MindBody Breakthrough
Restoring Control, Inspiring Success

Trauma, the Brain and Recovery

Understanding & Treating Trauma & PTSD

www.mindbodybreakthrough.net

Course Outline

Session 1:

- Introduction
- Trauma and the Brain

Session 2:

- Dissociation and Traumatic Memory

Session 3:

- The T.R.A.U.M.A. Framework for Healing Trauma (Part 1)

Session 4:

- The T.R.A.U.M.A. Framework for Healing Trauma (Part 2)

Session 5:

- The T.R.A.U.M.A. Framework for Healing Trauma (Part 3)

INTRODUCTION

What is Trauma?

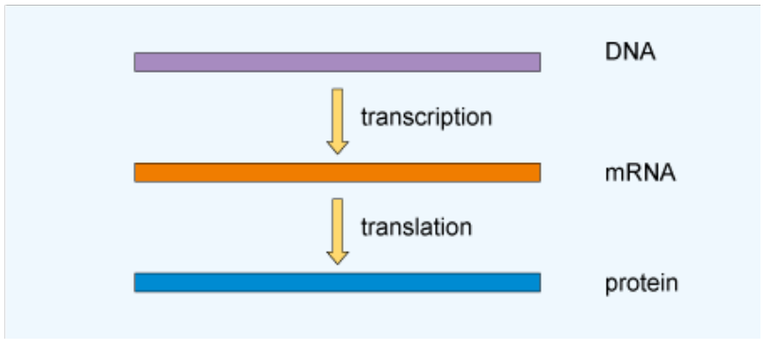
Trauma is a response to a deeply distressing or disturbing event that overwhelms the body's natural coping mechanism, causing feelings of helplessness, diminished sense of self and inability to feel a full range of emotions and experiences.

MindBody Breakthrough
Restoring Control, Inspiring Success

Causes of Trauma

Trauma can happen through a variety of negative life events, which may include:

- Catastrophic injuries or illnesses
- Childhood abuse (emotional, physical or sexual)
- War
- Childhood neglect or abandonment
- Rape
- Natural disaster (such as earthquakes, hurricanes, tornadoes, etc.)
- Birth stress, for both mother and infant
- Invasive medical and dental procedures
- Accidents (such as car crashes, falls, etc.)



Gene-environment interactions:

Some genes have been found to predict adult PTSD symptoms; e.g. DA transporter gene, serotonin transporter proteins, women's pituitary adenylate cyclase-activating peptide (PACAP). Binder E.B. et al 2019; Segman, R.H. et al. 2002; Ressler, K.J. et al. 2011)

Trauma heritability studies indicate moderate to severe heritability. Traumatic symptoms can be epigenetically transferred. Caroline M. N. et al. 2019: Yehuda, R. & Lehrner, A. (2018)

Symptoms of Trauma

Traumatic symptoms are very complex and diverse depending on the intensity, duration and nature of the traumatic event.
(Lander, L., 1991 (the ruins of memories))

Symptoms can be divided into 2 major categories:

- Hyperarousal (physical and psychological)

- Hypoarousal/Dissociation

MindBody Breakthrough
Restoring Control, Inspiring Success

Hyperarousal Symptoms (physical and psychological)

- Hypervigilance
- Intrusive imagery or flashbacks
- Hyperactivity
- Abrupt mood swings (such as rage reactions, temper tantrums, anger or crying)
- Nightmare and night terrors
- Low stress threshold
- Difficulty in sleeping
- Shame and lack of self-worth
- Panic attacks, phobias and anxiety
- Attraction to dangerous situations
- Addictive behaviours (such as, over/undereating, drinking, smoking, etc.)
- Avoidance behaviours (such as avoiding places, memories, people or activities)
- Mental blankness or spaced-out feelings

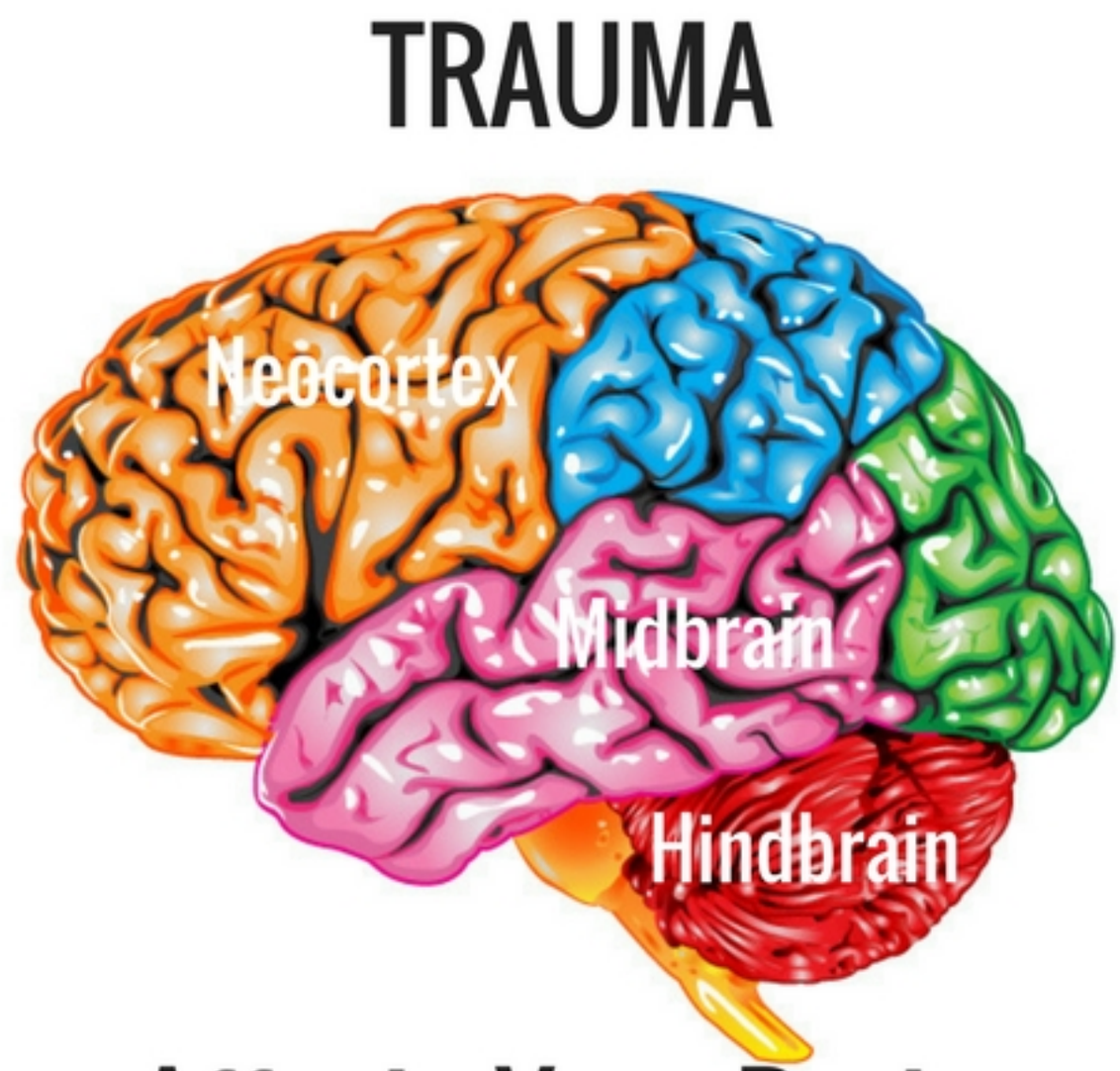
MindBody Breakthrough
Restoring Control, Inspiring Success

