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Introduction

Sport today is dominated by sport psychology, sport science and constant measurement.

In this report I want to share with you an emerging perspective and in doing so I hope to provide you with:

1. some answers to some of the things you want as a coach and
2. help you to develop an understanding of the link between our psychology and our biology when we are under pressure.

But first I'd like to share with you what my research has concluded.

The seven things wanted by ALL coaches

These seven things have been formed from a survey I undertook with a group of coaches in the Auckland region while researching coaches' comments in relationship to performance.

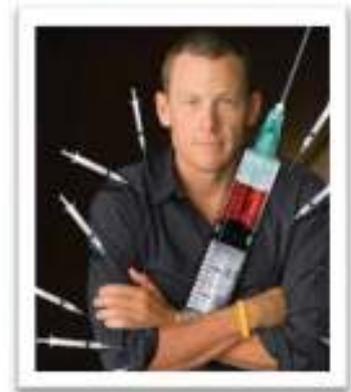
1. You want athletes to follow and **carry out your instructions** at both training and game time.
2. You want athletes adapting and **resilient to stressors** from internal and external environments.
3. You want to have players be able to achieve an in-the-zone state **consistently and on demand**.
4. You want your athletes to be at **peak performance, healthy, and injury-free**.
5. You want them to totally **dominate their environment** at game time using their skill, individual expression, talents, and abilities so that your instructions can be easily carried out.
6. You want to create an environment with **talented but sometimes difficult players** so they can engage in the right attitude, culture and, commitment for the environment you wish to create.
7. You probably want to help create an environment whereby all participants experience a feeling of joy that keeps them **engaged** in their chosen sport

BUT YOU CAN'T HAVE THOSE SAME THINGS IF YOUR ATHLETES ARE FEELING STRESSED AND UNDER PRESSURE.

Professional athletes are constantly examining ways to improve their performance in order to gain a competitive edge both **legally** and **illegally**.

This report identifies a legal edge to help **deal with pressure better** with **more consistent performance** and shares with you some proven ways to do just that.

In other words this report deals with providing a **legal performance enhancer**.



Who am I?

My name is **Jonathan Ferrier**. I asked myself that very question ten years ago, "Who am I?" Back then, I was stressed and burnt out from working too long in a pressure-cooker-trading environment. I was at the end of my tether and I knew something really had to change.

In 2004, I was introduced to **Heart Math** by my GP. Since then, I've studied what it's known as the **DeMartini Method**, Bruce Lipton, **energy medicine**, **Heart Intelligence**, and at the school of philosophy where I learnt about the ancient Vedic teachings.



My guinea pig was a **12-year-old sports junkie**, my youngest daughter. From the age of 5 she was hooked on soccer. Like all sports enthusiasts she was very **competitive** and if she missed a tackle it was all over - **meltdown** and she would go dark.

And so as strange as it might seem, given her age, I decided to introduce her to what I had learnt to **manage** my own stress.

The results were and remain amazing.

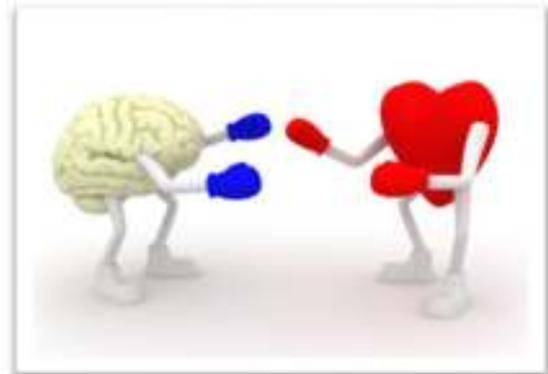
I am a **coherence coach**, a **licensed Heart Math** provider, and **Heart Intelligence** coach working with coaches and athletes to manage player physiological response to stressors during game time and for developing greater intuitive response.

So what happens under pressure?

Well **FIRSTLY**, our biology changes

The body begins to release a flood of hormones. Of which the key ones are **Cortisol** and **DHEA**.

