

# PTSD: Post Traumatic Stress Disorder



Merve Kaya

# What is PTSD?

- Experience or witnessing of a life-threatening events
- Includes generalized feelings of fear and apprehension
- In 1980 entered in DSM
- September 11 terrorist attack in New York
- Nightmares and flashbacks, difficulty in sleeping, feeling detached or estranged

# STRESS

- A psychological condition that occurs in experiencing or perceiving challenges
- Affect both body and mind
- Important terms: stressors, stress, distress, coping strategies
- DSM: On Axis 1 and Axis 4



# Which factors predispose a person to stress?

- Coping skills
- Presence of resources
- Individual characteristic
- Gene (5HTTLPR), more or less stress-sensitive
- Stress tolerance

**Self-perpetuating cycle**

# Characteristics of Stressors

- 1) Severity
- 2) Chronicity
- 3) Timing
- 4) How closely it affects our own lives
- 5) How expected it is
- 6) How controllable it is



# Measuring Life Stress

- Self report checklist
- Life Event and Difficulty Schedule (LEDS)



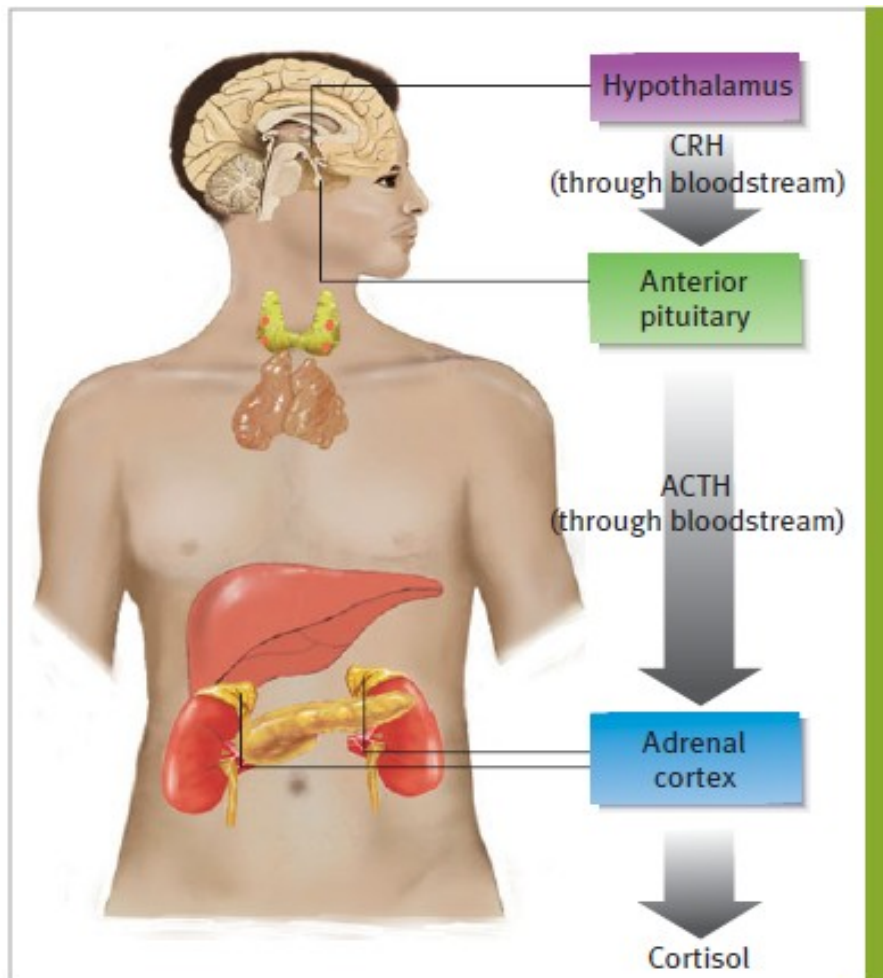
# Resilience

- Most common reaction after a traumatic event
- **Factors increase resilience:** Being male, being older, being well educated
- **Factors reduce resilience:** Having more negative affect, being more inclined to ruminate, trying to find meaning in what has happened
- Self confidence and being overly positive also help people to cope better

# Stress and Stress Response

- What happens to our body when we experience stress?
- **Sympathetic-adrenomedullary (SAM) system:** Fight or flight response, mobilize resources
- Hypothalamus- SNS- secretion of adrenaline- increase heart rate
- **Hypothalamic-pituitary-adrenal (HPA):** Cortisol, beneficial or harmful?





