

MARCEL DAANE

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# HEADSTRONG PERFORMANCE



IMPROVE YOUR MENTAL PERFORMANCE WITH  
NUTRITION, EXERCISE, AND NEUROSCIENCE



# Praise for Headstrong Performance



**Ron Kaufman**, New York Times bestselling author of “Uplifting Service” says:

*“Marcel has written a breakthrough book connecting the insights of neuroscience with the reality of our daily lives. These ideas and exercises deliver immediate performance improvements in your health, your happiness and your success in life. Read this book today to perform better tomorrow.”*



**Dr. Roy Sugarman**, Neuropsychologist and author of “Saving Your Life One Day at a Time: Seven Ways to Survive the Modern World” and “Client-Centered Training: A Trainer and Coach’s Guide to Motivating Clients” says:

*“Having met Marcel, you will immediately observe his passion, professionalism and commitment to his cause, namely, helping others do things just a little bit better every day, and become therefore a better person, every day of their lives. This commitment comes out clearly in his writing, and I recommend his new book with enthusiasm.”*



**Colin Sampson**, Senior Vice President, SAP says:

*“Headstrong Performance is a life-changing message about healthy work-life balance, good nutrition, rest and regular exercise, all leading to an improvement in performance, individually and as a team. A great way to bring about real, positive and productive change.”*





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## **Headstrong Performance**

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To my beautiful wife, Ursula, who patiently stood by me during the many months of writing this book and during my preceding years of research. I will always be grateful for your love and support.

To my amazing daughter, Kilani. You have been the greatest gift I could ever have asked for. Without you, I would not be where I am today.

Further, I would like to say thank you to everyone who inspired me to remain headstrong in my personal fitness pursuits as well as through my academic journey over the years, which ultimately enabled me to conceive the concept of “Headstrong Performance.”

I am in your debt.

Thank you all.



# Preface



Coming from a leadership consultant, using the word “headstrong” in the title of a book may seem a bit odd. By the standard definition, someone who is headstrong tends to be stubborn and immovable. These could possibly be interpreted as negative attributes in a leader. And the rigid, authoritative leader of yesteryear has long been proven to lack effectiveness compared to the modern-day transformational leader who specializes in the art of interpersonal communications.

In my years pursuing post-graduate qualifications in Neuroscience and Leadership, I was exposed to a multitude of leadership models and leadership research that spanned more than a century. Along with the academic knowledge I acquired, I also had the privilege of working with highly effective leaders through my own research and work conducted in collaboration with organizations such as The Center for Creative Leadership, or CCL.

My research and work covered multiple arenas from the military to Fortune 500 companies, to service industries and education. This exposure and experience opened my eyes to what is really required from a great leader. This in turn inspired me to not only be a better leader but a better person, husband and father.



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Through my own life's journey as well as these leadership experiences, I began to notice that while being headstrong might not be appropriate in some leadership contexts, aspects of it seem essential for success in others. There are numerous examples throughout history where monumental and world-altering milestones were achieved because people remained headstrong – firm and unwavering – in their core values and self-belief.

Consider the persistent Thomas Edison inventing the light bulb, or Nelson Mandela and Mahatma Gandhi defying suppressive political regimes. And there are scores of other modern-day individuals who defied all odds because they never quit believing in themselves or their purpose, and were determined to emerge victorious.

The title *Headstrong Performance* in this context therefore implies a level of motivation and unyielding dedication to be the best we can be, whatever we do.

My unique background blending nutrition, exercise and neuroscience complements my research in leadership, and has enabled me to develop a holistic perspective on how we can get the most out of our performance and our lives.

For that reason, I developed a number of performance strategies that are designed to fuel the brain and develop capacity for improved performance. At a foundational level, you may be familiar with many of these brain-capacity-generating strategies. But putting them into context, as part of a dedicated plan to improve mental *and* physical performance, offers a fresh perspective with literally life-altering consequences.

## Preface



These strategies are the culmination of decades of work and research. They are practical strategies that I still employ in my coaching practice today.

I hope you're entertained and engaged by the contents of this book, but even more importantly, I hope that you put into action some of the suggestions that I present here. The positive effects may surprise you.

My warmest and best wishes to you,



# How To Read This Book



This book is dedicated to everyone who has struggled or is currently struggling with finding balance in their lives, between their own health and the sacrifices they need to make to stay ahead of the game.

For those who believe that to even consider adding some health behaviors into our daily regimens is simply too difficult, too time-consuming, or even irrelevant to human performance – this book is designed to show you why health is intricately linked to performance. And further, this book offers a number of practical, easy-to-implement strategies that can be incorporated into the busiest of lifestyles.

Integrating neuroscience, exercise and nutrition creates an extremely powerful approach to enhancing performance. Of course, they're also diverse and sometimes technical topics, so one of my major challenges here has been to present scientific data in an enjoyable and easy-to-comprehend manner, without sacrificing scientific integrity.

To achieve this, *Headstrong Performance* is divided into four main topic sections: **Stress and Resilience**, **Optimizing Sustained Attention**, **Boosting Creativity and Insight**, and **Creating Change**.

Each of these sections starts with a chapter on the science behind the topic at hand, followed by a chapter focusing on



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strategies to apply that science, and finishing with a case study that puts the science and strategies into context.

For some of you, the scientific chapters may seem a bit challenging at times, but I encourage you to bear with them and take your time absorbing the information. The scientific chapters add depth and context to the strategies, and will help you understand many of the scientific underpinnings of our behavior under pressure.

