



State of the Science: Current Trends in Research & Treatments for PTSD

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1

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2

2

Does Treatment X work?

3

1. As compared to what?
2. What does it mean for a treatment to “work”?

4

Is Treatment X better than no treatment?

Is Treatment X better than placebo or sham?

Is Treatment X better than Treatment Y?

5

Is Treatment X better **at reducing PTSD symptoms** than no treatment?

Is Treatment X better **at reducing PTSD symptoms** than placebo or sham?

Is Treatment X better **at reducing PTSD symptoms** than Treatment Y?

6

What treatments, delivered how, by whom,
and under what circumstances, are most
effective for this person?

7

What treatment	Cognitive processing therapy (CPT)			
Delivered how	Individual Weekly	Group Daily		
By whom	Mental health therapists Community members / peers			
Under what circumstances	In-person Outpatient Native language	Online Residential	Telephone Inpatient Via interpreter	Smartphone
For whom	Men War trauma Single trauma Substance use Adults English	Women Sexual violence Repeated trauma Suicidal Adolescents non-English	Veterans Child abuse Depression Children Literate	Civilians MVA Illiterate

8

	Trauma Therapies	SSRI/SNRI	Novel Treatments	Experimental
How many people feel better?	Over 80%	Over 60%	Over 50%	Unknown
How much better do people feel?	Large reduction in symptoms 53% no longer have the condition	Small to moderate reduction in symptoms 42% no longer have the condition	Small to moderate reduction in symptoms Unknown if it eliminates the condition	Unknown reduction in symptoms Unknown if it eliminates the condition
How long does the treatment take?	Daily for 2 weeks to weekly for 3 months	Daily for months to years	Varies	Unknown
What are the risks?	Mild discomfort during treatment	Headaches, sleep problems, weight gain, sexual side effects	Headaches, sleep problems, weight gain, sexual side effects, seizures	Unknown
How do we know?	Decades of scientific studies conducted by independent researchers	Decades of scientific studies conducted by independent researchers and marketing information from companies	A few small studies conducted by researchers and marketing information from companies	Testimonials and marketing information from companies

9

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10

The Signal and the Noise

Signal

Information that conveys meaning

Noise

Items of no value that obscure useful information

11

The Signal and the Noise

Signal

Treatments that maximize the probability of benefit

Noise

Treatments with overstated or exaggerated claims of benefit

12

Treatments with a Definite Signal

- **Cognitive Processing Therapy (CPT)**
- **Prolonged Exposure Therapy (PE)**
- **Eye Movement Desensitization Reprocessing (EMDR)**

13



14

A Short List of Novel & Experimental Treatments for PTSD

- Written exposure therapy (WET)
- Transcranial magnetic stimulation (TMS)
- Stellate ganglion block
- Psychedelic-assisted therapy (psilocybin, MDMA)
- Ketamine
- Animal-assisted therapies (e.g., equine therapy)
- Service animals
- Recreational/wilderness therapies
- Essential oils
- Dietary supplements

15

Probably Noise

- Written exposure therapy (WET)
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- **Recreational/wilderness therapies**
- **Essential oils**
- **Dietary supplements**

16

Unclear (Probably Minimally Effective)

- Written exposure therapy (WET)
- Transcranial magnetic stimulation (TMS)
- Stellate ganglion block
- Psychedelic-assisted therapy (psilocybin, MDMA)
- Ketamine
- **Animal-assisted therapies (e.g., equine therapy)**
- **Service animals**
- Recreational/wilderness therapies
- Essential oils
- Dietary supplements

17

Unclear (Too Early to Tell)

- Written exposure therapy (WET)
- Transcranial magnetic stimulation (TMS)
- Stellate ganglion block
- **Psychedelic-assisted therapy (psilocybin, MDMA)**
- **Ketamine**
- Essential oils
- Dietary supplements
- Animal-assisted therapies (e.g., equine therapy)
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18

