

PTSD: WHEN THE “FIGHT OR FLIGHT” RESPONSE IS CAUSING HARM

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Disclosure

- **Financial disclosure: I do not have a financial relationship with any commercial entity which may represent, in perception or reality, a conflict of interest in the context of this presentation**

Pharmacist learning objectives

- Characterize what Post Traumatic Stress Disorder (PTSD) is.
- Describe the place in therapy of medications to treat PTSD.
- Illustrate how PTSD treatment needs to fit how the brain works.
- Identify which therapy works the best for the treatment of PTSD.

Technician Learning Objectives

- Describe what Post Traumatic Stress Disorder (PTSD) is.
- List medications used in the treatment of PTSD.
- Identify examples of trauma focused psychotherapy to treat PTSD symptoms.

PTSD

- **“Long after a traumatic experience is over, it may be reactivated at the slightest hint of danger and mobilize disturbed brain circuits and secrete massive amounts of stress hormones. This precipitates unpleasant emotions intense physical sensations, and impulsive and aggressive actions. These posttraumatic reactions feel incomprehensible and overwhelming.”**

van der Kolk, Bessel. The Body Keeps The Score: Brain, Mind, and Body in the Healing of Trauma. Penguin Books; 2014.

PTSD: What is happening to me?

- “Even years later traumatized people often have enormous difficulty telling other people what has happened to them. Their bodies reexperience terror, rage, and helplessness, as well as the impulse to fight or flee, but these feelings are almost impossible to articulate. Trauma by nature drives us to the edge of comprehension, cutting us off from language based on common experience or an imaginable past”

Bessel van der Kolk MD

- Psychiatrist who started working in 1978 at the VA in Boston¹
 - Angry patients in the waiting room
- Researching how to treat PTSD patients
 - The Traumatic Neuroses of War by Abram Kardiner in 1941²
 - Understood PTSD symptoms have their origin in the entire body's response to the original trauma

1. van der Kolk, Bessel. The Body Keeps The Score: Brain, Mind, and Body in the Healing of Trauma. Penguin Books; 2014.

2. Kardiner, Abram. The Traumatic Neuroses of War. Martino Fine Books; 2012 reprint of original edition.

PTSD/trauma

- **Traumatic experiences happen to us, our families, and our neighbors**
- **Person has exposure to a traumatic event**
 - **Person witnesses, experiences, or learns that a close family member or friend experienced trauma**
 - **Trauma/situation that involved a definite or threatened death or serious injury, sexual violence, or possible harm to self or others**

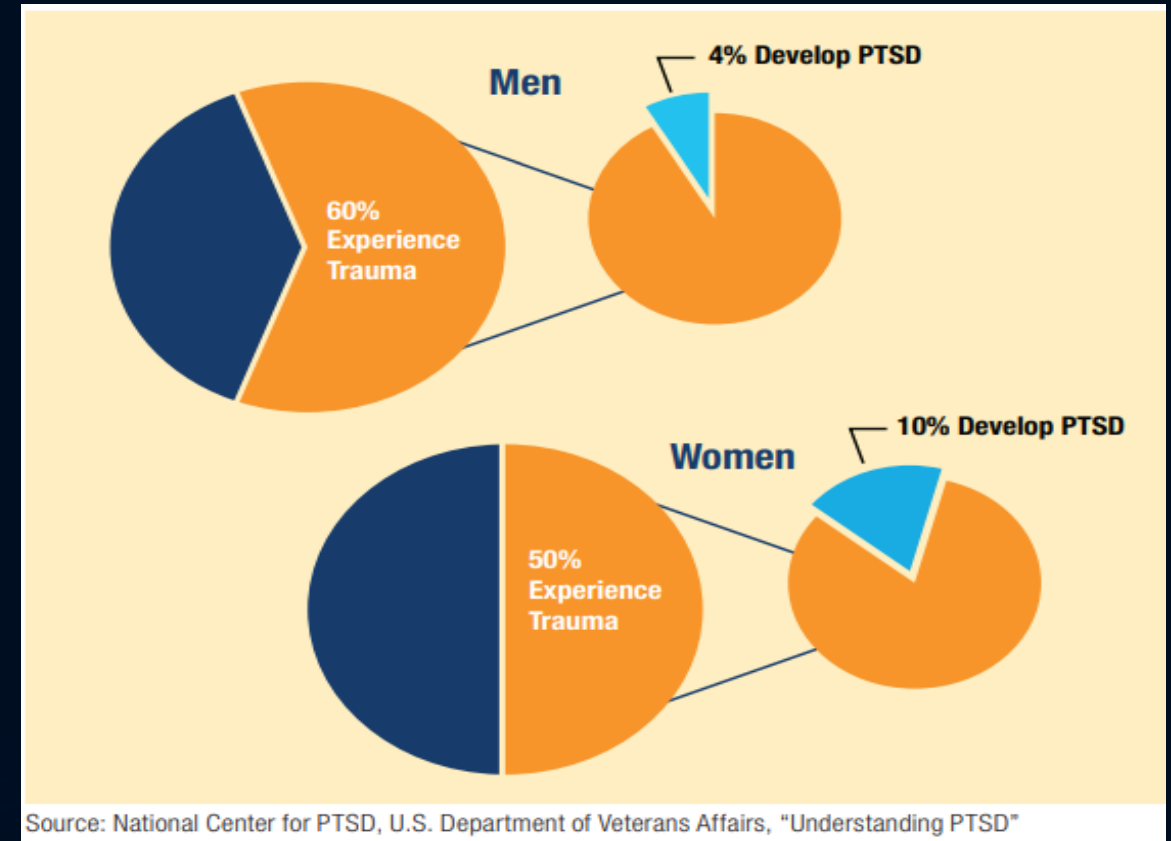
Department of Veterans Affairs and Department of Defense (DoD) Psychological Health Center of Excellence. A Patient's Guide: Understanding Posttraumatic Stress Disorder and Acute Stress Disorder.

PTSD: What is it?

- After a traumatic experience, it can be reactivated.
- Reactivation can be caused by the slightest hint of danger
- Causes a release of stress hormones
- Precipitates:
 - Unpleasant emotions
 - Intense physical sensations
 - Impulsive and aggressive actions
- For the patient during PTSD reactivation, it can feel incomprehensible and overwhelming

PTSD

- 60% of men and 50% of women face at least one traumatic event in their lifetimes
 - 10% of women and 4% of men develop PTSD
- Combat experience or sexual assault increases the incidence of developing PTSD
- Is it just a combat disease?



Department of Veterans Affairs and Department of Defense (DoD) Psychological Health Center of Excellence. A Patient's Guide: Understanding Posttraumatic Stress Disorder and Acute Stress Disorder.

PTSD

- **Poorly recognized and/or diagnosed in clinical practice?**
- **Co-occurs with anxiety disorders, depression, substance use, traumatic brain injury¹**
- **Overlapping symptoms lead to diagnostic uncertainty**
- **PTSD is a trauma and stressor related disorder²**
 - **PTSD is NO longer considered an anxiety disorder**
- **PTSD myth of “Just Happening”**

1. Department of Veterans Affairs and Department of Defense (DoD) Psychological Health Center of Excellence. A Patient's Guide: Understanding Posttraumatic Stress Disorder and Acute Stress Disorder.

