

## OCTC PRACTICAL GUIDES

### UNDERSTANDING TRAUMATIC INTRUSIONS

Helen Kennerley

July 2016

Anyone who suffers trauma can find themselves troubled by vivid recollections of that event, or indeed more than one event. As we'll see, this is a normal response because the brain is set up to re-run very emotional experiences. Any emotionally loaded experience is likely to do it (even positive events), but traumatic recollections can cause particular distress. For many people this is short lived because the intensity of the memory usually fades, but for others the distressing images persist and sometimes they are so vivid, so real, that we call them 'flashbacks'.

This article explores reasons why some traumatic intrusions are persistent and why some are so vivid.

#### What sort of trauma triggers a replay of memory?

Any trauma can do it, for example:

**Jake** kept getting memories of the moment that he found his wife with another man and he felt the shock and the grief mentally and physically, as if it was happening right now.

**Gerry** was in a road traffic accident and for weeks she vividly recalled the fear of losing control, the horror of seeing her injuries and the panic that she might die.

**Ralph** had a long career in the fire service and over that time he's seen many shocking things. There came a point where this overwhelmed him and he couldn't keep some of the worst memories at bay. When they came back so did powerful feelings of horror, helplessness and sometimes revulsion. Most recollections were single events but one intrusion was a composite memory that stood for several people he had not been able to recover in time.

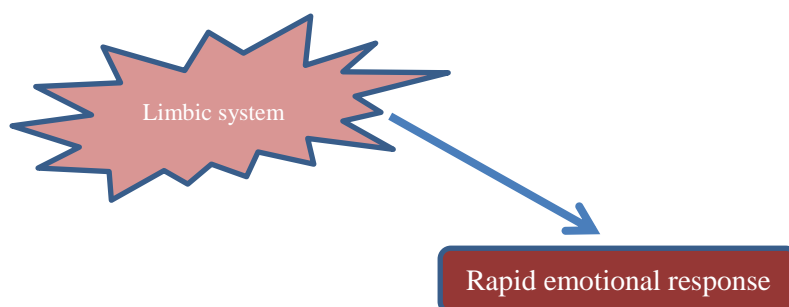
**Sara** was abused as a child—countless times. Her memories of this merged into two vivid recollections that captured the awfulness of what she'd been through. One was of a man pinning her down and the smell of tobacco: this was linked with horror and disgust as if it were happening all over again. Her other recollection was vague: shadows coming towards her triggering terror. This represented the time that she lay in bed fearing that her abuser would visit because when he did she saw only shadows and silhouettes.

**Colin** tried very hard not to think about the time that he felt so hurt and humiliated, but it kept coming to mind. It seemed that the harder he tried not to think about it, the more his head was filled with the memory and he felt embarrassed and ashamed all over again.

You can see how varied traumatic intrusions can be. They can arrive as pictures, sounds, smells, physical sensations, but they have something in common - they are associated with very powerful emotional responses. This intense affect is the key to the brain *replaying* these emotionally charged memories.