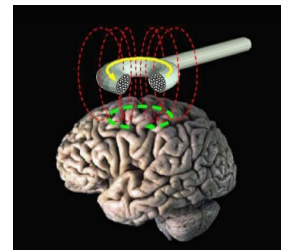
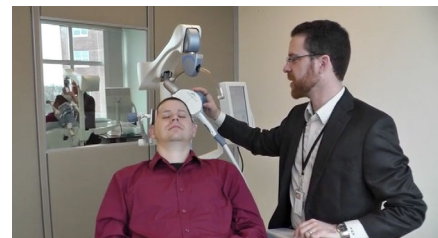
Possible Signal

- **Written exposure therapy (WET)**
- **Transcranial magnetic stimulation (TMS)**
- **Stellate ganglion block**
- Psychedelic-assisted therapy (psilocybin, MDMA)
- Ketamine
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19

Transcranial Magnetic Stimulation

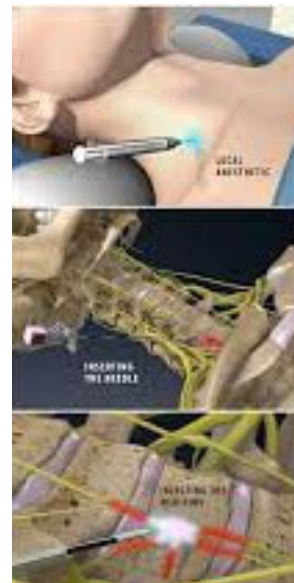
TMS	
How many people feel better?	Unknown
How much better do people feel?	Moderate reduction in PTSD symptoms Unknown if it eliminates PTSD
How long does the treatment take?	Daily for 6-8 weeks
What are the risks?	Headache, neck pain, tingling, sleepiness, facial twitch, impaired cognition, seizures
How do we know?	Several studies conducted by researchers



20

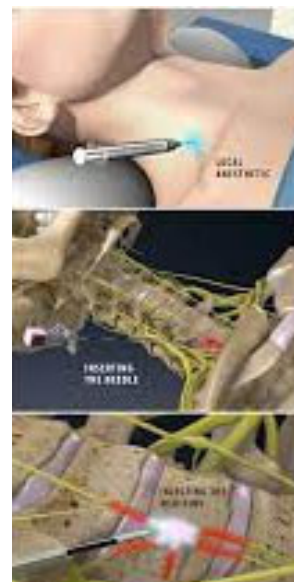
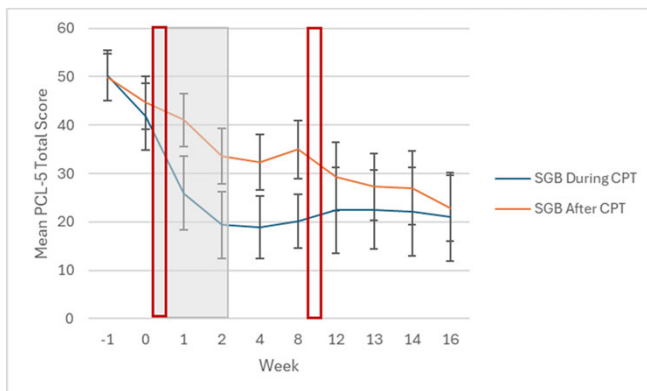
Stellate Ganglion Block

TMS	
How many people feel better?	Unknown
How much better do people feel?	Small to moderate reduction in PTSD symptoms Unknown if it eliminates PTSD
How long does the treatment take?	1-3 hours
What are the risks?	Drop in blood pressure, throat irritation, slowed heart rate, seizure
How do we know?	A few studies conducted by researchers

