PTSD Treatment: What Works and What's Coming Next

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(with many thanks to Elissa McCarthy, PhD)

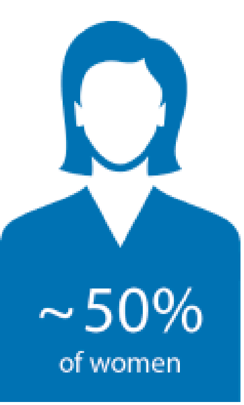
OBJECTIVES

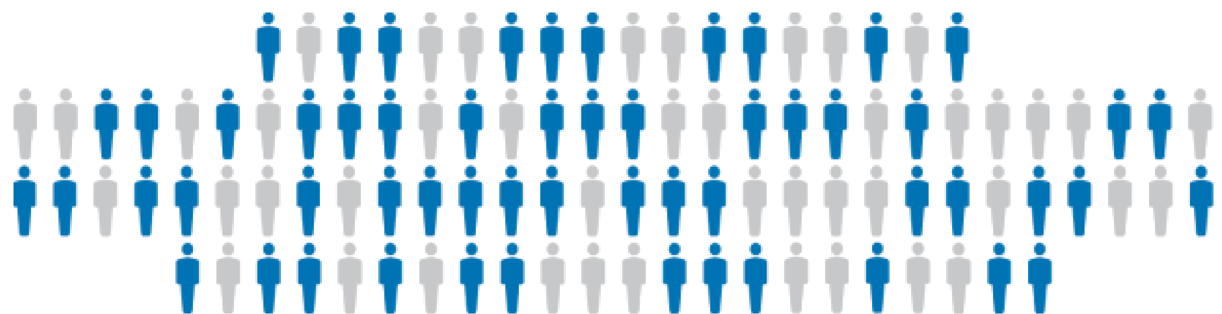
1. Understand at least 3 evidence-based treatments for PTSD.

2. Describe at least 3 novel treatments for PTSD currently in development.

3. Identify at least 3 National Center for PTSD resources and educational products.

TRAUMA EXPOSURE IS COMMON

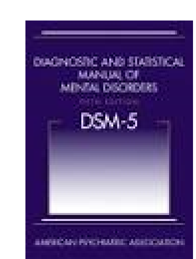




Most people you meet every day have experienced a trauma.

Kessler, R. C., Sonnega, A., Bromet, E., Hughes, M., & Nelson, C. B. (1995). Posttraumatic stress disorder in the national comorbidity survey. *Archives of General Psychiatry, 52*(12), 1048-1060.

DIAGNOSTIC AND STATISTICAL MANUAL OF MENTAL DISORDERS – 5 (DSM-5)



Criterion A: The person was exposed to actual or threatened death, serious injury, or sexual violence:

- Direct personal experience
- Witnessed
- Learned about it happening to close family or friend (violent or accidental)
- Repeated or extreme exposure at work (e.g., first responders, medics)

WHAT IS TRAUMATIC STRESS?

Daily hassles

Can include:

- Car breaking down
- Paying bills

Major life events

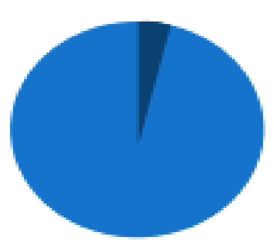
Can include:

- Losing a job
- Divorce
- Buying a new home
- Getting married

Serious traumatic events

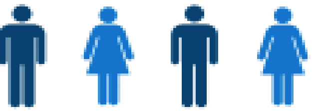
Can include:

- War zone exposure
- Physical or sexual assault
- Serious accidents
- Child sexual or physical abuse
- Natural disasters
- Torture



7 to 8%

of the U.S. population will have PTSD at some point in their lives.



What it's like to have PTSD may be different for everyone. There are four types of PTSD symptoms.

Reliving or re-experiencing the event

- Nightmares
- Flashbacks
- Triggers

Avoidance

- Avoiding crowds
- Avoiding certain smells, sights, or sounds
- Avoiding talking or thinking about the event

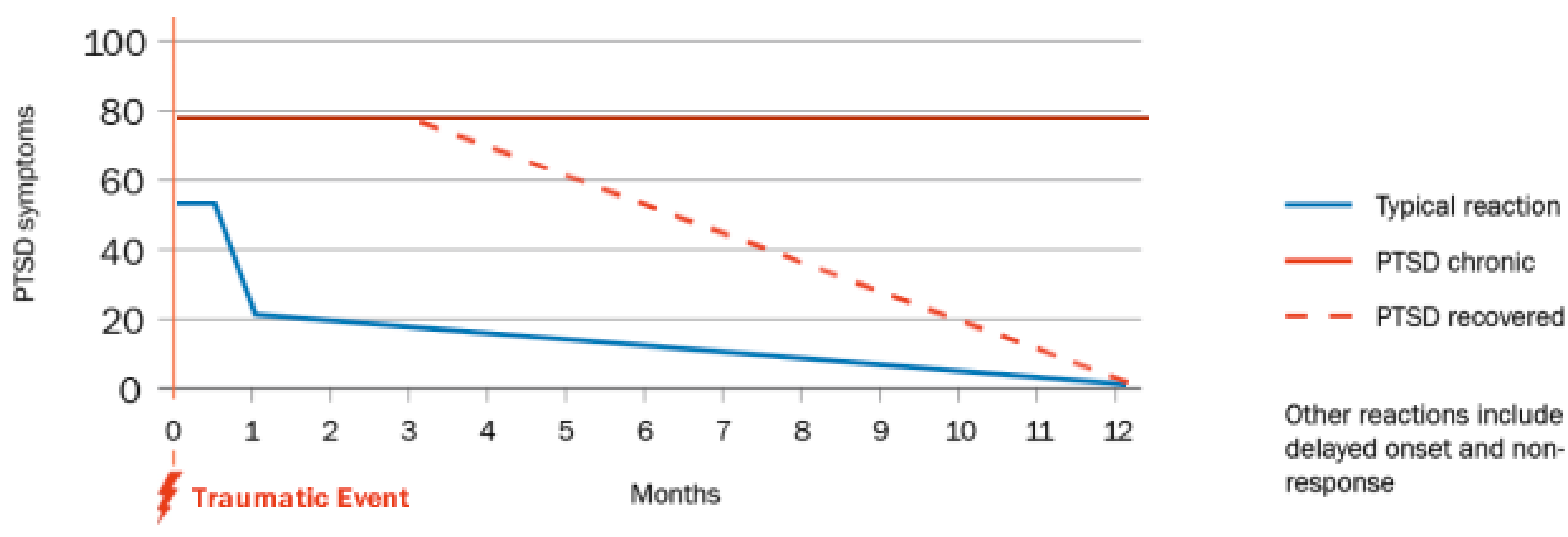
Hyperarousal or being on guard

- Being jittery or overly alert
- Difficulty sleeping or concentrating
- Feeling angry or irritable