Hypoarousal/Dissociation Symptoms

- **Symptoms of dissociation depend on the severity and types, which may include** (Van dar Kolk et al., 1995, (Dissociation and the fragmentary nature of traumatic memories)):
  - Depersonalisation (feeling detached from one's life, thoughts and feelings)
  - Problems with handling intense emotions
  - Sudden and unexpected shifts in mood
  - Derealisation (feeling as though the world is distorted or not real)
  - Dissociative amnesia (localised, selective, generalised or systematised)
  - Feeling compelled to behave in a certain way
  - Immobility, freezing and overwhelming feeling of helplessness

MindBody Breakthro
Restoring Control, Inspiring Su

Trauma and the Brain



Wieck, A. et al. (2014)

MindBody Breakthrough
Restoring Control, Inspiring Success

Trauma affects different regions of the brain. (Feinstein J.S., et al., 2011; LeDoux J., 2012; Edelman G. M., et al., 2013)

These brain regions include:

- Pre-frontal cortex
- Amygdala
- Hippocampus
- Broca's area
- Anterior cingulate

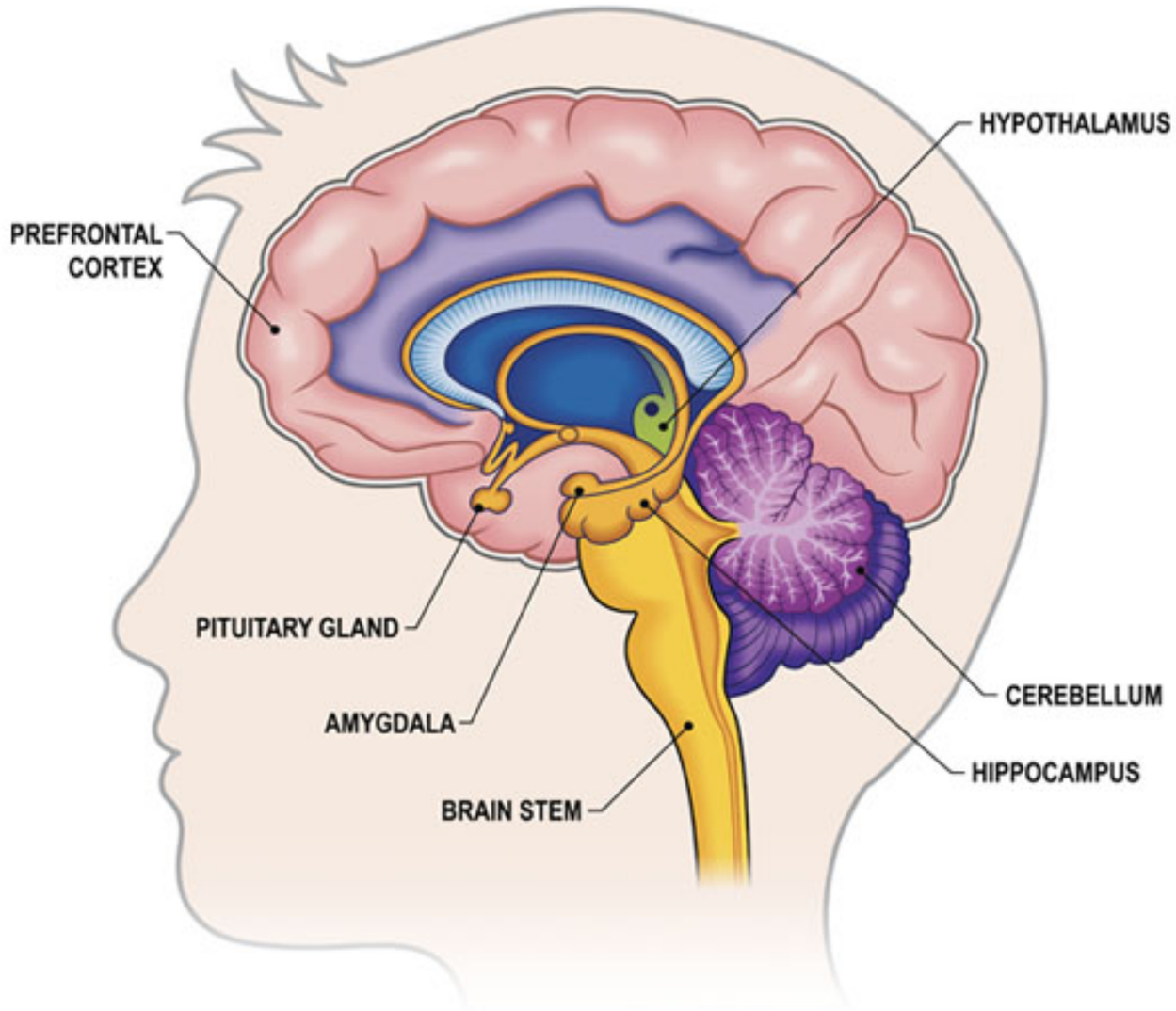
MindBody Breakthrough
Restoring Control, Inspiring Success

Pre-frontal cortex, Amygdala and Hippocampus

- Decreased prefrontal cortex volume has been observed in multiple trauma survivors. Rauch, S.L. et al. (2003)

- Individuals with borderline personality disorder and early abuse (CPTSD) have been found to have smaller amygdala volume. Vermetten, E. et al. (2011)

- Smaller hippocampal volume has been reported in several stress-related psychiatric disorders, including post-traumatic stress disorder (PTSD). Vermetten, E. et al. (2011)

