

| KHARINA@IMAKEMESTRONGRLIFECOACHING.COM |

## YOU ARE SO SENSITIVE

### Neuroscience Of The Highly Sensitive Person & ADHD



Welcome to my very first Newsletter, I am super excited you have chosen to get stuck into this read. I am ready to walk you through the field of neuroscience.

My purpose is to bring you clarity on

- Basic design of the nervous system & human brain
- How biological changes in the brain adapt behaviour and emotional responses
- Brain structure difference between the personality trait: Highly Sensitive Person (HSP) and A neurodevelopmental adaption of attention deficit hyperactivity disorder (ADHD).

I have simplified the topic, and so making the science easy to understand. Closing out with proven coaching tips that quickly shift your internal states to help relieve overwhelm for both the HSP and one with ADHD.

**Understanding  
our brain,  
let's us  
understand who  
we are  
and why we  
behave the way  
we do.**

#### Lost in play

How many times as a kid would you become lost in play? Through the power of your imagination, you'd embark on one hell of an adventure and make-believe where it felt like you were actually there within your world of wonder?



I remember vividly, my younger brother and I would unknowingly transition into that state. Filling the front room with our Star Wars figures, voicing sounds of 'pow, pow, pow' fully immersed in battle, stormtroopers thrown up in the air, watching as they bounced, tumbled then hit the ground, forgotten as attention moved to our front-line troopers and shouts of 'I'm winning!!!'

Elbows leaned into the carpet, imagined craters of the moon. Bobbing our heads to avoid the sprays of gun laser's 'bap, bap, bap, baaaap'.

Without knowing it, our young developing brain was preparing us for responses of regulation, love, problem solving, patience, planning, and so much more.

What always fascinated me was 'how' did our brains take us there. Why was it some of us could play for hours while others couldn't sit still. Why did some of us feel more deeply and others constantly distracted?



#### 'You're so sensitive'

It was a recent conversation with a fellow coach that has the personality trait of a highly sensitive person, that prompted me to write this as. When he said: 'Are you aware that people that are highly sensitive are commonly misdiagnosed as having disorders like ADHD?'

**I was intrigued as I  
myself have mild  
ADHD and am a  
highly sensitive  
person**

Ever since childhood different, behaviourally, I would quickly adapt change. I was however, constantly told I was too sensitive (which would then make me cry!). Simple things would affect me, like if I saw someone upset, I too felt upset, watching events on TV unfold like war or bombings, I would hold emotions like it was happening to me. As I slipped into adulthood the comments of 'you're so sensitive', 'what's wrong with you or 'why can't you just get over it' continued.

It felt personal and would leave me in a state of overwhelm or defensiveness. Why did I have to be so sensitive? Why couldn't I be stronger? Why did things affect me so badly?

Have you experienced the same?

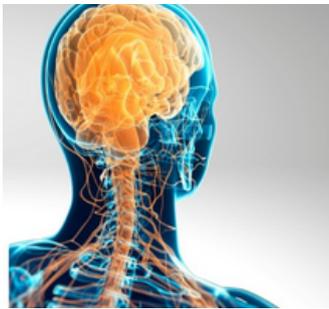
Are you a highly sensitive person or a person with ADHD? Ready to better understand your brain?



## Command Centre

Let me break things down for you. First, we will look at the brain and nervous systems basics. Then focus on the differences between the two for a HSP and ADHD respectively.

I'd like you to think of the nervous system as your brain's command centre, that has two categorized functions Somatic and Autonomic



### Somatic

Is all of your nervous systems except your brain and spinal cord, nerves that carries info signals from brain to head and neck areas

- Enables movement and control of movement.
- controls voluntary movements such as reflexes.
- receives & transmits messages from your senses.

### Autonomic

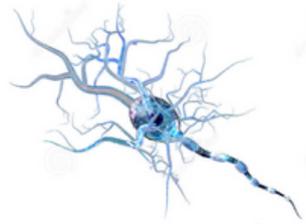
Simply means involuntary or unconscious.