Negative changes in beliefs and feelings

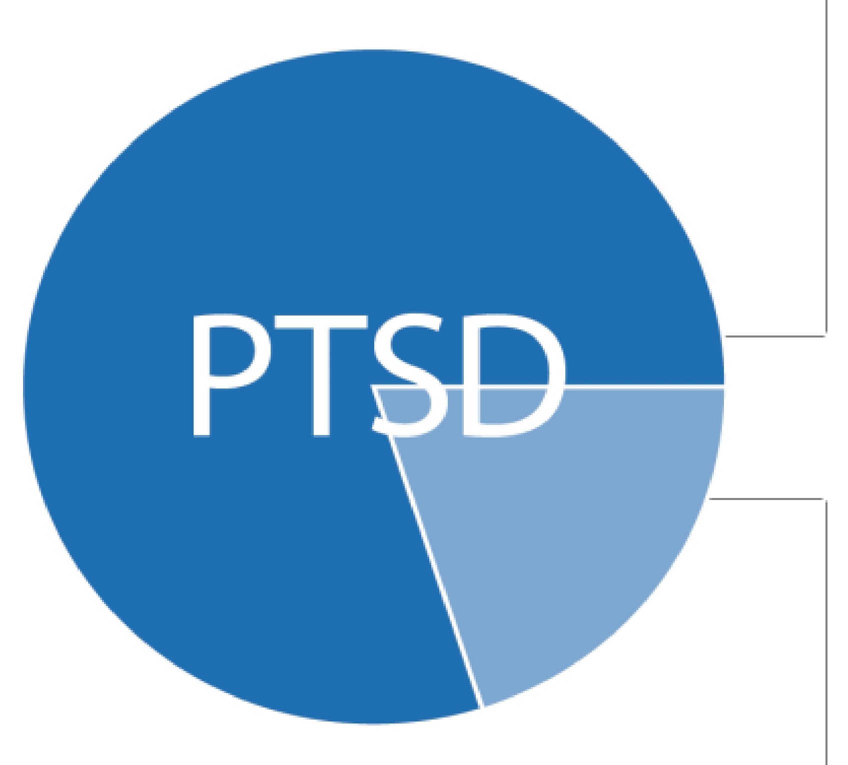
- Losing interest in things you used to enjoy
- Feeling guilty or ashamed
- Unable to trust others

HOW COMMON IS PTSD?



Kessler et al., 1995

COMORBIDITY: PTSD OFTEN CO-OCCURS WITH OTHER PROBLEMS



80% have one or more mental health problem

(depression, anxiety disorders, and substance use disorders)

20% have no other mental health problem

Kessler, R. C., Sonnega, A., Bromet, E., Hughes, M., & Nelson, C. B. (1995). Posttraumatic stress disorder in the national comorbidity survey. *Archives of General Psychiatry, 52*(12), 1048-1060.

OTHER CO-OCCURRING PROBLEMS

Reduced quality of life

Higher unemployment rates

Increased risk of suicide attempts

More medical illness

Relationship difficulties

Difficulties at home or at work

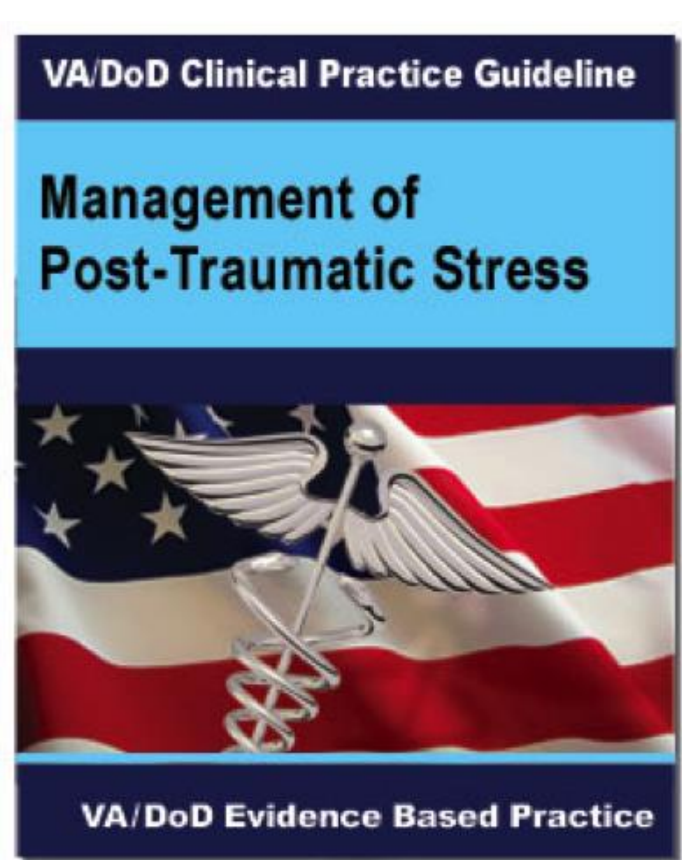
PTSD TREATMENT WORKS

www.ptsd.va.gov

2017 VA/DOD CLINICAL PRACTICE GUIDELINE

- Keeping up with the rapidly expanding evidence base for PTSD treatment represents a difficult challenge for most clinicians.

- The VA/DoD PTSD guideline is designed to **support clinical decision making with evidence-based recommendations**, not to define VA/DoD standards of care or policy.



www.healthquality.va.gov/guidelines/MH/PTSD

HOW EFFECTIVE ARE THE BEST TREATMENTS?

54 OUT OF 100

people who receive trauma-focused psychotherapy will no longer have PTSD after about 3 months of treatment.

47 OUT OF 100

people who take medication will no longer have PTSD after about 3 months of treatment.

12 OUT OF 100

people who don't get treatment will no longer have PTSD after about 3 months.

www.ptsd.va.gov/publications/print/PTSD_Best_Treatment.pdf

Hamblen et al., 2022

INDIVIDUAL TRAUMA-FOCUSED PSYCHOTHERAPY

We recommend **individual, manualized trauma focused psychotherapies that have a primary component of exposure and/or cognitive restructuring to include Prolonged Exposure (PE), Cognitive Processing Therapy (CPT), Eye Movement Desensitization and Reprocessing (EMDR), specific cognitive behavioral therapies for PTSD, Brief Eclectic Therapy (BEP), Narrative Exposure Therapy (NET), and written narrative exposure.**

Individual, manualized trauma-focused psychotherapy
- PE
- CPT
- EMDR
- Additional trauma-focused psychotherapies
  - Specific cognitive behavioral therapies for PTSD
  - BEP
  - NET
  - Written Narrative Exposure

- Currently recommended:
  - Sertraline (Zoloft) 150mg-200mg (FDA approved)
  - Paroxetine (Paxil) 20mg-60mg (FDA approved)
  - Fluoxetine (Prozac) 20mg-80mg
  - Venlafaxine (Effexor) 225mg-450mg
- Recommended in most clinical practice guidelines
- Can also treat co-morbid depression/anxiety

- Commonly used but not established/ recommended:
  - Other antidepressants
  - Augmentation strategies (e.g., buspirone)
  - Prazosin for nightmares
- Recommended ***against***:
  - Benzodiazepines
  - Risperidone and other atypical antipsychotics

Emerging treatments

EMERGING TREATMENTS

- Massed delivery of psychotherapy
- MDMA-Assisted Psychotherapy
- Psychedelics: ketamine, cannabinoids, psilocybin, ayahuasca, others
- Transcranial Magnetic Stimulation (TMS)
- Cranial Electrotherapy Stimulation (CES)
  - E.g., Alpha-Stim, Fisher-Wallace
- Stellate Ganglion Block (SGB)
- Neurofeedback
- Hyperbaric Oxygen Therapy (HBOT)
- (Others: electroconvulsive therapy, vagus nerve stimulation, transcranial direct current stimulation, deep brain stimulation, d-cycloserine)