2. American Psychiatric Association. (2013). Anxiety disorders. In Diagnostic and statistical manual of mental disorders (5th ed.).

PTSD

- **Patients then attempt to cope with unbearable emotions**
- **Mental health issues caused by patient attempts to cope**
 - **Drug and alcohol addiction (12-48% of veterans with PTSD)**
 - **Self-injury**
 - **PTSD increases risk of lifetime suicide attempt**
- **Patient usually has poor support system and poor contact**
- **Sleep disturbances (90-100% of veterans with PTSD)**

van der Kolk, Bessel. *The Body Keeps The Score: Brain, Mind, and Body in the Healing of Trauma*. Penguin Books; 2014.

PTSD the diagnosis

- In 1980 the American Psychiatric Association added the diagnosis of PTSD to the Diagnostic and Statistical Manual of Mental disorders (DSM-3) ¹
 - Etiologic agent was outside the individual (traumatic event) vs. it being an individual weakness
- van der Kolk received a grant rejection letter for a study on the biology of traumatic memories
 - The VA rejected his proposal, saying: “It has never been shown that PTSD is relevant to the mission of the Veterans Administration.”² (VA now has a National Center for PTSD)

1. Friedman, MJ. A brief history of the PTSD diagnosis. Veterans Affairs National Center for PTSD.

2. van der Kolk, Bessel. The Body Keeps The Score: Brain, Mind, and Body in the Healing of Trauma. Penguin Books; 2014.

What does PTSD look like?

- Avoid thinking of the trauma
- Flashbacks
- Cannot concentrate
- Negative thinking
- Sleeping difficulty
- Numbing
- Feeling guilt or shame
- Negative mood
- Always on guard
- Loss of interest
- Bad dreams
- Aggressive behavior

“Trauma affects the entire human organism—body, mind, and brain. In PTSD the body continues to defend against a threat that belongs to the past.”

van der Kolk, Bessel. *The Body Keeps The Score: Brain, Mind, and Body in the Healing of Trauma*. Penguin Books; 2014.

PTSD

- **Patients that are chronically angry or scared experience:**
 - **Constant muscle tension**
 - **Muscle spasms**
 - **Back pain**
 - **Migraine headaches**
 - **Fibromyalgia**
 - **Other forms of chronic pain**
 - **Patients experience visits to multiple specialists and may be prescribed multiple medications**
 - **Underlying trauma not identified, and the symptoms are the way the patient is coping with the trauma.**

Acute stress disorder (ASD vs. PTSD)

- **ASD**
 - **Happens only in the first month following trauma exposure**
 - **More emphasis on feeling disconnected**
 - **Altered sense of reality (feeling dazed)**
 - **Inability to remember important details of the event (inability to remember is not due to injury such as concussion)**

Cognitive errors in response to traumatic stress (VA)

- Cognitive errors:
 - Misinterpreting a situation as dangerous because it resembles a prior trauma
- Idealization:
 - Demonstrating inaccurate rationalizations or justifications of the perpetrator's behavior, especially if the perpetrator was a caregiver

Cognitive errors in response to traumatic stress (VA)

- **Excessive guilt:**
 - **Attempting to make sense of the trauma by assuming responsibility for the trauma (self blame)**
- **Trauma-induced hallucinations or delusions:**
 - **Experiencing hallucinations and delusions that, although they are biological in origin, contain cognitions that are congruent with trauma content**

PTSD symptom complexes: DSM-V

- **Intrusion symptoms (Reliving the event)**
 - **Recurrent, intrusive distressing memories of the trauma**
 - **Recurrent, disturbing dreams of the event**
 - **Feeling that the traumatic event is recurring (e.g., dissociative flashbacks)**
- **Avoidance (avoiding situations that remind you of the event)**
 - **Avoidance of conversation, thoughts, or feelings about the trauma**
 - **Avoidance of people, places, or activities that are reminders of the event**

American Psychiatric Association. (2013). Anxiety disorders. In Diagnostic and statistical manual of mental disorders (5th ed.) (DSM).

PTSD symptom complexes

- **Persistent Negative Alterations in Thinking and Mood (negative mood and negative thinking)**
 - Inability to recall an important aspect of the trauma
 - Anhedonia
 - Estrangement from others
 - Restricted affect
 - Negative beliefs about oneself
 - Distorted beliefs causing one to blame others or themselves for the trauma
 - Negative mood state

PTSD symptom complexes

- **Hyperarousal symptoms (Feeling keyed up)**
 - **Decreased concentration**
 - **Easily startled**
 - **Self-destructive behavior**
 - **Hypervigilance**
 - **Insomnia**
 - **Irritability or anger outbursts**

American Psychiatric Association. (2013). Anxiety disorders. In Diagnostic and statistical manual of mental disorders (5th ed.).

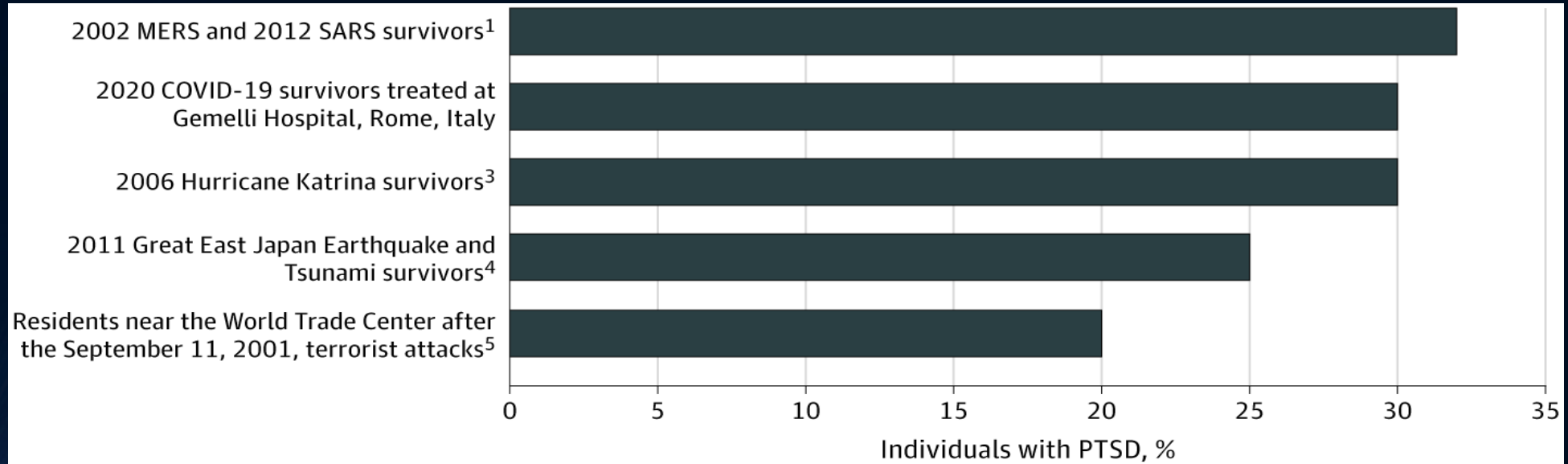
PTSD causes

- Severe traffic accidents
- Military combat
- Natural disasters
- Pandemics: Covid-19
- Childhood abuse
 - About 1 in 7 children, in the United States experienced child abuse and neglect last year¹
- Physical attacks by an intimate partner
 - About 1 in 4 women and 1 in 10 men experienced sexual or physical violence²
- Learning of a traumatic event that happened to a close family member or friend

1. CDC Preventing Intimate Partner Violence Prevention Injury Center

2. CDC Preventing Child Abuse & Neglect Violence Prevention Injury Center

PTSD causes: COVID-19 pandemic



- **115/381 (30.2%) patients in post acute care services**
- **2019 risk factors: female sex, history of psychiatric disorders, delirium or agitation during acute illness**

Janiri D, Carfi A, et al. Posttraumatic Stress Disorder in Patients After Severe COVID-19 Infection. JAMA Psychiatry. 2021;78(5):567–569.

