One day, years ago, I was asked to review an article about the studies being conducted at the Institute of HeartMath in Boulder Creek, California. I was immediately struck by the power and the significance of their findings—that the heart sends numerous and very powerful signals to the brain and that these signals affect multiple systems. This would have profound implications for cardiac health in particular, so I became interested in learning more about the underpinnings of their research. It didn’t take long to realize that this was a true scientific breakthrough. The research was well done and published in peer-reviewed scientific journals. I tried the techniques and they worked quickly to relieve my own stress. They also helped my family and my patients. As a result, I have been teaching and delivering lectures on HeartMath to hospitals, doctors and patients for the last six years.

Now, how do we go from physiology to golf? As everyone reading this book knows, golf is a unique game. I grew up playing competitive tennis, where I had to run around on a court not knowing where my opponent would place his shot. I had only one tool to hit a ball that might be traveling 100 miles per hour, and do so on the run. In golf, you have a bag with fourteen implements in it. Within reason, you can take as long as you want to fashion a shot. On the tee, you can even put the ball where you want. I was dumbfounded to witness the variety of possible outcomes and my lack of ability to predict them!

I took up golf when I was thirty-seven. Most of my friends played, and I had given it a try a few times. I figured that I'd be thrown out of the doctor fraternity if I didn't buy myself a pair of plaid pants and commit Thursday afternoons to playing golf. That year, I was working at a large university medical center and had just been recruited to move to another academic center to run a heart institute program. I had about six weeks of free time before the move. I was very fortunate to find a wonderful professional in Minneapolis, Jim Werre, who gave me five or six lessons to get me started. I was amazed to discover that I could hit the ball 300 yards and have been punished many times since for doing so, as I have spent a great deal of time on other people's fairways.

Over the next fourteen years, I became more fascinated with the game on many levels. I was introduced to the concept of routine brain patterns getting in the way not only of performance but the enjoyment of this great game, when I attended Fred Shoemaker's School for Extraordinary Golf, and have read and reread his book numerous times. I have also been educated in similar concepts by being a student of Manuel de la Torre, both in person and in print (*Understanding the Golf Swing*).

As I studied the game in great detail (and improved some along the way), I learned that *tension* is the enemy of the golf swing. This is a sport wherein the swing is *allowed* to occur, not forced. In other sports, one usually overcomes an opponent or wins an event by employing *more* tension and force. But only when thoughts and tension are absent does one experience the pure golf swing. How, then, in the midst of intense competition, when the sympathetic nervous system is geared up and adrenaline is pumping to fight for your survival, do you avoid muscle tension? And how do you widen your perspective to see elements and circumstances that may have a profound influence on your next shot and, in fact, the match, when your brain is literally being made stupid by your *fight-or-flight* circuitry that can't tell the difference between your anxiety about a golf match and a saber-toothed-tiger threatening you?

The tools of HeartMath allow you literally to alter your physiology, and do so easily. These tools are at the cutting edge of performance management. The Quick Coherence technique can be used in a few seconds to shift out of stress reactions that were wired into us hundreds of thousands of years ago for survival and into a high performance state. They have been learned and practiced by CEOs of Fortune 100 companies and elementary school children alike.

Who would have thought that one's heart signal, which I have been reading as the EKG for my entire professional career, is actually about 60 times more powerful in amplitude than one's brain signals? Or that the phrase, "play from your heart," has real meaning? Because the signal from the heart is the dominant "pendulum" in the body (quite contrary to my medical training prior to this research), you power-up and get into the "Zone" much more easily through the heart, plain and simple. Once you understand the concepts in this book, you will see that they apply beautifully to this wonderful and challenging game of golf. You will know it in your *heart*.

# Coaching with Quick Coherence and the emWave PC

Learn to Guide Your Own Emotions on the Course—  
*and in Life.*

*by Lynn Marriott and Pia Nilsson*

Wouldn't it be great to have an instructor available on the course whenever you needed one? Someone who could tell you exactly what to do at every moment? This instructor actually exists, though you might not know him or her as such: It's you.

