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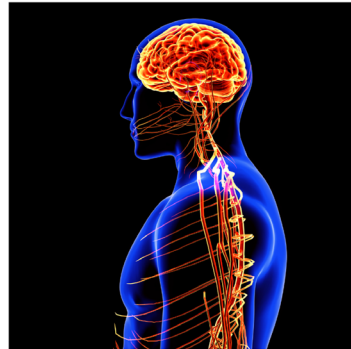
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PowerPoint handouts

Trauma and the Body: Dissociation and Somatisation online training

SESSION 1

- Trauma impacts our bodies!
- It is a supremely physical phenomenon
- Trauma pushes us beyond our normal coping capacities – something that we cannot process or deal with



SESSION 1

- Bessel van der Kolk's definition of trauma: 'an inescapably stressful event that overwhelms people's existing coping mechanisms'
- American Psychological Association: traumatic stress involves 'intense fear, helplessness, or horror'



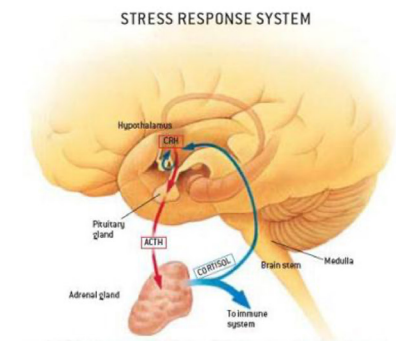
SESSION 1

- Trauma is **life-threatening powerlessness**
- **Powerlessness** is the very essence of trauma
- **Powerlessness** is both psychological and physical – and needs to be tackled on both levels if we are to recover



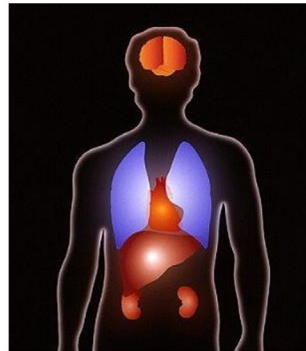
SESSION 1

- Traumatic stress kick-starts a series of physical responses:
 - Good for us short-term
 - Bad for us long-term
- Our focus as survivors can be on the wrong thing



SESSION 1

- Traumatic stress leads to a range of physical issues:
 - in the brain
 - in the major organs of the body
 - in the immune system
 - in the stress response system itself



SESSION 1

- Childhood trauma profoundly affects the way the brain organises and processes its experience
- Our brains become geared towards **sensing and responding to threat**



SESSION 1

- The trauma worldview tells us:
 - that the world is not safe
 - that we are powerless to act effectively in the face of threat
 - that recovery is not really possible



SESSION 1

- Recovery is possible!
- The impact of trauma is physical as well as psychological
- Unresolved trauma is the greatest threat to my physical health

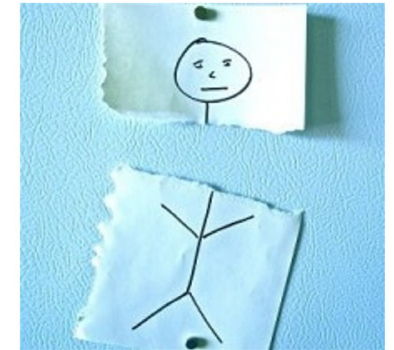


SESSION 1

- 7.7x more likely to suffer a stroke (Brass & Page, 1996)
- 5x more likely to die after a heart attack (Musselman et al, 1998; Rozanski et al, 1999)
- 62% increased risk of heart disease (Rich-Edwards et al, 2011)
- 2x more likely to develop chronic fatigue syndrome (Fuller-Thomson & Sulman, 2011)
- 65% higher risk of fibromyalgia (Fuller-Thomson & Sulman, 2011)
- 4.7x more likely to develop irritable bowel syndrome (Surdrea-Blaga, Baban & Dmuitrascu, 2012)
- 49% increased risk of cancer in adulthood (Fuller-Thomson & Brennenstuhl, 2009)
- 85% failure rate of back surgery for abuse survivors (as opposed to 5% for non-abused patients) (Schofferman et al, 1992)

SESSION 1

- Is this a physical issue or a psychological one?
- Do you have a physical illness or a mental one?
- Is sleep an issue for a therapist or a GP?



SESSION 1

- Aristotle's 'lunatics'
- Mental disorders were thought of as 'supernatural'
- Fine line between sainthood and demonisation!