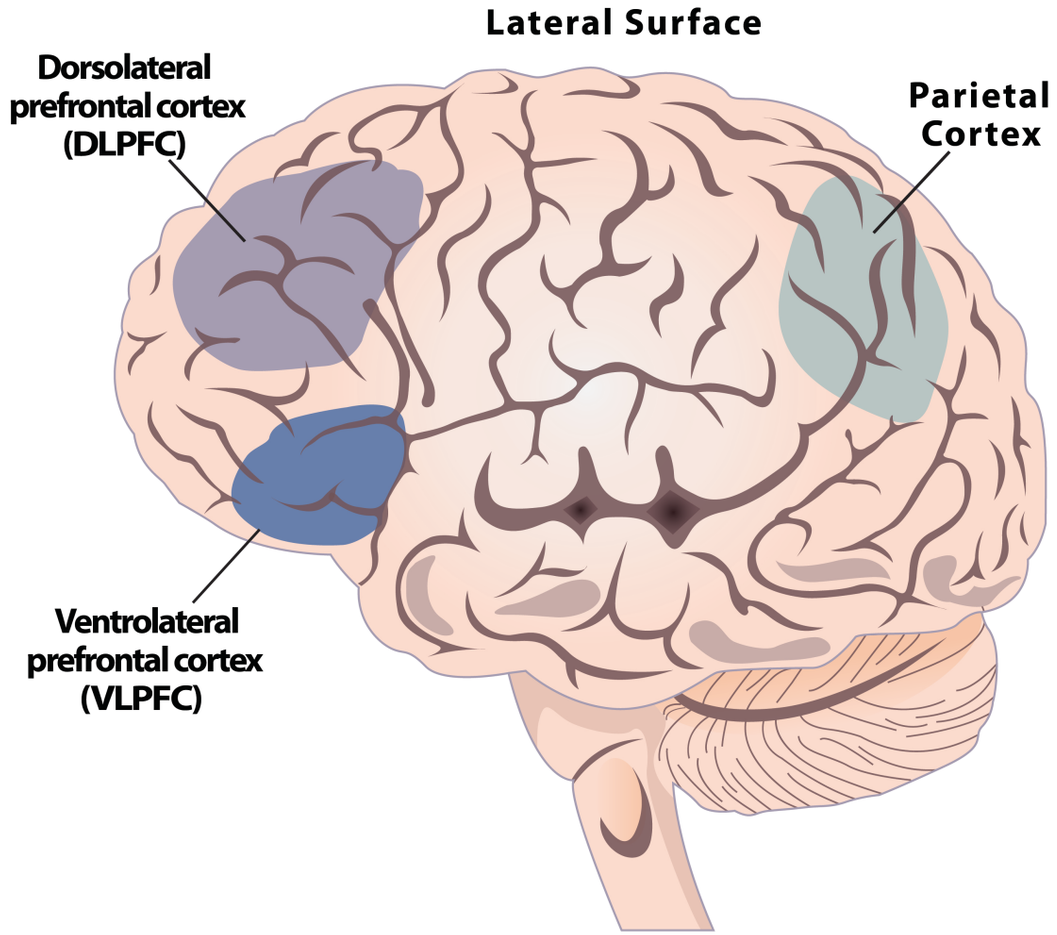


- The intense emotions of trauma break down the inhibitory capacities of the PFC (particularly the medial PFC - the watchtower)), forcing people to move directly from stimulus to response (B. A. Van der Kolk (2006).

- The vehement emotions of trauma shut down the thalamus (the receptionist), increasing the activation of the subcortical brain regions involved in emotions (e.g. amygdala, hypothalamus)

Dorsolateral Pre-frontal Cortex (DLPFC)

- The DLPFC is referred to as the time-keeper of the brain.

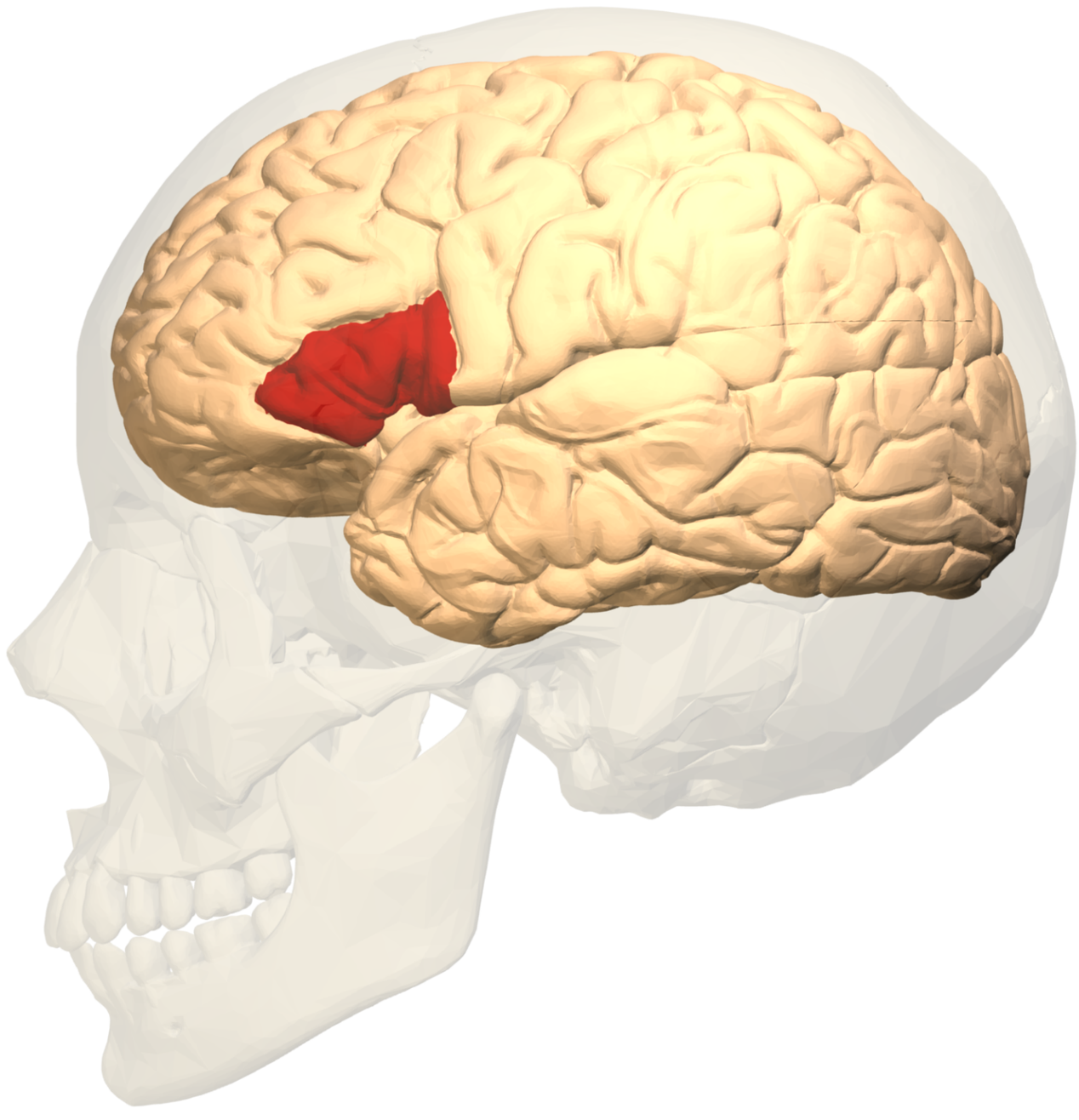


- When the DLPFC is deactivated, people become trapped in the past, without a sense of past, present and future (van Der Kolk, 2014).