The third chapter in each section will connect the dots between the science and day-to-day behavior as you read the case study. You'll get a real-world sense of how these strategies can be implemented, and the impact they can have.

**Chapters 1 and 2** of this book introduce the concept of Headstrong Performance as it relates to my own past experience as well as four years of research on the topic.

**Chapters 3, 4 and 5** focus on stress and resilience. Chapter 3 explains the neuroscientific underpinnings of stress and resilience, Chapter 4 offers practical strategies for managing stress and improving resilience, and Chapter 5 adds context with a case study from my daily work as a coach.

**Chapters 6, 7 and 8** follow suit. Chapter 6 delves into the neuroscience behind sustained attention, Chapter 7 shares strategies to optimize sustained attention, and Chapter 8 makes the practice of these strategies real with another case study.

**Chapters 9, 10 and 11** focus on the science behind creativity and insight, followed by strategies and another case study.

**Chapters 12, 13 and 14** follow the same format with a look at the science behind changing behavior, followed by strategies for change and a final case study.

## How To Read This Book



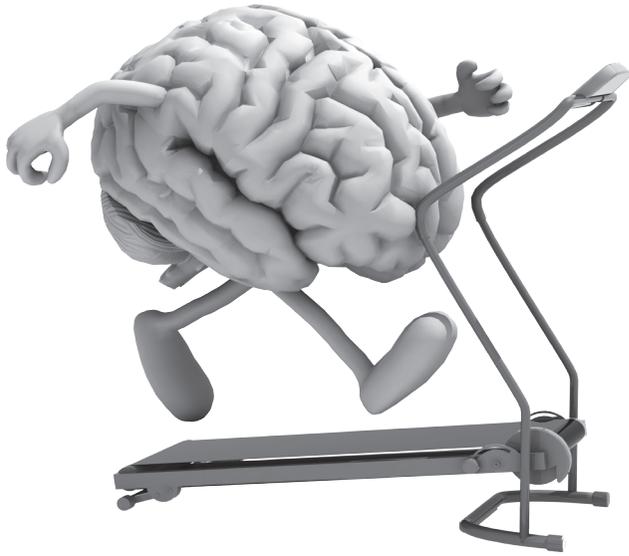
In **Chapter 15**, we will explore how to integrate the strategies from the previous chapters into an achievable action plan.

My goal for everyone reading this book is the same as for every one of my clients and workshop participants. I hope that each person will walk away inspired to introduce healthy behaviors into their lifestyles, and discover that health not only improves individual or organizational performance, but can positively change their lives and the lives of their loved ones in the process.

I hope this book will do the same for you.



# Chapter Two



## Health and Performance

*Successful people realize the importance of a healthy body and a healthy mind. They know that the two are inextricably inter-linked and imperative for their smooth functioning.”*

Andy Paula



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Six teenage volleyball players gathered around me just before they were about to play the game of the year in the National Championships. They had worked, trained and competed together for an entire year just to reach this point.

Outside of standard team practices, all of these girls spent countless additional hours refining their volleyball skills and improving their fitness on their own. They all sacrificed what other girls would consider fun time, such as time spent on social media, playing video games, staying up late during sleepovers and so on – with the hope that their sacrifices would help them make it to this point at the National Championships. Their dedication to the sport and to their team was inspirational, and I felt honored that my daughter wanted me to function as the team’s performance coach.

Our ritual was to have a team conversation before and after each game, and this game was no exception. During the pre-game mental preparation, the girls sat around me in a circle and we talked about their expectations. They talked about how they wanted to win the game, which might be considered good enough motivation. But when I asked them *how* they planned to do that as a team, the girls went silent. As hard as they had prepared individually for the game, they had not considered preparing mentally as a team.

They had not given attention to how they were going to perform *together* for that game. There was an expectation to win – without a uniform agreement on what they would do, as a team, to

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achieve that. They were focused on the objective, but none of them had focused on the path that was going to take them there.

Research in sports psychology has shown that simply focusing on winning without focusing on *what* we're going to do, and *how well* we're going to do it, actually decreases performance success. With that in mind, I began to shift the conversation from the expectation to simply win the game, to focusing on playing as a uniform team and having loads of fun and laughter in the process. They performed mental drills together, imagining how they would pass the ball to each other and how they would work together to score the points needed for a win.

The girls walked onto the court as a unified team and totally nailed it that day – but it didn't happen without its challenges. During the first set of the game, one of the girls experienced a bit of a mental breakdown. She expected excellence from herself, but for some reason, her body seemed to stop doing what her mind wanted to do. Every ball she touched seemed to develop a life of its own and went in a completely different direction than planned.

During that time, her teammates had to support her by taking on the extra workload and expending greater energy to cover her. They also offered words of encouragement with the hope that she would finally pull it together. Unfortunately, with every failed ball contact, her confidence chipped away until she had to be replaced by a substitute who was considered a weaker player. Sitting on the sidelines, she burst into tears, in complete disbelief about what had happened.

I decided to intervene, and we struck up a conversation about what was happening. She cried, "Coach, I don't get it. I've tried



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so hard, but nothing's working. I can't hit the ball. I can't jump as high as usual. I'm just not playing well. I feel like I'm letting my team down." I asked her a simple question: "What time did you have lunch?" She replied, "I didn't have lunch. I was too nervous." "How much water have you had today?" I asked. "Just this one water bottle," was her answer.