SESSION 1



SESSION 1

- Chaining patients was widespread until 1793
= 'humane treatment approaches'
- Mentally ill people were considered to be dangerous, criminal and subhuman



SESSION 1

- Descartes: **cogito ergo sum**
- 'Turf deal' with the Pope:
 - Mind, soul, emotions belong to the church
 - Science got the bodies!



SESSION 1

- WW1: 'shell shock' = shot for cowardice
- Difficulties in obtaining welfare benefits
- 'Lazy', 'cowardly', 'weak'
- Symptoms of trauma affect people who have been traumatised!



SESSION 1



What is your experience of mental health attitudes?

In what ways do you see the mind-body split in your professional work?

Why do you think that trauma leads to such increased risk for major disease?

SESSION 2

- Getting ill on holiday
- ‘Mind-body’
- Many trauma survivors suffer many physical complaints
- ‘Trauma tummy!’



SESSION 2

- Shame around the body
- Ambivalent: hate it, but ‘Please don’t notice it!’
- Dissociate from it: ‘I don’t have any feet!’
- We see our bodies as the source of the abuse/pain



SESSION 2

- I had to put the blame where it belonged and take it off my body
- I had to stop treating my body like it was the problem
- We need to treat our bodies differently from the way they have been treated



SESSION 2

- Avoidance of the body / self-neglect
- Many trauma survivors find it difficult to access healthcare
- Our bodies don’t ‘work’ the way they should

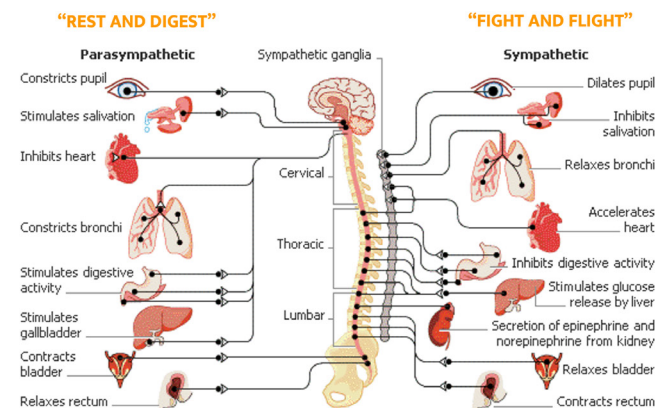


SESSION 2

- Trauma is a threat, real or perceived, to our bodily integrity
- ‘Life-threatening powerlessness’
- We are wired to survive threat by utilising our autonomic nervous system



SESSION 2



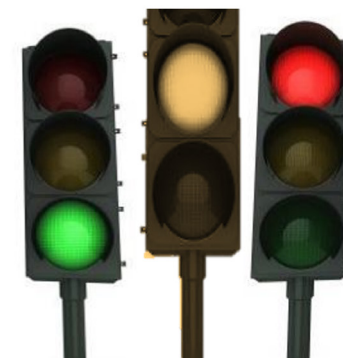
SESSION 2

- They are **complementary** and help to balance the body
- The sympathetic nervous system is like the accelerator
- The parasympathetic nervous system is like the brake



SESSION 2

- **Green** (parasympathetic, myelinated)
 - Safe environment
 - **Social engagement**
 - Feed and breed / rest and digest
- **Amber** (sympathetic)
 - Threat in the environment
 - **Mobilisation**
 - Fight and flight
- **Red** (parasympathetic, non-myelinated)
 - Overwhelming threat
 - **Immobilisation**
 - Freeze



SESSION 2

- **Red** and **amber** states are toxic to our health
- 'Recovery' can be seen as retraining the body/mind to live principally in the **green** zone



SESSION 2

- Attack or threat
- Instant response
- Amygdala responds within around 7 milliseconds
- 'Smoke alarm' sets off an alarm to trigger the sympathetic nervous system



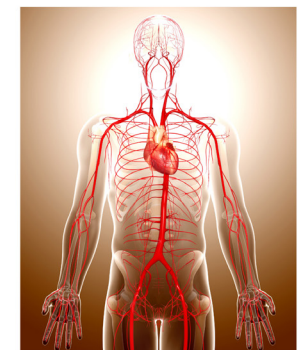
SESSION 2

- Signal to secrete neurotransmitter noradrenaline in the brain
 - Supercharges part of the brain
- Hypothalamus sends a message to the pituitary gland
 - This sends a message to the adrenal medulla
 - This releases adrenaline and noradrenaline into the bloodstream



SESSION 2

- Effects of adrenaline:
 - Heart beats faster and stronger
 - Blood vessels constrict to raise blood pressure
 - Blood supply shifts to brain and muscles



