

Anew Day

Mental Well-Being for Emergency Responders

Practical Information and Strategies for Staying Healthy

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The “Hypervigilance Biological Rollercoaster”

In his book, *Emotional Survival for Law Enforcement*, Dr. Gilmartin coins the phrase “hypervigilance biological rollercoaster” to summarize what is happening in the brain and body of a law enforcement officer while they are on, and off, duty.

In order to make it home safe at the end of a shift, a LEO must view the world from a threat-based perspective, and this perspective requires constant hypervigilance. Officers automatically come to see the world differently than the general population and must view all situations as potentially lethal until they are proven otherwise (Gilmartin, 2002, p.34). Living in a state of hypervigilance on-duty brings about significant biological changes and the ongoing release of stress hormones in the body, which then impact how an officer functions in all areas of life.

The Downside of Hypervigilance

What happens when the body spends 10, 12, 16 hours in a state of hypervigilance? An equal and opposite “crash” occurs after shift in which the body biologically experiences a state of “depression.” According to Gilmartin (2002), “When an officer goes off duty, the sympathetic branch of the autonomic nervous system, which controls on-duty reactions necessary for survival, gives way to the parasympathetic branch, which controls off-duty reactions. The alert, alive, engaged, quick-thinking individual changes into a detached, withdrawn, tired, and apathetic individual” (p. 44) in their personal life. In order to balance itself biologically, the body will experience a crash after spending extended periods of time in a state of hypervigilance. This ongoing “rollercoaster” can have long-term consequences.

Long-Term Fight or Flight

“The fight-or-flight state is very expensive physiologically. The body is operating at a higher metabolic rate than it can maintain over time. It’s like putting jet fuel in your car – you might get amazing performance but only until the engine melts” (Sharps, 2010, p. 17).

Fight-or-flight responses:

- More oxygen is needed to fight or run which requires more blood, causing the heart rate to rise and blood vessels to expand;
- Blood pressure and breathing rate rises to provide more oxygen for the circulatory system;
- Digestion shuts down (as does the ability to salivate) so as not to detract from other functions;
- Muscles become harder and more armor-like to fight or flee and prevent injury;
- Endorphins are released which decrease pain sensitivity (Sharps, 2010, p. 16-17).

Long term fight-or-flight can have the following impacts on the body:

- Excessive wear on the heart and blood vessels;
- Increased blood pressure over time;
- Digestive problems such as ulcers and esophageal reflux;

- Muscle tissue degrades due to toxic by-product buildup;
- Increased cortisol begins degrading body tissue, including brain structures responsible for memory (Sharps, 2010, p. 17-18).

Practical Strategies to Combat the Rollercoaster/Long-Term Impacts

- Be aggressive about maintaining your physical health and keeping exercise (especially 30-40 minutes of sustained cardio activity, four to five days a week) as a priority (Gilmartin, 2002).
 - While other forms of exercise are healthy, the type mentioned above has been proven to “reset” the body’s biology and counteracts the hypervigilance biological rollercoaster as well as the impacts of long-term fight-or-flight.

Impacts of Cumulative Stress and Trauma

Throughout their careers, Law Enforcement Officers will experience a wide array of stressful incidents which are usually categorized as either critical or sub-critical incidents, both of which can have an impact (Kirschman, et al, 2015).

- Critical incidents are usually perceived as “major” incidents which bring acute stress or trauma, have a clear beginning and end, and most would agree are “traumatic.”
- Subcritical incidents, however, are usually perceived as more “minor” in nature, but still have an impact on an officer, whether acknowledged or not.
- Critical and subcritical incidents can continue to build into cumulative stress/trauma which may result in difficulties in an officer’s life, and the development of unhealthy coping strategies which eventually cause even more difficulties.