COVID-19 impacting pharmacy staff

- Increased Stress
- Anxiety
- Fear
- Depressive symptoms
- Exacerbation of pre-existing Mental Illness
- Burnout/Mental Exhaustion
- Social Isolation
- Physical symptoms
- Emotional symptoms
- Behavioral symptoms

**COVID-19 STRESS FOR HEALTH CARE WORKERS (HCWs):
SIMILAR TO A NATURAL DISASTER OR INTERNATIONAL MASS CONFLICT**

COVID-19 sources of anxiety, depression, trauma, distress in HCWs

- Personal protective equipment
- Virus transmissibility
- Risk and fear of transmissibility to others
- Social distancing
- Access issues
- Communicative barriers
- Increase in workload
- Changing protocol and enforcements
- Changing and lack of consistent guidelines
- Unfamiliarity with COVID-19
- Limited available interventions
- Medication shortages
- Social stigma

Mike's story

Mike's story: life's events/trauma

- Two or Four?
- “It was the best of times, the worst of times...” (Charles Dickens A Tale of Two Cities)
- Birth of Zach and Carter in 2000
- Hit the ground running
- What if?
- Expecting again in 2003
- Expecting again in 2004

Mike's story: life's events/trauma

- Process of healing PTSD injury/Grief journey
 - Time frame for grief
 - Grieving as a father
 - Compartmentalize it and move on
 - So how is that working out?
 - Feelings
 - Hiding feelings
 - Triggers
 - Using work to numb
 - Acting strong for surviving spouse

Mike's story: life's events/trauma

- Grieving as a family
 - Mom, Dad, surviving twin, and little brother
 - Affects on surviving twin
- Grief, communication, and marriage
 - Effects on relationships/marriage: ineffective in expressing feelings of sorrow

PTSD and the brain

What trauma does to the brain

- Trauma changes the brain
 - Brain development
 - Self-regulation
 - Ability to stay in tune with others
 - Our brains are wired to foster working and playing together
 - Interferes with cooperation, nurturing, and ability to be productive
- Difficult time with intimate relationships
- Patient has difficulty in trusting themselves and others
- Trauma encodes in sensations

van der Kolk, Bessel. The Body Keeps The Score: Brain, Mind, and Body in the Healing of Trauma. Penguin Books; 2014.

What imaging shows about trauma

- **Functional MRI (fMRI)**
 - **Measures neural activity by tracking change in blood flow in the brain**
 - **Does not require exposure to radiation**
- **Imaging (fMRI and PET scans) demonstrate**
 - **Why patient become disorganized**
 - **Why lights and sounds may bother them**
 - **Why the patient may blow up at the slightest provocation**

Trauma and how people respond differently

- Professional couple involved in huge car crash in 1999
- 87 car pile-up due to fog
- Wife's story:
<http://www.ptsdassociation.com/storiesb/2015/2/12/into-the-fog>
- Night following accident
 - Sleep issues
 - Excessive drinking of wine
- To measure what happened to Stan and Ute's brains when a script driven imagery was read
 - Script captures sounds, smells, and other sensations when they were trapped in their car

Trauma and how people respond differently

- **Husbands scan**
 - Shows flashback in action
 - Lower right-hand corner brightly lit
 - Amygdala did not distinguish between past and present
 - Amygdala activated as if the car crash was happening
 - Triggers stress hormones and nervous system responses
 - Sweating, trembling, racing heart, elevated blood pressure
- **Wife's scan**
 - She went numb and her mind went blank
 - Nearly every area of her brain showed decreased activity
 - Her heart rate and blood pressure did not elevate
 - Her response “I felt just like I felt at the time of the accident: I felt nothing”
 - Example of Depersonalization

van der Kolk, Bessel. *The Body Keeps The Score: Brain, Mind, and Body in the Healing of Trauma*. Penguin Books; 2014.

Functions of part of the brain

- Left brain is sequential, linguistic, and analytical
- Left brain remembers facts, statistics, and the vocabulary of events
- Right brain develops first in the womb
- Right brain remembers sound, touch, smell, and the emotions they evoke
- Right brain reacts to voices, facial features, gestures, and places experienced in the past

Trauma and how the brain responds

- When traumatized patient reminded of the past:
 - Right brain reacts as if the traumatic event was occurring in the present.
- Left brain dysfunction
 - Patient may not be aware they are reenacting or reexperiencing the past
 - Patient is furious, terrified, enraged, ashamed, or frozen

Chapter 3: Functions of part of the brain

- Having one side of the brain shut down is disabling
- Left hemisphere brain deactivation causes:
 - Patient cannot organize experience into logical sequence
 - Cannot identify cause and effect of our actions
 - Cannot create coherent plans
 - Patient cannot translate shifting feelings into words

Areas of the brain and what they do

- **Brainstem basic housekeeping**
 - **Arousal**
 - **Sleep/wake**
 - **Hunger/satiation**
 - **Breathing**
 - **Chemical balance**

Areas of the brain and what they do

- Prefrontal cortex
 - Planning and anticipation
 - Sense of time and context
 - Inhibition on inappropriate actions
 - Empathic understanding
- Limbic brain (hippocampus, amygdala, hypothalamus)
 - Maps relation between organism and their surroundings
 - Emotional relevance
 - Categorization
 - Perception

Prefrontal cortex

- Frontal lobes allow you to weigh in with their assessment of the threat
- If you are not too upset, the frontal lobes can restore balance
 - Allows you to realize you are responding to a false alarm
 - Allows you to hover calmly/objectively over our thoughts, feelings and emotions (mindfulness) and take our time to respond
 - Inhibit, organize, and modulate hardwired automatic reactions preprogrammed in the emotional brain
 - Allows for better relationships with others
- IF SYSTEM BREAKS DOWN, AND WE DETECT DANGER, WE GO INTO FLIGHT OR FIGHT MODE AUTOMATICALLY