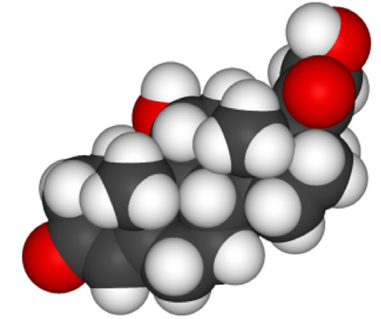
SESSION 2

- Other effects:
 - Spleen releases more red blood cells
 - Liver converts energy stores to glucose
 - Breathing speeds up and becomes heavier
 - Pupils dilate



SESSION 2

- Cortisol prepares us for an extended stress
- Complements many of the responses of adrenaline but has some extra impacts:
 - Increases cholesterol
 - Shunts energy away from the reproductive system
 - Affects the immune system



SESSION 2

- Suppresses the inflammatory response
- Synthetic cortisol = hydrocortisone cream
- Anti-inflammatory agent for insect bites, itches, rashes



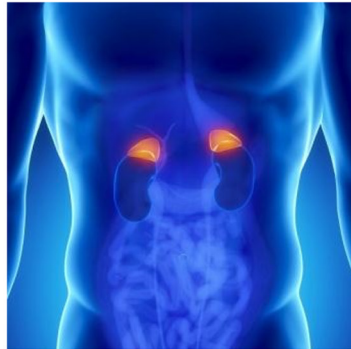
SESSION 2

- Adrenaline (fast response) is deactivated within about 5 minutes
- Cortisol (slow response) takes about 2 hours to clear from the bloodstream



SESSION 2

- Chronic amber state of mobilisation puts us at risk for disease
- ‘Corrosive cortisol’
- Made in our adrenal glands on top of our kidneys
- Primary function is to metabolise energy



SESSION 2

- Weight gain – increases blood sugar levels
 - ‘Catabolic’ effect on muscles
 - Increases appetite and cravings
 - Burns peripheral (good) fat but lays down visceral (bad) fat
- Keeps blood sugar levels high
 - Insulin resistance



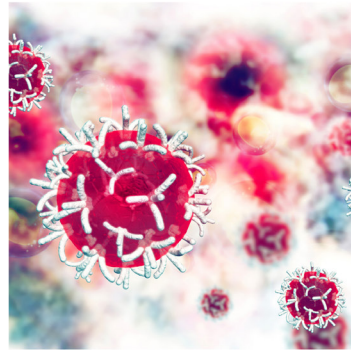
SESSION 2

- Heart disease
- Diet less of a contributing factor than stress
- Cortisol raises:
 - Blood pressure
 - Cholesterol
- Causes damage to blood vessels
- Chronic stress raises risk



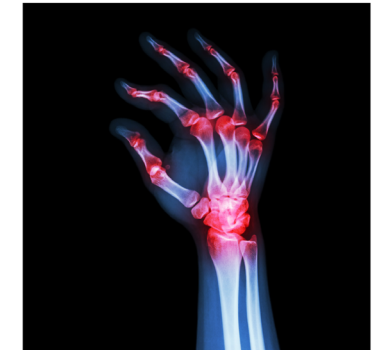
SESSION 2

- Cancer
- 49% increased risk for trauma survivors
- Increased lifestyle risks
- Direct impacts as well
 - Hormone imbalances
 - Immune system

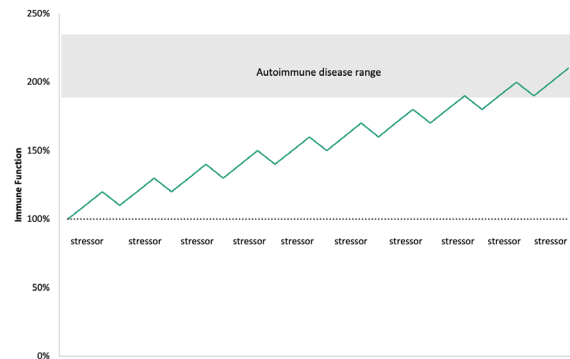


SESSION 2

- Generally speaking, the immune system is suppressed during stress
- But there is an initial burst of super-immunity
- Sometimes it doesn't fall back to baseline
- Numerous 'transient stressors' can ratchet the baseline higher over time, leading to autoimmune disorders



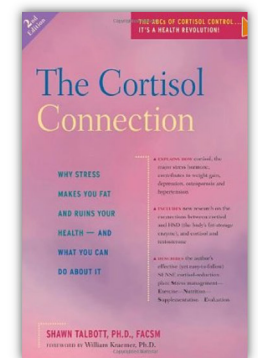
SESSION 2



A schematic representation of how repeated stress increases the risk of autoimmune disease (Sapolsky, 2004)

