Cannabis & PTSD: Existing Evidence and Clinical Considerations

Marcel O. Bonn-Miller, Ph.D.
Center of Excellence in Substance Abuse Treatment & Education, Philadelphia VA Medical Center
National Center for PTSD & Center for Innovation to Implementation
VA Palo Alto Health Care System
Department of Psychiatry, University of Pennsylvania Perelman School of Medicine
Disclosures

- Consultant
  - Aphria, Inc.
  - Insys Therapeutics, Inc.
  - Tilray
  - Zynerba Pharmaceuticals

- Scientific Advisory Board
  - Center for Medical Cannabis Education and Research (Thomas Jefferson University)
  - International Cannabis and Cannabinoids Institute
  - Realm of Caring Foundation
  - The Medical Cannabis Institute
What is Cannabis?
Cannabinoids

- Tetrahydrocannabinol (THC)
  - Content in 1960’s – 10mg
  - Content 2000’s – 150mg– 200mg
  - Moves rapidly into fat and tissue and slowly released back into bloodstream
  - Eventually clears from body (e.g., urine)

- Cannabidiol (CBD)
- Cannabinol (CBN)
- Cannabigerol (CBG)
- Cannabichromene (CBC)
Why Do People Use Cannabis?
Motivation

- Marijuana Motives Measure (Simons et al., 1998)
  - Enhancement (“Because it’s exciting”)
  - Conformity (“To fit in with the group I like”)
  - Expansion (“To expand my awareness”)
  - Social (“Because it makes social gatherings more fun”)
  - Coping (“To forget my worries”)

- Comprehensive Marijuana Motives Measure (Lee et al., 2009)
  - 12-Factor Scale (e.g., Boredom, Alcohol, Sleep/Rest, Coping, Conformity, Enjoyment, Social Anxiety)
Medical Marijuana Users in California

Motivation for Use
Demographics

- 217 community-based adults (73.3% male) currently receiving medical cannabis for a physical or mental health condition at a cannabis dispensary
- Mean age of participants was 41.2 (SD = 14.9, Range 18 – 74 years)
- White/Caucasian (68.7%), followed by Hispanic (7.5%), Black/Non-Hispanic (7.0%), Black/Hispanic (3.3%), Asian (3.3%), and “Other” (10.3%).

Demographics

- 96.9% completed high school, 60.3% completed a 2 or 4 year college, and 14.4% completed graduate or professional school.
- Participants reported working part-time or full-time (67.3%), or being unemployed due to disability or otherwise (12.9%), retired (11.5%), or a student (7.4%).
- Majority of participants reported being never married (50.5%), with an additional 33.5% reporting being married or living with a romantic partner, and 12.7% being divorced/annulled.
- Participants reported using cannabis for medical purposes for an average of 10.3 years (SD = 10.5, Range = 2 months – 47 years).

 Conditions

- Anxiety (61.8%)
- Chronic Pain (58.0%)
- Stress (48.6%)
- Insomnia (48.1%)
- Depression (44.8%)
- Appetite (29.7%)
- Headaches (26.4%)
- Nausea (22.2%)
- Muscle Spasms (20.3%)
- Posttraumatic Stress Disorder (18.9%)

How Prevalent?
Prevalence

* Most widely used illicit substance
  - 19.8 million past month users (7.1% of 12-17 year olds)
  - 8.1 million daily or almost daily users (>= 20 days) in past month
    - 5.1 million in 2005-2007
  - 5.7 million daily or almost daily in past year (i.e., >= 300 days)
    - 3.7 million in 2006
* Higher among vulnerable populations
  - Psychosis – 23% use
  - Spinal Cord Injury – 16% use
Prevalence

- Cannabis use for medicinal purposes has been legalized in 28 states as well as the District of Columbia.
  - Most states for which cannabis is legal agree on the medical use of cannabis by those with cachexia (i.e., wasting syndrome), cancer, severe and chronic pain, epilepsy and seizures, glaucoma, HIV/AIDS, multiple sclerosis and muscle spasticity, and severe nausea.
  - Some states for PTSD
Epidemiological Evidence: U.S.