Clearly, she was dehydrated and almost certainly suffering from low blood sugar. I gave her an energy drink plus an additional bottle of water and an energy bar to eat. She sat out the rest of the first set, eating and recovering. By the time the second set started, her energy levels had begun to rise as the food and fluids fueled her brain, nervous system and muscles.

Once fully refueled, she bounced back out of her seat and was ready to play again. During the second and third sets, her performance improved markedly – and with her help, the whole team began to work as a finely tuned machine again. This allowed them to finish the game, tournament, and the year with a victory. The team walked off the court that day with a win they deserved, and after the game, we reconvened for a debriefing. We discussed what went well, and what they felt didn't go well.

Some of the girls recognized that when the team had moments of struggle, such as with the player who suffered from dehydration and missed every ball, they allowed self-defeating thoughts to dominate their own mindsets – about the game, themselves, the other team and even the team member who wasn't playing well. This in turn drove team performance down even further, which in turn could have cost them the first set of the game.

The whole team recognized that the physical *and* emotional state of just one team member can greatly influence the

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emotional state of all others – and that team performance can drop considerably when the remaining team players allow self-defeating thoughts to take over. The lesson for this team that day was that no matter how well you prepare, or how hard you train, if you don't take care of yourself, not only will your individual performance suffer, but so too will the performance of the whole team.

Since that day, each of the girls has been extremely diligent with her nutrition and exercise. My daughter, who wishes to improve her vertical jump and has a dream of playing at elite levels one day, refers to healthy food as “jump food.” She has learned from firsthand experience how her performance – and her team's success – is affected by her own food choices.

This is just one example of the many amazing life lessons to be learned through team sports, and after four years of research, I've learned that it's a crucial lesson for corporate team performance as well. A team-sport athlete understands something important that most office workers don't: we're all part of an ecosystem, and our actions (and inactions) affect the whole team. Every team-sport athlete understands that for the ecosystem to maintain a healthy balance, every athlete needs to bring his or her A-game on a consistent basis.

This is so obvious for sports teams because the consequences of poor individual performance are immediately palpable, as in the case of my daughter's volleyball team. If one player is underperforming, the rest of the team will feel it, and they will likely need to pick up the slack to compensate for one player's subpar performance.



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Real ecosystems function this way as well. Think about nature and global warming. Consider what happens when we chop down trees in the Amazon forest. Less oxygen from fewer trees causes carbon dioxide (Co<sub>2</sub>) levels to rise. The Co<sub>2</sub> blocks off the ozone layer, which causes temperatures to rise, which then causes icecaps to melt, which causes water levels to rise, which then precipitates hurricanes all over the world. By messing with the trees in the Amazon forest, we can create hurricanes off the coastlines of Japan and the United States – causing billions, even trillions of dollars in damage, not to mention loss of life.

Now, let's apply this analogy to an organization. Imagine a financial department in Paris with one co-worker who doesn't feel like doing her job. This could possibly affect a salesperson in India. Within today's spread-out global organizations, it's easy to become divorced from our impact, unaware that our attitudes and behaviors are affecting others in the organization – possibly on a different continent. And yet, we do have that impact.

The analogy of an ecosystem goes even further to include our internal environments as well. In fact, internally we *are* an ecosystem. We are a collection of trillions of cells that interact with one another and affect each other in much the same ways as the trees in the Amazon forest affect global temperatures.

When I was studying complementary medicine for my undergraduate degree, we learned that the body consists of numerous systems – the cardiovascular system, the pulmonary system, the skeletal system and so on – yet we learned to treat the systems separately. We learned to treat disease within the realm of that specific system *without necessarily looking outside of that system*.

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However, as living human beings, we are much more than the sum of our parts. We are a collection of systems working intricately together. What we do with our intestinal systems can affect the arteries in our hearts. Thankfully, today many more medical practitioners are using sophisticated and holistic approaches to healing and health. The reason for this paradigm shift is that doctors, too, are learning that real healing only occurs with a multidisciplinary approach that targets the whole patient – the whole ecosystem – not just one system within the patient.

Organizations today operate based on similar principles. Managers tend to manage individual systems, even though those systems collectively make up an organization. Each of these systems has a direct effect on all the others, as in any ecosystem. In the same way that the body consists of trillions of cells all working together and influencing one another, so do organizations. Organizations do not literally have cells; however, the “cells” are human beings all influencing one another.

Because all individuals are unique with their own brains and their own thoughts, the complexity of creating emotional cohesion increases exponentially with the size of an organization. Of course, that doesn't mean the systems approach doesn't work at all. Organizations have been functioning with this approach for decades, and most organizations can still do a decent enough job that way.

In modern medicine, too, the systems approach certainly isn't without benefit; it has healed many people over the past few hundred years. However, modern advances in medicine are teaching us that the systems approach can only take us so far. If we want to improve the effectiveness of modern medicine beyond its current scope of performance, we need to turn



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to complementary approaches that help raise the quality and effectiveness of care.

Likewise, if we want to improve the effectiveness of current organizational management approaches so we can continue improving organizational performance, we need to seek out complementary approaches that add value and increase effectiveness. And one of the keys to finding new approaches is in the understanding of ecosystems and interdependence.

### **Health and Organizational Performance**

In 2013, the Aberdeen Group published its human capital management trends report. The report's general message shared that we need to focus on our people, because as organizations invest in systems and more efficient technology, human capital is being reduced.