This happens as soon as an athlete's mind and body system **perceives** stress whether or not the danger is real.



Under **prolonged** stress, Cortisol production **increases** which begins to **shut down** certain mind and body functions as part of the fight-or-flight response. Their adrenal gland releases DHEA and Cortisol as part of the stress response where DHEA and Cortisol **act together**.

DHEA has an **anabolic** or **building influence** whereas **Cortisol** has a **catabolic** or **tearing down** effect. The optimal balance for these hormones is in a narrow range, too high or low, and body functions suffer.

This balance has a significant impact on an athlete's ability to manage internal and external stressors.

Recent research has confirmed that at least **1400 biochemical changes** begin to occur as soon as our mind body system just perceive stress, whether or not the danger is real. This perception dramatically impacts the **Cortisol-DHEA balance**.



CORTISOL

So how does Cortisol DEGRADE mental function?

1. Adrenal stress causes **energy levels** to drop resulting in reaction time slowing, **fatigue**, **depression**, and **anxiety**.
2. It **cuts off** the fuel supply to the brain and body at **critical** moments.
3. It brings on **reaction failures** and inappropriate responses.
4. There is a **degradation** of working memory and active learning **brain function**.
5. It **blocks** intuitive processing.

How does Cortisol DEGRADE body function?

1. Our **immune defense**, brain, and nervous system tissue function suffer as our **stress levels** increase.
2. It contributes to a greater likelihood of **injury** and slow **recovery times**.
3. Under continual **adrenal stress**, blood sugar handling problems develop which cause people to make poor food choices, too many sweets and high glycemic index carbs that **reduce performance** levels.
4. The metabolism of carbohydrates and fats is compromised leading to premature drops of blood sugar levels during exercise.
5. It impacts muscle **tissue repair** and mineral levels leading to inefficient muscle contraction
6. It blocks **intuitive responsiveness** and energetic connection.

So how does Cortisol RELATE to performance?

1. It **impedes** carrying out your instructions at training and game time.
2. It contributes to **inconsistent** performance by team and players.
3. Cortisol **imbalance** affects mood, clear thinking, emotions, and cognitive function.
4. It **impacts** injury and injury **recovery** rates.
5. It **degrades** our ability to use our **intuitive** body system.
6. It **impacts** the body's energy fields which **influence** other players.

The All Blacks case study

"It's not so much about the psychology. It's about biology. It's about understanding what happens in the brain once you get under pressure."

This statement was made by **Gilbert Enoka**, the All Blacks' mental skills coach in a very rare radio New Zealand interview he gave in early in 2012 following the 2011 Rugby World Cup win.

To bring this quote into context, we can probably all remember the 2011 World Cup.



It looked like we were going to choke again when it came down to the wire during the last ten minutes of the final.

Fundamentally, the whole performance by the All Blacks throughout the World Cup looked as if it was **stressed** and definitely under extreme pressure in that final. But by some miracle they managed to pull it off.

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Then, we have in 2013, the All Blacks suddenly **jumping** a gear. What we saw was a totally consistent performance as individuals and team results.



At game time, they were able to **completely dominate** their environment by being resilient to pressure and adapting to change.

We saw individuals being able to express their individual talents and abilities in such a manner that we were just blown away as spectators.

The players clearly enjoyed having the freedom to express these talents.

And there were many wow moments!

Yet these individual moments also passed through into the wider team play.

It was as if they were **connected**. That they had some sort of psychic ability to just know what was going to happen next between them. They seemed to be able to do this as a team.

We also noticed some **incredible strategic** play which fundamentally indicated that they were able to carrying out the coach's **instructions** even **under pressure**.

Looking back on this, we noticed that the All Blacks really had **three phases** through that period. They were **stressed** in the Rugby World Cup final and throughout the whole campaign. We had Gilbert Enoka making the statement which was a bit of **epiphany** in the context of the whole interview. *"It's not so much about the psychology. It's about biology"*. Then, we noticed a **complete change** in the way the All Blacks had played in 2013. This is really being identified in what I am showing you today.

