In response to a traumatic event, as well as highly stressful everyday situations or fears, the “fight or flight” response occurs unconsciously, automatically and immediately. This “hard-wired” response to terror primes humans to fight for their lives or to run to safety (flee). During this first stage of this response, the sympathetic nervous system sends signals to multiple organs in the body. The heart and blood vessels secrete norepinephrine, which increases heart rate, blood pressure, and blood flow to various organs, especially skeletal muscles. The lungs also expand the airways, increasing oxygen in the body. The adrenal gland is also stimulated to secrete the hormone, epinephrine (adrenaline), which further stimulates the heart, expands the blood vessels, and breaks down glycogen stores in the liver for energy. Physiologically, stage one cannot be kept up for long.

During the next stage, also known as resistance, the pituitary gland secretes several hormones, necessary for sustained energy. Cortisol is released by the adrenal gland in response to stress, sparing available glucose for vital organs, such as the brain. Other hormones, such as the human growth hormone (HGH) and thyroid stimulating hormones (TSH) stimulate the body to used stored reserves, such as glucose, fatty acids, and amino acids from the liver, fat, and skeletal muscles, respectively. This stage provides the energy for sustained responses.

Finally, during stage three, also known as exhaustion, prolonged or repeated exposure to cortisol depletes the body’s energy stores, and can adversely affect the body, such as suppressing the immune system. The body can also no longer respond to stress. Typically, most everyday stresses do not reach stage three.

POST-TRAUMATIC STRESS DISORDER

PTSD is estimated to affect 5 million people in the U.S. at any given time. The prevalence of PTSD is believed to be highest in rape victims. The percentage of adults who experience at least one traumatic event in their lifetimes is high - approximately 60% of men and 50% of women. Of those, 8% of men and 20% of women will develop PTSD. Why women are more apt to develop PTSD than men is not understood. Nor is it known why a relatively small percentage of those experiencing a traumatic event, even the same one at the same time, develop PTSD.

There are certain factors believed to increase a person’s risk for developing PTSD. Individuals, who have experienced a previous traumatic event, are more likely to experience PTSD following a subsequent tragedy. A history of an emotional disorder prior to the event, such as depression, also increases the risk of PTSD developing.
Additionally, having little social or professional support after the catastrophe increases the risk. The event itself, or the victim’s perception of it, can also affect PTSD development. The more one believes they are endangered, the higher the potential for PTSD.

When exposed to a traumatic event, especially if it is beyond one’s control, feelings of fear, helplessness, and/or horror often result. These are normal reactions to traumatic events. It is when these intensify and linger on after the event has concluded that they are referred to as “post traumatic,” acknowledging on-going turmoil. PTSD is a response by normal people to an abnormal situation, a real or perceived traumatic event. Virtually any event that is life-threatening or that severely compromises the emotional well-being of an individual may cause PTSD. That is, any event of sufficient terror, either physically or emotionally, experienced or witnessed, may be the origin of PTSD. PTSD can result from any number of traumatic incidents, either acute single events or those that are complex and on-going. Such events include, but are certainly not limited to, war, rape, abuse (such as being a victim of domestic violence), a house fire, witnessing a drowning, murder, kidnapping, assault, bomb, serious accident, as well as natural disasters, such as earthquakes, floods, hurricanes, and tornadoes. Witnessing or experiencing the death of a loved one(s) may also lead to PTSD, often depending on the significance of the loss, as well as other factors, such as if the death was sudden or expected, and/or traumatic.

**ASSESSMENT & DIAGNOSIS**

There are three groups of PTSD symptoms. According to DSM criteria, one of more behaviors related to re-experiencing, avoidance/numbing, and increased arousal, must be present, as described below.

<table>
<thead>
<tr>
<th>Re-experiencing Symptoms (must have at least one)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Intense emotional distress to trauma reminders - crying hysterically, profound fear, horror (such as a survivor of a plane crash reacting to news footage of another crash)</td>
</tr>
<tr>
<td>• Intense physical reactions to reminders of the event - pounding heart, sweating, rapid breathing, muscle tension.</td>
</tr>
<tr>
<td>• Recurrent nightmares surrounding the trauma</td>
</tr>
<tr>
<td>• Reliving the event for minutes or even days at a time - involuntary flashbacks</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Avoidance And Numbing Symptoms (must have one of first two listed, plus one other from the list)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Avoids thoughts or feelings related to the trauma</td>
</tr>
<tr>
<td>• Avoids people, places, or activities related to the trauma</td>
</tr>
<tr>
<td>• Unable to recall important aspects of the trauma</td>
</tr>
<tr>
<td>• Loss of interest in activities and life</td>
</tr>
<tr>
<td>• General numbing of emotions</td>
</tr>
<tr>
<td>• Sense of a limited future - having a short life span, not getting married, no career</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Increased Arousal Symptoms (must have at least two)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Sleep disturbances</td>
</tr>
<tr>
<td>• Irritability or outbursts of anger</td>
</tr>
<tr>
<td>• Difficulty concentrating, forgetfulness</td>
</tr>
<tr>
<td>• Hypervigilance – “on red alert”</td>
</tr>
<tr>
<td>• Exaggerated startle response – “jumpy”</td>
</tr>
</tbody>
</table>