Brain wiring and how we perceiving the world

INTERNAL WORLD

- Temperature changes
- Breathing changes
- Arousal fluctuations

EXTERNAL WORLD

- Visual
- Auditory
- Tactile
- Olfactory
- Vestibular
- Proprioception

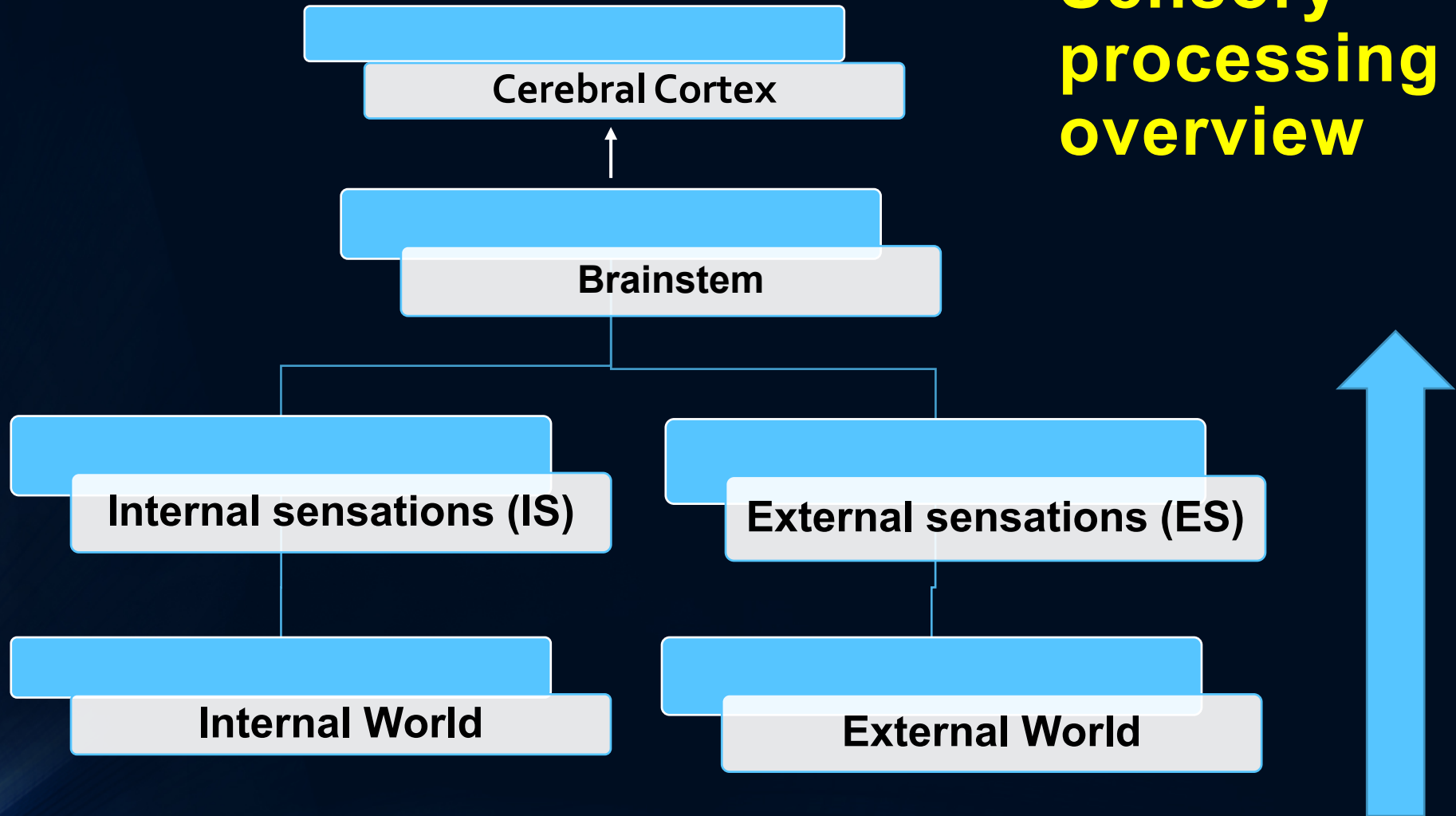
SENSATIONS

- Fear
- Emotional numbing
- Joy

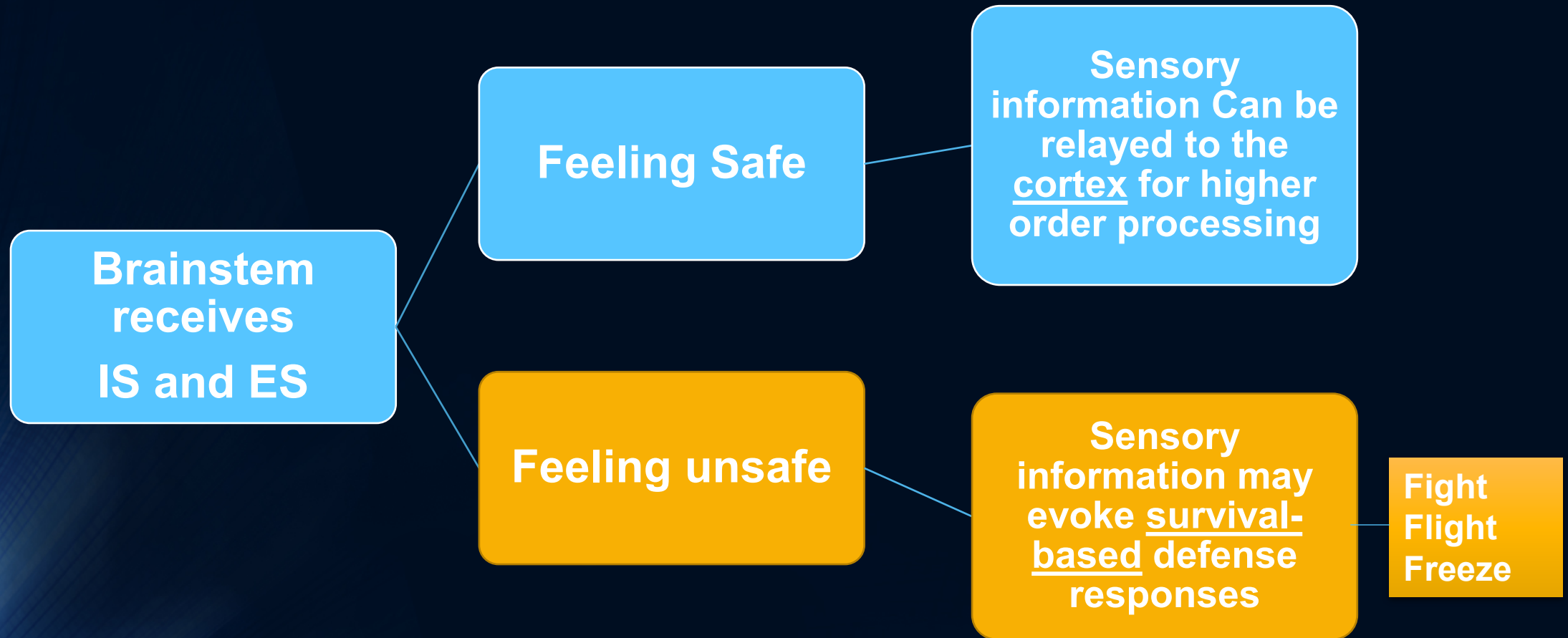
Self perception example

Sensory experience	External senses	Internal senses	Internal world and external world	Self (Perception of Mental Self in the External World)
"I'm on edge and the world is unsafe"	Hypersensitive to: Visual Auditory	Increased: arousal Fear	➡	=
"I feel dead inside"	Compromised ability to self-locate in space using: Tactile Vestibular	Decreased: arousal Numb	➡	=
"I felt loved as a child and felt safe"	Allow child/parent to communicate with each other through: Tactile Visual	Calm Breathing Joy	➡	=