- Trauma-focused PTSD psychotherapy massed delivery
  - 3 or more times per week
    - Well tolerated, feasible
  - Innovative delivery to decrease avoidance and help reduce barriers to engagement and treatment completion
  - Similar treatment outcomes to weekly treatment delivery

Held et al., 2020; Rauch et al., 2020; Scarrino et al., 2020; Wachen et al., 2019; Yamakowski et al., 2022; Yasinski et al., 2017)

MDMA-ASSISTED PSYCHOTHERAPY

3,4-Methylenedioxymethamphetamine (MDMA, ecstasy)

- First synthesized in 1912
- Psychoactive effects reported in 1960's-70's: euphoria, increased sociability and self-confidence
- Adverse effects: dehydration, hyperthermia
- First combined with psychotherapy in 1970's
- "Emergency" Schedule I designation in 1985

MDMA-ASSISTED PSYCHOTHERAPY

- Novel form of psychotherapy:
  - Two 8-hour psychotherapy sessions one month apart; two therapists present
  - MDMA given prior to each session
  - Preparatory and "integration" sessions before and after each session
- Efficacy
  - Several, small randomized, controlled trials suggest efficacy
  - One larger RCT (n=90) supported efficacy (MAPS)
  - Studies have differed in control conditions making blinding difficult and increasing likelihood of bias
- Confirmatory trial underway (MAPS)
  - Has received "breakthrough therapy" designation from FDA to fast-track approval decision

- Ketamine
  - Clear, rapid benefit for treatment-resistant depression; currently available clinically in IV and intranasal forms
  - Three randomized controlled trials in PTSD:
    - Single dose in community sample (n=41) showed benefit
    - Repeated doses in community sample (n=30) showed more sustained benefit
    - Repeated doses in active-duty/veteran sample (n=158) showed benefit for depressive symptoms but not PTSD
- Cannabinoids: negative RCT for smoked cannabis for PTSD
- Psilocybin, ayahuasca, others: no data

TRANSCRANIAL MAGNETIC STIMULATION (TMS)

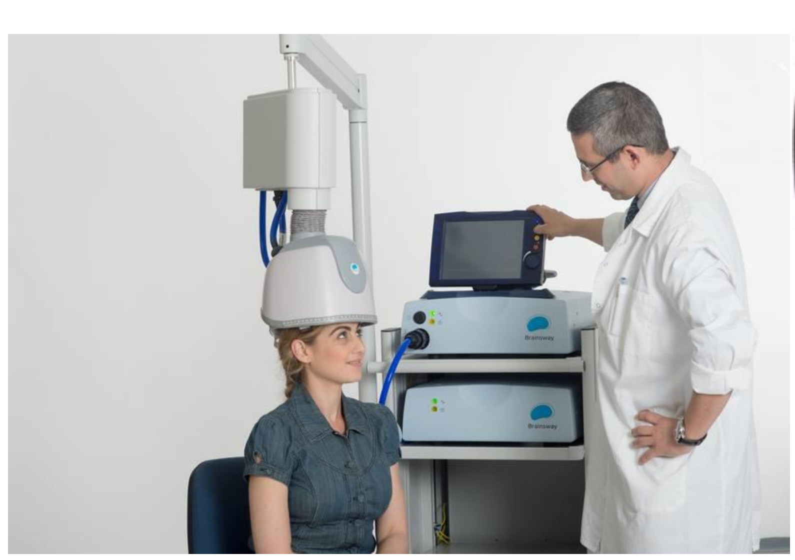
Stimulated Area
Prefrontal Cortex
Ferromagnet
Magnetic Field
Induced Electric Field
Limbic System

- Uses rapidly changing magnetic field to induce current in cortex
- Depolarizes cortical neurons focally
- Distant effects in connected regions throughout the network
- Non-invasive, no anesthesia, patient awake during stimulation

rTMS: ANTIDEPRESSANT EFFICACY

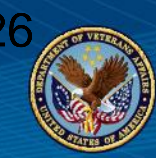
- Studied for depression since 1993
- Multiple meta-analyses confirm statistically significant antidepressant effects
  - Response rates ~20%-40%; up to 60% open-label
- Two large, multi-center trials (combined N=~500) demonstrate antidepressant effects of left dorsolateral prefrontal 10 Hz rTMS
- FDA-cleared in 2008

- Multiple FDA-cleared TMS devices
- Several variations in stimulation approach



rTMS: PTSD EFFICACY

- Studied since 1998
- Meta-analyses support efficacy for PTSD, but:
  - Heterogeneity in parameters
  - Small sample size
- May have benefit when provided together with evidence-based psychotherapy



CRANIAL ELECTROTHERAPY STIMULATION

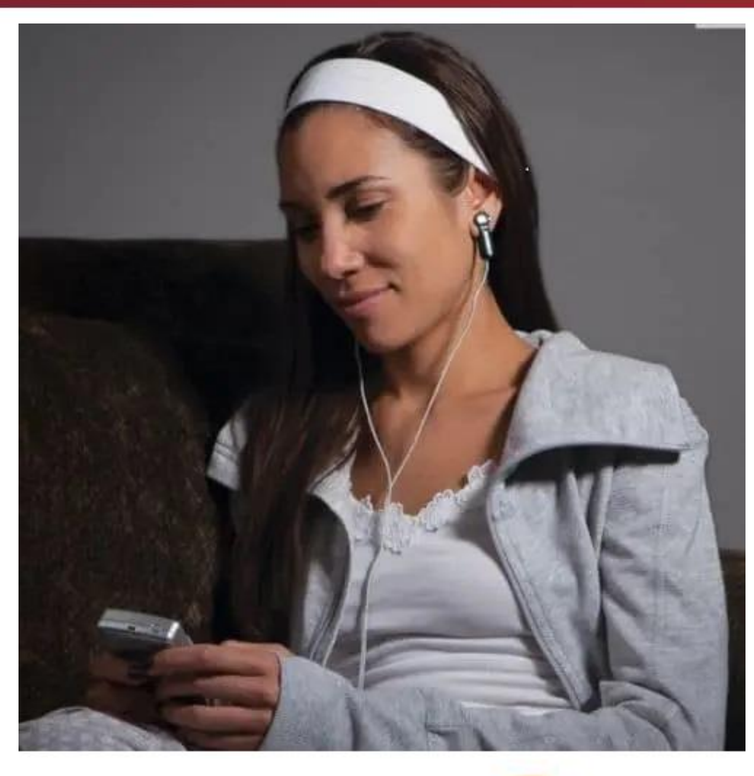
'The Black Box' (MECANET Model IV) as shown on the BBC film, with Meg demonstrating the controls. 1980

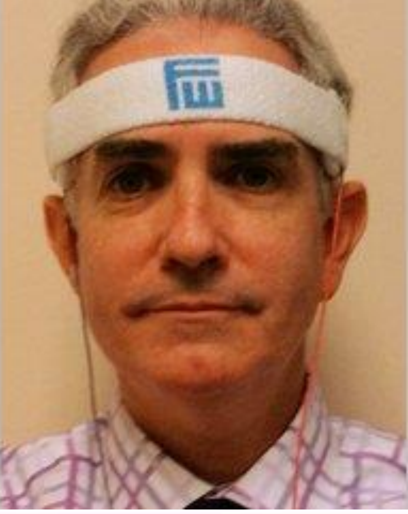
Meg with Pete Townshend, after his treatment. 1982