NCS-R
- 42.5% lifetime cannabis use, 6.8% lifetime PTSD
- 9.5% 12-month cannabis use, 3.6% 12-month PTSD
- Lifetime PTSD associated with lifetime Cannabis Use
  - AOR = 2.45 (1.70 – 3.52)**
- Lifetime PTSD associated with 12-month Cannabis Use
  - AOR = 1.44 (1.01 – 2.06)*
- Lifetime PTSD associated with Daily Cannabis Use
  - AOR = 1.87 (1.09 – 3.18)*
- 12-month PTSD associated with lifetime Cannabis Use
  - AOR = 2.37 (1.60 – 3.50)**
- 12-month PTSD associated with 12-month Cannabis Use
  - Lost significance after controlling for covariates (AOR = 1.25 (0.87 – 1.80)
- 12-month PTSD associated with Daily Cannabis Use
  - AOR = 2.06 (1.10 – 3.88)*

Epidemiological Evidence: U.S.

NESARC (Waves 1 & 2)

- Lifetime DSM-IV Criterion A trauma exposure was significantly associated with lifetime cannabis use (OR = 1.215), but only marginally with CUD (OR = 0.997).

- Within the trauma-exposed sample, lifetime PTSD was only marginally associated with lifetime cannabis use (OR = 0.992), but showed a significant association with CUD (OR = 1.217).

Epidemiological Evidence: V.A.

- VHA Trends in number of Veterans with PTSD and SUD diagnoses treated by VHA in the last year by drug diagnosis
Epidemiological Evidence: V.A.

Trends in Rates of Past-Year SUD Diagnoses by Drug among Veterans with PTSD & SUD Diagnoses Treated in VA Health Care

Veterans Health Administration, 2015
Epidemiological Evidence: V.A.

- Any psychiatric: 71.41%
- Depression: 23.21%
- GAD: 2.96%
- Panic: 1.86%
- Social Phobia: 0.43%
- OCD: 0.56%
- PTSD: 29.05%
- Schizophrenia: 6.68%

Consequences
Short-term use

- Impaired short-term memory, making it difficult to learn and to retain information
- Impaired motor coordination, interfering with driving skills and increasing the risk of injuries
- Altered judgment, increasing the risk of sexual behaviors that facilitate the transmission of sexually transmitted diseases
- In high doses, paranoia and psychosis

Long-term use

- Addiction (in about 9% of users overall, 17% of those who begin use in adolescence, and 25 to 50% of those who are daily users)*
- Altered brain development*
- Poor educational outcome, with increased likelihood of dropping out of school*
- Cognitive impairment, with lower IQ among those who were frequent users during adolescence*
- Diminished life satisfaction and achievement (determined on the basis of subjective and objective measures as compared with such ratings in the general population)*
- Symptoms of chronic bronchitis
- Increased risk of chronic psychosis disorders (including schizophrenia) in persons with a predisposition to such disorders

Consequences - Addiction
DSM-IV Classification - Abuse

- 1 or more
  - Failure to fulfill role obligations (e.g., school, work)
  - Use when physically hazardous
  - Legal problems
  - Continued use despite recurrent problems caused or exacerbated by cannabis
DSM-IV Classification - Dependence

- 3 or more
  - Tolerance
    - Need more for the same effect
  - Taken longer or more than intended
  - Desire or effort to cut back
  - A lot of time acquiring, using, or recovering from effects
  - Activities given up or reduced because of use
  - Use despite knowing it is causing you problems
What about Withdrawal?