Copyright@MindBody Breakthrough Ltd.

Broca's Area

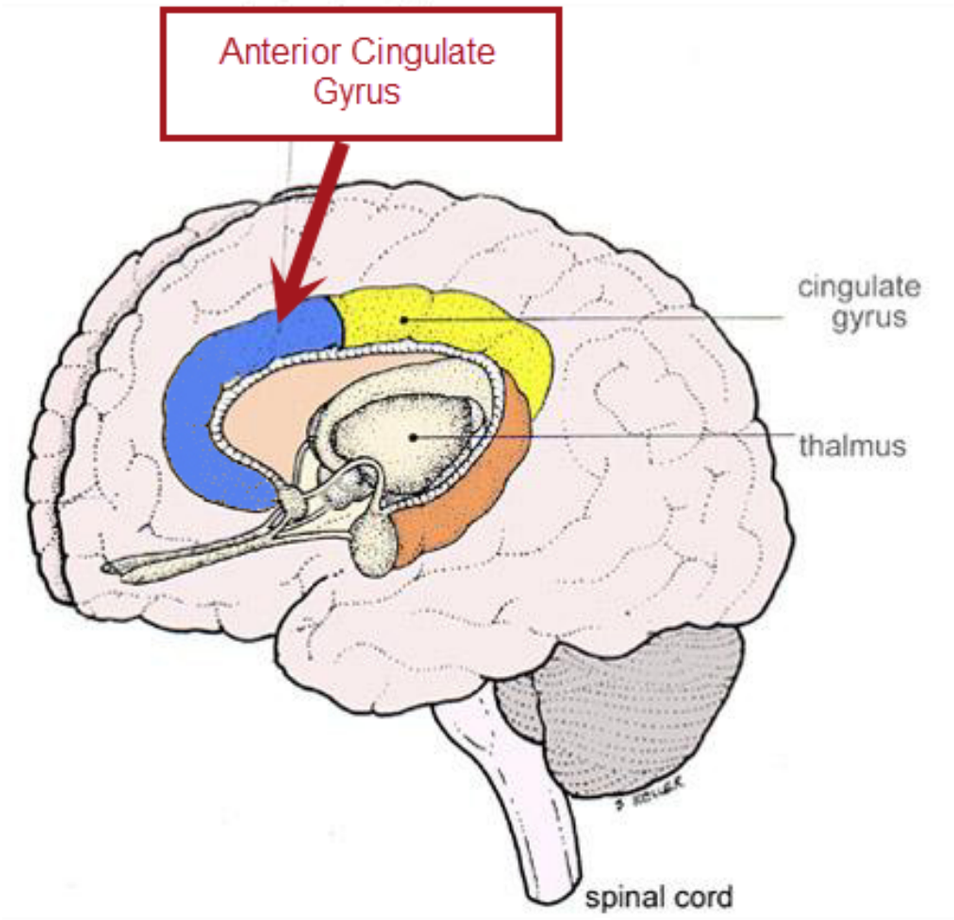
This is the region of the brain involved in converting our internal experiences (feelings, thoughts, sensations) into communicable speech (van der Kolk, 2014).



MindBody Breakthrough
Restoring Control, Inspiring Success

Anterior Cingulate Gyrus (ACG)

This is the region of the brain known as the gear-shifter. It is involved in cognitive flexibility, self-sensing and consciousness



McGovern RA and Sheith SA, (2017); Hong, J.S, et al (2016)[1]

MindBody Breakthrough
Restoring Control, Inspiring Success

Session 2

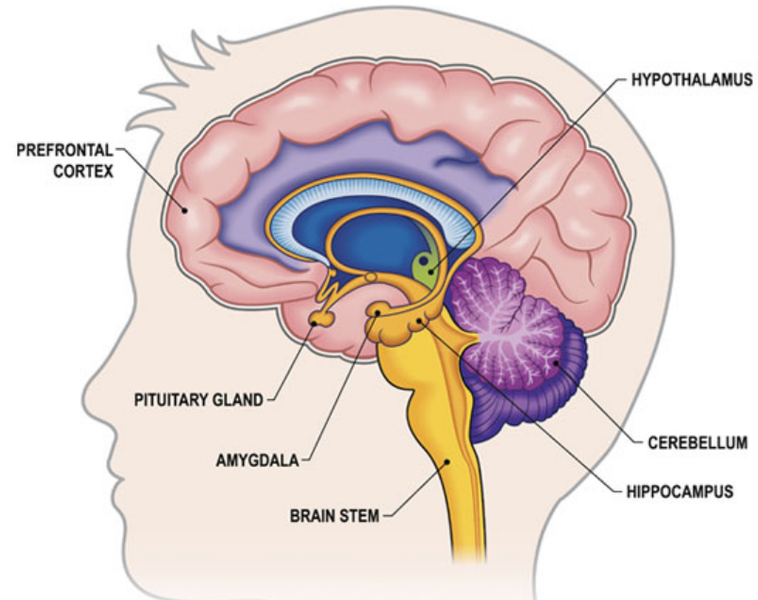
Dissociation and Traumatic Memory

Kardiner A., 1941; Van dar Kolk et al., 1989; Van dar Kolk et al., 1995

MindBody Breakthrough
Restoring Control, Inspiring Success

Dissociation and Traumatic Memory

- Dissociation is the fragmentation of consciousness for the purpose of self-preservation.



- This is when all the elements of the trauma are not organised into a unitary whole in the hippocampus to form an integrated sense of self.

- Phobias of traumatic memories prevent the integration of traumatic experience into communicable personal narratives
- Traumatic memories are split off and encoded as fragmented and dissociative somatosensory states
- Dissociative process plays a critical role in the development of trauma-related psychological conditions (such as, PTSD)

MindBody Breakthrough
Restoring Control, Inspiring Success

The traumatic fragmented memory symptoms include:

- Obsessional rumination and preoccupation
- Somatic re-experiencing of trauma (visual, olfactory, affective, kinaesthetic and auditory)
- Traumatic amnesia (total, partial or delayed)
- Mutism
- Stupor
- Acute catastrophic stress reactions, such as cognitive disorganisation, disorientation, derealisation, depersonalisation, panic attacks
- Behavioural re-enactment - spontaneous expression of trauma-related behaviour in everyday activities (e.g sexually provocative play towards self or others)

MindBody Breakthrough
Restoring Control, Inspiring Success

3 Types of Dissociation in Trauma

Van der Kolk, B. A., & McFarlane, A. C. (1996)

- Primary dissociation (PD)
- Secondary dissociation (SD)
- Tertiary dissociation (TD)

MindBody Breakthrough
Restoring Control, Inspiring Success

3 Types of Dissociation in Trauma

- **Primary dissociation (PD)**

- This occurs whenever the traumatic memory fails to integrate into ordinary consciousness (e.g. children)