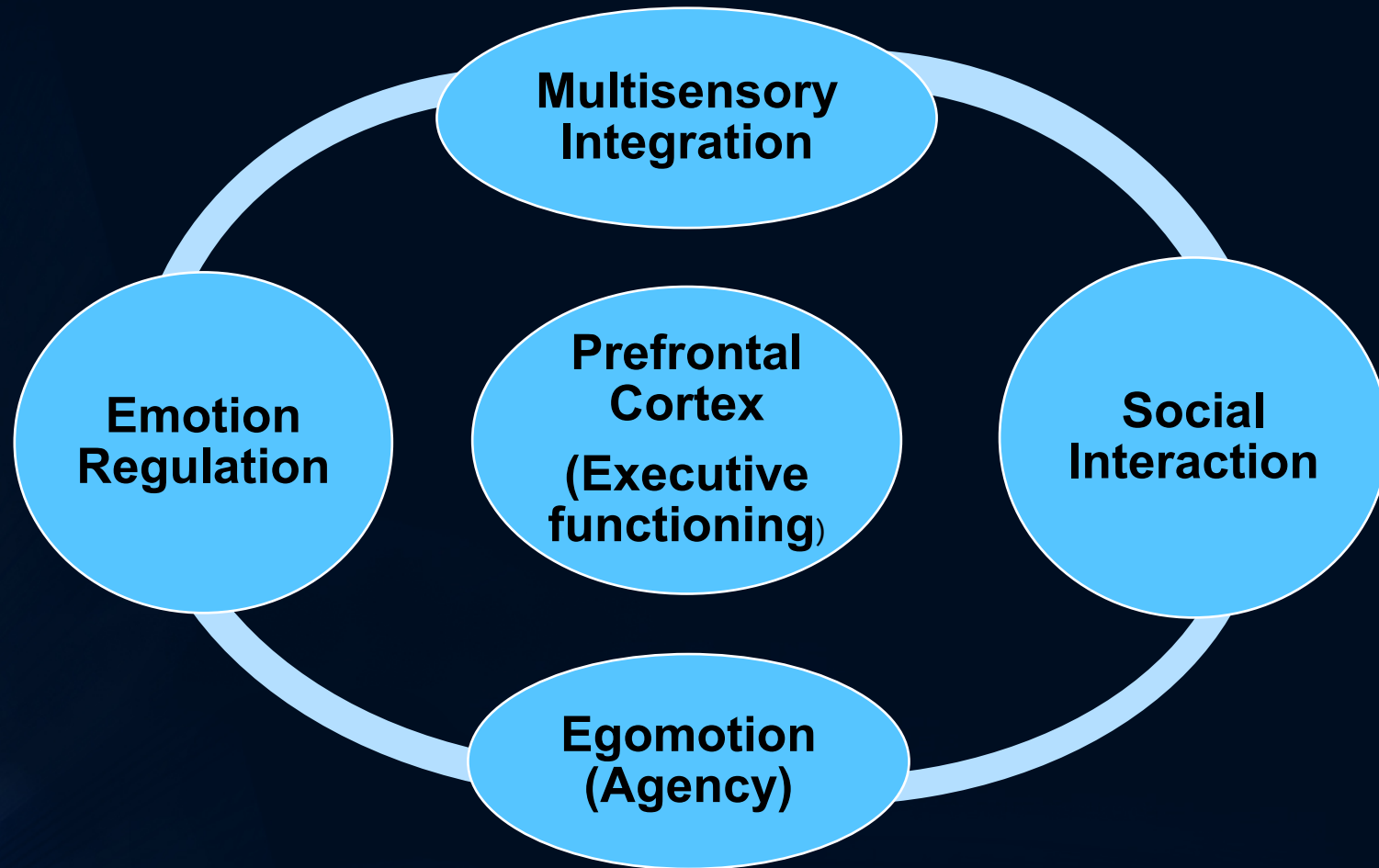
Sensory processing overview



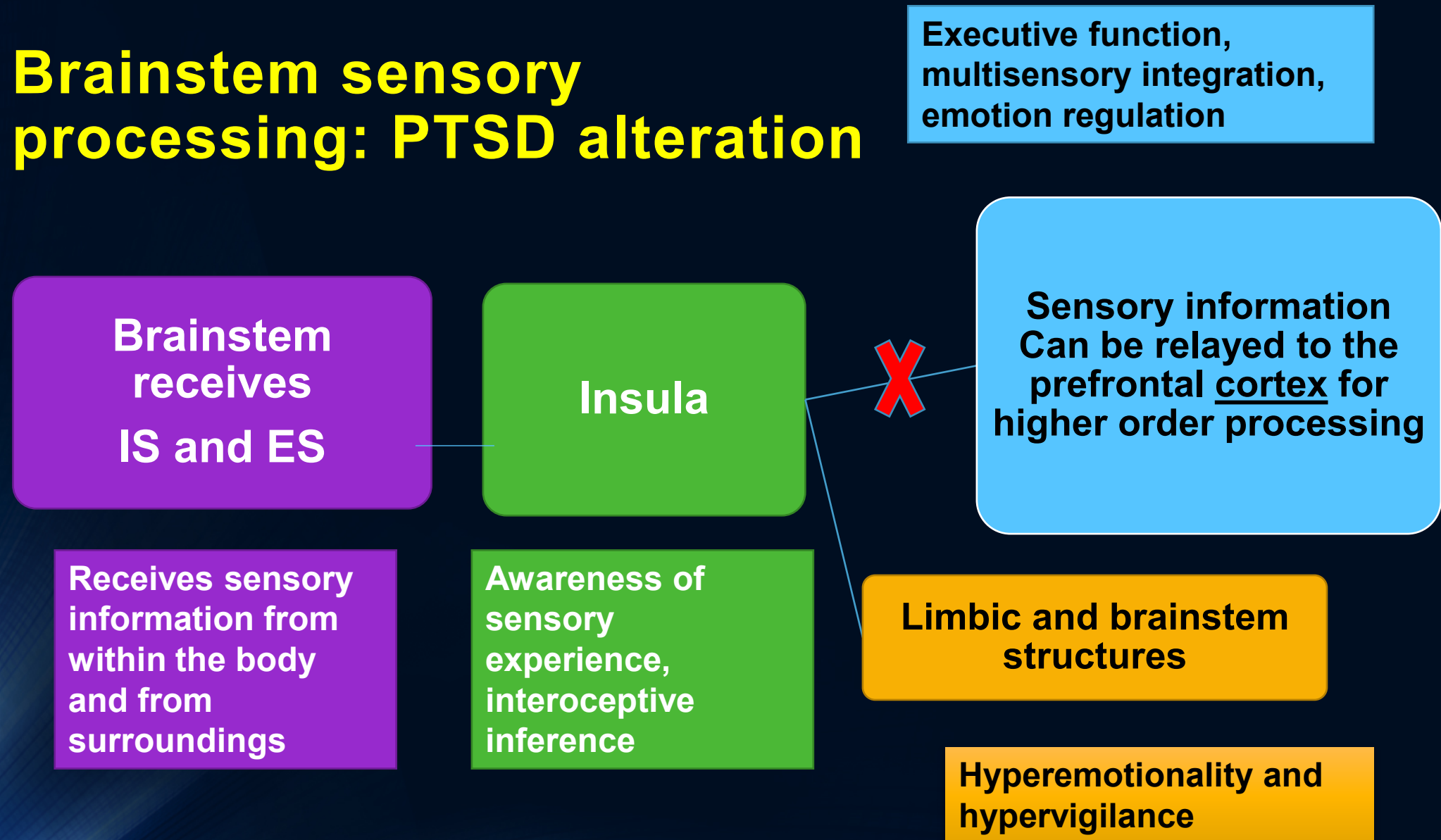
Brainstem sensory processing: PTSD alteration