With 3 distinct parts named as follows:

*The Sympathetic Nervous System (SNS),  
The Parasympathetic Nervous System (PNS), and the Enteric.*

Relates to: Involuntary movements such Breathing, heartbeat, blood flow, digestion, sexual arousal, etc,

## Satellites AKA Neurons



So we have our command centre now we need to understand how it communicates. Mostly located centrally us humans have these nifty little things called neurons. They are electrical impulses combined with chemical signals.

Let's think of these as 'satellites' in our nervous system. Neurons are responsible for receiving incoming sensory from external environments and transporting on through our body. This is done via chemical and electrical signals.

### Posing

As part of our human make up, we have a class of neurons called *Mirror Neurons*.

Mirror neurons love to pose! Just kidding! Actually, their function is to mirror the action, movements and habits of others. They mirror or

An easy example is seen in babies. Babies, mirror behaviours. They follow mouth shapes to form words, if you poke your tongue out, they too will follow the movement all a natural part brain and body development.

### HSP- Finely tuned



The HSP is *born* with a finely tuned nervous system known as a biological state. Pretty awesome right! So no, there is nothing wrong with you!

**Around 20%  
of the world's  
population are  
born with a finely  
tuned nervous  
system**

## Active

*The difference between the non HSP and the HSP is that the HSP's mirror neurons are more active.*

They do not have increased or more mirror neurons, theirs are just more active.

*This means mirroring is heightened and therefore the HSP can become over stimulated by social stimuli, sounds, expressions, voices...*

*behavioural outcomes include*

- *if they see someone get hurt, they feel the pain.*
- *See someone yawn they yawn*
- *Watching movies that evoke emotions of fear they feel the fear as though it's really happening in all its intensity*

## ADHD Command Center



HSP is a personality trait, whereas ADHD is neurodevelopmental condition meaning there are impairments relating to the development and growth of the nervous system and brains core functions. With ADHD the control centre's ability to transmit to the satellites is altered. This means the brain can take more time to develop. It comes down to a specific neurotransmitter called Norepinephrine.

Not so easy to pronounce!

Let's now look at the brain structure and biological differences between the HSP and someone with ADHD.

## The Brain

This little look into the human brain, will help you understand

- The science of what's happening in the brain.
- Where it's happening
- What different parts of the brain when in higher or lower engagement affect emotional/body responses



The human brain is split into two. The **Left hemisphere** and the **right hemisphere**.

These hemispheres are then subdivided into 4 lobes, and each lobe holding a range of regions.

## HSP Brain

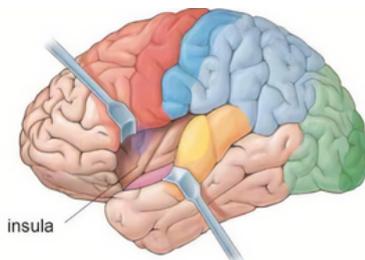
For the HSP the region of the brain involved is in the frontal lobe in an area called the Prefrontal cortex.

Remember the childhood throw back of being deep in play? For a developing child it is the prefrontal cortex that builds new circuits while in play increasing social interactions both complex and simple.

There are two parts of the brain of the HSP that is the cause of their increased emotional responses

These are *The Insula* and the *Cingulate Area*.

## The Insula



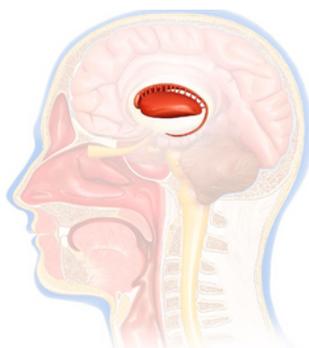
### 1st part

Your insula is responsible for moment-to-moment comprehension of inner states, such as 'I feel anxious', 'I am hungry, and 'I am cold', body positions, and external events like watching tv, social environments, etc.

## The Cingulate Area

### 2nd Part

is the Cingulate area which is known to be referenced as 'The Seat of Consciousness' increased activation means the HSP is more in tune to what's going on around them and within themselves. the cingulate region is located behind the eyes .