In December 2013 (in context just following the end of the All Blacks unbeaten year) I attended a Sports Awards dinner where **Grant Fox** was the key note speaker. He made a statement about the All Blacks Mental Skills coach **which confirmed** something I already knew BUT hadn't heard articulated in this context!



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Grant Fox acknowledged the **absolute brilliance** of Gilbert Enoka and the profound impact he had on the All Black's success in 2013.....

.....BUT also articulated how that had developed his understanding of his **own success** as an All Black a number of years earlier and is related to what I am introducing to you here!

So what is Stress?

Well stress **is not** the **situation** but rather your mental and emotional reaction to it. Fundamentally your stress response entrains your **neurological, biophysical, biochemical, and energetic** body systems which then inhibits brain function. This ultimately leads to both poor and inconsistent performance.



DHEA

DHEA **impacts** both the **body** and the **mind** of an athlete.

So how does DHEA enhance body function?

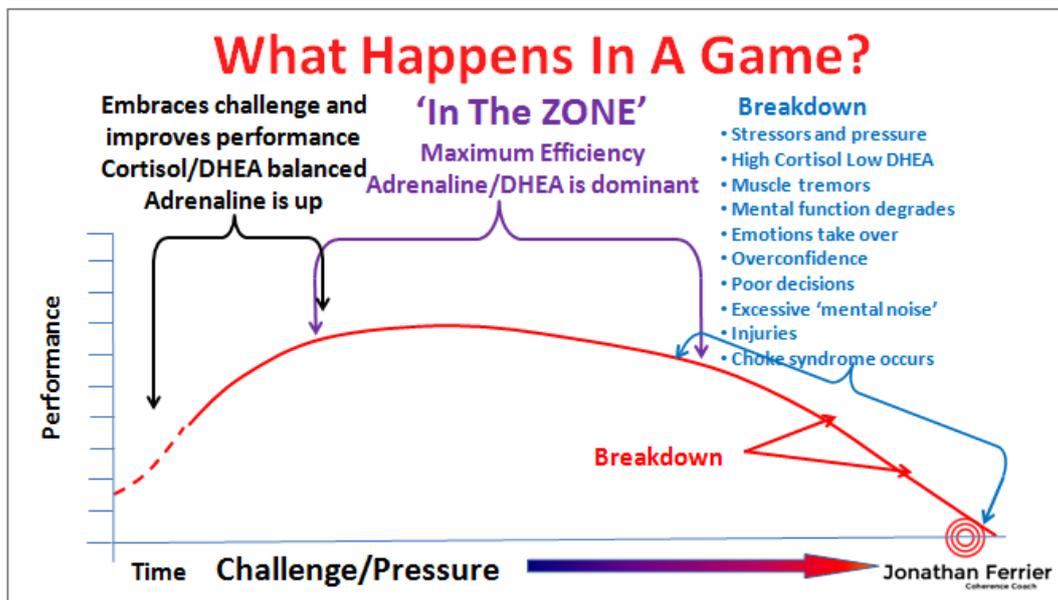
1. It is a precursor to testosterone, an important **performance enhancement** hormone.
2. It facilitates **resilience** and **adaptability** to training and game stressors.
3. It is a buffer hormone regulating other **natural steroid** hormone function.
4. It affects **multiple physiological** systems in the **body** including **vascular, immune, and central nervous systems**.
5. It also **impacts** glucose **metabolism**.
6. It facilitates intuitive sensory system function

So how does DHEA enhance mind functions?

1. It's important in the **uptake** of **coach's** instructions during practice and game time.
2. There's a **40% improvement** in long-term memory,
3. **24% improvement** in short-term memory.
4. It increases the ability:
 - to **focus**,
 - to **process** information,
 - **increase reaction** times,
 - **improve** learning,
 - And to improve **intuitive** function.

What happens in the game?