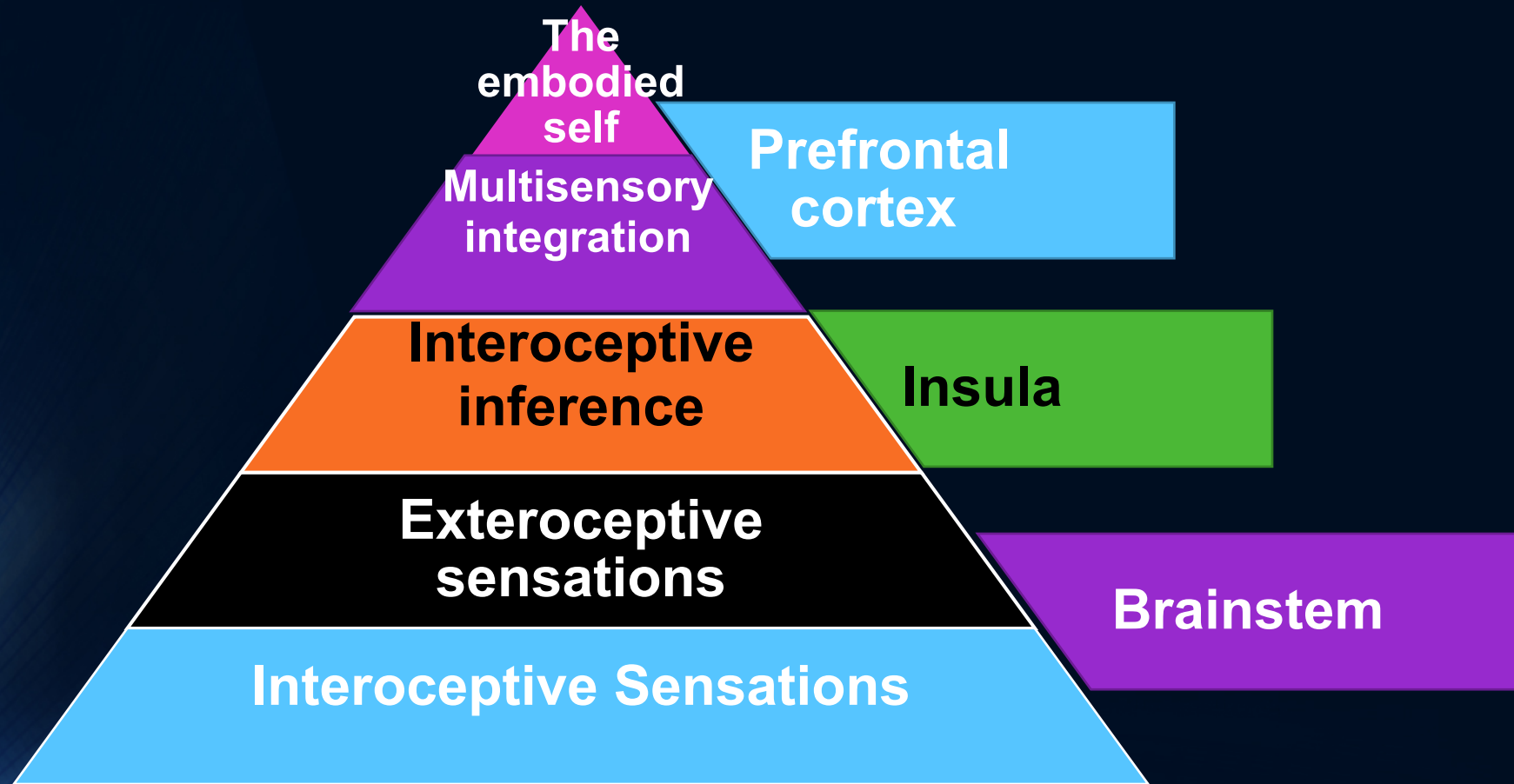
Prefrontal cortex: higher order functions



Brainstem sensory processing: PTSD alteration



PTSD treatment: bottom-up approach



PTSD treatment

PTSD treatment options

- Treatment of PTSD is similar regardless of cause
- Recommend psychotherapy that focuses on the trauma
 - **GENERALLY, HELPS PTSD SYMPTOMS MORE THAN MEDICATIONS**
- If psychotherapy not enough or not feasible then consider medication therapy options

Helping people change from trauma

- Patients can learn to control and change their behavior
 - Key is making the patient feel safe enough to experiment with new solutions
 - Fear destroys curiosity and playfulness
 - Move patient out of fight or flight states
 - Reorganize persons perception of danger
 - Manage relationships
- Language allows us to change ourselves and others
- Regulate our own physiology (breathing, moving, touching)

van der Kolk, Bessel. The Body Keeps The Score: Brain, Mind, and Body in the Healing of Trauma. Penguin Books; 2014.

Understanding brain wiring

- Teach patients to recognize and name their physical sensations
- Examples
 - What happens when their chest tightens?
 - Person feels nervous
 - Breathing becomes shallow?
 - Person feels uptight
 - What happens when they feel angry?
 - What can they do to change that sensation in their body?
 - What happens when they take a deep breath, jump rope, use a punching bag?

Autonomic nervous system

- Sympathetic nervous system (SNS)
 - Adrenaline to fuel the body and brain to take action
- Parasympathetic nervous systems (PNS)
 - Acetylcholine to regulate digestions, wound healing, sleep and dream cycles
- Inhalation
 - Stimulates the SNS
 - Increases heart rate
- Exhalation
 - Stimulates the PNS
 - Decreases heart rate

Understanding brain wiring

- **Teach patients:**
 - **how their brains are built**
 - **What emotions are for**
 - **Where emotions are registered in their bodies**
 - **How to express emotions/feelings to others**
 - **Facial muscles give clues about what the patient is feeling**
 - **How facial expressions affect other people**

Helping people change from trauma

- Why isn't it easy to heal from trauma?
 - Trauma makes it difficult to engage in intimate relationships
 - Alexithymia: no words for feelings
 - Stress re-exposure relieves anxiety
 - Learning to tolerate the physical sensations patient is experiencing
 - Adaptation or disease
 - “Being a patient, rather than a participant in one's healing process, separates suffering people from their community and alienates them from an inner sense of self”
 - Therapy is **HARD WORK!**

van der Kolk, Bessel. The Body Keeps The Score: Brain, Mind, and Body in the Healing of Trauma. Penguin Books; 2014.