SESSION 2

- Trauma seems to set the stage for a number of physical processes to go wrong
- Gabor Maté: 'When the Body Says No'
- Shawn Talbott: 'The Cortisol Connection'



Metabolic effect (cortisol-induced)	Chronic health condition
Increased appetite, accelerated muscle catabolism (breakdown), suppressed fat oxidation, enhanced fat storage	Obesity
Elevated cholesterol and triglyceride levels	Heart disease
Elevated blood pressure	Heart disease
Alterations in brain neurochemistry (involving dopamine and serotonin)	Depression/anxiety
Physical atrophy (shrinkage) of brain cells	Alzheimer's disease
Insulin resistance and elevated blood-sugar levels	Diabetes
Accelerated bone resorption (breakdown)	Osteoporosis
Reduced levels of testosterone and oestrogen	Suppressed libido (reduced sex drive)
Suppression of immune-cell number and activity	Frequent cold/flu/infection
Reduced synthesis of brain neurotransmitters	Memory/concentration problems

Source: The Cortisol Connection by Shawn Talbott

SESSION 2



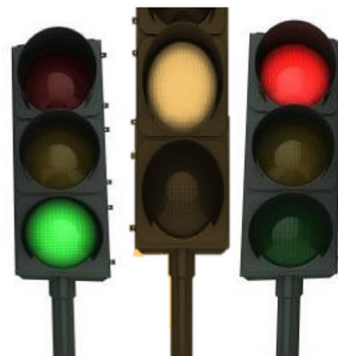
How can you safely help trauma survivors access healthcare services?

Using the traffic light analogy, which way do you (or your clients) tend to respond to stress – by going into amber or red?

Have you previously seen disease processes such as cancer, diabetes and heart disease as being connected to trauma?

SESSION 3

- **Green** (parasympathetic, myelinated)
 - Safe environment
 - **Social engagement**
 - Feed and breed / rest and digest
- **Amber** (sympathetic)
 - Threat in the environment
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 - Freeze



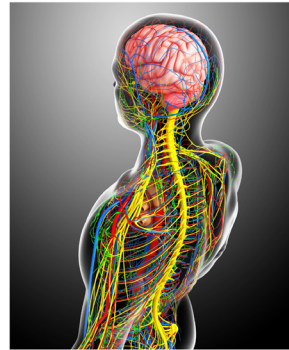
SESSION 3

- Fight-and-flight response makes sense!
- I became **physiologically habituated** to switching straight to a freeze response (a dissociative response)
- Freezing is a survival response



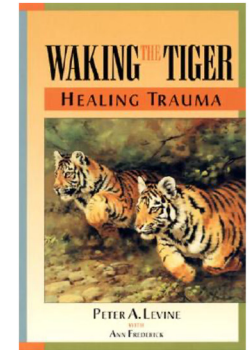
SESSION 3

- Parasympathetic nervous system kicks in
- Unmyelinated branch of the vagus nerve
- Flood of endogenous opioids ('homemade heroin')
- Pain response is numbed
- Freeze is to the body what dissociation is to the mind
- Attention is narrowed
- 'Depersonalisation' and 'derealisation'



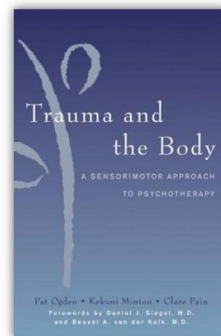
SESSION 3

- Peter Levine proposed that PTSD etc is a result of not discharging the freeze response
- Animals discharge the freeze response with violent trembling or shaking



SESSION 3

- Recovery is by 'shaking out' the trauma
- Breathing re-regulates the ANS and stimulates the vagus nerve
- 'Completing' the actions of fight and flight that the body wanted to do at the time



SESSION 3

- We have to teach **all** parts of our brain (including our primitive back brain) that we are no longer powerless
- Study by Amy Cuddy and Dana Carney on power posing
- Pierre Janet: 'acts of triumph'
- We freeze in response to **all** kinds of stress, not just traumatic stress



SESSION 3



At a time when you have felt helpless in the past, what is that your body would have done if it could have done?

What 'acts of triumph' are there in your life?

In what ways have you 'forgotten' how to engage active responses in your life?