## How and why the brain replays memories

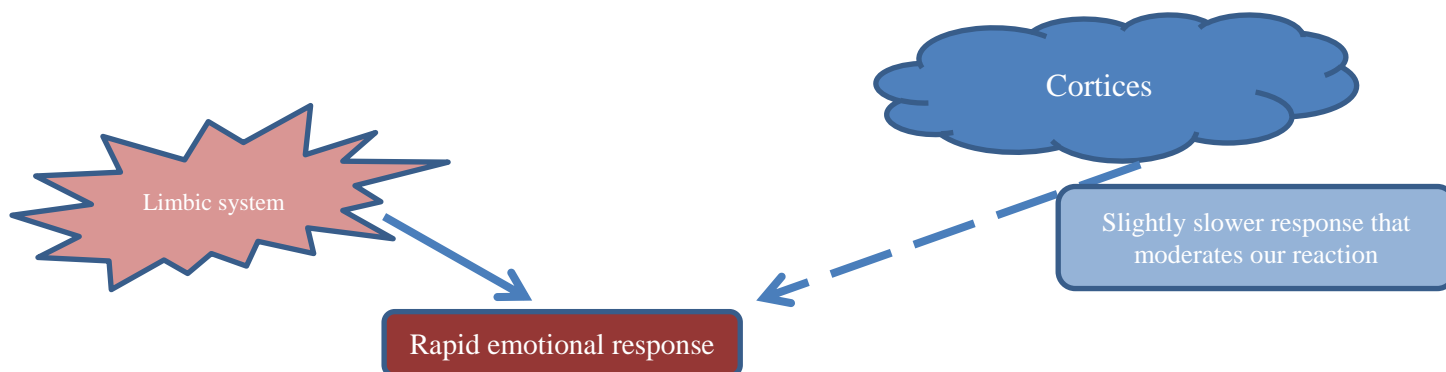
The brain has evolved to help us react quickly and efficiently to threat, be this in the form of things that scare us or disgust us or make us angry. Deep in the centre of the brain is the **Limbic System** and this is responsible for very quickly generating an emotional reaction. It is not a conscious process so we often ‘feel’ before we are knowingly aware of what’s triggered the feeling. This can be lifesaving – better that I feel fear and react as a bus hurtles towards me than I think about it too much. Thinking too much could cost me valuable time.



We will all have had this unconscious reaction at some time or another – how often have you tensed and taken a sharp intake of breath only to become aware a fraction of a second later, “Oh, it looks like a snake!” or “I think I’m going to crash!” or “No wonder I panicked, I thought he was going to hit me, but now I see that he’s just raising his hand.”

Letting the limbic system hijack the brain for a few moments tends to serve us well because it means that the stress response can kick in and we are well prepared for flight or fight *if the threat is real*. So if the snake is real (and not just a discarded old belt lying in the grass) I will have the energy to run, or if I am heading for a crash, I will have the extra strength needed to hold on to the steering wheel to try to avert it. In that hijacked instant, other parts of the brain are also activated, including the **Cortices**, which house data that put our experiences into context. Stored here is the information that, a moment later, will either reassure me that it is a belt in the grass *or* alert me that it is in fact a snake. Early activation of the alarm response means that I’m prepared for the worst (snake) before I have even consciously thought about it, yet I can quickly switch off the stress response if there is nothing to worry about (belt).

The moment I am conscious of the belt, the snake, the car skidding etc I’m perfectly primed to deal with it.

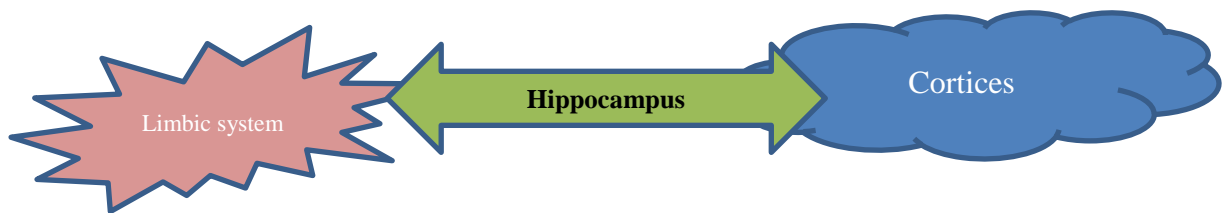


This shows us that the brain works on a “better safe than sorry” basis—and this does mean that sometimes we react when it isn’t necessary, as in this example: “No wonder I panicked, I thought he was

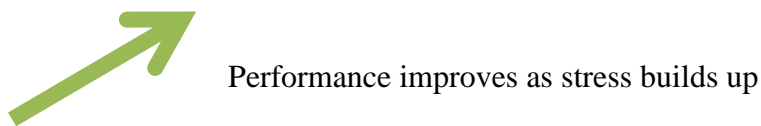
going to hit me, but now I see that he's just raising his hand." This knee-jerk response can be a nuisance but on the whole most of us would consider it a reasonable price to pay for safety.

