

HOW PTSD DEVELOPS - With Love from Dr. G

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You've all heard about Pavlov and his dogs? His research serves as a behavioral model for our understanding of how PTSD develops through classical conditioning. Pavlov noticed that when initially holding up and ringing a bell, dogs did not salivate. They only salivated (this is called an Unconditioned Response) to a steak (this is called an Unconditioned Stimulus). The word "unconditioned" is used because there is no learning or association necessary for this response. Animals are hard-wired and will always respond to food by salivating). This makes sense. However, what surprised Pavlov was what he discovered happened when he held up a steak, and rang the bell simultaneously. It did not take long for him to realize that the dogs began to salivate not only when the steak was in front of them, but now also when the bell was rung all by itself (and the steak was taken away). Why did this happen? It happened because the dogs no longer simply understood a bell to be a bell. Since the steak had been paired with it, now the dogs associated the steak (food) with the sound and sight of the bell. This is the process by which we begin to respond to lots of things that are not necessarily life threatening after we have been exposed to trauma, which can ultimately lead to the development of Posttraumatic Stress Disorder.

To clarify, our Unconditioned Stimulus (US) was the Route 91 massacre, and specifically, **guns shooting bullets towards us, causing death**. The bullets were the US. We will always have a hard-wired Unconditioned Response (UR) to what causes us harm because it invokes an immediate, unconditioned, unlearned FIGHT, FLIGHT, FREEZE response from the Limbic System of our brains. We all had this hard-wired fear response to this life-threatening experience although it may have taken different forms. This ability to respond to ACTUAL danger is ADAPTIVE and we do *not* want to lose this ability to respond quickly when a lion is about to eat us (to use an evolutionary analogy).

However, unfortunately, something MALADAPTIVE (much *less* adaptive and unhelpful) happens as a result of how dangerous and frightening this one experience was, and because it was a **near**-death experience for so many of us who survived. Many people (and animals) begin associating unrelated sights, sounds, smells, etc., (called Conditioned Stimuli, CS) with the US (bullets), and then begin having what is called a Conditioned Response (CR) to all of these triggers. The CRs produce a response very similar to the hard-wired UR (e.g., fear, panic, anger, hypervigilance, intrusive memories, anxiety, depression).

So, why does this matter? Why is that *not* okay? Well, the answer is, it's not adaptive because over time we begin to have difficulty discriminating between what is actually dangerous and what is not really dangerous. If we lose our ability to identify the difference, we will be in trouble. Let's be clear on this...it was not

Jason Aldean, or country music, or Las Vegas, or hotel room windows, or fake turf, or floodlights, or fireworks, or helicopters, or ambulances and police cars, or blood, or cowboy boots, or anything else there that night killing and harming us. It was the BULLETS, and the BULLETS ALONE that were causing harm to us! During an actual life-threatening experience, we want to be able to focus in (literally) on what is most salient to our survival. If we have generalized our fear through conditioned learning and now respond to many different things around us in a fearful way, it takes focus away from what we need to pay attention to in a time of true danger. If, God forbid, we find ourselves in another life-threatening situation, we want to be able to react to the “lion,” (US) and not be distracted by all of the associated things that do not actually cause harm (CSs). And even more importantly, once we begin to connect bullets (US) to just about everything that was around and in our environment that fateful night (CSs), then we may end up avoiding not only bullets, but also all the other things listed above (e.g., country music, country concerts, Las Vegas, hotels, and any other triggers that remind us of bullets). This is highly problematic because our life has the potential of becoming very isolated, and over time, someone may end up truly losing all quality to his/her life.

So what is the answer? Well, we want to sever all associations we may have made to the bullets that night. If floodlights trigger you, then you need to find a way to be around floodlights. If country music triggers you, then you need to listen to country music until you don't feel any anxiety anymore. You get the drift. Engaging in exposure activities (refer to the WHY AVOIDANCE MAKES IT WORSE document) is a means of helping us develop and maintain greater **discrimination** between REAL and PERCEIVED threats. Discrimination is life-saving and life-preserving. Over time, generalizing FEAR has a snowball effect and a person may collect more and more “things” to avoid, leading to a smaller and smaller life. We want to prevent this so we don't start losing out on all the things we hold most dear to us in life.