SESSION 4

- Martin Seligman: 'learned helplessness'
- 'Inescapable shock'
- The more shocks the animal receives, the less often it tries to escape
- It loses the ability to **act** in the face of stress or trauma
- It remains in 'freeze'



SESSION 4

- We can develop a conditioned response and 'freeze'
- We 'freeze' even if the 'barriers' have been removed
- If we 'freeze' (dissociate) when we're stressed, that's a dissociative disorder



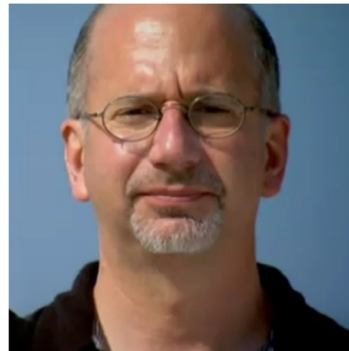
SESSION 4

- Powerlessness ('learned helplessness') is our core reaction to trauma
- It is frustrating to people around us and can deeply impact our relationships
- We mustn't make friends with our barrier!
- We need to see that **reality is not always what we think it is**



SESSION 4

- Faa or Baa?
- 'Top down processing' and 'bottom up processing'
- (Pat Ogden, 'Trauma and the Body' and Daniel Siegel, 'Mindsight')



SESSION 4

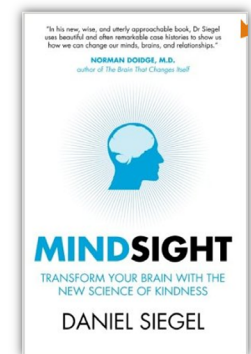
- Mindfulness is a key way to begin to 'unfreeze' our brains
- Mindfulness is directed, focused attention
- A raft of studies show the health benefits of mindfulness
- It also reduces cortisol



Dissociation	Mindfulness
I'm not here (derealisation)	I am here (presentification)
I'm not me (depersonalisation)	I am me (personification)
Drifting off	Being grounded
Attention elsewhere (often the there-and-then)	Attention on the here-and-now

SESSION 4

- Mindfulness engages the media prefrontal cortex (front middle brain)
- Daniel Siegel: 'Mindsight'
- Mindfulness enhances **neuroplasticity**
- It helps our 'noticing' brain realise that the barrier is no longer there
- 'Headspace' app: www.headspace.com



SESSION 4

- Automatic reaction to trauma: fight, flight, freeze
- The more trauma, the more likely we are to freeze
- A conditioned **bodily** response
- We can develop learned helplessness
- We need to recognise powerlessness
- We need to reassess: 'Baa' or 'Faa'?



SESSION 4



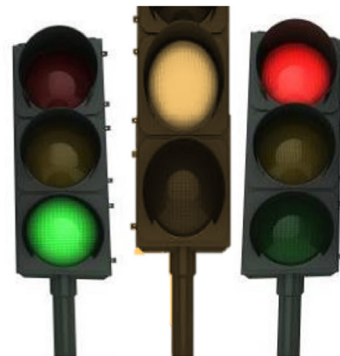
What did you think of the 'Faa Baa' clip? Could you override what your eyes were telling you?

What barriers does your brain still 'see' that might not be there?

What role does learned helplessness play in your life?

SESSION 5

- **Green:**
 - Feed and breed / rest and digest
 - No associated health risks
- **Amber:**
 - Fight and flight
 - Health risks from **too much** cortisol
- **Red:**
 - Freeze
 - Health risks from **too little** cortisol



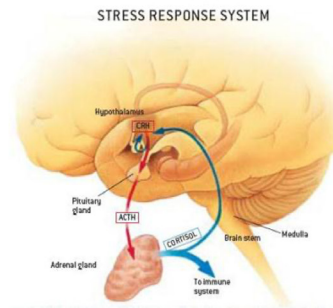
SESSION 5

- Women who have been physically abused in childhood:
 - Twice the odds of developing CFS
 - 65% higher odds of developing fibromyalgia
- 3-8-fold increased risk depending on the trauma



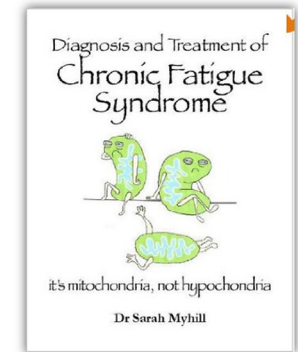
SESSION 5

- A disturbance of the HPA axis:
 - Hypothalamus
 - Pituitary
 - Adrenal
- Disturbed cortisol levels
- Chronic over-activation of fight-or-flight
- Exhaustion of amber state leading to a red state of immobilisation