- The traumatic experience is therefore split off into isolated somato-sensory elements where they can be re-enacted

- This fragmentation is accompanied by an ego state that is distinct from the normal state of consciousness

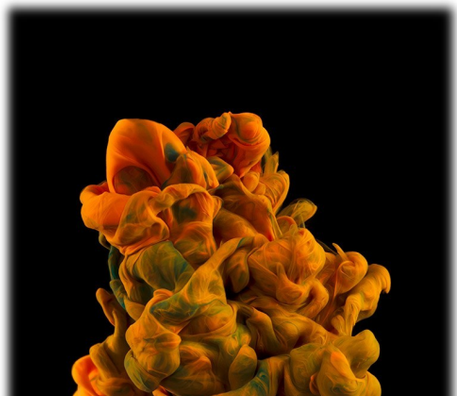
- Primary dissociation is characteristic of PTSD - where the symptoms are basically the expression of dissociated traumatic memory

MindBody Breakthrough
Restoring Control, Inspiring Success

3 Types of Dissociation in Trauma

• Secondary dissociation (SD)

- Once a person is in a traumatic state of mind, further disintegration of personal experience can occur, leading to the formation of the '**observing**' and the '**experiencing**' ego states.
- People have reported mentally leaving their body at the moment of trauma and observed what was happening to them at a distance (example - incest survivors, combat solders, etc).



- This allows individuals to observe their traumatic experience as spectators in order to limit their pain and distress.
- While PD limits people's **cognition** towards their traumatic experience, SD puts people out of touch with feelings and emotions of trauma
- Secondary dissociation anaesthetises them from the full impact of their traumatic experiences.
- Secondary dissociation is also referred to as **peri-traumatic** dissociation.

MindBody Breakthrough

3 Types of Dissociation in Trauma

- **Tertiary dissociation (TD)**

- This is the formation of multiple and complex ego identities with distinct cognitive, affective and behavioural patterns.

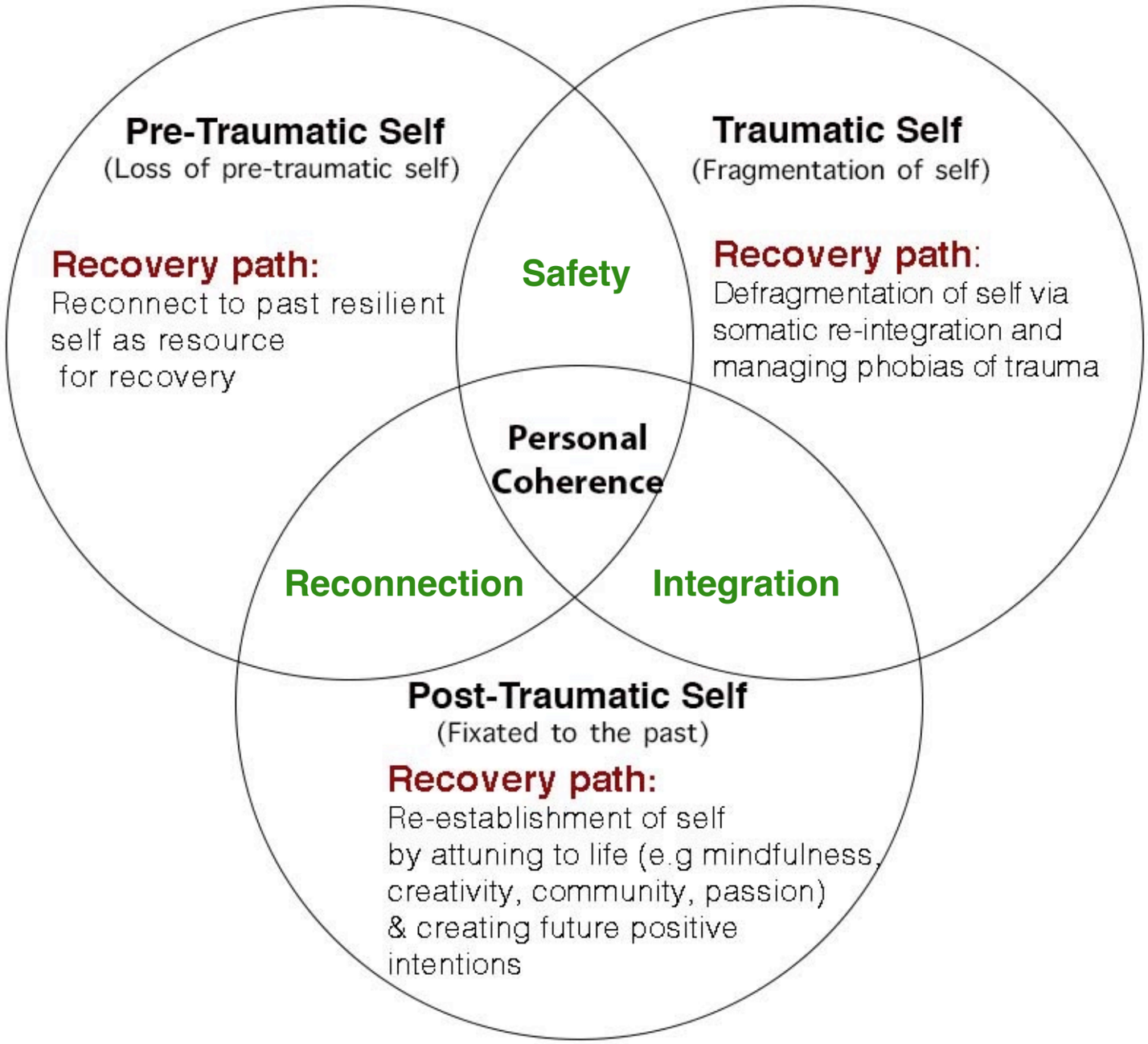
- Some ego states may contain the pain and anger of the traumatic experience while other ego states are unaware of the trauma and continue to perform the normal routine functions of daily life.

- This is often found in people with multiple dissociative identity disorder (DID), where different psychic states experience different aspects of one or more of their traumatic experiences, while others stay unaware of these unbearable experiences.