**FIGURE 5.1**

*The Hypothalamic-Pituitary-Adrenal (HPA) Axis*

Prolonged stress leads to secretion of the adrenal hormone cortisol, which elevates blood sugar and increases metabolism. These changes help the body sustain prolonged activity but at the expense of decreased immune system activity.

Source: From KALAT. *Biological Psychology* (Non-InfoTrac Version), 7th ed. © 2001 Wadsworth, a part of Cengage Learning, Inc. Reproduced by permission.

# Biological Cost of Stress

- **Allostatic load:** Adapting to stress
- Relaxed: Low allostatic load
- Feeling pressured: Higher allostatic load
- Stress may provoke or maintain certain disorders (e.g. migraine headaches)
- Correlational study: Students who experience higher negative events are more likely to develop cold

# The Mind-Body Connection

- Stress causes vulnerability in immune system functioning
- Psychoneuroimmunology
- Bidirectional relationship between brain and immune system
- Immunosuppression
- Cardiovascular Disease

# History

- The American Civil War (1861-1865) and the Franco-Prussian War (1870-1871)  
Civil War: Early attempt in diagnosis
- Nostalgia, Soldier's Heart, and Railway Spine
- Shell Shock
- Battle Fatigue or Combat Stress Reaction (CSR)
- Development of the PTSD diagnosis
- DSM 5

# Acute Stress Disorder

- Symptoms should be last at least 2 days
- It is used to diagnose when symptoms develop shortly after traumatic event
- Diagnosis can be changed into PTSD after 4 weeks
- Early intervention
- Depression and generalized anxiety disorders can also develop after a traumatic event

# Prevalence

- Lifetime prevalence of PTSD in USA is 6.8%
- Higher in women: 9.7% women, 3.6% men
- Why?
- It is often co-morbid with other psychiatric disorders.
- Most common diagnoses are major depressive disorder, panic disorder, other anxiety disorder and substance abuse or dependence.

# Rates of PTSD after traumatic experience

- Low rate of natural disaster, low rate of PTSD
- Human intent trauma more likely to cause PTSD (e.g. terrorist attack vs. car accident)
- Direct exposure
- Manner of assessment (clinical interviews vs. questionnaire)

# The trauma of military combat

- Ordinary coping methods are not useful
- Constant fear, unpredictability, uncontrollable circumstances, necessity of killing, separation from family etc.
- “shell shock”, World War 1
- Combat exhaustion, World War 2



# Mental health consequences of deployment to Iraq and Afghanistan

- 2 million people had deployed
- High prevalence in post deployment mental disorders
- Importance of mental health screening for pre deployment
- Theater-specific duties



# Prisoners of war and holocaust survivors

- Extensive symptoms; anxiety, insomnia, headaches, irritability, depression, nightmares, impaired sexual potency and diarrhea
- Both biological and psychological stressors causes these symptoms
- Survivor prisoners showed low frustration tolerance, impaired resistance to physical illness, alcohol and drug dependence, emotional instability

# Psychological trauma among victims of torture

- Torture survivors highly develop PTSD, anxiety or depression symptoms (e.g. Nepalese refugee camp)
- Does preparedness for torture be protective against PTSD