- In DSM-IV
  - No Withdrawal in criteria
- In DSM-5
  - Withdrawal (Budney et al., 2003)
    - Irritability, anger or aggression
    - Nervousness or anxiety
    - Sleep difficulty (insomnia)
    - Decreased appetite or weight loss
    - Restlessness
    - Depressed mood
DSM-5 Classification – Use Disorder

- At least two of the following symptoms within a 12 month period (Mild is used to indicate 2-3 symptoms, moderate indicates 4-5 symptoms, and severe indicates 6 or more symptoms):
  - Taking more cannabis than was intended
  - Difficulty controlling or cutting down cannabis use
  - Spending a lot of time on cannabis use
  - Craving cannabis
  - Problems at work, school and home as a result of cannabis use
  - Continuing to use cannabis despite social or relationship problems
  - Giving up or reducing other activities in favor of cannabis
  - Taking cannabis in high risk situations
  - Continuing to use cannabis despite physical or psychological problems
  - Tolerance to cannabis
  - Withdrawal when discontinuing cannabis.
Cannabis Withdrawal Symptoms

- Behavioral symptoms
  - decreased appetite, increased aggression, restlessness, sleep difficulty, and strange dreams

- Mood symptoms
  - nervousness/anxiety, depressed mood*, irritability, and anger

- Physical symptoms
  - weight loss, shakiness*, stomach pains*, nausea*, vomiting*, tension*, sweating*, and chills*

* less common symptoms
True Withdrawal??

- Reliability - Consistent symptoms observed
- Incidence - Majority of daily users
- Closely follows cessation - Within 48 hours
- Symptoms follow a specific time course that includes a return to baseline
- Abate with subsequent drug administration
Withdrawal Time Course (Budney et al., 2003)
Withdrawal

- Duration of withdrawal symptoms among frequent users
  - Varies based on symptom
  - Can last over 45 days

- Quantity of cannabis use and withdrawal symptoms
  - Those with 3 or more cannabis withdrawal symptoms smoked 4.3 joints/day
  - Those with less than 3 cannabis withdrawal symptoms smoked 3.6 joints/day
Dependence Risk

- Cannabis is associated with high rate of dependence potential
- Rate of dependence among those using regularly (weekly) is 20% - 30%
- Approximately 35% of users meet criteria for abuse or dependence (versus 30% approximately 10 years ago).
Cannabis & PTSD
The First Work

- Bremner, Southwick, Darnell, & Charney (1996)
  - Retrospective Cross-sectional among Vietnam veterans with PTSD (n = 61)
  - Greater PTSD associated with greater frequency of cannabis use
  - Cannabis to manage PTSD-related symptoms of Hyperarousal
Clinical Evidence

- Cannabis using individuals with higher relative to lower levels of posttraumatic stress symptom severity appear more apt to use cannabis to regulate their emotional experience.

- Prospective relation between PTSD symptom severity (hyperarousal, avoidance/numbing) during PTSD treatment and cannabis use following treatment.
  - Among those who reported cannabis use prior to treatment (who used on average 16.17 days during the month prior to treatment), 54.3% relapsed post-treatment (averaging 11.63 days of use during the follow-up month).
  - Among those who reported no pre-treatment cannabis use, 10.1% of individuals “initiated” use (averaging 9.88 days of use during the follow-up month).