There was some **important** research conducted in **World War II** to help people understand what happened to soldiers under stress. Surprisingly this research can **equally** be **applied** to **sport**, because as we know, sport is often referred to as a **battle field**.



Adapted from Swank & Marchland

At the beginning, a player has a heightened focus. They **embrace** the challenge and the big events like Nationals, the World Cups, and the Olympics, where often records are broken and performances are improved.

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We then move **into the zone**. The athlete has highly focused, efficient and where adrenalin and **DHEA** are **dominant**. This is the in-the-zone period.



We then move into the **breakdown period** where the stressors take over, **high Cortisol** and **low DHEA**, mental and body functions degrade, and emotions take over.

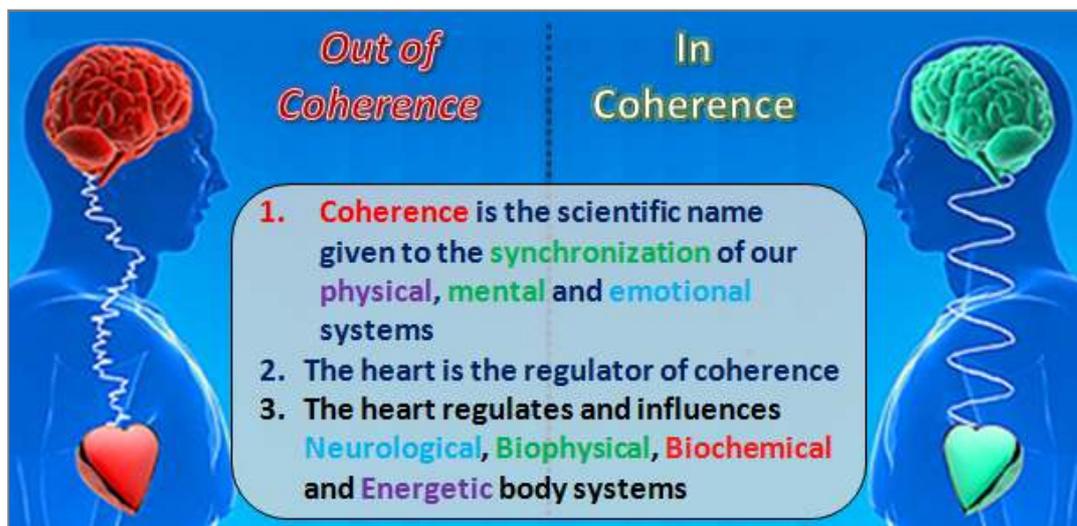
Excitability or even **overconfidence** has an impact in the same way that stress and emotions impact where **poor decisions** and responses occur. Coach's instruction **disappears** out the window. It's where the **Choke Syndrome** occurs.

The objective is therefore to increase this zone period over time; ideally, for the whole game.

How can you effectively and consistently influence player stress / pressure response?

Firstly, you need to understand something called **coherence**, and how coherence actually influences sporting success.

What is coherence?



With coherence there are two states. We have **out of coherence** (generally our normal state in western society) and **in coherence** or being in a coherent state.

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Coherence is a **scientific name** given to the **synchronization** of our **physical, mental, and emotional** systems.

The **heart** is the **regulator** of coherence. The heart **regulates** and **influences** the **neurological, biophysical, biochemical, and energetic** body systems.

What is the importance of coherence?

Coherence provides the optimal physiological conditions for receiving a coach's instructions and for carrying out those instructions

It also helps an athlete to better manage their environment and allow them to have what I call **situational awareness**. This basically means an awareness of everything that is going on around them at any moment in time.



Coherence plays an **active** part in **reducing fatigue and injury**; to building and **sustaining resilience**, and **decreasing friction** in relationships, and improving communication.

