

Job-Related Trauma and Post Traumatic Stress Disorder (PTSD)



[Photos by Jim Macmillan, Philadelphia Daily News](#)

"The credit belongs to the man who is actually in the arena; whose face is marred by dust and sweat and blood; who strives valiantly; who errs and comes up short again and again; who knows the great enthusiasms; the great devotions, and spends himself in a worth cause; who, at the best, knows in the end the triumph of high achievement; and who, at worst, if he fails, at least fails while daring greatly, so that his place shall never be with those cold and timid souls who know neither victory nor defeat." - Teddy Roosevelt, President, 1901-1909

Post Traumatic Stress Disorder (PTSD) was first recognized as a diagnostic category in the 1980 Diagnostic and Statistical Manual of Mental Disorders, (DSM III) and initially was created to describe the dramatically altered functioning of traumatized American soldiers who had served in combat zones. The recognition that the job of a combat soldier could be traumatizing was soon followed by the observation that law enforcement officers, fire, rescue and EMS professionals also serve in high-risk jobs in which potentially traumatizing incidents were routine. Since that observation, professionals have referred to the high stress and traumatizing aspects of these jobs by a variety of terms:

- "duty-related stress"
- "occupational stress"
- "police stress"
- "traumatic stress"
- "critical incident stress"
- "critical incident/post shooting trauma"
- "work trauma"
- "critical incident trauma"
- "traumatic incident exposure"

Some of these terms group both the stressful and traumatizing aspects of these jobs as one. However, job situations which have the potential to be stressful are different from those which are traumatizing. Deadlines, unsupportive supervisors, court testimony, traffic jams, and overwhelming work loads have the potential to be stressful, but are not normally traumatizing. On the other hand, viewing the body of a murdered or burned child, seeing a co-worker die, being ones own death is certain and imminent are

job-related incidents which have the potential to be traumatizing.

Post Traumatic Stress Disorder (PTSD) can develop when a "person experienced, witnessed, or was confronted with an event or events that involved actual or threatened death or serious injury, or a threat to the physical integrity of self or others". The response to this traumatic event must involve "intense fear, helplessness or horror" (DSM IV, 1994). PTSD is the only diagnostic category which is defined chiefly by its cause.

Although most people may experience only a limited number of traumatic incidents in their lifetime, law enforcement officers and fire and rescue service professionals are routinely exposed to incidents which involve death, injury or the possibility of injury or death, as well as exposure to the most vile and horrific of scenes and the most depraved of human behavior. It is understandable, therefore, that many of these professionals develop symptoms caused by job-related trauma.

Job-related trauma includes PTSD, partial PTSD (where some symptoms are present, but not enough to be diagnosed with PTSD), and complicated PTSD (a more severe form of PTSD developed from experiencing multiple traumas over an extended time period, particularly those which involve injury and violence).

A number of research articles have looked at the rates of PTSD in high-risk occupations. They found:

- **Law Enforcement Officers** who agreed to be in these studies had rates of PTSD ranging between 3% - 17%. A recent research study found that 45% of officers were having sleep difficulties typical of patients seen in insomnia clinics. In this study, stresses related to their work environment were strongly associated with sleep quality; sleep disturbances were associated with symptoms of PTSD. "These high rates of insomnia are particularly alarming, because sleep deprivation can drastically hinder mental and physical performance" (Thomas Neylan, MD, 2002).
- In a study by Corneil, et. al., (1999), which compared 203 U.S. **Fire Fighters** in urban departments with 625 Canadian fire fighters, twenty-two percent of fire fighters in U.S. urban departments were experiencing PTSD compared to 17% of Canadian fire fighters. (The U.S. sample had 9% women and 13% paramedics, not found in the Canadian sample). Other researchers have found 33-41 % of fire fighters were experiencing emotional distress. Rates of PTSD in U.S. fire fighters are similar to those found in a study of German fire fighters, 18.2% and are higher than those generally found in wounded combat veterans, i.e., 20%. These researchers concluded that the high level of PTSD A suggests that this is a serious mental health problem of epidemic proportions in urban professional firefighters in the U.S."
- Twenty percent of **Emergency Ambulance Personnel** have been found to have PTSD. Rates of symptoms, such as depression, anxiety, sleep problems and undue worry rage from 20% - 60%.
- Nineteen percent of **Rescue Workers** serving 9-11 sites have been diagnosed with PTSD in the two years following this tragedy.