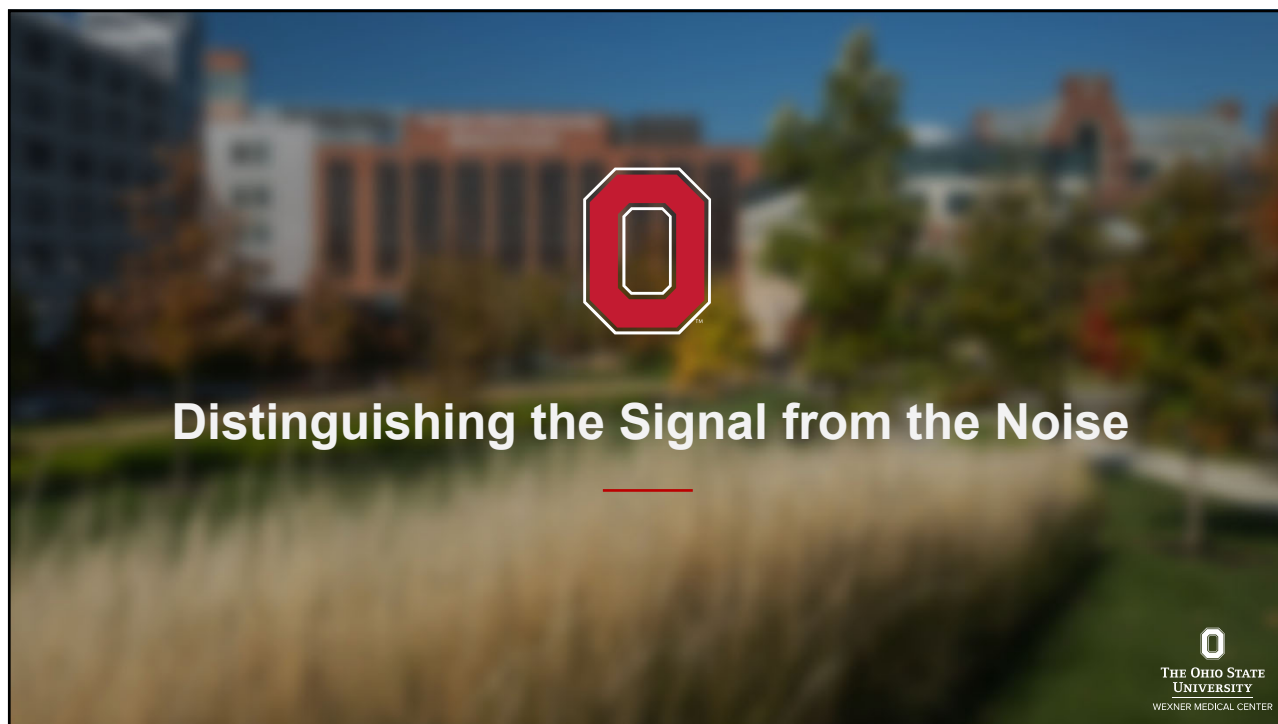


21

Stellate Ganglion Block + PTSD Therapy



22



23

Spotting Overhyped Treatments

- Effective, legitimate treatments typically don't use hype, sales pitches, or marketing
- Effective, legitimate treatments are typically available from professionals who have received specialized training
- Two "types" of hype:
 - Research Evidence
 - Promotion and Marketing

Meichenbaum & Lilienfeld (2018)

24

Promotion and Marketing Hype

- Greatly exaggerated, often unsubstantiated claims
- Conveying of powerful and unfounded expectancy effects
- Excessive appeal to authorities or gurus
- Heavy reliance on endorsements from presumed experts
- Use of extensive promotional efforts, including sale of paraphernalia
- Extensive use of “psychobabble” or “neurobabble”
- Tendency of advocates to be defensive and dismissive of critics
- Extensive reliance on anecdotal evidence and testimonials
- Claims that treatment “fits all” or “cures all”

Meichenbaum & Lilienfeld (2018)

25

Red Flags

- Use of promotional language:
 - “Revolutionary” or “Ground-breaking”
 - “Complete satisfaction guaranteed”
 - “If this doesn’t help you, nothing will”
- Use of nonspecific terms and language:
 - “Healing” or “Holistic”
- “Cure all” claims (treatment used for multiple problems)
- Availability of products, merchandise, and/or swag for sale
- Denial of side effects and risks
- “Proof” of effectiveness based exclusively (or nearly exclusively) on testimonials, anecdotal evidence, and/or satisfaction ratings

Meichenbaum & Lilienfeld (2018)

26

Final Thoughts

1. Think in terms of probabilities and “returns on investment”
2. Think in terms of “better or worse” versus “effective or ineffective”
3. Remember all treatments have limitations, side effects, and risks
4. If it sounds too good to be true, it probably is
5. Most treatments will help a few, but few treatments will help most

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27



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Volunteer for
a study



Give

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28