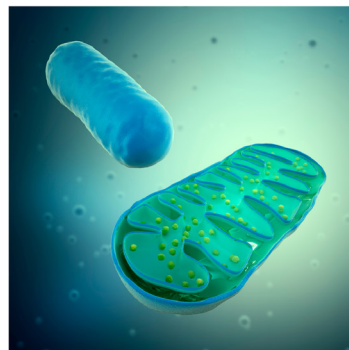
SESSION 5

- Dr Sarah Myhill:
‘Diagnosis and Treatment of Chronic Fatigue Syndrome’
- www.drmyhill.co.uk
- CFS/ME caused by mitochondrial failure



SESSION 5

- Mitochondria are the ‘engines’ of cells
- The ‘fuel’ for cells is ATP: adenosine triphosphate
- Adenosine molecule with 3 phosphate ions
- To release energy in the cell, a phosphate ion is released
- ATP becomes ADP (adenosine diphosphate = 2 phosphate ions)



SESSION 5

- ADP (two ions) can usually be recycled back up to ATP (three ions)
- This recycling doesn't happen (or not quickly enough) in CFS/ME
- ADP degrades to unrecyclable AMP (one ion)
- Need more B-vitamins, Co-Q10, magnesium
- One of the signs of lack of ATP is lactic acid ('stich') – causes pain



SESSION 5

- In severe CFS/ME the body's supplies of ATP are used up just existing
- Dr Arnold Peckerman: CFS/ME is effectively heart failure
- The heart muscles have insufficient ATP leading to low cardiac output
- CFS/ME = 'borderline heart and organ failure' (Dr Sarah Myhill)



SESSION 5

- Conceptualising CFS/ME as a red alert state of exhaustion
- The key for me has been resolving the underlying trauma
- With unresolved trauma, the brain hasn't registered that the trauma is over
- So the autonomic nervous system keeps sounding the alarm



SESSION 5



To what extent do you believe that recovery from trauma is physical as well as psychological?

How might you need to adapt the services you provide to enable clients with chronic health conditions to access trauma therapy?

How can you help the survivor's back brain begin to recognise that the trauma is over so that the alarm stops sounding?

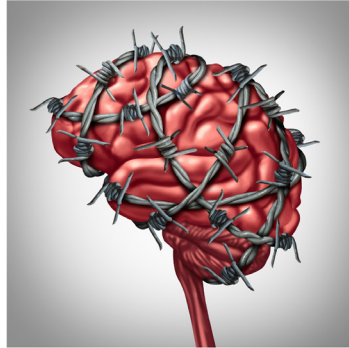
SESSION 6

- 'Grey' pain
- 'Electric' pain
- Chronic pelvic pain
- Alloydynia (non-painful things are painful)
- Hyperalgesia (painful things are extra-painful)
- Analgesia (painful things aren't painful)
- Over-sensitive empathy response
- Lactic acid
- Joint pain / fibromyalgic inflammation



SESSION 6

- More powerless
- Feels like punishment
- Retriggers old memories
- Intensely lonely experience
- Vicious cycle
- But my pain levels have improved probably by around 70%



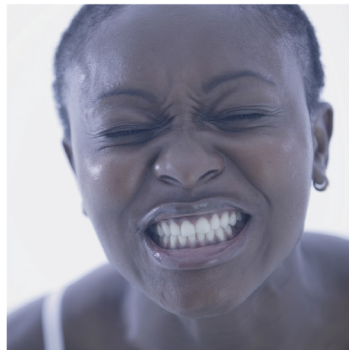
SESSION 6

- Purpose of pain:
 - To signal injury or disease
 - Memories of pain help us avoid danger
 - Forces us to rest



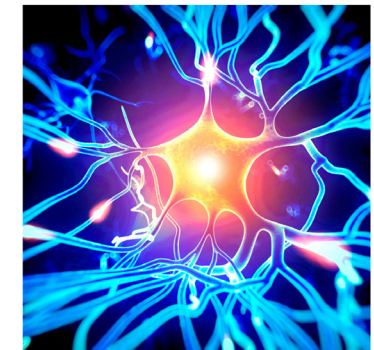
SESSION 6

- Pain is not always proportional to the damage
 - Massive damage, little pain
 - Small damage, lots of pain
- Tissue damage heals in 3-6 months, but chronic pain continues beyond this



SESSION 6

- Pain is affected by:
 - Meaning
 - Cultural background
 - Anticipation
 - Control



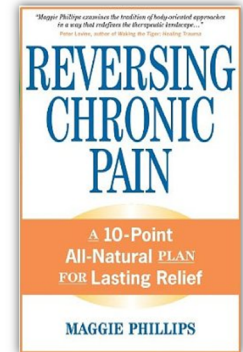
Melzack and Wall, 'The Challenge of Pain':

'Pain is a unified stream of experience that is generated by the brain and is influenced by all of its cognitive functions such as memories of prior experiences and the meaning of the current situation.'