Traumatic incidents have been shown to sever some connections between the right and left hemispheres of the brain and can result in a variety of impacts to “normal” cognitive functioning. For example:

- Impacted ability to think resulting in:
 - Confusion
 - Poor problem solving
 - Distractibility
 - Inattention
 - Difficulty with simple tasks (i.e. arithmetic)
 - Hypervigilance
 - Disorientation of time, place, or person
 - Heightened or lowered alertness
- Impacted behavior resulting in:
 - Difficulty sleeping
 - Nightmares
 - Appetite Disturbance
 - Startle response
 - Withdrawal and isolation

- Impacted emotional reactions resulting in:
 - Guilt
 - Anger
 - Shock
 - Fear
 - Anxiety
- Impacted physical functioning resulting in:
 - Compromised immune system leading to higher susceptibility to illness (Wright, 2017, p.1).

Just because someone has experienced a critical incident/traumatic event(s), does not mean they will struggle long-term. Often, these symptoms will subside within a few days to a couple months as your brain has time to process the incident.

While there are common symptoms related to experiencing acute and chronic traumatic events, the symptoms associated with PTSI are more significant and usually continue on after the first few months post-incident.

Post-Traumatic Stress Injuries

While the common term is “Post-Traumatic Stress Disorder,” the term “Post-Traumatic Stress Injuries” (Kirschman, et al, 2015) better explains what is occurring. When the body experiences trauma of some kind, like in a car accident, injuries result. The same is true for the mind. When the mind is exposed to acute and/or ongoing trauma, psychological injuries may result. Just as the body can only withstand so much impact before being injured, so the mind can only experience so many “hits” before it also sustains “injuries.”

Post-Traumatic Stress Injury symptoms may include the following:

- Flashbacks
- Traumatic dreams
- Memory disturbance
- Persistent intrusive thoughts
- Self-medication – substance abuse
- Anger/irritability
- Dazed or numb appearance
- Panic attacks
- Development of phobias
- Startle response
- Hypervigilance (Wright, 2017, p.1).

When an officer is experiencing PTSI, it will impact their overall performance and impair their ability to do their job. It is important to note that developing PTSI is not an indication of weakness, but rather the result of experiencing an overwhelming incident or number of incidents. While, like physical injuries, psychological injuries can be significant, if they are properly cared for and treated, there can be recovery and healing.

Reasons Trauma May Be More Severe

While an officer may experience hundreds of incidents without experiencing any especially significant impacts, there are a number of reasons one incident may prove to be more traumatic to an officer than all previous incidents. Several common reasons include:

- Feeling blind-sided by the incident;
- Feeling like you should have been able to prevent it;
- Having a personal connection (i.e., fatal accident involving a six-year-old at a traffic scene when you have a six-year-old child at home);
- Feeling helpless when a situation escalates out of control;
- Trauma experienced in childhood which is triggered by an incident;
- Genetics – certain genetic factors impact the chemicals released by the brain and may be as much as 40% responsible in determining whether PTSI develop;
- Core beliefs – what you believe about yourself and how the world operates (Kirschman, et al, 2015, p.62-64).

Traumatic events are initially processed by the “emotional” portion of the brain...the portion that reacts and responds to a situation. Unless trauma is reprocessed through the logical portion of the brain and memories filed accordingly, symptoms can develop, be severe, and/or ongoing.

- During traumatic events, specific sensory details such as images, smells, sounds, or stress responses can be strongly imprinted and vividly recalled.
- If you indulge anxiety, it will grow. When you start avoiding the street, then the cross street – avoidance reinforces with your nervous system that danger is still present and can make symptoms worse.

Common Thoughts/Beliefs Held by LEO's

Most law enforcement officers take their jobs and the safety of their fellow officers very seriously, and often hold themselves responsible for any number of occurrences post-incident. The following thoughts/beliefs, though usually inaccurate, are very common:

- “I should have gotten there faster.”
- “I should have known better.”
- “I should have done more.”
- “It’s my fault,” or “It’s my responsibility...”

LEO's are trained that everything depends on them, so it's easy to hold onto inaccurate beliefs if you somehow were unable to show up as you wished you could have. High standards are good, impossible standards are not. If you wouldn't hold a fellow officer to what you are telling yourself, it's likely not an accurate thought/belief.

Alcohol Use

Alcohol use is by far one of the most prevalent coping strategies for officers. Because alcohol use is legal (and perhaps even expected within law enforcement culture) it becomes a primary, socially acceptable coping mechanism (Kirschman, et al, 2015).