When we have had a shock, it is common for the brain to go over that memory again. Some researchers think this is so that we can learn from the frightening experience without having to put ourselves in danger again. So, if I have a car accident, reviewing it in my mind might help me to develop a strategy for avoiding it in the future, or if I get mugged, revisiting the incident mentally might help me think of ways of making myself safer in the future. Again we see that the brain is set up to make us safe.

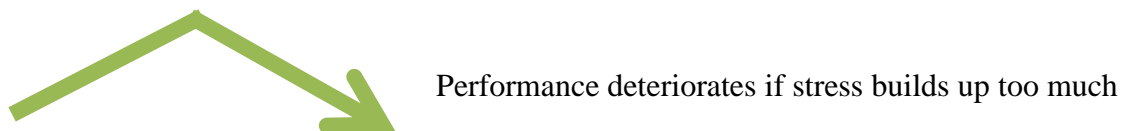
Usually over time, the intensity of recollections fade, they lose their immediacy and become bad memories that we know are in the past and we know that we came through the incident. This process of putting experiences into context, organising fragments of recollections, placing them in the past, being aware of what went before and after relies on another part of the brain called the **hippocampus**. It is one of the main links from the limbic system to the cortices (which you might remember are data banks, holding lots of information) and that's why the hippocampus is so pivotal in helping us to put emotional experiences into context.



The hippocampus operates in an interesting way: at first, the more stressed we become the more efficient it is, helping us to see things clearly and allowing us to bring to mind what we need for planning and problem solving.

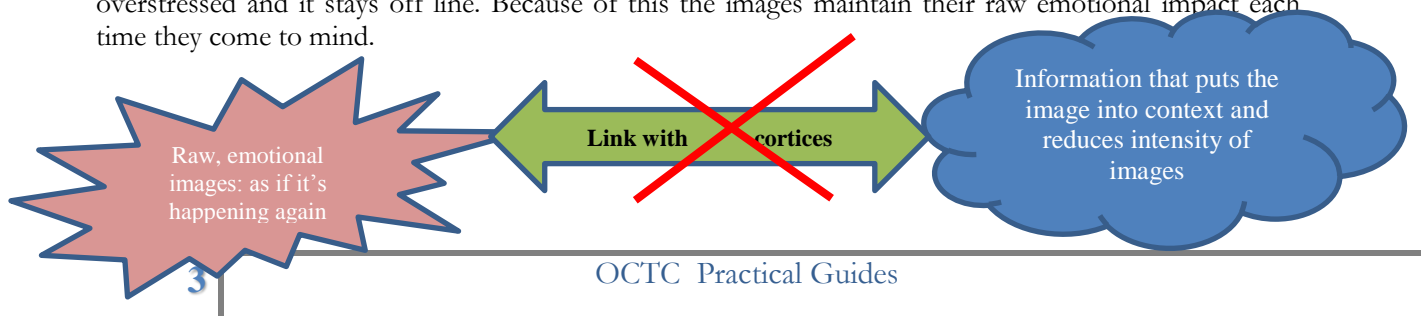


However, too much stress and it becomes less efficient and eventually goes 'off-line'.



This is why, when we are extremely stressed we can't think straight, we can't easily make links to our past knowledge and we feel very much locked in the 'here and now'. This is our brain responding to stress but not thinking about it, which, you might recall can be life-saving when we are under real threat.

Sometimes, the traumatic images are so vivid and emotional that the hippocampus can't get on with its job of contextualizing the memory. Instead of gradually linking the vivid memory with other information (that puts it into a timeframe and allows us to realise that we survived), the hippocampus is chronically overstressed and it stays off line. Because of this the images maintain their raw emotional impact each time they come to mind.