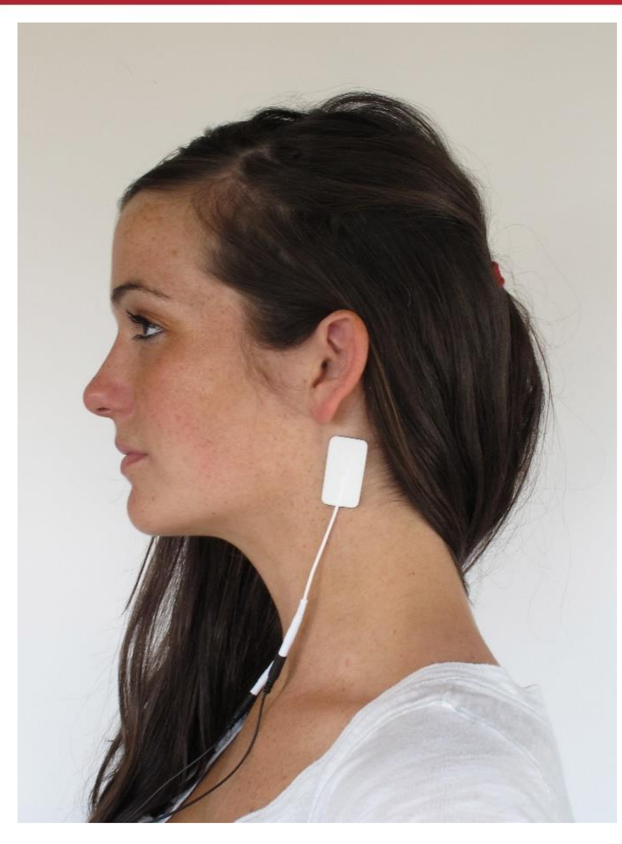
CRANIAL ELECTROTHERAPY STIMULATION

- Two or more cutaneous electrodes
  - Similar to TENS, but not TENS
- Parameters:
  - Alternating current (not TMS)
  - 0.5 to >60 Hz; up to 4 mA
  - ~30 min stimulation per day
  - Can be used over several days
- Mechanism:
  - Does not depolarize neurons
  - May alter cortical excitability of underlying cortex
  - May alter concentrations of various neurotransmitters

CRANIAL ELECTROTHERAPY STIMULATION







CRANIAL ELECTROTHERAPY STIMULATION FOR PTSD

- CES is ***FDA-cleared*** for treatment of depression, anxiety, insomnia
- Very limited database on efficacy (e.g., few RCTs, suboptimal symptom scales, small sample size)
- No high-quality data exist for CES for treatment of any psychiatric disorder, including PTSD
- Recent open-label, uncontrolled trial suggests benefit for PTSD (Rustad et al., 2022)

Rustad et al., 2022: Results

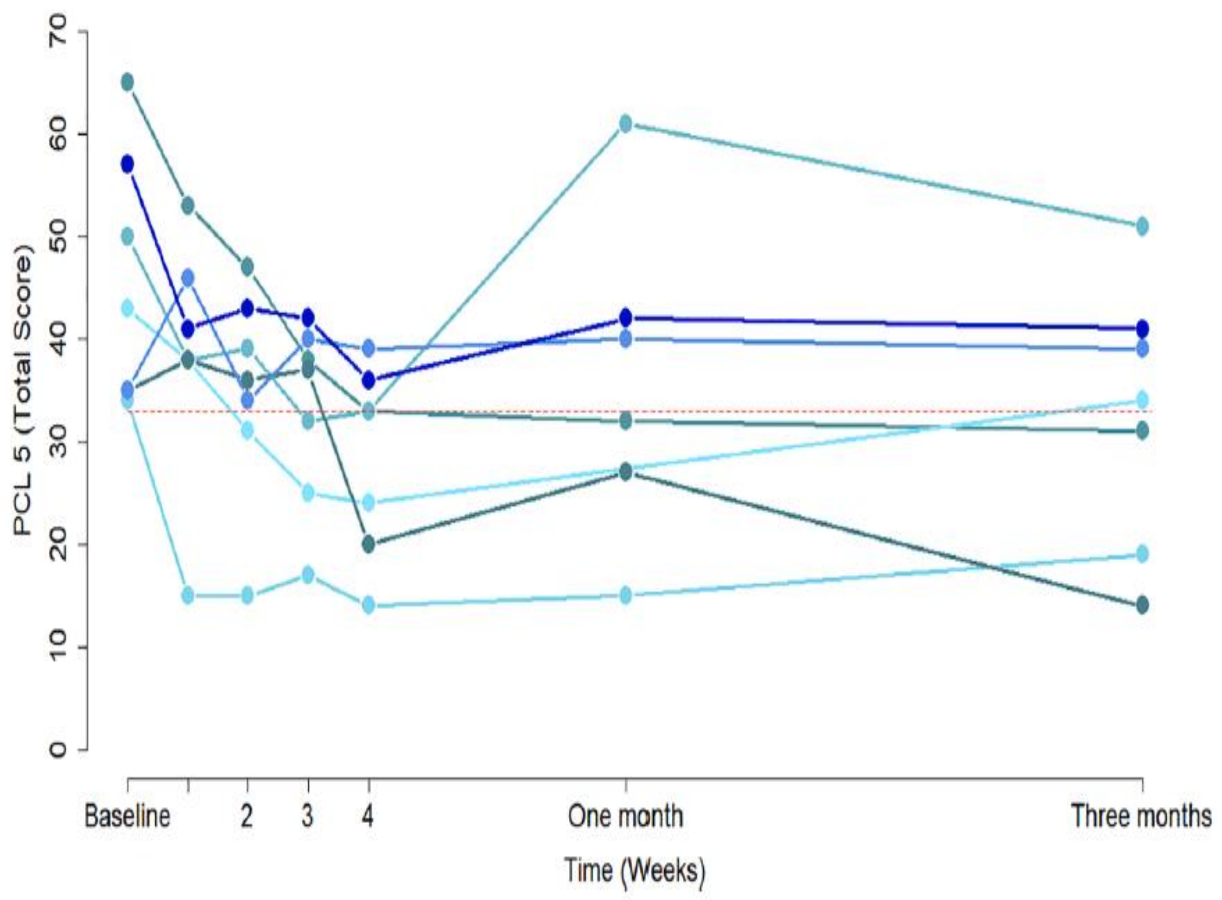
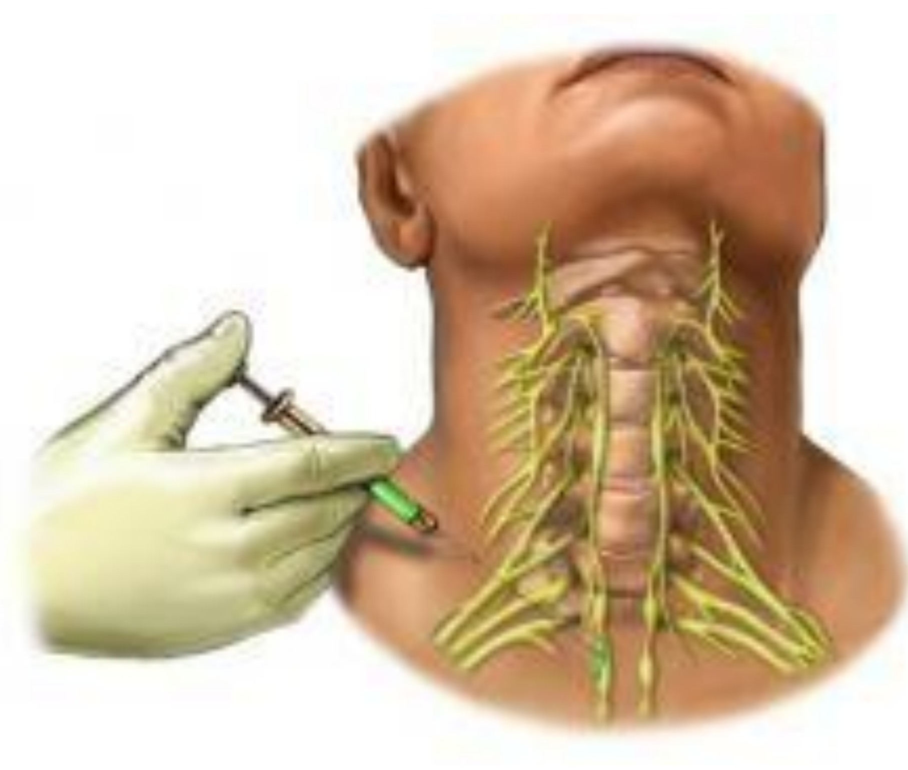