- Alcohol is an effective anti-anxiety...but only for as long as blood alcohol level continues to increase.
- Alcohol is often used to fall asleep, particularly if anxiety is causing insomnia. In fact, alcohol does decrease the time it takes to fall asleep, but when it begins converting to sugars around 90 minutes into the sleep cycle, it tends to disturb the second half of the sleep period especially if consumed within an hour of bedtime.
- Alcohol has been shown to interfere with REM and deep sleep, both essential to feeling rested and supporting the brain in processing recent information and experiences.

Eye Movement Desensitization and Reprocessing (EMDR) Therapy

- EMDR therapy is a neuroscience-based trauma therapy which uses bi-lateral stimulation (in which both hemispheres of the brain are activated, either through eye movements or other means) to reprocess traumatic memories so they are stored in a more adaptive and healthy manner. This therapy decreases the disturbance level of the incident and assists the body to release stress responses so they are not stored long-term. It may be that EMDR can help restore neural pathways and memory networks in the brain which can be damaged during traumatic incidents.
- The brain has both a sub-cortical and cortical structure – the sub-cortical structure or “lizard brain” holds the stress responses and reacts as if you’re still in danger or there’s still a threat (Sharps, 2010). You can logically understand you’re not, but your nervous system doesn’t believe it. Your cortical structure (responsible for logical processing and reasoning) is not engaged during a critical incident and information is often not reprocessed logically and accurately without support (such as with EMDR), which works with the nervous system to let go of those stress responses and the inaccurate belief that danger is still present.
 - EMDR is not considered “talk therapy” and is not “just talking about your feelings.” We can’t “talk” to the sub-cortical parts of our brain because they’re stupid.
 - EMDR identifies what was disturbing about an incident, vivid sensory memories (images, sounds, smells, etc.), the underlying belief about the incident, emotions experienced related to the incident, how disturbing the incident feels, and body sensations/stress responses still experienced when thinking about the incident.
 - Within EMDR, the Recent Traumatic Event Protocol (R-TEP) can be especially beneficial in decreasing distress experienced after the incident and has been shown to be 85-90% effective in preventing any PTSD symptoms from developing.
 - If you are able, pursuing EMDR treatment within about a month or two after a traumatic incident can assist the brain to process the information prior to the brain

consolidating the memory inaccurately with a negative belief (i.e. "If only I had driven faster," etc.).

- EMDR can be effective for recent events or events that occurred many years ago.
- As in any profession, there are those equipped to understand and serve specific populations and those who are not. One bad experience with a counselor who does not understand law enforcement may have more of a negative than positive impact. Ask around, utilize the technology available to support officers, and find someone who you will feel comfortable working with and who is culturally competent with law enforcement.

Recommended Resources

Emotional Survival for Law Enforcement: A Guide for Officers and Their Families,
Kevin Gilmartin, PhD, 2018

I Love a Cop: What Police Families Need to Know (Third Edition), Ellen Kirschman,
PhD, 2018

First Responder / First Responder Family Crisis Resources:
<https://frsn.app.box.com/s/9wbclmihkwp5ps5rkqzejy0vfjcw6s3a>

First Responder / First Responder Family Support Meeting Directory:
<https://frsn.app.box.com/s/19esz3jepcc0qabxqc9b9tddknq6hf4h>

First Responder Support Network / West Coast Post-Trauma Retreat
www.frsn.org

Street Cop Podcast, Dennis Benigno
<https://streetcoptraining.com> (available on podcast platforms)

References

Gilmartin, K. (2002). *Emotional Survival for Law Enforcement: A Guide for Officers and Their Families*. E-S Press.

Kirschman, E., Kamena, M., & Fay, J. (2014). *Counseling Cops: What Clinicians Need to Know*. Guilford Press.

Sharp, M.J. (2010). *Processing Under Pressure: Stress, Memory, and Decision-Making in Law Enforcement*. Looseleaf Law Publications, Inc.

Wright, H.N. (2017). "Trauma – What Is It?" Handout.