MindBody Breakthrough
Restoring Control, Inspiring Success

Trauma Recovery Pathways

www.mindbodybreakthrough.co.uk



copyright@www.mindbodybreakthrough.co.uk

MindBody Breakthrough
Restoring Control, Inspiring Success

Session 3

The T.R.A.U.M.A. Framework for Healing Trauma

MindBody Breakthrough
Restoring Control, Inspiring Success

Healing Trauma
The T.R.A.U.M.A. Framework

T - terminate sources of re-traumitisation

R - reintegrate survivors into loving and supportive environment

A - accelerate the brain's healing process

U - untangle the nervous system from the immobility response

M - metabolising memories of trauma

A - attuning to life and creating future positive intentions

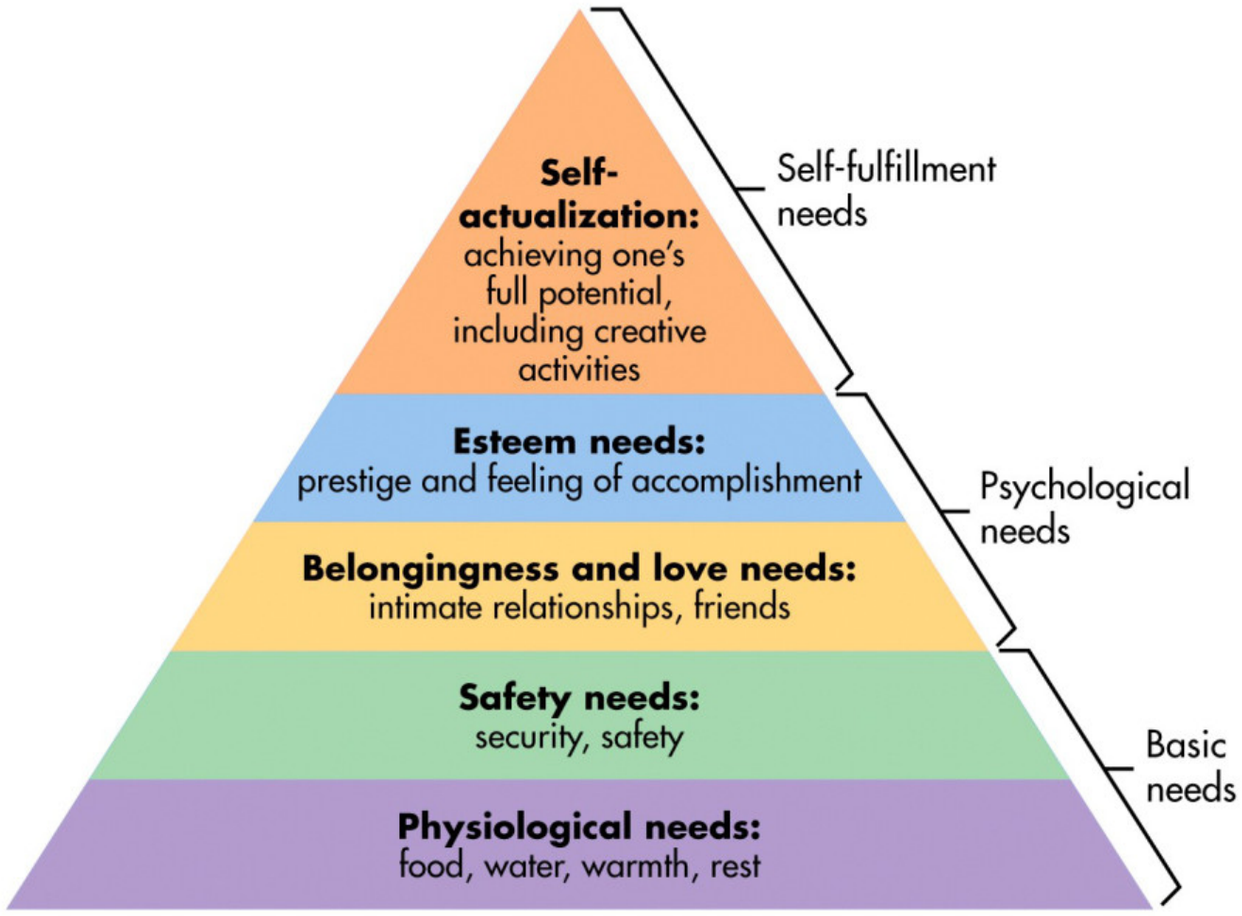
MindBody Breakthrough
Restoring Control, Inspiring Success

Healing Trauma

The T.R.A.U.M.A. Framework

T - terminate sources of re-traumitisation

- In healing trauma, individuals' most basic needs must be met before they become motivated to achieve higher level needs
- Physiological and safety needs must be prioritised first.



- Maslow's hierarchy of needs

Trauma risk factors include:

- Traumatic re-experiencing
- Traumatic reminders
- Secondary adversities

MindBody Breakthrough
Restoring Control, Inspiring Success

Healing Trauma
The T.R.A.U.M.A. Framework

R - reintegrate survivors into loving and supportive environment

- Reconnecting individuals to a loving and nurturing family

- Engaging in activities that re-establish individual mastery and goals-directed actions

- Appropriately utilising beneficial social supports; e.g. alcohol/drug treatment programme, day/inpatient treatment, hospitalisation to detoxify, eating disorder control centre, suicidality containment intervention, etc.

MindBody Breakthrough
Restoring Control, Inspiring Success

Healing Trauma
The T.R.A.U.M.A. Framework

A - accelerate the brain's healing process

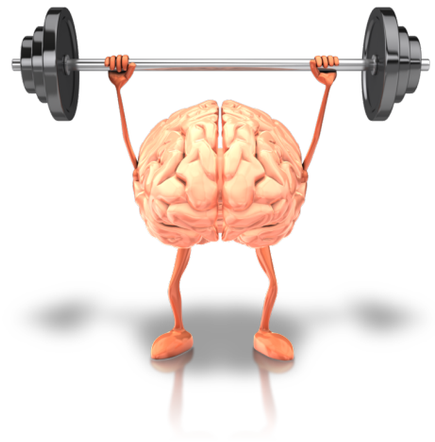
- Extreme emotional arousal of trauma depletes brain reserves

- Traumatic symptoms accelerate the ageing process of the brain

MindBody Breakthrough
Restoring Control, Inspiring Success

Accelerating the brain's healing process

- Regular exercise (aerobic and anaerobic) (Carek PJ et al.,2011)
- Healthy waist to height ratio (WtHR): The brain functions at its best when your waist size in inches is less than or equal to half your height
  Mazza E et al., 2017: Wiltink J et al., 2013



- Regular exposure to anti-inflammatory scents, such as lavender, chamomile, frankincense can improve brain resilience
  (Setzer, W.N., 2009); Ghiasi, M. et al. 2012; Perry, R., Terry, R., Watson, L,.K., & Ernst, E., 2013)
- 7-8 hours of sleep daily if possible Paula Alhola et al., 2007;
  Kripke DF, et al., 2002)
- Regular massage sessions and other somatic therapies
  (Tiffany M. Field et al., 2011)
- Regular breathing and meditation exercises (Saeed S.A et al. (2010)
- Community and connections (Oscar Ybarra et al., 2008)

MindBody Breakthrough
Restoring Control, Inspiring Success

Accelerating the brain's healing process

- Identify your passion and purpose (Musumari P.M, et al. 2018)
- Practise gratitude and appreciation daily (Strinnholm S. et al., 2019)
- Surround yourself with positive people (Arewasikporn A et al., 2019)
- Engage in acts of kindness (Jennifer, L. Trew & Lynn E. Alden, 2015; Hochheiser, J., Lundin, N.B., Lysaker, P.H., 2020)

