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Cwm Taf
University Health Board

**Cwm Taf University
Health Board –
Psychological Therapies
Department**

Introduction: How does trauma affect the mind and body?

Stabilisation Pack

Introduction: How does trauma affect the mind and body?

The previous section, 'What is trauma?' described some of the terrifying events which are referred to as traumas, and which can have a lasting effect on our mental health. This section describes the effects in more detail.

When people face a trauma, their physical and emotional survival and wellbeing are under threat, and they are overwhelmed by feelings of fear and terror. Our minds and bodies have evolved over thousands of years so that we can survive and protect ourselves from these dangers. The most common ways of coping are:

Fight – Our bodies automatically prepare to fight.

Flight - Our bodies automatically prepare to run away, by releasing adrenaline.

Freeze – When fight or flight are not an option, the body will freeze, rather like a rabbit in the headlights of a car.

Submission – People will try to appease, hide, not say anything or make themselves as insignificant as possible to survive the trauma and stop it happening.

Dissociation - This happens when people shut off from their feelings. They can sometimes feel as if they are outside their bodies and numb to their emotions. This is described in more detail in the section on 'Dissociation.'

Here is what some people have told us about how they coped with traumatic situations:

'My parents would fight when I was younger and sometimes they did this in front of me and my younger sister. They would really hurt each other and I would be afraid they would kill each other and us. I was so afraid I took my little sister and would hide in the wardrobe upstairs. I would stay very still until I couldn't hear anything else'. (Flight)



'When I was younger they came into my bedroom at night and sexually abused me. It was horrible and I hated it. I used to pretend I was on the ceiling looking down at what was happening as if it was happening to someone else and pretend it wasn't me'. (Dissociation)



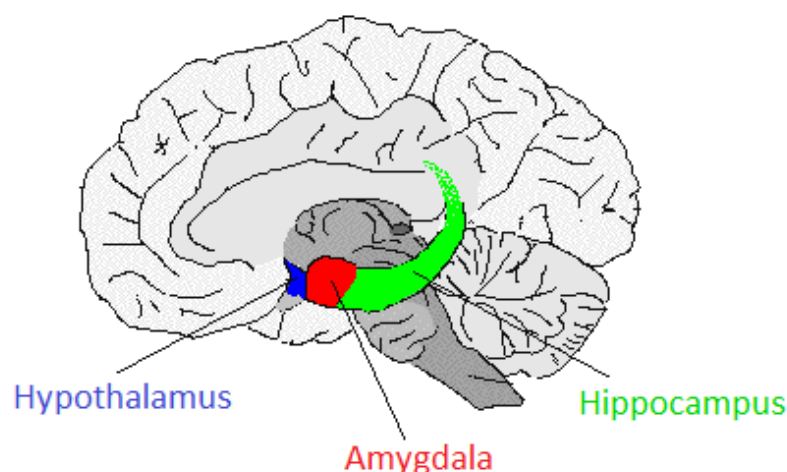
These responses are automatic and not always under our control. They are the brain's hardwired responses for survival. Some people are critical of how they coped during a traumatic event and feel they should have acted differently. They may even believe that they are to blame. For example, it is common for a person who is sexually assaulted to freeze, and be unable to fight back or run away. Remember, you did not choose the way you responded to your trauma. In fact, your brain and body went into an automatic reaction in order to help you survive.

How the brain processes trauma

It is useful to understand a bit about how the brain and body react to trauma. This will help you to understand your reactions, and blame yourself less.

The main areas of the brain that deal with threat are the thalamus, the amygdala, and hippocampus.

- The thalamus acts as a 'gatekeeper' to all new information reaching the brain. It assesses whether the information is threatening, and if it is, passes this message on to the amygdala.
- The amygdala is the brain's 'alarm centre'. If it believes there is a threat, it will make sure the body prepares itself to fight, flee, submit, freeze or dissociate by releasing stress hormones. Your body reacts by increasing your heart rate, using shallow breathing to take in more oxygen and be ready for action, tensing muscles ready to fight, racing thoughts so that you can make rapid decisions about danger, and so on.
- The hippocampus is a bit like a filing clerk. It checks out the amygdala's assessment of threat by comparing it with other memories of similar situations. If the hippocampus decides that there is not a threat, it can tell the amygdala to calm down. Otherwise, the brain and body will prepare to react.



In order to survive dangers like wild animals and so on, the brain and body had to evolve to respond very rapidly and immediately to threat, without you even thinking about it. Usually this works well and helps to protect us.

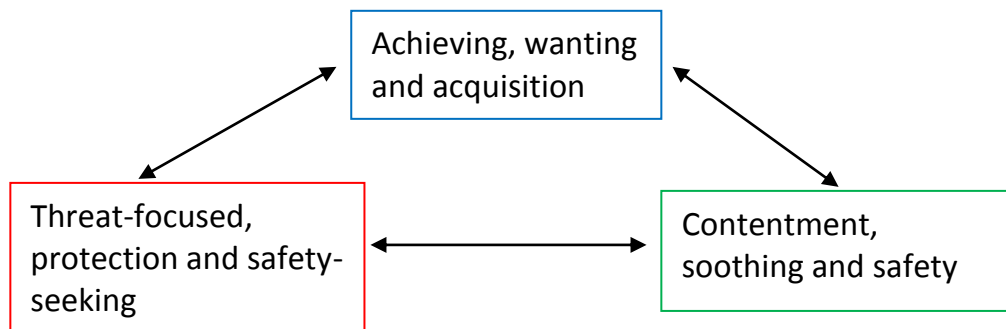
Unfortunately, in people who have experienced extreme or long-lasting trauma, the amygdala can become over-reactive. It has a 'better safe than sorry' rule which means that it sometimes reacts to small triggers as if they were serious dangers. In traumatised people, the amygdala becomes hyperalert to all sources of potential threat, even when there is no actual danger in the present.