## Why are the memories and images so vivid, so real?

Something else that the brain is good at doing is responding to what we imagine just as it responds to the real thing. I remember this being illustrated in a workshop by Professor Paul Gilbert nearly 20 years ago. He asked members of the audience to close their eyes and picture a juicy lemon sitting on plate in front of them. Next he asked them to imagine quartering it, then lifting it to their lips. Then biting into it... What do you think happened? What did the members of the audience report? Without exception, mouths watered. This same thing can happen when the image in our mind is a traumatic one: our mind and body can respond as if the trauma is real and here and now.

**Jake** almost every day had a brief vision of the moment that he saw his wife and her lover. It was as if he were back there for a second. He felt the grief of his loss and betrayal, but he also felt ashamed because he perceived this strong emotional reaction as a weakness in himself and he felt scared that he was losing his mind.

**Gerry** had several intruding images: losing control of the car; being trapped when the smell of petrol was powerful; visions of her injuries as she was freed. These flooded into her mind whenever something sparked off the memory of the car crash and each lasted for several seconds and she re-lived the moment.

**Ralph** would find himself ‘coming round’ from a lapse in time when it was as if he’d been transported into the past and again he was witnessing the horrific events. He wasn’t sure what set off the recollections.

**Sara** ‘relived’ her abuse several times a day and she was unsure how long she was caught up in her flashbacks. During the day she was also aware of frightening shadows and silhouettes that others could not see, yet for her they were real and immediate.

**Colin** worried that the images of his humiliation would come back to haunt him again and they invariably did. He would find himself re-running the incident in his mind and he felt physically sick.

Worrying about the intrusions or trying *not* to think about them can make things worse as it simply primes the brain to tune into the problem image, yet it is quite understandable that someone who suffers alarming intrusions worries about having them. This was so with **Colin** who tried hard not to think about his humiliating experiences, but in doing so he actually kept them in mind. Once they were in mind, they could initiate the fear response.

Looking back over the vignettes, you can see that traumatic intrusions take different forms. Some last a brief moment while others persist, some occur infrequently while others happen several times a day, some seem to come out of nowhere and some are only set off by specific events. What each has in common, though, are the powerful emotions that are triggered. The images arrive and the limbic system kicks in, meaning that our recollections alone can fire up the stress response. If the emotion is strong enough it might even stop the hippocampus from doing its job of helping us keep things in perspective.

If we put together what we know so far...

- Our emotional response hijacks the brain if we are faced with something traumatic and if our emotional response is very strong the hippocampus stays ‘offline’.
- The brain replays traumatic memories.
- Images can trigger reactions as if an event were really happening.

... we have an explanation for those times when an intrusive image puts a person right back “in the trauma” and we can better understand why this keeps happening and why it’s hard to break free. If an image is vivid enough, then the old feelings are triggered too. Just as people in the audience couldn’t help it, their mouths watered, so a person can’t help it if traumatic images generate distress. If the distress is great enough then the memories can’t be put into context and they continue to be vivid and traumatic recollections, which the brain replays. This is quite a vicious cycle but, fortunately, it can be broken.

Just as the brain is programmed to replay memories and shut down the hippocampus if we are under extreme stress, it also programmed to put trauma memories into context as soon as stress levels drop enough for the hippocampus to come on line again. The key to managing traumatic intrusions is to reduce the distress that they generate, to link them with something calming. Reduced stress allows the hippocampus to become active enough to make the brain connections that put experiences in perspective. The memories might still be unpleasant but they will at least feel like memories and not as if the horror is being relived.

There are several ways of doing this: below is a summary with some recommendations for further reading. This article is primarily about *understanding* traumatic intrusions and what follows is simply a brief overview of possible interventions, it is not a therapist guide. If you are not yet familiar with helping people manage traumatic intrusions we would recommend attending relevant workshops and finding a supervisor who can guide your practice. Hackmann et al. (2011) have written an outstanding text that incorporates manipulating and managing traumatic images and you might find it a useful resource.