- Reduce alcohol consumption, excessive caffeine intake, and quit smoking (Espinosa Jovel C.A et al.,2017; Fluharty M et al., 2017)
- A balanced diet of high-quality proteins, healthy fats, and fewer carbohydrates and sugar will help balance the brain and mood (Bruggink, S.M et al.,2019)
- Essential brain health supplements include: Omega 3 fatty acids, (Dagnino-Subiabre A. 2019) magnesium, B complex vitamins, vitamin D, vitamin C (Cinta Valls-Pedret et al., 2015)

MindBody Breakthrough
Restoring Control, Inspiring Success

Session 4

The T.R.A.U.M.A. Framework for Healing Trauma

MindBody Breakthrough
Restoring Control, Inspiring Success

Healing Trauma
The T.R.A.U.M.A. Framework

U - untangle the nervous system from the immobility response

Trauma is both psychological and biological. The mind, body and nervous system are all affected.

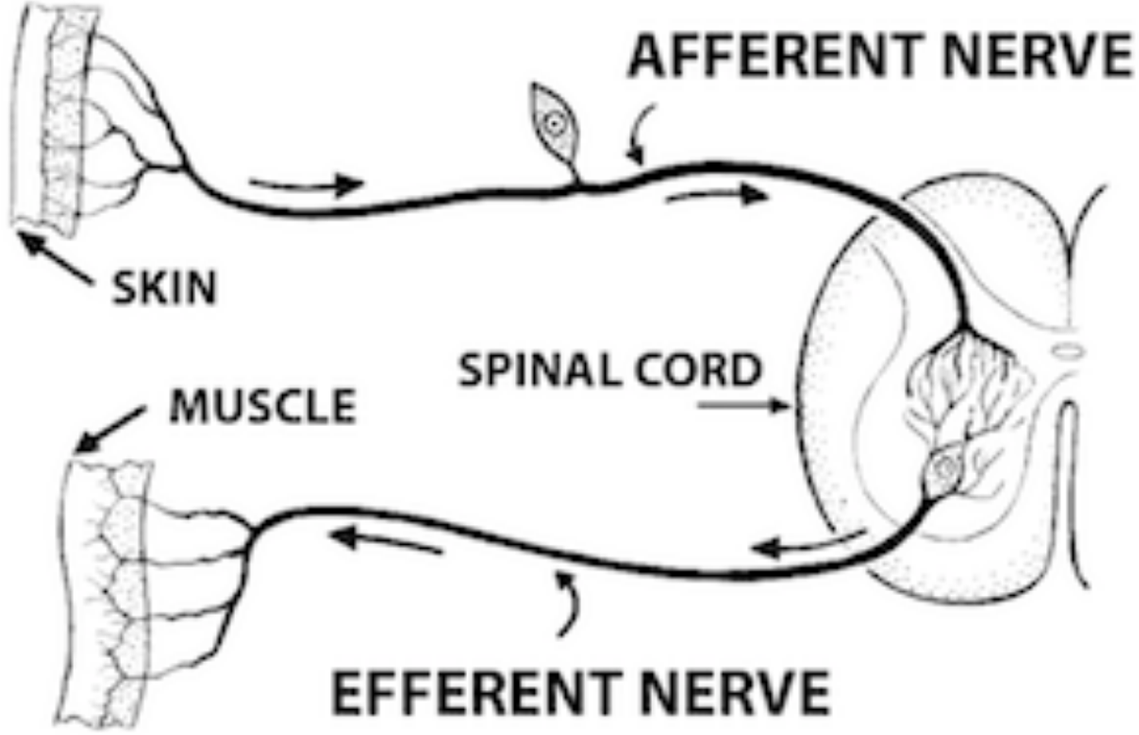
The vehement emotions of trauma often lock the nervous system into a frozen and immobility state of adaptation

In healing trauma, the frozen nervous system must be untangled and returned to equilibrium. Also, the fragmented and dissociated ego states must be reintegrated into a unitary whole.

MindBody Breakthrough
Restoring Control, Inspiring Success

Somatic Re-negotiation Exercises

Developed by Peter A. Levine, PH.D.



MindBody Breakthrough
Restoring Control, Inspiring Success

U - untangle the nervous system from the immobility response

1. Tracking Exercise

This is about attuning to our body sensations (feelings, thoughts, beliefs, images) in order to move out of the immobility and frozen state

This is not a dissociative state but of self awareness, becoming an observer of our internal landscape of feelings and sensations

Tracking exercises gradually unshift a sense of frozenness, numbness and collapse and move us into a state of flexibility and flow

Tracking helps us find our instinctual ability to move through trauma by learning to shift through contrasting polarities of sensations

U - untangle the nervous system from the immobility response

2. Pendulating Exercise

This is the shifting between the nervous system opposing polarities (negative and positive sensations) in order to return to its dynamic equilibrium

Pendulating is the ability to move rhythmically between the surviving state and reviving state without getting stuck in survival

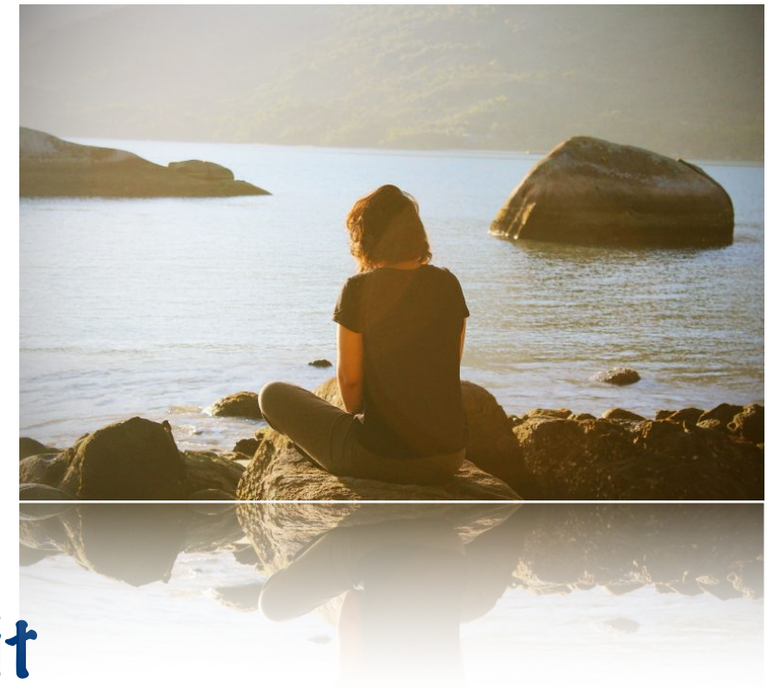
In this way, the NS starts to get unstuck, transforming trauma in the process.