'... pain experience must not be confused with physical injury or disease. The perceptual qualities of pain are produced by built-in neural networks in the brain which may be activated by sensory inputs but can also be generated spontaneously.'

Maggie Phillips, 'Reversing Chronic Pain':

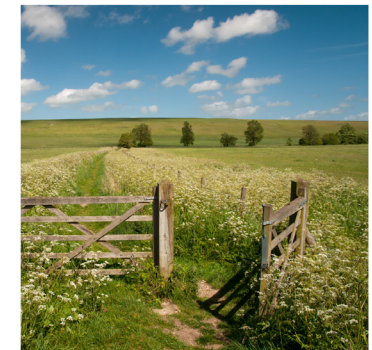
'Pain is not simply a function of the amount of bodily damage alone. Rather, the amount and quality of pain we feel are also determined by our previous experiences and how well we remember them, by our ability to understand the cause of the pain and to grasp its consequences.'



- My perception of pain is affected by:
 - My memories
 - My expectations
 - My sense of threat
 - The meaning I've attributed to it
 - My mood and other psychological factors
 - 'Kindling'



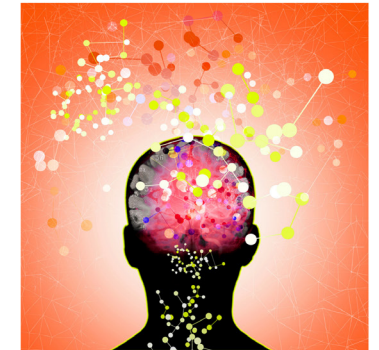
- Melzack & Wall's theory of a pain 'gate':
 - Some things can 'open' the gate
 - Some things can 'close' the gate



What opens the gate (increases pain)	What closes the gate (decreases pain)
Lack of sleep or disrupted sleep	Good rest and sleep
Stress	Relaxation and self-treatment
Anxiety and fear about pain levels	Confidence in using tools to block or interrupt pain
Depression	Increased serotonin
Deficit of endorphins	Increased endorphins through exercise and other experiences
Nutrients that increase inflammation, e.g. processed foods, caffeine etc	Nutrients that decrease inflammation, eg those containing omega-3, magnesium and B-vitamins
Repeated trauma to the injury area	Techniques to relieve pain areas; avoidance of unnecessary surgery or invasive medical procedures
Boredom, inactivity, too much activity	Increased activity in daily activities; appropriate activity levels

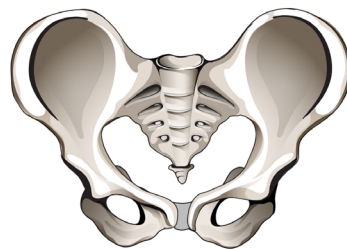
SESSION 7

- You don't need to have a body to feel a body
- You don't need to have tissue damage to feel pain
- All pain exists in the brain



SESSION 7

- Three pathways for my chronic pelvic pain:
 - 'Misfiring' of the pain system
 - Pain as somatic memory
 - Somatisation



SESSION 7

- Somatisation is 'a tendency to experience and communicate somatic distress in response to psychosocial stress' (Lipowski)
- An ego-defence: the unconscious channelling of repressed emotions into somatic symptoms



SESSION 7



In what ways does your body communicate your emotions?

If a part of your body (that is unwell or is in pain) could speak, what might it say to you?

In what ways do you listen to your body?

SESSION 8

- Is traumatic amnesia for real?
- 'Denial of the syndrome is part of the syndrome' and 'denial and dissociation are two sides of the same coin'
- The more distressing an event, the more likely it is for amnesia to occur



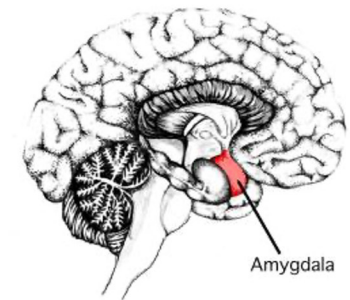
SESSION 8

- By 'memory' we tend to mean 'explicit' memory – episodes and facts
- There are multiple memory systems in multiple parts of the brain
- 'Implicit' and 'explicit' memory