Another problem is that trauma memories are processed in a different way and stored in a different part of the brain from ordinary memories. The hippocampus acts like a filing cabinet for storing memories. Usually, the hippocampus labels memories with dates and places, such as 'This happened 3 years ago, when I was out for a walk near my home.' But trauma memories are stored in the amygdala, and not filed away properly. This means the memory is confused, and associated with strong feelings such as fear or anger. It may jump into your mind at unexpected times. When a memory of the traumatic event is triggered, the amygdala treats it as if the event is happening right here and now, and as if you are in just as much danger in the present as you were in the past. Stress hormones are released, and you may feel terrified and hyperalert, or else frozen and numb.



Emotional regulation systems

We have 3 main systems for regulating – or keeping in balance – our emotions. So far, we have described the threat-focused/ protective system. Ideally, this is balanced by the contentment and soothing system, which helps us to calm our emotions after danger is over, and feel safe and close to others. We also have a ‘drive’ system which motivates us to act, achieve, pursue our goals, and so on.



We learn to keep these systems in balance partly through our early relationships. For example, when children are frightened, a loving parent will reassure, soothe and calm them again, and the threat system will then calm itself down. This teaches us to do the same to ourselves when we become adults. Traumatized children may not have learned to do this. But it is not too late – we can learn to be our own kind, soothing carers, and in this way we can get our emotions in better balance and overcome a too-active threat response. The section on ‘Compassion’ explains this in more detail.

Ways of coping –helpful and not so helpful

Traumatic experiences understandably leave people with many distressing feelings and painful memories. They may have intense and overwhelming emotional pain, which may come on quickly like a tidal wave. They will do whatever they can to reduce this distress, and sometimes this means using self destructive ways of coping.

On the next page are some coping strategies you may recognise, along with their advantages and disadvantages:-

| | How does it help? | Why is it harmful? |
|---|--|---|
| Using drugs or alcohol | Drugs and alcohol give a short buzz which distracts from sadness or anxiety. They numb or block out emotional distress. | Can lead to addiction, costs money, have health consequences, can make you more vulnerable to others taking advantage of you, can lead to work and relationship problems. |
| Harming the body e.g. by cutting or taking overdoses. | Produces adrenaline which can have a calming effect on body. Lets others know you are in distress and releases feelings. | Can lead to infection, scarring, shame and physical pain. Overdosing is risky. |
| Withdrawing from others and the world | Avoid possible pain and triggers to difficult feelings. | Feeling lonely and low in mood. Keeps you stuck. Existing not living. |
| Taking feelings out on others by verbal or physical aggression. | Aggression can make us feel powerful and in control. | Loss of relationships, risk of criminal record, feeling bad afterwards for hurting others. |
| Controlling eating – by eating too little, too much or bingeing. | May help to manage feelings or to comfort self | Physical health problems. Weight gain and weight loss. |
| Having unsafe or unprotected sex | Can give a sense of control and power in relationships, getting some of the attention and affection you missed out on when growing up. | Sexually transmitted diseases, unwanted pregnancy, being hurt by others, shame, rejection. |
| Avoiding pleasant activities or events as you do not think you deserve it. | Helps to avoid feeling guilty. | Missing out on fun, leading to feelings of loneliness or isolation. |
| Self blame | Blaming yourself may give you a sense of control about what happened. A way of protecting your family. | Feeling bad about yourself. Others less likely to take responsibility for their actions. Feeling helpless and hopeless. May stop you from doing something to change the situation. |
| Being hyper vigilant to potential sources of danger | Believing that you can stop all potential dangers. May help if there was no one else to protect you as a child. | Increases anxiety as you see danger in everything when it is not always there. Becoming paralysed by fear or wanting to run or fight. Can affect quality of life and stop you from making positive changes. |
| Dissociating, numbing and shutting off from feelings | Cutting off from what is happening or what we are feeling and remembering | Memory lapses are confusing. Missing out on good feelings as well as painful ones. |

It is not surprising that traumatised people turn to these ways of coping. Some of the strategies were essential at the time the events were happening, but they may not be helpful in the present. This manual is about helping you to develop more effective coping strategies, now that the original danger has gone. You may not be able to learn new coping methods very quickly, and you may still need to turn to self-harm or over-eating and so on for quite a while. However, with support and perseverance you can gradually replace these with other ways of looking after yourself and dealing with the effects of trauma.

Reading and Resources

Chapters 2 and 3 in Deborah Lee's book *'The Compassionate Mind Approach to Recovering from Trauma using Compassion focused therapy'* (London: Robinson 2012) have a good explanation of the brain and body's response to threat.

Strategies for dealing with the ways trauma affects the mind and body can be located in some of the other stabilisation booklets, including;

- 'Grounding'
- 'Distraction and Distancing'
- 'Soothing and Safety'
- 'Compassion'
- 'Mindfulness'
- 'Self Care'

Apps

Below are some apps that can be downloaded from the Google Play store and the iPhone App store that might be helpful too.

'Breaking Free – The Journey Begins' is an app for people who have experienced childhood sexual abuse, and consists of information and various coping strategies and is free to download.

'Breaking Free – Keeping Safe' is an app that provides strategies to help people stay safe while working through their difficulties, including managing harmful coping strategies, recognising triggers, coping with intense feelings and taking control of panic attacks.