The positive polarity (sensation) is used as a resource against the negative emotions of the negative polarity

MindBody Breakthrough
Restoring Control, Inspiring Success

U - untangle the nervous system from the immobility response

3. Resourcing Exercise



- This is about finding a mental representation of strength and empowerment to serve as a resource against negative emotional feelings of trauma

- Resourcing enables us to eventually confront the core of our traumatic experience without re-living it

- Whenever you're stuck, pendulate your awareness to a pre-determined resource of strength and resilience (e.g. a person of positive influence, place in nature, animal, spiritual figure, etc.)

- The real resource is the ability to move back and forth between opposing polarities of emotions and sensations

- Daily resourcing exercise gradually transforms the traumatic fixated state by reprogramming the subconscious for free movement of energy. It gives us the belief that change is possible

MindBody Breakthrough
Restoring Control, Inspiring Success

U - untangle the nervous system from the immobility response

4. Resiliency Exercise

- This is a measure of how much we can bend without breaking
- Trauma deactivates our innate resiliency as a result of the overwhelming sense of brokenness that we feel. Resiliency exercise helps us build back our strength and bouncing back energy
- Identifying with a tree that is deeply rooted in spite of the storms is an essential metaphor for renegotiating resiliency in trauma. The tree bends and swerves but does not break under pressure from the storms
- Using calming upbeat music, stay grounded on your feet and swerve back and forth. You can also do slight jumping movement if possible and notice what happens in your legs as you leap and reconnect to earth
- Feel the freedom of your flexibility, leaping and then returning to the earth well grounded and empowered

MindBody Breakthrough
Restoring Control, Inspiring Success

U - untangle the nervous system from the immobility response

5. Repairing Your Natural Boldness (Aggression) Exercise

- Natural boldness is lost in trauma as a result of the failure of the fight/ flight nervous system

- Reconnecting back to our natural boldness is an important part of renegotiating trauma. It helps us neutralise the sense of collapse and immobility

- A common metaphor for regaining natural boldness is to identify yourself as part of a herd of elk being confronted by a mountain lion. Standing your ground together and unleashing your natural aggression, the lion then backs off

U - untangle the nervous system from the immobility response

6. Repairing Your Running Response Exercise

- This is the ability to run or retreat when needed without freezing or entering into the immobility state

- Right balancing of the fight-flight responses is very crucial to the normal functioning of the nervous system

- The running response enables us to discharge the survival energy mobilised for our survival

- Now imagine that the mountain lion returns and catches the herd of elk off guard and starts to chase the weaker group up the mountain (you are in this group). Imagine the fear, and the chaos this chasing entails. Eventually, imagine that all of you escape to the mountain and the mountain lion turns back. You possess a right to retrieve without freezing. Imagine this exercise regularly.

MindBody Breakthrough
Restoring Control, Inspiring Success

U - untangle the nervous system from the immobility response

7. Orienting Response Exercise

- This is the ability to be in a present moment and restful state, while at the same time at alert against any potential danger that may arise
- In trauma, we lose our orienting response and become hypervigilant towards sources of threats. We start to see threats where they do not exist
- Orienting is about enjoying the present moment while also watching out for any potential threat or danger
- Practise orienting daily by becoming conscious of your environment. Feel a sense of groundedness while calmly observing sources of escape in case of any threat
- Now I am aware of my car, the sunshine, my body, my breathing and my groundedness. I feel alive, centred and well resourced

MindBody Breakthrough
Restoring Control, Inspiring Success

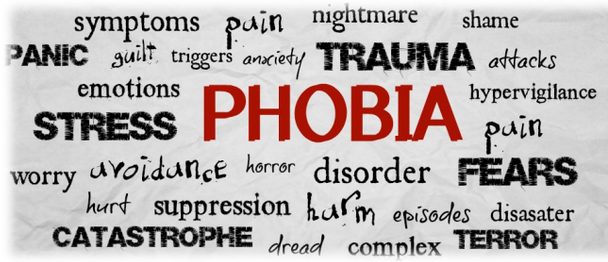
Session 5

The T.R.A.U.M.A. Framework for Healing Trauma

MindBody Breakthrough
Restoring Control, Inspiring Success

Healing Trauma
The T.R.A.U.M.A. Framework

M - metabolising memories of trauma: integrating talk therapy



- In metabolising memories of trauma, the goal of therapy is to help the traumatised individuals reintegrate the trauma memories into personal narrative without getting re-traumatised in the process
- In this phase, survivor fully reconstructs the traumatic memories verbally, integrating all related bodily sensations (visual, olfactory, kinesthetics, auditory, affective, gustatory (taste)).
- Survivors must recite not just what happened but also feel the intense emotional feelings that are attached to each disclosure.
- This phase can be enriched through different modalities of therapy, including:

*Exposure therapy (CBT)
*EMDR -Eye movement desensitisation and reprocessing
*Play therapy
*Art therapy
*Hypnotherapy
*Psychotherapy
*Counselling
*Occupational therapy
*Internal family system
*And many other modalities

MindBody Breakthrough
Restoring Control, Inspiring Success

Healing Trauma
The T.R.A.U.M.A. Framework

A - attuning to life and creating future positive intentions

- This involves the resolution to making the most of each day, developing a new self-ideal and setting future positive goals
- Set at least 5 goals for the future that include self-growth and using your past experiences to help others

- Starting with 'I' or 'I am', write a short positive affirmations paragraph of your new self-ideal
- In addition, write a few 'I refuse...' statements (e.g, I refuse to identify with my inner critics to toxically shame myself)

- Read your affirmations aloud daily and also use daily meditation to ingrain them into the subconscious blueprint

MindBody Breakthrough
Restoring Control, Inspiring Success

Q&A Session

MindBody Breakthrough
Restoring Control, Inspiring Success

Online Recovery Courses & Materials

Please Visit:
www.mindbodybreakthrough.net

MindBody Breakthrough
Restoring Control, Inspiring Success

MindBody Breakthrough
Well-Being & Motivational Resources

MindBody Breakthrough
Restoring Control, Inspiring Success

Keep in Touch

Facebook/Instagram: mindbody breakthrough

Join our Mental Health Discussion Group on our Facebook page (Mindbody breakthrough)

- Twitter: waleoladipo1 / mindbodybreakthrough

For in-house seminar/general enquiries, please email: admin@mindbodybreakthrough.net

Join the MindBody Breakthrough Network

Youtube Channel: search Wale Oladipo to access meditation clips

CERTIFICATE

OF ATTENDANCE

This certifies that

has successfully completed seven hours of CPD on

Treating Intrusive Thoughts and the Inner Critical Voice

Accredited CPD Course by the NCS

MindBody Breakthrough
Restoring Control, Inspiring Success

5th March, 2016	*Wale Oladipo*
DATE	COURSE TUTOR

MindBody Breakthrough
Restoring Control, Inspiring Success

Thanks for attending!

MindBody Breakthrough
Restoring Control, Inspiring Success