## Managing traumatic intrusions.

**1. Psychoeducation:** sometimes learning that the brain is simply doing what it has evolved to do takes the angst out of flashbacks and other worrying intrusions. Stress levels then drop and hippocampus can perform its magic. **Jake** was so reassured that he wasn’t a weak man who was going mad that his level of fear diminished and his flashbacks disappeared within the week. This illustrates a common predicament—where the experience of having the intrusions is interpreted in an alarming way that adds to stress, thus making it even harder for hippocampus to function. Another common predicament is described by **Gerry** who said that her flashbacks were triggered by pictures of cars, reports or discussions of road traffic accidents. As these are such everyday occurrences, she felt plagued by her flashbacks, hopeless and worn down. Learning that it is normal for everyday events to trigger memories and that emotional memory can feel very real, reduced her upset and calmed her enough for her to be able to learn the skill of discriminating between the benign trigger and the upsetting memory. As she did this her flashbacks diminished. Knowing that the brain is primed by anticipating images (or by trying not to think about them) can also give a new and helpful perspective to the problem. **Colin** learnt this and was reassured that there was hope and he was motivated to use distractions instead of trying *not* to think about the images.

**2. Linking intrusions to soothing or empowering images:** We can take charge of our emotions by exploiting the fact that images can produce strong feelings. If we can generate constructive images then we can counter distress. This is the basis of distraction and grounding strategies (See OCTC Practical Guides: <https://www.octc.co.uk/wp-content/uploads/2016/07/Distraction.pdf> ). When soothing or powerful images, “safe-places-in-mind”, comforting body positions and so on are activated they can often displace the traumatic images. This can give a person a sense of mastery that reduces their fear of the images. Once the fear reduces, the hippocampus does its job. Soothing smells can also sometimes displace a distressing image. **Sara** learnt to counter her shadowy images by doing one of three things: she transformed them into tiny puffs of grey smoke that she could simply bat away; she shifted her attention to her safe-place-in-mind which was filled with pleasurable distractions and an image of herself as strong and serene; she smelled lavender oil which immediately transported her back to her great aunt’s home where she had felt loved and safe. Using any of these strategies countered the image and Sara completely

changed her relationship with the intrusions. Now she saw them as a nuisance that she could manage and she no longer dreaded them. As her anticipatory anxiety fell so did the frequency of the images.

Note: When using distractions such as these it is always important to review how success is interpreted. People need to feel empowered by developing their own coping repertoire and so we need to check that “success” is not being viewed as something that is only achieved because of the strategies. This might sound like a subtle distinction (and it is) but it is a radical one. It marks the difference between someone developing ‘can-do’ coping response (which will enhance confidence) and their developing a ‘can-only-do-because-of-my-special-strategies’ safety-seeking behaviour (which will undermine confidence).

**3. Reviewing and updating or re-structuring images:** These approaches require a person to hold in mind the intrusion and to work with it to diminish its emotional impact. There are several ways of doing this and most interventions are well described in the literature, which we would encourage you to consult. Again, the Hackmann et al. book provides an excellent foundation guide as does Holmes et al. (2007). You do need to ensure that your patient is robust enough to tolerate bringing to mind the traumatic intrusion. Some people find that they are too easily overwhelmed to adopt this direct approach. For example, Sara quickly became drawn deeply into her flashbacks, which meant that she suffered and could not engage in the clinical work of reviewing them. She benefited from postponing directly reviewing the images and instead first learning to self-soothe and to use a selection of distractions. This increased her belief that she could take charge of the traumatic images and her emotions. Then she became more confident and more able to bring to mind her traumatic images so that she could eventually work on them directly. This approach of first developing coping skills was promoted by Herman back in 1992 and now several researchers have shown it to be helpful for people who suffer from complex trauma (for example see Cloitre et al., 2010).