Moreover, for the first time ever, our talent is expected to execute multiple functions simultaneously in order to keep costs down to a manageable level. In our efforts to keep those costs down and keep profits high, we are creating a different type of executive – one who performs multiple tasks. But how is the typical executive coping with this shift? Multifunctioning is putting enormous strain and extra stress on executives, who are desperately trying to keep up with increasing demands at work while simultaneously trying to hold on to sanity in their private lives as partners, spouses and parents.

Because of this phenomenon, we're seeing an alarming number of executives suffering from burnout and presenteeism. If you're unfamiliar with the term, "presenteeism" refers to people

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showing up to work exhausted, depressed or ill. They're present, but they lack the capacity to maintain decent quality work output. We're starting to see stress, anxiety and depression manifesting as medical conditions, resulting in personnel dropping out of organizations because they are not capable of keeping up with the mounting pressure.

Whether we like it or not, people can be either a viable source of revenue or they can be an organization's greatest liabilities. The Aberdeen Group report emphasized the dire need to invest in people, so that they can remain a reliable source of productivity and profit. What this research and other reports are telling us is that these three areas – stress, happiness and performance – are intricately linked. And the balance between them affects the whole organization. The higher the levels of stress, the greater the chances that people aren't going to be happy. When people are not happy, they're not going to perform very well.

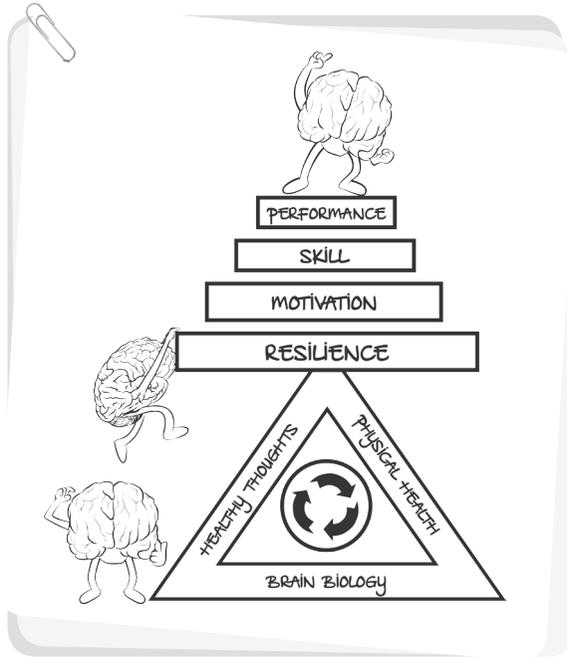
Not so long ago, the idea of a happy employee was considered a “soft,” touchy-feely, not-so-serious concept. It was believed that we don't have to be happy to be productive at work. But we now know that happy employees are way more productive than unhappy employees.

Happiness is actually a viable source of income for a company. If people are happy, they're going to have more positive attitudes toward work, resulting in improved performance.

The close link between health, happiness and stress is illustrated by the health-performance pyramid, which I initially designed while training elite athletes, but have since adopted for executives as well.



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At the bottom of this pyramid is a small triangle that represents our brain biology. Our brain biology is responsible for neurochemicals, the amount of oxygen and hydration in our brains, and many other biological variables. If our brain biology isn't balanced, it significantly affects every aspect of the mind and how it functions: our thoughts, feelings and behavior. That, in turn, is going to affect our health behaviors and the decisions we make about our health. It will impact our diet and exercise choices – which will impact our brain biology, creating a negative feedback loop (also known as a vicious cycle).

Say one night you have a high-fat meal and a lot of alcohol. There's no way your brain is going to have optimal biology the next day. It's going to affect your thought processes, feelings and behavior.

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It might influence your thoughts and feelings to the degree that you might *again* choose to have more unhealthy food and alcohol. Which will further degrade your brain biology ... and so on.

On the other hand, if you flip that equation around and really take care of yourself, you will generally have great brain biochemistry, and will function far better. Your thoughts, feelings and behavior are much more likely to be positive. And this, in turn, leads to healthy choices that further support good brain biology – a *positive* feedback loop. And another thing – if you take care of yourself you will have more energy. And energy is critical, because it gives you the brain biology to be resilient.

People who exercise and take care of themselves generally have a lot more energy. They tend to feel that they can cope with whatever is thrown at them. If they get knocked down, they can get straight back up. They have bounce-back ability. That's a large part of the meaning of resilience.

Without energy, we're running on empty. Conversely, if we have a lot of energy because of good health choices, we have reserves. In fact, there's a concept called Cognitive Reserve that suggests we have a limited amount of energy available to us, and it can be either depleted or kept in reserve. Our energy reserves can be used for all sorts of activities, from socializing to sports – that actually recharge our batteries and generate more energy.

Stress, which will be discussed in greater detail in the next chapter, is created when our brain's energy levels deplete. We *feel* unsafe because our brain is running out of gas, and that's considered unsafe by the brain. So the brain goes into survival mode, causing a cascade of effects and outcomes we'll explore.



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Energy, cognitive reserves and resilience are important because not only are *you* going to be more proficient and confident – you’ll inspire others to higher levels of proficiency and confidence. Your energy “rubs off” on those around you. Additionally, increased proficiency improves performance. These factors are all intricately linked.

I like to call this “the iceberg effect.” When we measure performance in executives, we tend to look at the top two layers of performance on the health-performance pyramid. We don’t really look at what underlies that behavior – what’s underneath the so-called tip of the iceberg – because it isn’t easily visible. Because we don’t see the brain directly, we don’t pay attention to it.