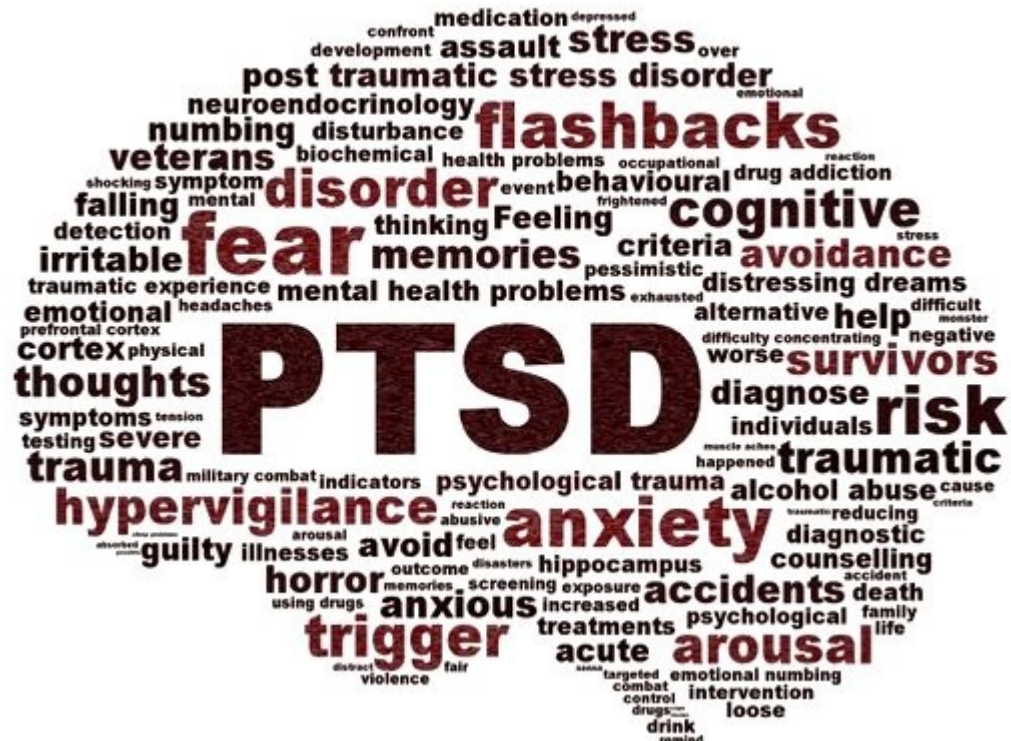
# Symptoms

- **Re-experiencing symptoms:** Upsetting memories, flashbacks, and nightmares, feelings of distress or intense physical reactions when something reminds them the event
- **Avoidance and numbing symptoms:** Avoid activities, places or thoughts that reminds them of the trauma. Feeling detached from others and lose interest in activities and life in general.
- **Arousal symptoms:** Trouble in sleeping, irritability, difficulty concentrating, feeling jumpy and easily startled, and hyper vigilance

# Diagnosis

- Symptoms must last at least 1 month
- Cause significant distress or interfere with work or home life
- Person must have 3 different types of symptoms to be diagnosed: re-experiencing symptoms, avoidance and numbing symptoms, and physical symptoms





- <https://www.youtube.com/watch?v=XfkmyKrQk-w>

# Causal Factors in PTSD

- **Pre-traumatic risk factors**

Previous psychiatric disorder

Gender

Personality

LSES

Lack of education

Race

Previous trauma

Family psychiatric history

- **Post-traumatic risk factors**

Perceived lack of social support

Subsequent life stress

# Individual Risk Factors

There are both risks for experiencing trauma and risks for PTSD

- Certain occupations( soldier vs librarian)
- Being female
- Having less than a college education
- Having a conduct problem in childhood
- Having a family history of psychiatric disorder
- High extraversion and neuroticism
- Substance abuse



## Protective factor against PTSD

- Having good cognitive ability (e.g. 6 years old children with above 115 IQ)

## Biological factors

- Gender (e.g. women with PTSD have higher cortisol level than women without PTSD)
- The type of trauma and cortisol level
- Gene environment interactions (s/s form of serotonin transporter gene)
- Having reduced size of hippocampus

# Sociocultural Factors

- Being a member of a minority group
- Being more educated and having a higher annual income
- Returning to a negative and insecure social environment
- Justification for the combat and clarity of the war goals

# Long Term effects of posttraumatic stress

- It can be severe and chronic condition in some cases
- Difficulties in readjusting life
- Diagnosis of delayed PTSD is more difficult



# Prevention

- Reduce the frequency of traumatic event
- Changes in law and social policy
- Preparing people in advance
- Cognitive-behavioral techniques:  
Stress inoculation training
- Does playing tetris after a traumatic event reduce flashbacks?