Incredible right! Now you have the science behind your emotional and body responses if you are a HSP.

Let's have a look at the brain for a person with ADHD.

## ADHD Brain Chemicals

For a person with attention deficit hyperactivity disorder as explained earlier there is an alteration to a neurotransmitter called norepinephrine, A chemical and hormone., that releases stress hormones to the body.

The Norepinephrine is low in levels and is mates with a chemical called dopamine that is in increased levels.

Dopamine is responsible for control, reward and pleasure in the brain.

This brain alteration contributes to two key types of behavioural challenges

- Hyperactivity & Impulsiveness
- Inattentiveness/challenges to focus & concentrate

This makes an individual with ADHD have lowered attention span, trouble concentrating and planning, is easily overwhelmed.

## ADHD Brain

The key regions of the brain affected in ADHD are

*prefrontal cortex*, /the *frontal lobe* associated with thinking and logical reasoning and concentration,

*cerebellum* located behind the ears a regulator for movement and motor responses.

### *Basal Ganglia*

key for motor control & learning, behaviours and emotions.

### *Cortico Limbic*

Combines emotion with behaviour showing up outwardly specific to social environments. /Flight fight response.

There are some behaviours that are the same as a HSP responses or behaviours as we see though the brain is developed differently.



## Proven Coaching techniques

As a CPTSD & trauma focused coach, I have close interaction with clients that are HSP's, and individuals with ADHD. These are techniques have proven successful in reducing overwhelm. As you see the approaches are different as the brain designs are different for both.

### Reducing overwhelm for the HSP

#### CLOSE YOUR EYES COUNT TO 3

80% of the stimulation is through the eyes. By closing the eyes stimuli is blocked

#### Breathe

slowly Breathe in  
Count 1,2,3,4  
Slowly breathing out 4,3,2,1  
Slowing down your breath enables the nervous system to regulate

#### NAME THE EMOTIONS SHOWING UP

Name the emotions you are feeling  
Thank them for showing up  
Ask them to leave

'Overwhelm, thank you for showing up.

You have served your purpose and now I choose to let you go, you can leave'

#### Recap

*As I close out in recap you now have a basic understanding of our human brains design. How natural adaptations to the brain can alter our behaviours, and how the differences in our nervous system and brain results in personality traits or developmental difference.*

*There is nothing wrong with us, we are unique with an incredible brain make up. I call this a superpower. For a HSP or an individual with ADHD what my goal is, for you to finish this newsletter with a better understanding of why you do what you do in relation to emotional states and behaviour. overwhelm quick coaching techniques you can use anywhere to quick relief overwhelm putting you back in controls of YOU..*

**Disclaimer- Written for information purposes.  
In no way replaces therapy or medical interventions. Always speak to your doctor.**

### Reducing overwhelm for persons with ADHD

#### Breathe

slowly Breathe in  
Count 1,2,3,4  
Slowly breathing out 4,3,2,1  
Slowing down your breath enables the nervous system to regulate

#### Make a plan (Use a whiteboard)

Before you go to sleep plan the following day. Use a whiteboard so you eliminate the overwhelm of post- its!

The idea is to take the planning out of your head and write it down, so you have less activity in your brain.

#### The 7 Second Pause

When you feel the overwhelm incoming, literally PAUSE.

Stand still and count down slowly  
7,6,5,4,3,2,1

The count stimulates the focus area of your brain and so engages the opposing side this evokes a state of calm

### Editor Kharina Kharran

Founder of Kharina Kharran CPTSD & Trauma Coaching. Author of Things Like That Don't Happen to Me, the power of re-writing fear to courage, and host of a new podcast series, Rewriting fear to Courage- The Trauma Podcast.



### Got a question?

Pop your questions to the email address below- I look forward in speaking with you!

1:1 Coaching / Group Empowerment Coaching  
Book your free 30 min discovery call together we can safely transform your life.  
kharina@imakemestrongerlifecoaching.com

Note full screening is completed before the start of any coaching