It’s important moving forward in different management systems that we consider the deeper neurological levels of functioning and take them into account. If we see a person’s performance dropping, it could very well be that the problem is an unbalanced brain. Trying to approach the performance problem at a structural, external or otherwise strictly rational level might not necessarily work. We have to focus on the whole human being.

### **Health and Employee Performance**

*Engagement* is a popular buzzword these days. According to Scarlett Surveys International, employee engagement is a measure of employees’ positive or negative emotional attachments to their jobs, colleagues and organizations. Engagement profoundly influences an employee’s willingness to learn and perform at work. So a more engaged employee is more inclined to think on behalf of the organization, team and colleagues.

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What about somebody who is disengaged? He'll think only about himself. According to neuroscience, disengagement is actually our default brain state. Thinking selfishly is normal. The brain is designed to be selfish. Selfishness is a survival mechanism that ensures our existence on this planet.

Should we really call a person “disengaged” when he or she is merely doing what biology dictates – to put his or her interests before the organization’s interests? What does it accomplish to label as a negative what the brain does merely in its natural attempt to survive? I believe one of the major flaws in leadership is that many of us tend to assume or expect our employees to be engaged *by default*. We shouldn’t expect our employees to be *naturally* engaged. We need to take responsibility for their engagement.

If we as leaders are seeking to improve engagement in our employees, it’s up to us to ensure that we shape and change brains so they become engaged. We need to apply innovative leadership strategies to ensure that an exceptional level of engagement is attained. And if engagement drops, it’s our responsibility to make sure it rises again.

Why is this so important? Research suggests a number of things happen when people are engaged. Concentration levels go up, distraction time goes down, and productivity, creativity and the ability to communicate all increase. Additionally, when people are engaged, their positive personal affect also increases. *Personal affect* is the impact we have on others. When a person walks into a room, one of two things can happen. He or she can suck all the energy out of the entire room. That’s what I like to refer to as an “energy vampire.” Alternatively, when a person walks into a room, energy levels can soar, seemingly for no reason at all.



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His or her presence makes everyone feel amazing and energized. That's positive personal affect.

I'm sure we've all witnessed engaged employees. They're super-excited about what they do, and have more of a positive effect on those around them than people who are disengaged. They're also more emotionally and psychologically resilient, and they improve organizational vitality and adaptation. Employee engagement impacts a marketplace in which billions of dollars are transacted each year. The fact is, a great deal of money can be made or lost based on employee engagement levels.

Earlier, I mentioned the term "presenteeism," referring to the phenomenon of someone who might be physically but not mentally present at work. We now know that presenteeism costs organizations *six* times more than absenteeism. So the people who take extra sick days aren't the only ones organizations should be concerned about. We do need to be concerned about absentees, but presentees are costing organizations much more, not only because of their own lack of productivity, but because they affect the team. Their disengagement cascades down through the entire organization.

So: disengagement – the default state of the brain – has a negative effect on organizational performance and the bottom line. If we as leaders don't introduce initiatives to improve engagement, we can safely assume that employee engagement – and with it organizational performance – will remain far from optimal.

If you're a manager or business owner, chances are good that you're already aware of this issue and are implementing all sorts of employee engagement initiatives to counter it. But there might be a key you're missing in your efforts. Our research, as well as

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research by other reputable organizations, has shown a clear link between *physical health* and employee engagement. That's right – a *healthy* employee is, in fact, a much more engaged employee.

In 2010, leading global professional services company Towers Watson discovered that people who are engaged also naturally tend to make better health choices. They are more inclined to say, “Hey, I’m really engaged in what I’m doing, I really want to be here and I find this really important. Therefore, I will take care of myself so I can keep engaging.” People who are healthier also tend to have a lot more energy, feel happier, expend less energy completing tasks, have lower levels of stress and handle challenges better.

### **Health as a Viable Business Strategy**

Since health is proving to play a vital role in employee engagement, it should not be ignored as a valuable tool in any employee engagement strategy. Two years ago, Gallup surveyed more than a million employees. They discovered that organizations with higher employee engagement actually generate 47 percent more revenue than companies with average or disengaged employees.

*47 percent more revenue!*

If I could prove to companies that I have a software program to help them earn 47 percent more revenue, every one of them would be interested. Yet in many organizations, employee health is still not considered a high priority or a viable strategy to raise the bottom line. However, data shows a close link between employee health and the actual amount of money organizations make. Health, therefore, represents a viable business strategy, not just something that's nice because it's good for people.



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*Good health practices can actually improve employee engagement and help raise the organization's bottom line.*

While I was conducting research in 2010, I had a meeting with the HR Director of American Express. Just like so many large financial organizations, they too suffered greatly after the 2008 financial crash. Interestingly, however, American Express experienced a very low employee turnover, compared to many other organizations.

During our meeting, the HR Director told me that American Express had initiated a very comprehensive employee wellness program prior to the 2008 crash. As a response to the crash, American Express was forced, in many cases, to lower salaries and cut the benefits of many executives. As the American Express leadership team braced themselves for a large exodus of their key executives, to their surprise, many of the employees chose to stay on and worked through the crisis instead.

Amazed by this, the company wanted to know why, despite these serious cutbacks, their employees stayed on. So they conducted a survey in 2010. Astonishingly, the number one reason employees gave for staying and working through the 2008 crash with lower salaries and benefits was that American Express did not cut back on their wellness program during those challenging times. Specifically, the employees said the wellness program made them feel that the company cared about them.

As employees, customers or executives, if we feel that the organization “has our back,” we’re going to stick with it. If we show our employees that we really care, employee turnover drops.