# Treatment

Natural recovering is typical

- Telephone Hotlines
- Crisis interventions



# Psychotherapy

- **Cognitive Processing Therapy (CPT):**

Helps patient by changing their way of thinking

Four main parts: Learning About Your PTSD symptoms, becoming aware of thoughts and feelings, learning skills, understanding changes in beliefs

Learning new ways to deal with trauma



- **Stress Inoculation Training (SIT)**

Educate person about skills to manage anxiety and stress

Muscle relaxation, cognitive restructuring, breathing exercises, assertiveness skills, thought stopping, role playing, and guided self-dialogue may be included

- **Exposure-based therapy:**

Decrease distress

To change reaction for stressful memories

- **Prolonged Exposure:** Education, breathing, real world practice, talking through trauma

90 minutes therapy session

- **Virtual Reality:** Head mounted display with 3D images

Combined with relaxation





- Eye movement desensitization and reprocessing (EMDR):

Integrative

Eight phases: History and treatment planning, preparation, assessment, desensitization, installation, body scan, closure, reevaluation

- Individual therapy, group therapy, combination of therapies can be applied by a professional according to the patient needs

# Psychological Debriefing

- To help and speed up the healing process
- Emotional support
- Encourage victims to talk about their experiences
- Structured discussion
- Critical Incident Stress Debriefing (CISD):  
Group, 2-10 days after trauma, 3-4 hours long

# Medications

- Antidepressant for depression, intrusion and avoidance symptoms
- In some cases antipsychotic medications
- Anti-anxiety medication
- Prazosin



# Family Therapy




# Group Therapy



# Sources

- Butcher, J. N., Mineka, S., & Hooley, J. M. (2007). *Abnormal psychology*. Boston: Pearson/Allyn and Bacon.
- Adsheed, G. (2000). Psychological therapies for post-traumatic stress disorder. *The British Journal of Psychiatry*, 177(2), 144-148.
- Post Traumatic Stress Disorder. (n.d.). Retrieved March 20, 2016, from <http://www.ptsd.ne.gov/what-is-ptsd.html>
- Bisson, Jonathan I. "Post-traumatic Stress Disorder." *Occupational Medicine* 57.6 (2007): 399-403. Web.
- Andreasen, N. C. (n.d.). Posttraumatic Stress Disorder: A History and a Critique. Retrieved March 20, 2016, from [http://www.brainline.org/content/2011/01/posttraumatic-stress-disorder-a-history-and-a-critique\\_pageall.html](http://www.brainline.org/content/2011/01/posttraumatic-stress-disorder-a-history-and-a-critique_pageall.html)
- Iribarren, J., Prolo, P., Neagos, N., & Chiappelli, F. (2005). Post-Traumatic Stress Disorder: Evidence-Based Research for the Third Millennium. *Evidence-Based Complementary and Alternative Medicine*, 2(4), 503–512. <http://doi.org/10.1093/ecam/neh127>
- Andreasen, N. C. (n.d.). Posttraumatic Stress Disorder: A History and a Critique. Retrieved March 20, 2016, from [http://www.brainline.org/content/2011/01/posttraumatic-stress-disorder-a-history-and-a-critique\\_pageall.html](http://www.brainline.org/content/2011/01/posttraumatic-stress-disorder-a-history-and-a-critique_pageall.html)
- Menon, S. B., & Jayan, C. (2010). Eye Movement Desensitization and Reprocessing: A Conceptual Framework. *Indian Journal of Psychological Medicine*, 32(2), 136–140. <http://doi.org/10.4103/0253-7176.78512>

- 
- Hamblen, PhD, Schnurr, PhD, Rosenberg, MA, & Eftekhari, PhD. (n.d.). PTSD: National Center for PTSD. Retrieved April 05, 2016, from <http://www.ptsd.va.gov/professional/treatment/overview/overview-treatment-research.asp>
  - PTSD: National Center for PTSD. (n.d.). Retrieved April 05, 2016, from <http://www.ptsd.va.gov/public/treatment/therapy-med/treatment-ptsd.asp>
  - Virtual reality treatment for Post Traumatic Stress Disorder. (n.d.). Retrieved April 05, 2016, from <http://www.vrs.org.uk/virtual-reality-healthcare/ptsd.html>
  - Post-traumatic stress disorder (PTSD). (n.d.). Retrieved April 05, 2016, from <http://www.mayoclinic.org/diseases-conditions/post-traumatic-stress-disorder/basics/treatment/con-20022540>
  - Post-traumatic Stress Disorder. (n.d.). Retrieved April 05, 2016, from [https://www.med.upenn.edu/ctsa/ptsd\\_treatment.html](https://www.med.upenn.edu/ctsa/ptsd_treatment.html)