Trauma-focused psychotherapy

- **Definition:** therapy that uses cognitive, emotional or behavioral techniques to facilitate processing a traumatic experience and in which the trauma focus is a central component of the therapeutic process.
- **The following are the individual manualized trauma-focused psychotherapies with the strongest evidence for obtaining change in core PTSD symptoms:**
 - **Prolonged exposure (PE)**
 - **Cognitive processing therapy (CPT)**
 - **Eye movement desensitization and reprocessing (EMDR)**
 - **Specific cognitive behavioral therapies for PTSD**
 - **Brief eclectic psychotherapy (BEP)**
 - **Narrative exposure therapy (NET)**
 - **Written narrative exposure**

VA/DOD provider trauma informed practices

- **Orient the patient to what you will be doing and why; don't assume he/she understands the purpose of assessments, treatment planning and interventions**
- **Provide feedback about your trauma assessment and clinical observations**
- **Explain the biological aftermath of trauma, particularly hyper-arousal and sleep disturbance**
- **Provide a clear message of availability and accessibility throughout treatment**
- **Shift from “Provider knows best” to “Together we can find solutions”**

VA/DoD trauma informed practices

- Discuss how treatment and wellness activities contribute to improved health and well-being
- Emphasize the patient's strengths and resilience while encouraging the development of new skills
- Service members and veterans who experience delayed trauma responses may benefit from the following strategies:
 - Create an environment that allows acknowledgment of the traumatic event(s)
 - Draw a connection between the traumatic event and trauma-related symptoms that may present
 - Recognize that triggers can precede traumatic stress reactions and assist in identifying those triggers
 - Work together to develop coping strategies to navigate and manage symptoms

Cognitive processing therapy

- Type of CBT in which patients learn skills to better understand how a trauma changed their thoughts and feelings¹
- Helps patient identify trauma related thoughts and how to change them so they have control over them
- Requires assignments for maximum results
- CPT requires patient to talk about the trauma
 - CPT-Cognitive only requires patient talk about thoughts and feelings about the trauma (not discussing the trauma)
- Usually, 8-14 sessions lasting 60-90 minutes
- Mobile app:²
 - **Mobile App: CPT Coach - PTSD: National Center for PTSD (va.gov)**

1. American Psychological Association. Clinical practice guideline for the treatment of (PTSD) in adults. Cognitive processing therapy.

2. Department of VA and DoD Psychological Health Center of Excellence. Health Care Provider's Guide to Trauma-informed Care.

Prolonged exposure therapy

- Patient talks about the trauma repeatedly¹
 - Then patient can gradually approach situations they may have been avoiding
- Discussing the trauma repeatedly decreases the impact of the trauma
- Allows patients to gain control over their emotions
- Requires assignments for maximum results
- Usually, 8-15 sessions each lasting 60-90 minutes
- Mobile app:²
 - **Mobile App: PE Coach - PTSD: National Center for PTSD (va.gov)**

1. American Psychological Association. Clinical practice guideline for the treatment of (PTSD) in adults. Prolonged exposure therapy.

2. Department of VA and DoD Psychological Health Center of Excellence. Health Care Provider's Guide to Trauma-informed Care.

Eye movement desensitization and reprocessing (EMDR)

- Evidence based treatment developed in 1987 and focuses directly on the memory Intended to change the way the memory is stored in the brain
- Based on the Adaptive Information Processing model¹
- PTSD symptoms result from disturbing past experiences²
 - Memories cause distress because they were not processed
 - Unprocessed memories contain emotions, beliefs, thoughts, and physical sensation that occurred during the disturbing experience
 - When memories are triggered, these stored items are experienced and cause symptoms of PTSD and/or other elements

1. Shapiro, F., Liliotis, D. EMDR and the Adaptive Information Processing Model: Integrative Treatment and Case Conceptualization. Clin Soc Work J 39, 191–200 (2011).

2. American Psychological Association. Clinical practice guideline for the treatment of (PTSD) in adults. Eye Movement Desensitization and Reprocessing (EMDR) Therapy.

EMDR

- **How it works¹**
 - **Uses eye movements and other rhythmic left-right stimulation (for example tones or taps)**
 - **Occurs while the patient focuses on the traumatic memory**
 - **An accelerated learning process is stimulated by EMDR**
 - **Patient focuses on the traumatic event at the same time as focusing on the back-and-forth movement or sound**
- **What it does²**
 - **Appears to help reduce the vividness and emotion of the memory**
 - **May be able to help patients without the patient having to talk about their trauma**

1. Hase M. The Structure of EMDR Therapy: A Guide for the Therapist. Front Psychol. 2021 May 25;12:660753.

2. American Psychological Association. Clinical practice guideline for the treatment of (PTSD) in adults. Eye Movement Desensitization and Reprocessing (EMDR) Therapy.

EMDR

- Individual therapy delivered 1 to 2 times per week for a total of 6 to 12 sessions lasting 60-90 minutes
- Does not require assignments
- Conditionally recommended by APA (“the panel suggests”)

American Psychological Association. Clinical practice guideline for the treatment of (PTSD) in adults. Eye Movement Desensitization and Reprocessing (EMDR) Therapy.

Brief eclectic psychotherapy (BEP)

- Goal for patient is understanding how traumatic event change their perspective
- Patient discusses trauma until memories are no longer upsetting
- Requires completing assignments
- Usually, 13-17 sessions each lasting 60 minutes

Narrative exposure therapy (NET)

- **Patient goal is to create a detailed, coherent narrative out of disorganized traumatic memories**
- **Helps patient process memories**
- **Requires completion of assignments**
- **Usually, 4-6 sessions each lasting 60-120 minutes**

Free mobile Apps:

- Reminder that apps are not a replacement for professional help
- [Mobile Apps - PTSD: National Center for PTSD \(va.gov\)](#)
- PTSD coach:
 - <http://t2health.dcoe.mil/apps/ptsd-coach>
- PTSD family coach:
 - https://www.ptsd.va.gov/appvid/mobile/familycoach_app.asp
- Beyond Military sexual trauma:
 - [Beyond MST - PTSD: National Center for PTSD \(va.gov\)](#)
- Breathe 2 Relax:
 - <http://t2health.dcoe.mil/apps/breathe2relax>

Free mobile Apps

- Mobile Apps - PTSD: National Center for PTSD (va.gov)
- Tactical Breather:
 - <http://t2health.dcoe.mil/apps/tactical-breather>
- Couples Coach
 - Mobile Apps: Couples Coach - PTSD: National Center for PTSD (va.gov)
- Insomnia Coach:
 - Insomnia Coach - PTSD: National Center for PTSD (va.gov)
- Stayquit smoking cessation Coach:
 - Stay Quit Coach - PTSD: National Center for PTSD (va.gov)