How much money did this company save as a result of the employee loyalty driven by their solid wellness program? Let’s

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put it into perspective. I'll use McDonald's as an example. An employee at McDonald's in the United States makes about \$9 an hour, which comes to around \$1,500 dollars per month. How much would it cost McDonald's to actually lose a \$9 per hour employee, then rehire and train a replacement?

Based on research conducted by Center for American Progress (CAP) in 2012, to replace a minimum-wage employee costs approximately 20 percent of that employee's annual salary, or about \$3,000, if we factor in hidden costs such as productivity loss, recruitment, training, onboarding and so on.

If the cost of employee turnover is 20 percent of an employee's annual salary, what would it cost to replace a \$250,000-a-year executive? Well, CAP researched this as well, and they discovered that replacing an executive is a much more costly affair. Through their research, they calculated that it would cost a staggering 216 percent of an executive's annual salary. Imagine how financially draining that is for an organization with a moderate- to high-turnover rate. And imagine the impact on the company's bottom line if we could bring that replacement cost down, even by just 10 percent.

### Health and Maslow's Hierarchy

With costs like these at stake, being concerned about employee health and fitness isn't just about compassion or compliance. It's actually an organizational strategy to drive down costs and increase profits, while simultaneously offering an invaluable service that gives employees a feeling of safety. And it turns out that making employees *feel* safe and cared for improves performance – and thus the bottom line – in more ways than one.

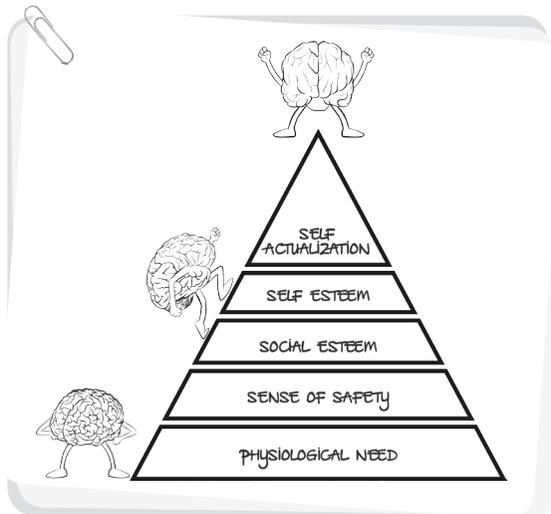


## HEADSTRONG PERFORMANCE

A wellness program doesn't just improve employee health directly. The feeling of safety is *itself* also essential to organizational performance – a fact that is best illustrated by a famous psychological model called Maslow's Hierarchy of Needs.

Decades ago, Abraham Maslow designed a simple model in the form of a layered pyramid that he called the Hierarchy of Needs. The pyramid depicts a hierarchy of the various layers of human needs, which we can climb as the needs below are satisfied. Right at the bottom of the pyramid are physiological needs. For example, if you were to start to suffocate for whatever reason, you wouldn't be worrying about what's for lunch. You wouldn't be worrying about anything except trying to breathe.

The moment we perceive that somebody or something is threatening what we need, it creates stress. So if we perceive that breathing, food, water, sex, sleep or any physiological fundamentals are being threatened, it creates stress. The same applies to our sense of safety, social esteem and self-esteem.



## Health and Performance



If all layers below are satisfied, and our perceived needs are met, only then are we able to meet a level of self-actualization. Self-actualization is the level at which we need to reside to be creative, to innovate and to relate with others' perspectives. In other words, achieving a level of self-actualization is necessary to be a top performer at home, at work and in life.

The role of health actually presents an interesting conundrum. As Maslow's hierarchy suggests, only employees at the top of the pyramid will have the motivation to exercise regularly and make healthy choices. Yet there's a "which came first, the chicken or the egg" situation (or vicious cycle) here. Unhealthy choices have a direct negative effect on our health. And when health levels decline, it affects our physiological functioning – which is at the bottom of Maslow's Hierarchy.

Ironically, not meeting our physiological needs makes it more challenging to emerge at the top of the pyramid. And good health choices seem to require, for the most part, being at the top level of self-actualization. Practically speaking, our poor health choices one day can put us in more of a "survival mode" situation the next day.

For example, if you end a day on a high note and decide to celebrate with a high-fat meal and more alcohol than the body can metabolize, the next morning will be substantially more challenging for your brain as it will lack essential nutrients to perform at its best. The lack of essential nutrients will make it more challenging for your brain to perceive the world with the same positive perspective as the day before, making you less resilient and more susceptible to stressors that would otherwise bounce off you.



## HEADSTRONG PERFORMANCE

Due to your health choices, you're now responding from a less actualized perspective. In other words, your health choices can actually affect where you reside on Maslow's Hierarchy of Needs.

### Health and Leadership

Let's look at this from a leadership perspective. When I ask participants in my workshops about what they consider to be the qualities of a great leader, people typically name the following attributes:

A great leader is someone with vision.

A great leader is an excellent communicator.

A great leader leads from the front.

A great leader is a team player.

A great leader is fair, creative, has great energy, is disciplined and so on.

Of course, these are all great qualities. But more important than merely *possessing* these qualities, is that the people around us *see* those qualities in action. Obviously, as leaders, we need to *have* those qualities for them to be seen. But we tend to underestimate the fact that it's actually how the world *sees* us that's ultimately going to determine how effective we are. It's therefore not just about our qualities but how we demonstrate them that's most important. Our teams should be inspired by our *example*, by *experiencing* our best qualities rather than simply having an idea that we possess those qualities.