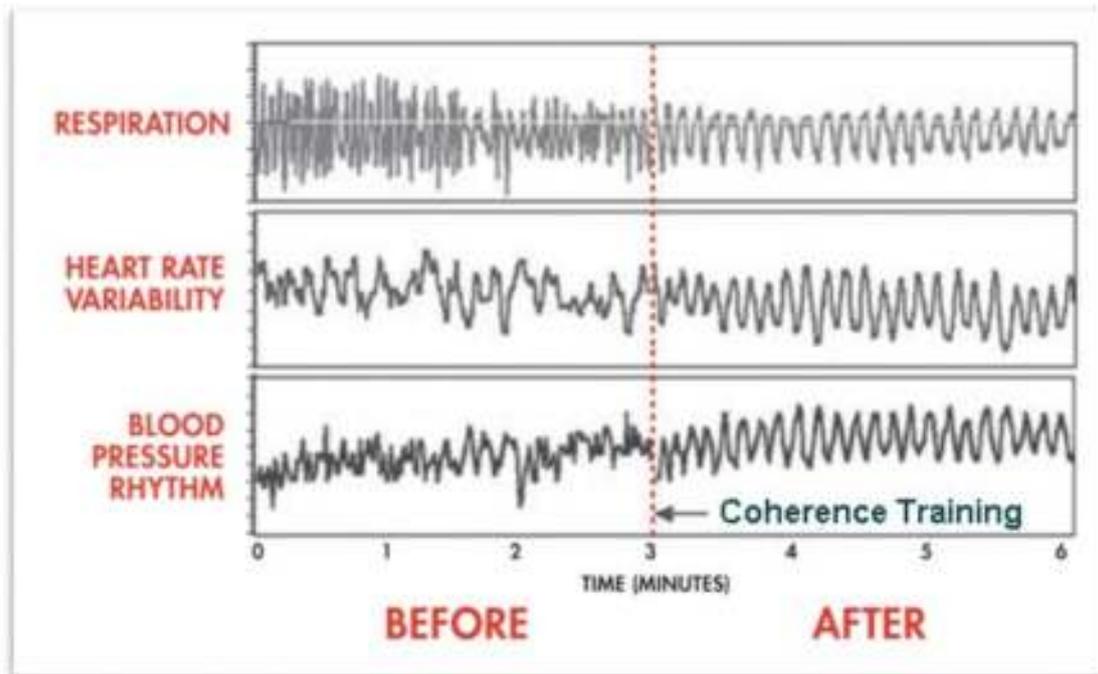
Coherence **influences DHEA** and **Cortisol balance** and ultimately paves the way for zone performance and intuition.

Let me put that another way

1. **High coherence** equals **high DHEA** which equals high or peak performance or in-the-zone state.
2. **High coherence** equals **low Cortisol** which equals **adaptability** and **resilience** to stressors.
3. **High DHEA** means an **improvement** in a player's ability to follow and carry out instructions.
4. It is where there are **fewer injuries** and better recovery times.

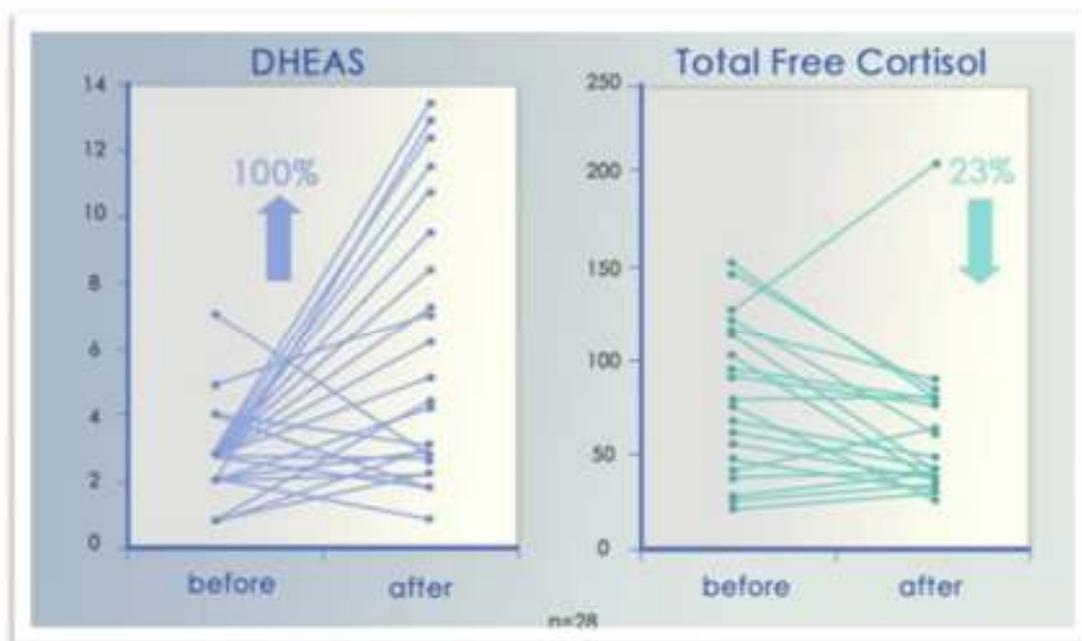
Scientifically, what does coherence look like?