Coaching yourself mentally and emotionally is the key to consistent success on and off the course — it's what separates the best players from the rest. Here's an example: Annika Sorenstam, then a rookie without any wins, had a one-stroke lead on the 71st hole of the '95 U.S. Open when she mis-hit a shot to an impossible position. Her reaction? She laughed, regrouped and went on to secure her first major.

We tell our golf students they have two productive choices when it comes to reacting to a golf shot: They can either be happy or neutral. Nothing else. Sorenstam could have reacted with anger, but it probably would have cost her the tournament.

## **Riding Golf's Emotional Roller Coaster**

As in life, emotions in golf have a tendency to snowball. They can spiral in a positive or negative direction. It's up to you.

## The Upward Spiral:

Good golfers, especially at the tournament level, have all been fortunate enough to feel the upward spiral. It's the ideal emotional state to be in on a golf course, whether you're competing or playing for fun. It works best by being emotionally neutral on the first tee. After a couple of shots, you become more interested in what you're doing—you're there, in the present, and can't wait to hit the next shot. This makes you play even better. Now you're starting to get engaged. You don't just make clear decisions; you have the courage to go through with them. After a few holes like this, you start feeling confident and saying good things to yourself such as, "I know I can do this" and "I trust myself with this shot." Once this level has been reached, and you maintain a positive emotional balance (but appreciating your game) you're likely to slip into the elusive Zone which golfers all try so hard to find. This is where everything just flows; your mind and body work effortlessly together, and everything clicks with remarkable ease. The final upward spiral stage is pure euphoria. You feel total happiness and well-being, and your internal "pharmacy" is flooding your system with healthy chemicals.

## The Downward Spiral:

Unfortunately, many golfers end up on the opposite, downward spiral instead. After hitting a shot that isn't 100% right, you might feel a slight hesitation when standing over the ball. This likely makes you hit another mediocre shot. Your mind starts spinning with questions: "Is my ball position correct?" "What was it that I heard on 'Academy Live'?" Now you're confused. On the next few shots you try a slew of different swing thoughts but nothing works, making you frustrated—"I knew this was going to happen!" You quickly turn from frustration to anger and even start cursing or calling yourself names. After anger always comes depression, and by then you might as well add ten shots to your score. To have a chance of getting yourself started on

an upward spiral quickly, you must abort the downward spiral before you reach frustration. How? Practice with the HeartMath tools and you can shift out of the downward spiral into an upward spiral fast. You can also learn how to get in the Zone and anchor yourself there more consistently by using the power of your heart intelligence. Here's how.

## **Anchoring your Good Shots**

We often describe and prescribe a strategy for how golfers can learn to “anchor” their good shots and not anchor their bad shots. Pia has reduced this to a slang form of Swedish we call “ASSA” and “DISSA.” The player learns to ASSA when they hit a shot they like... to “Associate” it...which means to take it into their heart and emotionalize the good results and experience. You can do this by practicing the Quick Coherence technique and sincerely feeling appreciation for the good shot. This will allow you to maintain a positive and uplifting emotional balance as you play. Then learn to DISSA if you hit a shot with an undesirable result. Disassociate by using the Quick Coherence technique to rebalance and go back to neutral. In neutral, you become an objective observer. You stop any energy drain and keep any negative emotion from being stored for future reference in your amygdala (2nd brain emotional memory storage bank).

What is most prevalent in the golf culture is to see golfers at all levels emotionalize and store the bad shots but dissociate the good ones. This can be attributed to a belief that it's best to be humble or stoic about great performance. In fact, until recent years it was not common to see golfers being emotionally happy when they hit good shots.

Practice visualizing and feeling your good shots while you use Quick Coherence with the emWave PC. See which feelings get you into the highest coherence and help you stay in the Zone. You will build a new internal reference place of emotional balance and heart

power that you can reconnect to while you're on the golf course.

The ability to associate and dissociate emotions on the course will fill your inner emotional memory bank with positive, uplifting feelings and keep the negative, destructive ones at bay. Remember: This doesn't just apply to the golf course—it's a great way of enhancing everyday life as well.

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## Glossary

**adrenaline:** A hormone secreted by the adrenal glands that stimulates the heart, and increases blood sugar, muscular strength, and endurance. Also called epinephrine.