Fig. 1. Total PCL-5 over time by individual Change in PCL-5 total score by individual. Dashed line indicates threshold for presumed loss of diagnosis (PCL-5 total score of 33).

STELLATE GANGION BLOCK (SGB)



- Local anesthetic injected into neck
- Target: stellate ganglion of sympathetic nervous system
- Efficacy for Complex Regional Pain Syndrome (aka Reflex Sympathetic Dystrophy)

STELLATE GANGION BLOCK (SGB) FOR PTSD

- Proposed mechanism: modulating the sympathetic nervous system might alter autonomic activity in PTSD
- May specifically work via ameliorating hyperarousal
- Efficacy:
  - Several case series suggesting benefit
  - RCT (n=41): no benefit of SGB vs. sham
  - RCT (n=113): SGB superior to sham for PTSD symptom improvement

SGB FOR PTSD: DATA LIMITATIONS

- Short duration of follow-up (~6-8 weeks)
- RCT data collected in largely active duty (not VA) population
  - Less chronic?
  - Less severe trauma history?
  - Fewer comorbidities?
- Study design not triple-blind (person doing SGB aware of treatment arm)

SGB FOR PTSD

- Generally safe, well-tolerated
- Common side effects: neck pain, stiffness, Horner's syndrome
- Rare side effect: pneumothorax
- *Not* regulated by the FDA
- Not recommended for the treatment of PTSD; large VA study ongoing

NEUROFEEDBACK

- A form of biofeedback where patients are trained to modulate brain activity via real-time EEG/fMRI feedback
- Efficacy:
  - Several studies validating proof of principle
  - RCT (N=52): EEG-based NF showed statistically significant improvements in PTSD vs. waitlist
  - Additional trials support benefit but often using different paradigms
- Safety: no concerns
- Not currently recommended for PTSD; research ongoing

HYPERBARIC OXYGEN THERAPY (HBOT)

HYPERBARIC OXYGEN THERAPY (HBOT)

- FDA-cleared for decompression sickness, carbon monoxide poisoning and several other medical conditions
- Not FDA-cleared for any psychiatric condition
- Efficacy: Three negative RCTs
- A fourth RCT showed acute benefits for post-concussive symptoms and PTSD after 13 weeks
  - BUT, positive PTSD effects were no different from sham at 6 months
  - No benefits of HBOT vs. sham at 12 months

- Generally safe and well-tolerated
- Common, mild side effects:
  - Sinus pain, ear pressure, joint pain
- Rare, serious side effects:
  - Air embolism, paralysis

All resources are free and publicly available.

Unless otherwise noted, you can find them at www.ptsd.va.gov

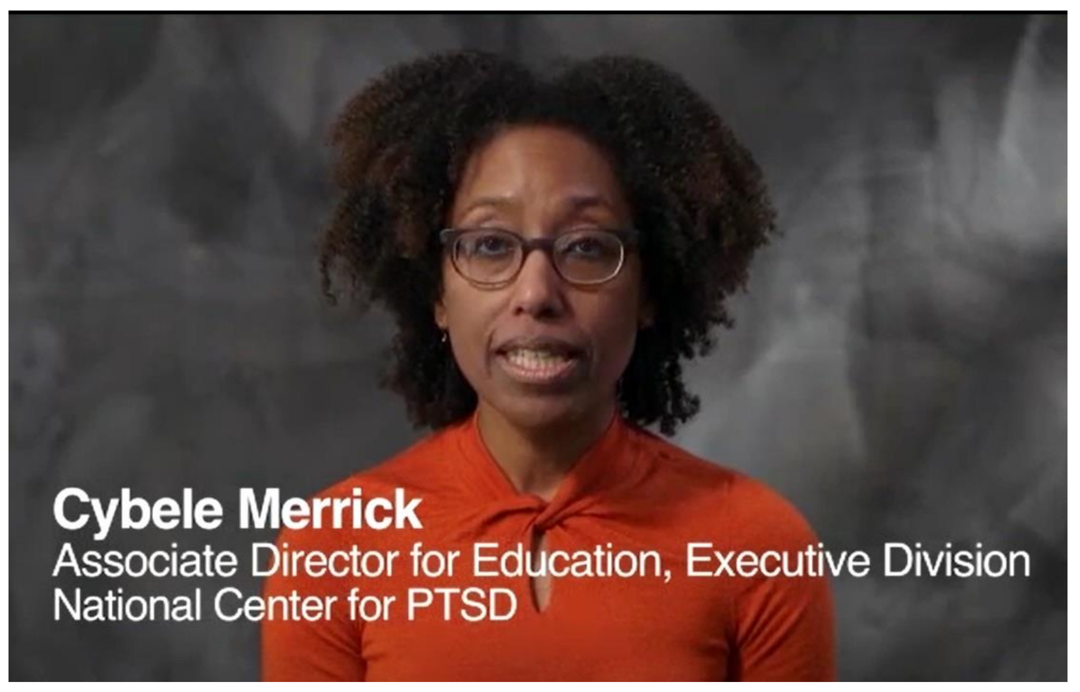
Trauma-Informed Care

Realize the Prevalence	**Recognize** the Impact
Respond Appropriately	**Resilience** through Skill-building

4 R's of Trauma-informed Care

Health Care Provider's Guide to Trauma-Informed Care (army.mil)

PTSD Awareness in Health Care Settings



- This 15-minute video for medical center staff shows how patients' PTSD symptoms may come into play in health care settings.
- Facilitator's guide for PTSD Awareness in Health Care Settings

AboutFace VIDEO GALLERY

ABOUTFACE

Home | Watch ▼ | Learn More ▼ | Get Help

PTSD We've been there.