SESSION 8

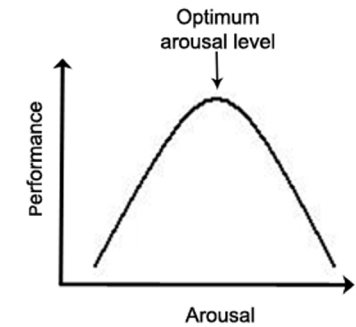
- The hippocampus mediates explicit memory (episodic, narrative, semantic)
- The amygdala mediates implicit memory (procedural learning, conditional)



	Explicit (declarative)	Implicit (non-declarative)
Process	conscious	unconscious
Information types	cognitive facts mind verbal/semantic descriptions of operations and procedures	emotional conditioning body sensory automatic skills and procedures
Mediating limbic structure	hippocampus	amygdala
Maturity	around 3 years	from birth
Activity during traumatic event	suppressed	activated
Language	constructs narrative	speechless

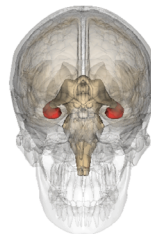
SESSION 8

- The amygdala never forgets, but the hippocampus does
- The hippocampus works on an 'inverse-U' basis
 - A bit of stress and it's enhanced
 - A lot of stress and it's shut down



SESSION 8

- Edouarde Clapere, a neurologist at the beginning of the 20th century
- His patient had a damaged hippocampus and couldn't form new 'explicit' memories
- But she had an implicit memory of his 'attack'!



SESSION 8

- Implicit memory – ‘body memories’ – warn us of danger
- In trauma, we are dominated by our survival-based back brains (amygdala) rather than our choosing, thinking front brains (hippocampus)
- Making the implicit explicit



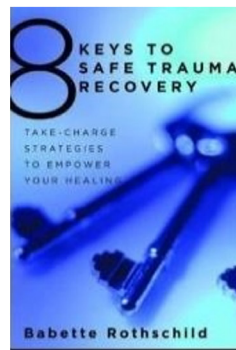
SESSION 8

- Traumatic events are stored weakly in explicit memory and strongly in implicit memory
- Flashbacks and triggers are clues and the ‘footprint’ of implicit memory
- We need to keep the hippocampus online when processing traumatic memory



SESSION 8

- The hippocampus is a ‘context stamp’
- Marks events (memories) as ‘over’, ‘past’
- We are in our ‘window of tolerance’ if we can both think and feel at the same time
- Babette Rothschild: ‘Eight Keys to Safe Trauma Recovery’



SESSION 8



Do you think you need to be able to remember the trauma (‘explicit memory’) in order to be able to recover from it? Why or why not?

Do you view triggers as negatives to be avoided, or as guides to what needs to be integrated?

How can you help a client stay within their ‘window of tolerance’ when working through traumatic memories?

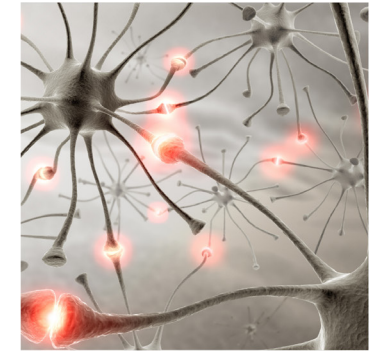
SESSION 9

- Moving forwards, we need to do some melting!
 - The freeze in our brains
 - The freeze in our bodies



SESSION 9

- Neurogenesis (new cell growth) has been found in the hippocampus
- Stimulated by three things:
 - Exercise (movement)
 - Novelty
 - SSRIs



SESSION 9

- Healing comes through getting back in touch with our bodies
- Dissociation is 'I'm not here, I'm not in my body'
- Grounding is getting back in our bodies



SESSION 9

- Successful trauma work includes:
 - Being 'here-and-now' present in your body
 - Using that as an anchor to 'time-travel' to the 'there-and-then'
 - Owning and feeling your experiences
 - Distinguishing 'Faa' and 'Baa'
 - Marking trauma memories as 'over'



- Powerlessness is normal, but unless we tackle it, everything else will seem impossible
- I refuse to be bowed by the enormity of our trauma
- I refuse to believe the 'myth of specialness'
- We mistake the 'bogeyman' as being 'out there'



Do you believe that we can recover from trauma?
To what extent? What is it dependent on?

What needs to be present in the therapeutic relationship to help the client overcome traumatic powerlessness?

What do you need to do differently (if anything) as a result of this course?