Those who are able to bring to mind the traumatic image essentially have two options:

(i) **Reviewing and updating the traumatic image:** whereby the patient vividly recounts the distressing event(s) but is coached and encouraged to incorporate information that will bring the recollection up to date. This technique was refined by Ehlers and Clark in 2000 and is still a mainstay of PTSD work. **Gerry** benefitted from this approach. She was able to “update” her intrusive memories by incorporating knowledge that she now held. She was able to remind herself that her injuries looked worse than they actually were, that the paramedics quickly released her from the car, that she was never in mortal danger and that the accident happened some time ago and to a great extent she had recovered and reclaimed her life. Importantly, when asked how this left her *feeling*, she said: “Calmer about it, tearful but with a sense of relief. I feel shaken but I can have the memory and see light at the end of the tunnel now. I feel safe.” Once her feelings changed and she was less anxious, her hippocampus could do its work and her flashbacks rapidly diminished.

(ii) **Creating a specific new ending:** whereby the image runs its course (sometimes the traumatic intrusion happens so rapidly that is inevitable) and a new, coping ending is developed so that the patient combines the memory with a positive final message. This idea was pioneered by Layden in the 1980s when she worked with women with histories of chronic and developmental trauma – women like Sara. This approach does not pretend that the trauma did not happen or that something different occurred, it simply provides a means of using soothing imagery to reduce the arousal associated with the image so that the intrusion can be contextualised and diminished. **Ralph** benefitted from creating a new ending for his flashback of fire victims he had been unable to save. He felt deep horror, grief and shame when this intrusion came to mind and to counter these feelings he developed a constructive image of seeing the face of the victim as serene (this filled him with compassion, replacing the horror) and saying to them that he was sorry that he could not save them, but that had done his best (something that he believed). He also imagined the fire victim nodding in acknowledgement and acceptance. He rehearsed this new ending and when his flashback was activated he continued the image to the new conclusion. He then felt calmer, and

shame-free. Although feelings of sadness persisted, the intense grief disappeared and over the next month so did the flashback.

## Summary

There are understandable reasons why people struggle to take control of traumatic intrusions and it can be therapeutic to share a simple explanation. Just appreciating that the brain is doing what it evolved to do can be reassuring enough to diminish the distress that they cause. Understanding the rudimentary neuropsychology of intrusions can also add to our shared conceptualisations and contribute to rationales for certain interventions. For example, providing good reasons for using distractions to counter images and soothe emotions, or explaining reasons for restructuring images to update and contextualise them. However, helping patients manage distressing intrusion images requires some training and supervision so we would always advocate therapists first develop their knowledge and skills.

## Useful reading:

- Cloitre, M., Stovall-McClough, K.C., Nooner, K., Zorbass, P., Cherry, S., Jackson, C.L., Gan, W. & Petkova, E. (2010). Treatment for PTSD Related to Childhood Abuse: A Randomized Controlled Trial. *American J Psychiatry*, 167, 915–924.
- E Ehlers, A., & Clark, D.M. (2000). A cognitive model of post-traumatic stress disorder. *Behaviour Research & Therapy*, 38, 319–345.
- Hackmann, A., Bennett-Levy, J. & Holmes, E.A. (2011). *Oxford guide to imagery in cognitive therapy*. Oxford: O.U.P.
- Herman, J. L. (1992). Complex PTSD: A syndrome in survivors of prolonged and repeated trauma. *Journal of Traumatic Stress*, 5, 377–391.
- Holmes, E., Arntz, A. & Smucker, M.R. (2007). Imagery rescripting in CBT: images, treatment techniques and outcomes. *Journal of Behavior Therapy and Experimental Psychiatry* 38 297-305.
- Kennerley, H. & Kischka, U. (2013). *The Brain, Neuropsychology and Dissociation*. In: Kennedy F, Kennerley H, Pearson D (2013). *Cognitive Behavioural Approaches to the Understanding and Treatment of Dissociation*. Routledge.
- Layden, M., Newman, C., Freeman, A., & Morse, S.B. (1993). *Cognitive therapy of borderline personality disorder*. Boston, MA: Allyn & Bacon.