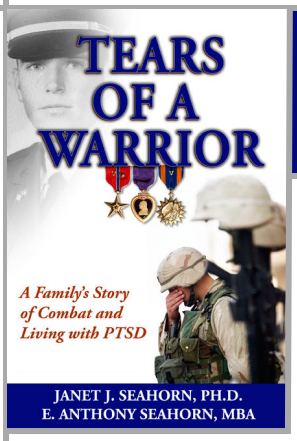

Information on PTSD

The ***National Institute of Mental Health*** defines **Post-Traumatic Stress Disorder** as, "an anxiety disorder that can develop after exposure to a terrifying event or ordeal in which grave physical harm occurred or was threatened. Traumatic events that may trigger PTSD include violent personal assaults, natural or human-caused disasters, accidents, or military combat".

According to Steven Silvers, a combat veteran of Vietnam and currently the Director of the inpatient Posttraumatic Stress Disorder Program of the VA Medical Center in Pennsylvania, and Susan Rogers, **trauma resulting from combat and terrorism differs** somewhat from trauma experienced by civilian events.

Some of these differences include:

- The duration of exposure to the trauma
- Likelihood of multiple traumas experienced in a short time span
- The trauma is man-man vs. natural disasters, accidents, or 'acts of God'
- The tendency of the a sufferer to be both victim and perpetrator of violence

PTSD's effects on brain chemistry:

Recent research on PTSD and its impact on the brain show how these extreme stressors actually alter the brain's chemistry and functions. People with PTSD tend to have abnormal levels of key hormones involved in response to stress.

Cortisol levels are lower than normal and epinephrine and norepinehprine (key brain neurotransmitters for fight or flight mechanisms) are higher than normal.

Scientists have also found that people with this condition have alterations in the function of the thyroid and in neurotransmitter activity involving serotonin (calming and sleep chemicals in the brain/ body) and opiates (pleasure & pain chemicals).

When people are in danger they produce high levels of natural opiates, which can temporarily mask pain. Scientists have found that people with PTSD continue to produce those higher levels even after the danger is passed; this may lead to the blunted emotions (numbness, hyperarousal, hypervigilance) associated with the condition.

Levels of CRF, or corticoptropin releasing factor—the ignition switch in the human stress response—seem to be elevated in people with PTSD, which may account for the tendency to be easily startled.

Brain imaging studies indicate that the hippocampus, a part of the brain critical to emotion-laden memories, can shrink and become smaller due to the stress and trauma. Scientists are investigating whether this is related to short-term memory problems. Changes in the hippocampus are thought to be responsible for intrusive memories and flashbacks that occur in people with PTSD.