Here we have spectrograms showing before and after coherence training over respiratory, blood pressure and Heart Rate Variability readings.



It represents Coherence Training before and after. We have a **coherent state** where the line is indicated by a **smooth even-waved** form. This is in the **in-the-zone** or **coherent** state.

Coherence Case Study



From Integrative Physiological and Behavioural Science, April-June 1998, Vol. 33, No 2, 151-170 copyright 1998 Transaction Publishers

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Here, we have the results of a **case study** which were later confirmed in a study by a large computer manufacturer before implementing in their company.

It shows the DHEA-Cortisol **changes** over a **30-day period** with 28 subjects.

They were tested **before** and **after**, and we can see here, a **100% increase** in **DHEA** and after 30 days of coherence training, and a **Cortisol decrease** of **23%**.

In summary, what is coherence really all about?

Coherence is an **optimal state** in which the heart, mind, and body, and emotions are operating in sync and **balanced**.

Physiologically, the **immune**, **hormonal**, and **nervous systems** function in the state of the energetic **coordination** and become an engine for **resilience** and **adaptability** under pressure.

When we are coherent, we are energetically synched **increasing** our **mental** and **emotional flexibility** and our capacity to be in charge of ourselves and fully connected to our environment.

It's where coherent players are **able to carry** out your instructions within a pressured environment.

In a nutshell, what do we have?

ONE low coherent player can **AFFECT** the whole team and conversely a **coherent** team **DOMINATES**.

What does coherence training offer?

Coherence training is a **proven** way to **eliminate stress** and to help athlete's **better cope** with all sorts of pressures and stressors.

Coherence training greatly facilitates the **seven** things I mentioned at the beginning of this report that **you** as a coach would **want**.

It offers the opportunity to **balance** DHEA-Cortisol levels and **prolong energy** and



vitality during a game

It is effectively **DHEA** (the body's natural performance enhancer) **on tap!**

It can help **effectively** manage the **physiological responses** to stressors, **building resilience** to stressors and the ability to track full physiological state, functions, and capabilities.

It helps an athlete create a **clear focus** in each and every moment on the **instructions** and **intentions** being given to them by their **coach**. Whether that be at practice or game time

It develops an **environmental** structure to **support** coherent team development, and the ability to **dominate** the game environment using player skill, individual expression, and **talents**, and **abilities** to the **fullest** so that your instructions can be carried out.

It facilitates **intuitive flow** and **in-the-zone** performance.

What am I offering you?

So if the content of this report has captured your imagination and you would like to further **explore** exactly what **coherence coaching** could do for you then I am offering:

- a **FREE one-hour** individual introduction to coherence coaching
- a **FREE hands-on demonstration** to a LOW cost **scientifically-validated** technology
- An introduction to the **four emotional states** that influence performance and the related physiological response.

To take advantage of this you can either call me on: **0274990423**

OR

Email me with your contact details or any questions you might have to **j@ferrier.co.nz**