Organizations are, thankfully, filled with people who demonstrate inspiring behavior. Leadership isn't restricted to "designated" or "official" leaders. Leadership involves everyone



in the organization. In a very real sense, we all have leadership potential and responsibility. Unfortunately, leading by doing can go both ways. Through our actions and attitudes we can inspire positive thoughts and actions, but we can also trigger negative ones, depending on the message our behavior sends.

### **Let's put this "leading by doing" concept in a neuroscience context.**

In the 1980s and 1990s, Italian researchers were doing studies on macaque monkeys in which they were trying to teach the animals to perform certain arm movements. They were measuring brain activity in the prefrontal cortex, the area associated with voluntary motor action. One day, a researcher walked in with an ice cream cone and lifted his arm up to lick the ice cream. As he did so, the same neurons were activated in the monkey's brain and they lit up as if the monkey himself was doing the movement.

What that means is that when I raise my arm, neurons in my brain light up and trigger my muscles – *and if you see me raise my arm, those exact same neurons light up in your brain as well.* The neurons that connect to your parietal cortex are also connected to your visual cortex, thus allowing you to both feel and imagine. So when I raise my arm, in a sense you're raising your arm as well, because – strange as this may seem – the brain does not know the difference between thinking about an action and actually doing it.

In other words, if you see me raise my arm often enough, the part of your motor cortex that's responsible for raising your arm *will actually grow.* My actions have a direct effect on your brain. *I can actually shape your brain this way.*

So as leaders, our actions change the brains of the people around us. We actually change neurons – a process called neuroplasticity.



## HEADSTRONG PERFORMANCE

The implications of this discovery are staggering. If our actions alter another person's brain, for better or for worse, that gives each of us enormous responsibility. This proves that it's what people see us *do*, not what we say, that matters.

In a recent research project, I had the privilege of conducting research on 108 executives in Singapore. In this research, I intended to examine the brain's response to exercise. All participants were first subjected to a series of brain performance tests, after which one-half of the participants were asked to participate in a simple exercise video, and the other half were asked to observe the exercise group working out.

During the exercise segment, I recorded the heart rates of all participants and observers. After the exercise segment, I conducted another battery of brain-performance tests. Participants believed that I was exploring whether or not exercise improves brain function – something that has repeatedly been demonstrated. Participants in the observation group believed that I was only testing the exercisers. However, my actual interest was to see if the *observation* of exercise elicits similar physiological effects as *participation* in exercise.

The exercise group predictably showed that just 12 minutes of mild exercise greatly improves cognitive capacity. However, much more surprising was that 30 percent of the observation group – *the group of people sitting in chairs and watching the exercise group* – *actually experienced an increase in heart rate*. Here's what else was mind-blowing: those observers who experienced an increase in heart rate *also experienced an increase in brain performance capacity similar to that of the exercising group*.

## Health and Performance



My conclusion is that the mirror neuron network enabled the observers to “imagine” themselves actually exercising, and it was the imagination of exercise that drove the heart rate to increase. This in turn resulted in the exercise benefits that improve brain function.

These preliminary findings may show for the first time, that when an employee observes his or her leaders exhibiting behaviors such as healthy food choices and regular exercise, it may not only be *inspiring* to them, but *their bodies and brains may actually be experiencing similar health benefits*.

Again, the implications of these findings are far-reaching and enormous. I’m sure it won’t take much imagination to assess how having a greater understanding of the mirror neuron network, and how our behaviors affect the health and well-being of our employees, could change the way we approach leadership in other aspects of organizational performance.





# Tools for Your Journey

*“No problem can be solved from the same level of consciousness that created it.”*

Albert Einstein

As you commence on your journey of improved performance, you will need access to resources to expand your consciousness about your health and performance.

The contents of this book are just the beginning. To help you along on the wonderful discovery of the body and the brain, you will need access to in-depth material and all the latest advances in the field.

I also know that people learn differently. This is why I have created a place where you can access the pioneering research, learn new techniques and applications and even get personalized coaching.

Get FREE resources  
now at  
[HeadstrongPerformance.net](http://HeadstrongPerformance.net)

## Assessments

Take 2 minutes and try my FREE Self-Assessment on my website for a quick overview on whether your lifestyle behaviors are priming you for superior performance. Want a more comprehensive assessment, including brain testing? Complete my proprietary Headstrong Performance Assessment. Complete it with your team and get a comprehensive, 22-page report full of useful information and suggestions.

## Keynotes

Book me for a speaking engagement at one of your leadership conferences or events. These keynote addresses deliver a basic and experiential introduction to the numerous factors required for superior performance by executives. The presentation is ideal for a broader audience with minimal time investment, such as during corporate events and leadership retreats.



## Workshops

Interested in learning how to improve performance through health and neuroscience? Sign up for one of my Headstrong Performance Workshops or book me for an exclusive Leadership Workshop in your organization.

## Executive Coaching

For a more exclusive approach to attaining superior levels of performance, my Executive Coaching sessions involve priming the brain for superior performance through nutrition, exercise and neuroscience, followed by a goal-oriented executive coaching methodology to enable new insights and neural pathways. The empowering solutions can be found within you.

## Webinars

Join me for a variety of online teaching events that focus on the science and application of Headstrong Performance.