To develop PTSD, a person must have been exposed to a traumatic incident; however, the majority of people who are exposed to a single traumatic incident do not develop PTSD. Therefore, although exposure

to a traumatic incident is the major element in the development of PTSD, other factors interact to play a role in the development of symptoms. Previous trauma has been found to play a significant role in the development of PTSD following exposure to a new traumatic incident, particularly trauma occurring during childhood and adolescence.

In addition to previous trauma, the development of PTSD is influenced by:

1. The **characteristics and nature** of the particular work-related traumatic event,
2. The **number** of traumatic incidents the worker has experienced prior to this incident, as well as the **intensity** and **duration** of each of these events,
3. Additional traumatic or stressful events that are taking place in the individual's personal life during the same time period,
4. The **level of social support** experienced by the worker following the traumatic incident, as well as
5. The employee's **age** (as age increases, probability of trauma decreases) and
6. Feelings of **guilt, humiliation** and **shame** which arise as a result of the incident.

For example, a fire fighter or EMT who has been exposed to numerous on-the-job traumatic incidents, has a child who is dying from cancer and who was physically abused as a child has a much higher chance of developing job-related traumatic symptoms in working a scene where a father beat his baby to death than a fire fighter or EMT working the same scene who had no traumatic experiences growing up, is happily married with no children and has been exposed to few job-related traumatic incidents.

Biological Factors:

Although psychological factors play a role in the development of PTSD, the body's biological response to traumatic incidents is responsible for the development of symptoms common to PTSD. Exposure to a traumatic incident, particularly those involving threats to survival, activates numerous brain and body systems. Levels of adrenaline, norepinephrine, thyroid hormones, testosterone and other hormones rise dramatically to prepare the body for "fight or flight". These hormones increase the heart rate, blood pressure and stimulate numerous other changes in the muscles, senses and other body structures. In most instances physical changes are short-lived and promptly subside. However, individuals who develop PTSD after a traumatic incident continue to maintain high levels of these stimulating hormones and physical changes as if they are continuing to experience the traumatic incident. These hormones and alterations in physical functioning commonly lead to other changes in the body, such as problems sleeping and concentrating. In addition, the physical changes freeze the memory of the traumatic event in the present memory, where it is often re-experienced again and again, as if it were re-occurring.

PTSD can cause a profound negative impact on many systems of the body as a result of these biological changes

1. The Cardiovascular System

- Higher resting and sleep heart rates

- Higher diastolic and systolic blood pressure, blood pressure variability and long-term hyper-responsiveness of blood pressure
- Elevated cholesterol, low-density lipoprotein, triglycerides and reduced high density lipoprotein-when PTSD is chronic.
- Nonspecific ECG abnormalities, atrioventricular conduction defects and infarctions.

2. **A Compromised Immune System**, leading to illness, infections, tumor development, slow wound healing, and the tendency to get sick when stressed.

3. **Chronic pain, back problems, headaches, gastrointestinal problems.** 95% of fire fighters and paramedics indicated that they had a pain complaint in the week prior to the study (Beaton, Murphy; Pike, 1996). A survey of law enforcement officers found that in the month prior to the survey, 26% had headaches, 43 % had backaches, and 22% had digestive difficulties (Richardson, 1994).

Most law enforcement officers and fire and rescue service professionals find their jobs to have many positive and rewarding facets, including the opportunity to help others, to make a difference in someone's life and to change the world in a positive manner. The men and women who serve in these underpaid and generally undervalued professions often die or are critically injured attempting to help citizens that they have never met. In doing their jobs, these individuals can develop debilitating symptoms after working traumatic job-related incidents. These symptoms can lead to poorer job performance, an increased potential to be injured or killed on-the-job, increased potential for problems with alcohol, as well as problems which impact on their personal life. Clearly, these professionals, their managers and their friends and family would all benefit from an understanding of job-related trauma and of treatment which can quickly restore their ability to function on their jobs at peak performance levels.

There are particular incidents in each of these professionals that seem to be more likely to be traumatizing than others:

[Law Enforcement Officers](#)

[Fire Fighters/EMT](#)

[Rescue Workers](#)

Citations for research available from Dr. Davis or are listed in her book, *Multi-Sensory Trauma Processing, a Manual for Understanding and Treating PTSD and Job-Related Trauma.*

© 2003 Dr. Davis gives permission for this article to be duplicated and used for training and/or educational purposes provided she is acknowledged as the author.