COVID-19 sources of anxiety, depression, trauma, distress in HCWs

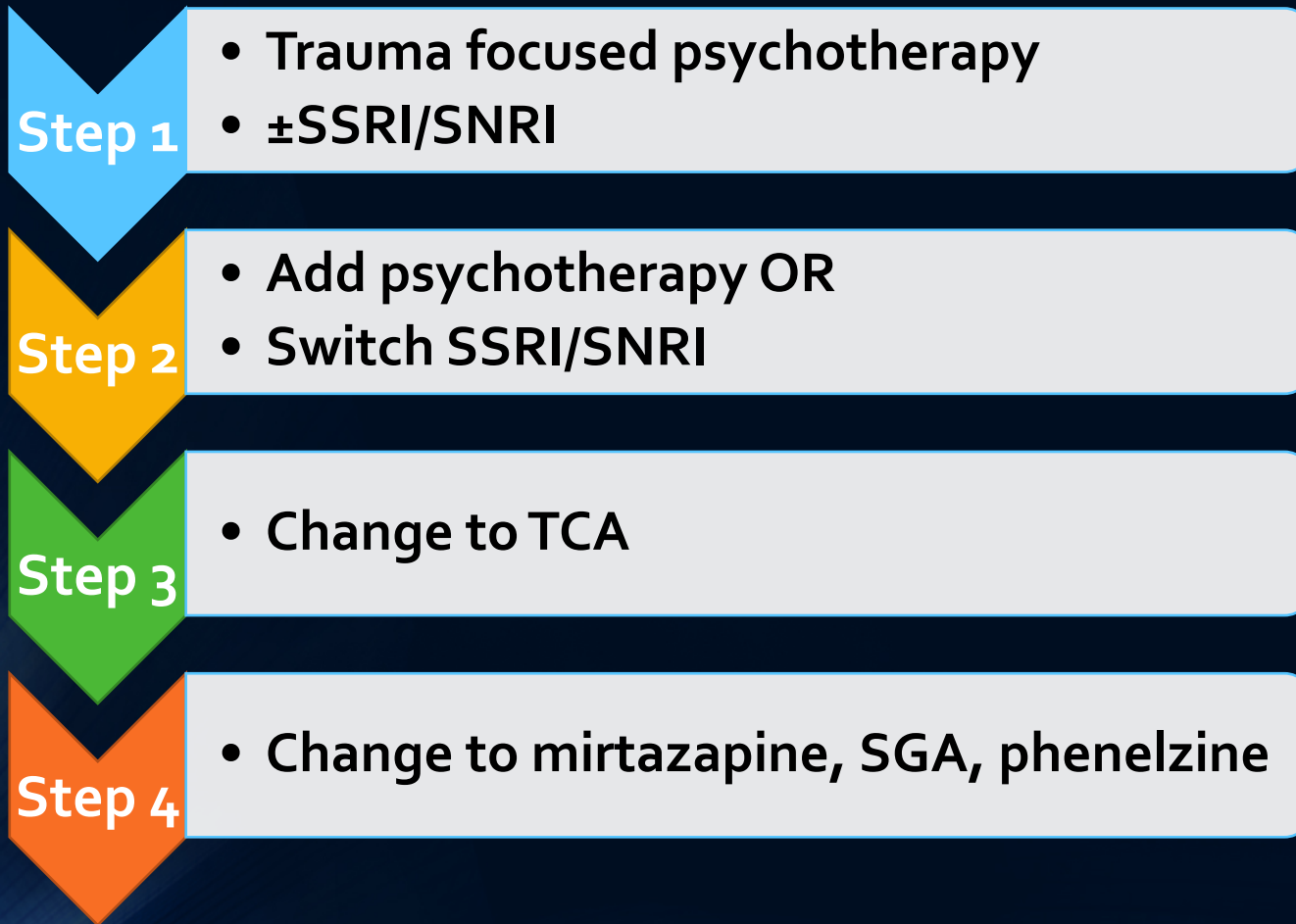
- HCWs: Remember self care
 - Must address our own needs in order to be able to care for others
 - Addressing own needs provides energy and resiliency
- Stretching
- Slow your breath (belly breathing)
- Sensory grounding
- Hydration
- COVID Coach
 - [Mobile App: COVID Coach - PTSD: National Center for PTSD \(va.gov\)](#)

Other recovery strategies

- **Activity plans:**
 - **Planning healthy, relaxing, and fun activities the patient can do when feeling stressed**
- **Education resources for the patient**
 - **Patient specific resources that might be helpful or interesting to the patient**
 - **What the patient can do on their own to address their symptoms**

PTSD medication therapy: Is it the answer?

PTSD medication therapy



Atypical
antipsychotics
??

Prazosin may help
with nightmares

No
benzodiazepines

PTSD antidepressant medication therapy

- **Start with low medication doses and titrate**
 - **High medication doses may be needed**
- **Onset of effect within the first 2-4 weeks**
 - **Full effect may take 8-12 weeks**
- **Long term use is effective in preventing relapse**
 - **Treat at least 6 to 12 months and then individualize**
- **Adverse effects**
 - **Gastrointestinal symptoms**
 - **Sexual dysfunction**
 - **Insomnia**
 - **Agitation**

Concluding thoughts

- Healing of trauma/PTSD can occur, but requires hard work
- Healing trauma through getting in touch with feelings and then rewiring the brain
- Medications play a role, but not the primary role
- Variety of CBT options available to heal the trauma
- Increased awareness to trauma/PTSD will lead to improved lives/healing for many
- Hope is out there

Concluding thoughts

- Terrible things will still happen
- Teaching persons to talk about these events
- Building trust and resources around people
 - Allows them to seek help when needed
- Trauma is an urgent public health issue

THE END: Questions?

Pharmacist learning assessment

Active learning question #1:

Which of the following is NOT a symptom complex of PTSD according to DSM-V?

- A. Avoidance symptoms
- B. Hyperarousal symptoms
- C. Intrusion symptoms
- D. Persistent positive alterations in thinking and mood

Pharmacist learning assessment

Active learning question #2:

Antidepressant therapy for PTSD is curative?

A. True

B. False

Pharmacist learning assessment

Active learning question #3:

In the brains of PTSD patients, when they are feeling unsafe, sensory information can be relayed to the cortex of the brain for higher-order processing?

- A. True
- B. False

Pharmacist learning assessment

Active learning question #4:

Which of the following therapies for the treatment of PTSD has the strongest evidence for obtaining change in core PTSD symptoms?

- A. Medications**
- B. Psychotherapy that focuses on the trauma**
- C. Self-help applications**

Technician learning assessment

Active learning question #1:

PTSD patients may experience which of the following:

- A. Bad dreams
- B. Feeling shame
- C. Inability to concentrate
- D. Both A and C
- E. All the above

Technician learning assessment

Active learning question #2:

Which of the following is/are medication(s) used in the treatment of PTSD symptoms?

- A. fluoxetine
- B. alprazolam
- C. donepezil
- D. prazosin
- E. Both A and D

Technician learning assessment

Active learning question #3:

Which of the following is an example of a trauma focused psychotherapy to treat PTSD?

- A. Electroconvulsive therapy (ECT)
- B. Eye movement desensitization and reprocessing (EMDR)
- C. Acupuncture
- D. Repetitive transcranial magnetic stimulation (rTMS)

PTSD resources

- Share resources with patients and staff
 - Phone number: 800-662-HELP (4357)
 - Crisis Text Lines: 741741
 - National Suicide Prevention Lifeline 800-273-TALK (8255)
 - Anxiety and Depression Association of America: www.adaa.org
 - National Alliance on Mental Illness: www.nami.org
 - National Institute of Mental Health: www.nimh.nih.gov
 - PTSD Association: www.ptsdassociation.com
 - Mental Health America: www.mentalhealthamerica.net

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