# Be a Headstrong Performer, Join the Community

Join Marcel Daane, and many thousands of Headstrong Performance enthusiasts. Our community is ever growing and we invite you to join us in our quest to be the best that we can be in all areas of life. Here, we share the latest news, ideas and research, and open up the forum for mindful discussion. Share with us your experiences and get answers to your questions from other Headstrong Performance enthusiasts around the world.

Our community members are committed to their performance and are always seeking ways to upgrade themselves to greater levels of health, thus priming their brains for superior performance capacity.

### **Blog and Email Newsletters**

Sign up for the *Headstrong Performance Blog* on [HeadstrongPerformance.net](http://HeadstrongPerformance.net), and receive periodic emails that provide the latest news, research, applications and opinions. You will get lots of free ideas and tools for you and your entire organization.

### **[LinkedIn.com/MarcelDaane](http://LinkedIn.com/MarcelDaane)**

If you are an executive – and even if you are not – connect with Marcel through LinkedIn. Then join the Headstrong Performance group for more networking opportunities and great ideas.

### **[Twitter.com/HeadstrPerform](http://Twitter.com/HeadstrPerform)**

Keep in touch wherever you are by following Marcel's twitter feed. Be the first to know what's going on in the world of Headstrong Performance.

### **[Facebook.com/HeadstrongPerformanceBook](http://Facebook.com/HeadstrongPerformanceBook)**

Be a fan of Headstrong Performance and like the page. Follow all the latest happenings from around the world and remain up to date on all offerings and workshops.

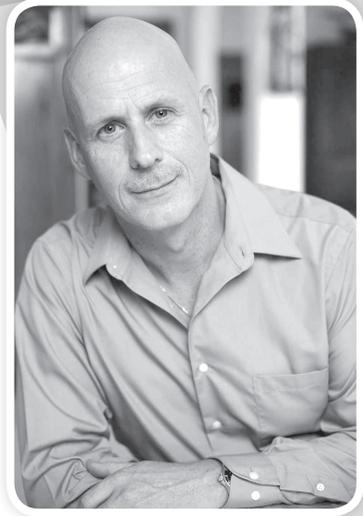
### **[YouTube.com/ Headstrong Performance](http://YouTube.com/HeadstrongPerformance)**

The online video home of Headstrong Performance gives you access to dozens of videos on neuroscience, nutrition, exercise and performance.





# Meet Marcel Daane



Marcel Daane is one of the pioneers in integrating health and neuroscience to improve performance in executives. With over 20 years of coaching experience across business, sports, health and cognitive performance, his integrated approach has transformed the lives of thousands of executives and has subsequently helped improve the performance of numerous multi-national organizations from a wide variety of industries

Headstrong means determined, focused and committed and Marcel learned from the best about what that really means. His mother was exiled but ultimately honored by South Africa for her courageous stand against apartheid. Marcel's own life-journey has taken him from military service in naval intelligence, to coaching Olympic and professional athletes, and ultimately into executive and leadership coaching.

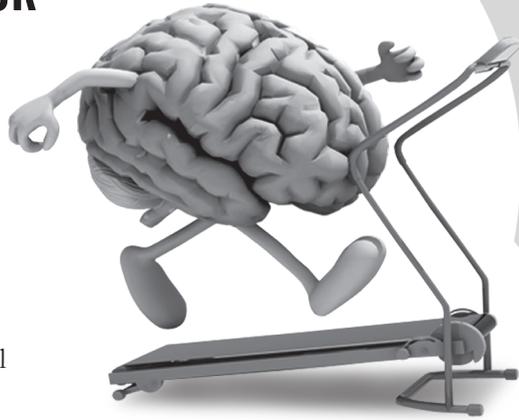
Marcel holds a postgraduate degree in the Neuroscience of Leadership from Middlesex University and an Undergraduate Degree in Complementary Medicine from Charles Sturt University coupled with advanced certifications in fitness and performance coaching.



## About This Book

In today's dynamic business climate, despite technological advances, executives spend more time at work than ever before. Faster moving markets, shorter deadlines, constant change, and tighter budgets, all mean greater pressure and increased energy demands.

Headstrong Performance explores the research behind the deterioration of executive performance as a result of stress mismanagement and reveals the neuroscience behind stress and poor health behaviors commonly witnessed in the workplace and demonstrates how these coping strategies result



in employee disengagement, decreased business performance, and subsequently a bottom-line that suffers.

Moving beyond the research, this book also provides a number of highly effective, health performance strategies that will enable today's professionals to remain on top of their game and work towards improved sustainable business performance for years to come.





# HEADSTRONG PERFORMANCE

A Breakthrough Book that challenges traditional views of business, leadership, and performance by linking the benefits of nutrition and exercise with the power of neuroscience to optimize performance in executives.

## 10 Reasons Why You Might Want To Read This Book

1. You are a high performing executive who wants to get even more out of yourself, your work, and your life.
2. You are competing at work with people much younger than you and you want to show them that high performance is possible at any age.
3. You want to give this book to your boss to inspire positive change that will improve productivity for everyone at work.
4. Your memory is not what it used to be, and you want to regain mental clarity and capacity.
5. Stress is killing you. You want to feel better and do better at work and in your daily life.
6. You want to reduce excess body-fat, and keep it off for good.
7. You want to know more about how exercise and eating well can take you and your business to superior levels of success.
8. You want to use fitness to improve employee engagement and performance throughout your organization.
9. You want to understand and overcome resistance to change inside your organization.
10. You're about to hop on a long flight and want something entertaining and useful to read because you've seen all the in-flight movies.

**Whatever your reason, you found the right book. Buy it, try it, and enjoy your improved performance.**