Other common symptoms of PTSD often include:

- Anger, irritability
- Guilt, shame, or self-blame
- Depression, suicidal thoughts, anxiety, social phobias.
- Self-destructive behaviors, such as drug abuse
- Feeling mistrust, alienation, isolation, betrayal
- Headaches, stomach problems, chest pain

Following a traumatic event, almost everyone experiences at least some of the symptoms of PTSD, such as having short-lived nightmares. Symptoms of PTSD usually develop within 3 months following the traumatic event, but the onset may be delayed. They may occur immediately after the event, but may also occur weeks or months later, becoming suddenly or gradually apparent. The following criteria are related to the diagnosis of PTSD:

1. Experiencing, witnessing or being confronted with an event involving serious injury, death or a threat to a person’s physical or emotional integrity.
2. A response involving helplessness, intense fear or horror.
3. Symptoms of PTSD are present for at least one month.
4. Symptoms must cause significant distress or functional impairment.

**IMPLICATIONS**

Once the victim is safely removed from the traumatic event, a key implication for the healthcare provider is to make the person who has experienced a trauma feel safe. Providing something to drink, to eat, and physical comfort, such as a dry, warm blanket, are helpful. Staying with the patient and asking gentle, caring questions, such as “Are you in pain?”; “Can I call someone for you?”; “Would you like to talk to me or someone else about what happened?”, is also helpful for the patient to feel safe, connected and heard. Making this effort at the time of first contact, sometimes referred to as a post-crisis debriefing, provides a means of offsetting the common tendency toward isolation and bottling up feelings. Knowing the history of every patient is essential. Assessing only the patient’s presenting problem is not sufficient. Any time during the patient’s care if he or she becomes physically or emotionally distressed, providing a caring, reassuring, and supportive environment is essential. If necessary, appropriate referrals, such as to mental health professionals and resources, is appropriate.

PTSD, an emotional illness, is often referred to as the “can’t stop remembering” disease. Healthcare providers play a key role in assessing for symptoms of PTSD after a traumatic event, as well as promoting a sense of safety.
1. PTSD is a response by normal people to an abnormal situation.

   a. True  
   b. False

2. Which of the following is NOT characteristic of symptoms of PTSD? They occur:

   a. immediately after the event.  
   b. when the patient is reminded of the trauma.  
   c. within 3 months of the event.  
   d. only at the time the traumatic event is experienced.

3. Norepinephrine is released by our bodies in times of terror.

   a. True  
   b. False

4. Which of the following is the best example of a “re-experiencing” symptom?

   a. Loss of interest in activities and life  
   b. Difficulty concentrating  
   c. Recurrent intrusive memories of the trauma  
   d. The impulse to commit suicide

5. Which of the following is the best example of an “avoidance” symptom?

   a. Complaints of difficulty staying asleep  
   b. Refusal to go to the park where her rape occurred  
   c. Heart pounds and profuse sweating when hears of a similar traumatic event  
   d. Difficulty concentrating when following a recipe
6. Which of the following is the most common event to cause PTSD?

   a. Rape
   b. Death of a loved one
   c. Intense responses to trauma reminders
   d. Feeling alienated and alone

7. Other common symptoms of PTSD include all of the following EXCEPT:

   a. depression.
   b. substance abuse.
   c. forgetfulness.
   d. talking incessantly.

8. Because a higher percentage of men experience a traumatic event in their lives, men are more likely experience PTSD than women.

   a. True
   b. False

9. A key implication for the healthcare provider when caring for a patient who has experienced or witnessed a trauma is to:

   a. insist that the person talks about the ordeal with you.
   b. stay with the patient to allow him or her to feel safe, heard, and connected.
   c. encourage law enforcement to debrief the patient as soon as possible.
   d. isolate the patient from family and friends until a full evaluation has been completed.

10. Which of the following may be the origin of PTSD?

    a. A house fire where property and/or persons are lost
    b. Physical, sexual or on-going emotional abuse
    c. Witnessing the death of a loved, either by natural causes, suicide or homicide
    d. All of the above if sufficient terror is evoked in that person