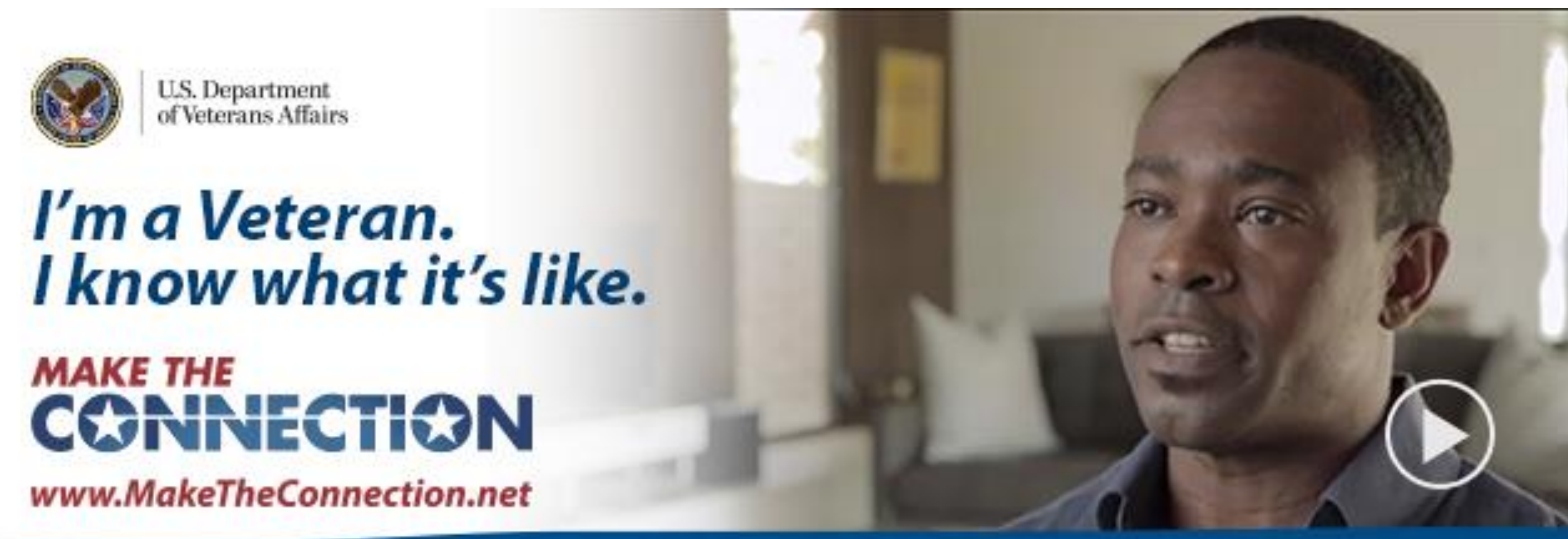
After a traumatic event — like combat, an assault, or a disaster — it's normal to feel scared, keyed up, or sad at first. But if it's been months or years since the trauma and you're not feeling better, you may have PTSD (posttraumatic stress disorder).

Watch the intro

This is AboutFace

In these videos, Veterans, family members, and clinicians share their experiences with PTSD and PTSD treatment. **Choose a topic below to hear what they have to say.**

www.ptsd.va.gov/aboutface



www.maketheconnection.net

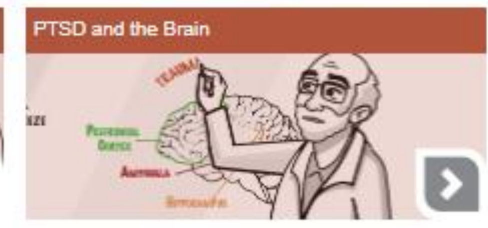
WHITEBOARD VIDEOS

- NCPTSD created a series of whiteboards, including one for professionals about PTSD and effective treatments.
- Short (~3 minute), engaging videos that are easily shared via email or Facebook.

Whiteboards

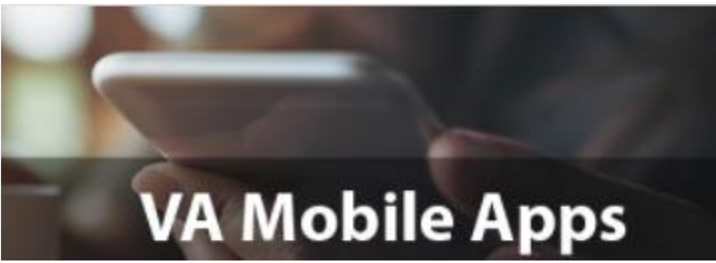
Watch these short animated videos to learn about PTSD and effective treatments.

https://www.ptsd.va.gov/appvid/video/index.asp



INTEGRATING TECHNNOLOGY INTO CARE

https://www.ptsd.va.gov/professional/tech-care/



Mobile Apps - PTSD: National Center for PTSD (va.gov)

MOBILE APPS TO SUPPORT TREATMENT & SELF-CARE

Self-Help

- These apps provide support and guidance in living with PTSD.

Treatment Companion

- These apps offer additional help for PTSD treatments.

Related

- These apps help with related issues affecting people with PTSD.

https://www.ptsd.va.gov/appvid/mobile/index.asp

PRESCRIPTION FOR BEHAVIORAL HEALTH
Mobile & Web Resources

- ACT Coach
- AIMS for Anger Management — www.veterantraining.va.gov
- Beyond MST
- CBT-i Coach
- CPT Coach
- Couples Coach
- COVID Coach
- Insomnia Coach/ Path to Better Sleep — www.veterantraining.va.gov
- Mindfulness Coach
- Moving Forward — www.veterantraining.va.gov
- Parenting — www.veterantraining.va.gov
- PE Coach
- PTSD Coach/Online — https://go.usa.gov/xN9Hb
- PTSD Family Coach
- STAIR Coach
- VetChange — www.ptsd.va.gov/apps/change

RECOMMENDATION:

More info on mobile apps: www.ptsd.va.gov/appvid/mobile

Question about the Rx pads? MobileMentalHealth@va.gov

PTSD COACH APP

- App provides:
  - Education about PTSD and PTSD treatment
  - A self-assessment tool
  - Portable skills to address acute symptoms
  - Direct connection to crisis support
- Used as stand-alone education and symptom management tool, or with face-to-face care
- Tools are easily accessible when they are needed most

www.ptsd.va.gov/appvid/mobile/ptsdcoach_app.asp

PTSD Coach online

skip to content

National Center for PTSD Posttraumatic Stress Disorder

PTSD COACH ONLINE

VA

U.S. Department of Veterans Affairs
Veterans Health Administration
National Center for PTSD

Home FAQs

I want to work on my

Choose a problem to work on from the list or view all tools

- worry or anxiety
- anger
- sadness or hopelessness
- sleep problems
- trauma reminders
- avoidance of stressful situations
- disconnection from people
- disconnection from reality
- problem solving skills
- direction in life

Welcome to PTSD Coach Online. Tools to help you manage stress.

VA PTSD Coach Online: Intr...

Meet a coach

PTSD Coach Online is for anyone who needs help with upsetting feelings. Trauma survivors, their families, or anyone coping with stress can benefit.