**amygdala:** A key brain center that coordinates behavioral, neural, immunological, and hormonal responses to environmental threats.

**appreciation:** An active emotional state in which a person has clear perception or recognition of the quality or magnitude of that which he or she is thankful for.

**autonomic nervous system:** The portion of the nervous system that regulates most of the body's involuntary functions.

**bronchioles:** Small air passageways of the lungs.

**central nervous system:** The main information-processing organs of the nervous system, consisting of the brain and spinal cord.

**compassion:** Deep care with understanding.

**cortex:** The outer layers of the brain, used in thinking, problem-solving, goal-setting, planning.

**cortical facilitation:** Enhanced or improved functioning of the cortex of the brain.

**cortical inhibition:** Reduced functioning of the cortex of the brain.

**ganglion:** A specific group of nerve cells.

**hormones:** Chemical messengers that affect local or distant parts of the body, or the body as a whole.

**immune system:** The system that protects the body from disease by producing antibodies.

**medulla:** The lowest part of the brain, continuous with the spinal cord, containing nerve centers that control breathing, circulation, and other involuntary functions.

**motility:** Movement or contraction of an organ or system, for example the gastrointestinal tract.

**motor system:** Nerves carrying impulses to the muscles.

**nervous system:** The system of cells, tissues, and organs that coordinates and regulates the body's responses to internal and external stimuli. In vertebrates, the nervous system is made up of the brain and spinal cord, nerves, ganglia, and nerve centers in receptor and effector organs.

**parasympathetic nervous system:** The branch of the autonomic nervous system that generally slows or relaxes bodily functions.

**secrete:** To form and release a substance, as a gland forms and releases hormones.



- sensory:** Connected with receiving input from our senses of smell, taste, sight, hearing, and touch.
- stress:** Pressure, strain, or a sense of inner turmoil resulting from our perceptions and reactions to events or conditions.
- suppression:** The stopping or lessening of the activity or function of a bodily organ or system.
- sympathetic nervous system:** The branch of the autonomic nervous system that generally speeds up bodily functions, preparing us for mobilization and action.
- synchronize:** To move or occur at the same time or rate.  
(**sync:** *In synchronization with, or in harmony with.*)
- thalamus:** The part of the brain to which run all the nerves that give rise to conscious sensation.
- vagus nerves:** Nerves that carry signals between the brain and the heart, lungs, esophagus, and most of the abdominal organs.

## Learn More About HeartMath Products

Explore other HeartMath books, e-books, learning programs, music, software, seminars and professional training to reinforce and advance what you've learned in this book. More details can be found online at: <http://heartmath.com>.

### Books and Learning Programs by Doc Childre

*The HeartMath Approach to Managing Hypertension: The Proven, Natural Way to Lower Your Blood Pressure.* Doc Childre and Bruce C. Wilson, MD, 2006.

*Transforming Anxiety: The HeartMath Solution for Overcoming Fear and Worry and Creating Serenity.* Doc Childre and Deborah Rozman, 2006.

*Transforming Stress: The HeartMath Solution for Relieving Worry, Fatigue, and Tension.* Doc Childre and Deborah Rozman, 2005.

*Transforming Anger: The HeartMath Solution for Letting Go of Rage, Frustration and Irritation.* Doc Childre and Deborah Rozman, 2003.

*The HeartMath Solution.* San Francisco, Harper San Francisco. Doc Childre and Howard Martin, 1999.

*From Chaos to Coherence: The Power to Change Performance.* Doc Childre and Bruce Cryer, 2000.

*The How to Book of Teen Self Discovery,* Doc Childre 1992.

## Music by Doc Childre

Scientifically designed to enhance the practice of HeartMath techniques and tools. *Quiet Joy, Planetary Publications*

## emWave® PC Stress Relief System

emWave PC is a patented interactive learning system with heart rhythm monitor and pulse sensor. This software-based program allows you to observe your heart rhythms in real time and assists you in increasing coherence to reduce stress and improve health and performance. The Coherence Coach, Emotion Visualizer, and three software games in emWave PC are fun ways to build your skills an emotional management.