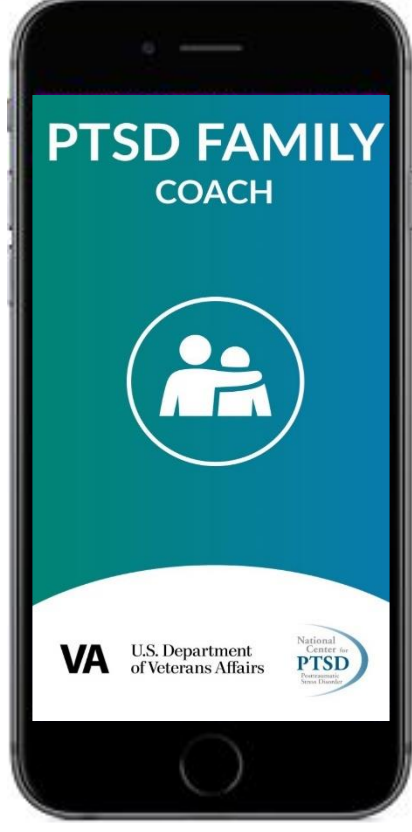
www.ptsd.va.gov/apps/ptsdcoachonline

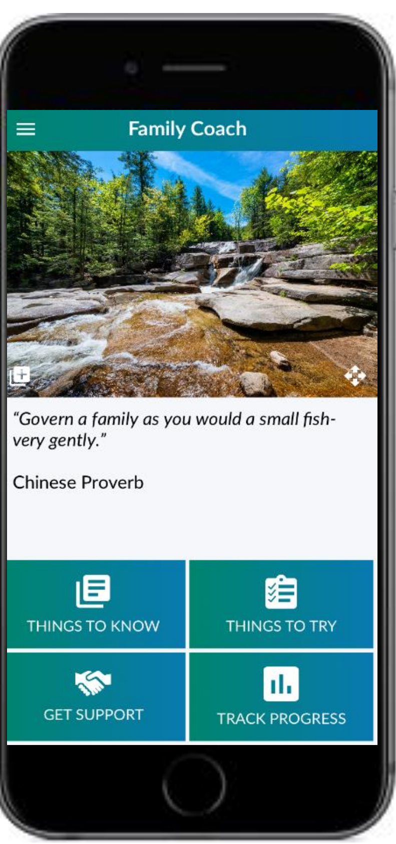
PTSD FAMILY COACH APP

PTSD Family Coach is for family members of those living with PTSD.

App provides:

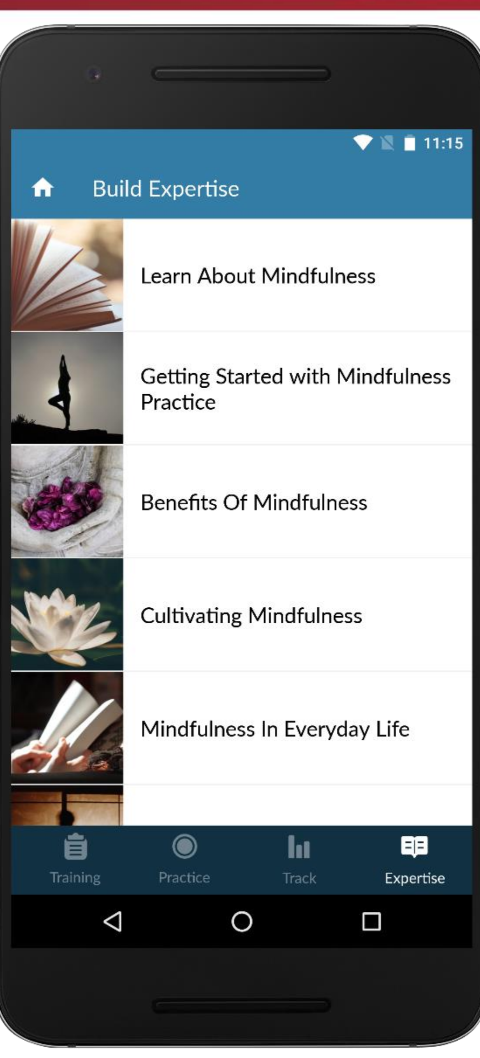
- Education about PTSD and self-care
- Information to help take care of your relationship and children
- Resources to help a loved one get treatment for PTSD
- Tools to manage stress and build social networks
- Tracking for stress level over time





www.ptsd.va.gov/appvid/mobile/familycoach_app.asp

MINDFULNESS COACH APP



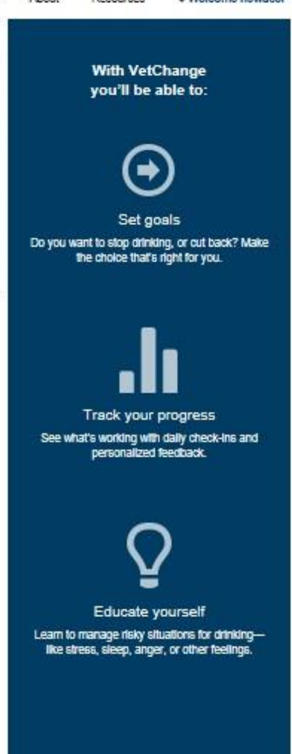
- Education about the benefits of mindfulness
- Mindfulness exercises to practice on your own or with guidance
- Strategies to help overcome challenges to mindfulness practice
- Log of mindfulness exercises to track your progress
- Reminders to support your mindfulness practice

https://www.ptsd.va.gov/appvid/mobile/mindfulcoach_app.asp

VETCHANGE ONLINE TOOL AND MOBILE APP

VETCHANGE Helping Veterans Help Themselves

My Dashboard · Using VetChange · About · Resources · Welcome newuser



A free online program for Veterans concerned about their drinking

VetChange is a free self-management program for active duty military and Veterans concerned about their drinking. VetChange can help you build skills to better manage your drinking and other problems that can happen after deployment, including symptoms of posttraumatic stress disorder (PTSD).

Register now to get started, read more about the program, or view this video to learn how VetChange can help you:

VetChange is a self-management program designed for Veterans and active duty Servicemembers who are concerned about their drinking.

This tool helps users learn skills to manage drinking and other problems that can happen after deployment (e.g., PTSD symptoms, anger, trouble sleeping).

www.ptsd.va.gov/apps/change

Resources from the National Center for PTSD

www.ptsd.va.gov/COVID

Mobile App: COVID Coach

INCLUDES A VARIETY OF RESOURCES FOR

- Everyone (including Veterans, their families, and the general public)
- Health Care Workers and Responders
- Employers and Community Leaders

[Coping with Current Events in Ukraine - PTSD: National Center for PTSD (va.gov)]

[Provider Guide to Addressing Veterans' Reactions to Current Events in Ukraine - PTSD: National Center for PTSD (va.gov)]

PROVIDER SELF-CARE TOOLKIT

Provider Toolkit

Home | Working with Trauma Survivors | Self-Assessment | Self-Help Strategies | Resources

Provider Self-Care Toolkit

This toolkit is for providers who work with those exposed to traumatic events, to help reduce the effects of job-related stress, burnout, and secondary traumatic stress. Working with trauma survivors is rewarding, yet such work can create challenges. Hearing trauma survivors' stories can be difficult and some providers may find they experience burnout or secondary traumatic stress as a result. In this toolkit you will find assessment tools, strategies, and resources to help you care for yourself while working with those who have experienced trauma or have posttraumatic stress disorder (PTSD).

www.ptsd.va.gov/professional/treat/care/toolkits/provider/

COMMUNITY PROVDIER TOOLKIT

Community Provider Toolkit

Asking about Military Experience

Working with Veteran Populations

Supporting Veteran Mental Health & Wellness

Navigating Veteran Benefits & Services

Information & Resources for Providers who Serve Veterans

https://www.mentalhealth.va.gov/communityproviders/index.asp

RURAL PROVIDER TOOLKIT

Rural Provider PTSD Toolkit

Home | Rural Health Care Realities | Ensuring Core PTSD Services | Optimizing Rural Care | The Right Tool for the Job

Welcome to the Rural Provider PTSD Toolkit. Both Veterans with a diagnosis of PTSD and providers working to deliver care to them in rural settings face unique challenges. In particular, disparities in the availability and use of effective psychotherapies and medications have been noted.

This toolkit compiles information and resources to help you, the rural health care provider. By recognizing the benefits and barriers of rural care provision, you can improve the lives of rural Veterans with PTSD by reducing obstacles to effective treatments and improving care coordination between Veterans Affairs (VA) and community services. Learn how to access tools that optimize PTSD care, support your patients, and help you manage your own self-care.

https://www.ptsd.va.gov/professional/treat/care/toolkits/rural/

CONTINUING EDUCATION COURSES

Over 50 hours of web-based courses aimed at professionals.

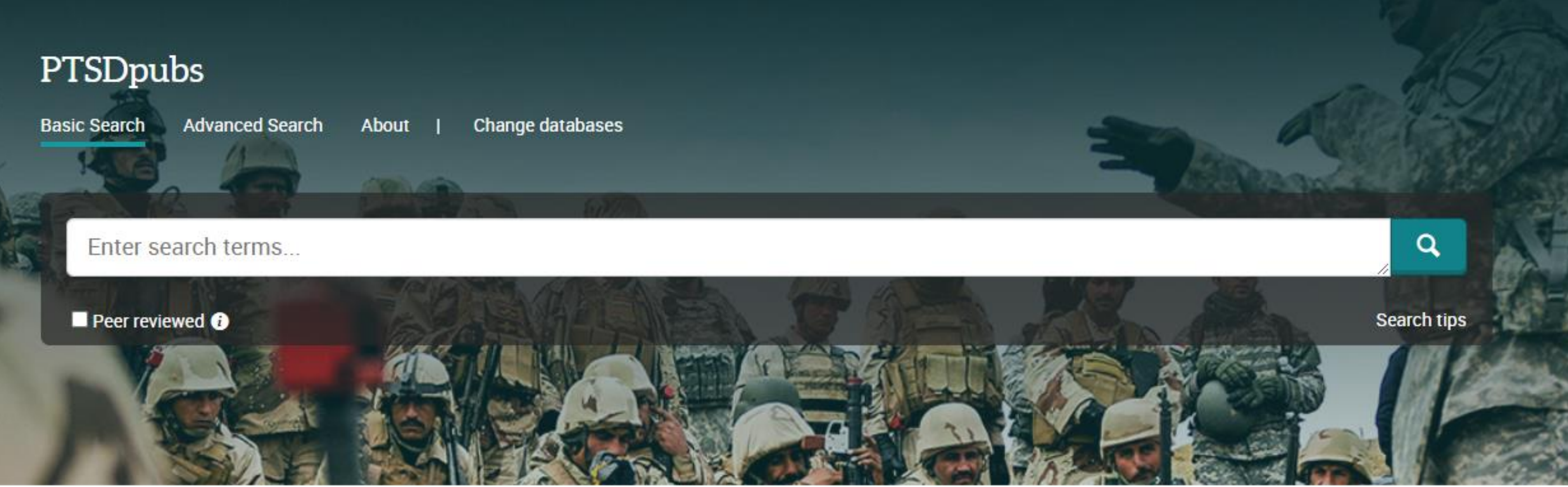
All courses are **free** and most offer continuing education for multiple disciplines.

Courses can be viewed without intention to seek certification credits.

Understanding the Context of Military Culture in Treating the Veteran with PTSD

www.ptsd.va.gov/professional/continuing_ed/index.asp

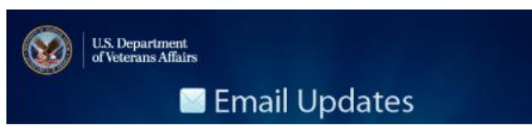
PTSDpubs DATABASE

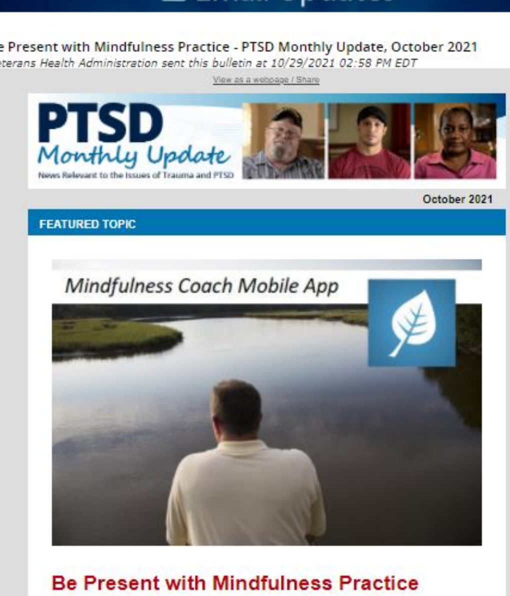


PTSDpubs database (formerly PILOTS) is a freely available, online database providing access to the worldwide literature on PTSD and other mental health consequences of exposure to traumatic events. It is produced by the National Center for PTSD.

https://www.proquest.com/ptsdpubs/index

STAY UP TO DATE AND CONNECT WITH US





- Summaries of the most current research, news and resources on trauma and PTSD delivered to your inbox
- All of our publications are free e-subscriptions

https://www.ptsd.va.gov/publications/electronic_pubs.asp

PTSD CONSULTATION PROGRAM LECTURE SERIES

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SAVE THE DATE: Third Wednesday of the Month from 2-3PM (ET)

UPCOMING TOPICS INCLUDE		
April 20, 2022	**PTSD Treatment for Veterans with Disabilities**	Erin Andrews, PsyD, ABPP
May 18, 2022	**Eye Movement Desensitization and Reprocessing (EMDR) to Treat PTSD**	Sonya Norman, PhD & Marianne Silva, LCSW
June 15, 2022	**Ethical Considerations in Shared Decision-Making for PTSD Treatment**	Lisa-Ann Cuccurullo, Psy.D
July 20, 2022	**Troubleshooting Lack of Progress in PTSD Treatment**	Abigail Angkaw, PhD & Cynthia Yamokoski, PhD

ORDER FREE NATIONAL CENTER FOR PTSD MATERIALS AT:

https://orders.gpo.gov/PTSD

TAKE-AWAY POINTS

- Screen for PTSD and offer/encourage treatment
- There are several effective PTSD treatment options
- Several novel treatments are in development
- The National Center for PTSD has **LOTS** of resources to help support you and the care you provide
  - **www.ptsd.va.gov**
- Questions? Contact the PTSD Consultation Program: **PTSDconsult@va.gov** *or* **866-948-7880**

Questions?

The PTSD Consultation Program consultants are available any time to answer your questions about Veterans and PTSD.

PTSDconsult@va.gov *or* **866-948-7880**

www.ptsd.va.gov/consult