## emWave® Personal Stress Reliever®

emWave Personal Stress Reliever is a breakthrough in stress reduction technology. This stress reliever helps build a cushion between you and day-to-day stress, thereby enhancing energy and performance. A mobile device weighing just 2.2 ounces and small enough to fit in your pocket, you can take it with you to use anytime, anywhere.

## emTech® Media Products

emTech products were created by utilizing information from a variety of HeartMath resources. They offer some of the best subject-specific information found in the HeartMath System and are available as e-booklets, audio programs and interactive learning modules.

## TestEdge® Interactive CD-ROM—Grade 9-12 and above

This unique interactive learning program helps students balance their mental and emotional systems, which is critical for successful learning and test taking. Without emotional balance, feelings of anxiety and fear jam the connection between what students really know and what they can actually express, especially while taking tests. The TestEdge

tools help students to clear disturbances they carry into the classroom from peer pressure, stress overload, problems at home or in relationships.

## **HeartMath Seminars and Training**

HeartMath provides world-class training programs for organizations, hospitals, health care providers and individuals. HeartMath training is available through on-site programs, licensing and certification for organizations, and sponsored workshops, seminars and conference presentations.

## **Licensing and Certification - 1:1 Provider (Coaching)**

HeartMath offers licensing and certification to health care providers, coaches and consultants wanting to use HeartMath tools and technology as part of the services they provide to clients in a one-on-one professional model.

## **Licensing and Certification: “Train the Trainer” Programs for Organizations**

HeartMath also offers licensing and training to organizations wanting to make the HeartMath tools and technologies a part of their offerings to internal customers, employees, or members.

For information on products, seminars and workshops, call 1-800-450-9111, e-mail [info@heartmath.com](mailto:info@heartmath.com), visit the website at [www.heartmath.com](http://www.heartmath.com), or write to:

HeartMath, 14700 West Park Avenue, Boulder Creek, CA 95006

## **Research and Education**

The Institute of HeartMath® (IHM) is a nonprofit research and education organization dedicated to understanding emotions and the role of the heart in learning, performance and well-being. IHM offers programs for use in educational and classroom settings:

**TestEdge® programs for improving academic performance and test scores, K-12.**

**Resiliency and Quality Instructor Programs (QIP) for teachers, administrators and principals**

For information about Institute of HeartMath research papers, research initiatives and education programs, call 831-338-8500, e-mail: [info@heartmath.org](mailto:info@heartmath.org), visit the website at [www.heartmath.org](http://www.heartmath.org) or write to: Institute of HeartMath 14700 West Park Avenue, Boulder Creek, CA 95006

"HeartMath tools help golfers recognize how their emotional state changes so quickly and helps them to be aware of how they can take charge of that. It's not out of their control. Learning how to stay heart focused is the same technique as being able to stay target focused. It recruits the same mental and emotional energy. When players are hitting a golf shot, emotion is involved. There is fear of failure and of success. Golfers have to make choices all the time. Realizing that you can make a choice to let go of negative emotion and incoherent physiology allows for more success. The emWave PC (formerly known as Freeze-Framer®) is an instrument to help golfers gain that awareness, and then shows them how they can make choices for the positive fulfillment of their goal." —**Laird Small, 2003 National PGA Teacher of the Year. Voted Top 50 Teacher for 2003-2004 by *Golf Digest* and Top 100 Teacher by *Golf Magazine***

"Effective management of the emotions in your golf game will not only lower your scores, but is guaranteed to increase your enjoyment of the game." —**Lynn Marriott and Pia Nilsson, Voted Top 50 Teachers 2003-2004, *Golf Digest***

"Using HeartMath techniques and the emWave PC (formerly known as Freeze-Framer®) are so effective because you can get immediate feedback on your internal state. Having real-time physiological feedback with the emWave PC takes the guess work out of whether I'm in the right frame of mind and attitude and gives me something to hang onto—a concrete, internal reference point instead of just guessing at intuition. As I practice, I am learning to lengthen the time I can stay coherent, on and off the golf course." —**Marlo Stil**