<table>
<thead>
<tr>
<th>Variable</th>
<th>CUD Mean (SD)</th>
<th>CUD-PTSD Mean (SD)</th>
<th>Unadjusted for Covariates</th>
<th>Adjusted for Covariates</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>F</td>
<td>(\eta^2_p)</td>
</tr>
<tr>
<td><strong>Cannabis Use Motives</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1) Coping</td>
<td>12.04 (4.67)</td>
<td>15.87 (3.63)</td>
<td>17.73***</td>
<td>0.16</td>
</tr>
<tr>
<td>2) Enhancement</td>
<td>17.89 (5.35)</td>
<td>18.14 (4.04)</td>
<td>0.05</td>
<td>0.00</td>
</tr>
<tr>
<td>3) Social</td>
<td>14.98 (5.77)</td>
<td>15.49 (5.60)</td>
<td>0.18</td>
<td>0.00</td>
</tr>
<tr>
<td>4) Conformity</td>
<td>7.84 (4.07)</td>
<td>9.95 (5.21)</td>
<td>4.77*</td>
<td>0.05</td>
</tr>
<tr>
<td>5) Expansion</td>
<td>12.23 (5.54)</td>
<td>13.92 (6.47)</td>
<td>1.83</td>
<td>0.02</td>
</tr>
<tr>
<td>6) Cannabis Use Problems</td>
<td>6.84 (8.67)</td>
<td>11.86 (10.22)</td>
<td>6.53*</td>
<td>0.07</td>
</tr>
<tr>
<td>7) Withdrawal Symptoms</td>
<td>6.35 (7.06)</td>
<td>13.33 (10.09)</td>
<td>14.94***</td>
<td>0.15</td>
</tr>
<tr>
<td><strong>Cannabis Craving</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8) Compulsivity</td>
<td>7.43 (3.97)</td>
<td>10.70 (4.48)</td>
<td>13.67***</td>
<td>0.13</td>
</tr>
<tr>
<td>9) Emotionality</td>
<td>9.52 (5.59)</td>
<td>13.65 (4.67)</td>
<td>13.81***</td>
<td>0.13</td>
</tr>
<tr>
<td>10) Anticipation</td>
<td>10.89 (5.47)</td>
<td>14.32 (4.43)</td>
<td>10.14***</td>
<td>0.10</td>
</tr>
<tr>
<td>11) Purposefulness</td>
<td>11.79 (5.49)</td>
<td>13.68 (4.99)</td>
<td>2.84</td>
<td>0.10</td>
</tr>
</tbody>
</table>

### Table 1
Mean scores for each motive for cannabis use based on group and regression analyses.

<table>
<thead>
<tr>
<th>Motive for use</th>
<th>Group</th>
<th>Regression analyses: DV = past 30-day cannabis use</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PTSD</td>
<td>Step 1 Motive Group</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Step 2 Motive Group Interact.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Step 3 Motive Group Int Dep ALC</td>
</tr>
<tr>
<td></td>
<td>No PTSD</td>
<td></td>
</tr>
<tr>
<td>N = 75</td>
<td>N = 95</td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>----------------</td>
<td>----------------</td>
<td>---------------------------------------------------</td>
</tr>
<tr>
<td>Sleep</td>
<td>10.84 3.97</td>
<td>9.32 4.11</td>
</tr>
<tr>
<td>Enjoy</td>
<td>10.35 2.97</td>
<td>10.42 3.59</td>
</tr>
<tr>
<td>Conform</td>
<td>3.57 1.47</td>
<td>3.59 1.72</td>
</tr>
<tr>
<td>Coping</td>
<td>6.63 2.96</td>
<td>5.45 2.62</td>
</tr>
<tr>
<td>Experiment</td>
<td>5.28 3.43</td>
<td>4.97 2.67</td>
</tr>
<tr>
<td>Boredom</td>
<td>5.15 2.61</td>
<td>5.34 2.97</td>
</tr>
<tr>
<td>Alcohol</td>
<td>3.83 1.54</td>
<td>3.56 1.19</td>
</tr>
<tr>
<td>Celebration</td>
<td>6.56 3.48</td>
<td>7.30 3.69</td>
</tr>
<tr>
<td>Perception</td>
<td>8.80 3.92</td>
<td>8.46 3.95</td>
</tr>
<tr>
<td>Social</td>
<td>7.77 3.78</td>
<td>6.71 3.46</td>
</tr>
<tr>
<td>Low risk</td>
<td>9.40 3.61</td>
<td>9.16 3.88</td>
</tr>
<tr>
<td>Available</td>
<td>5.74 2.87</td>
<td>5.22 2.43</td>
</tr>
<tr>
<td>Total score</td>
<td>79.56 23.17</td>
<td>76.64 21.55</td>
</tr>
</tbody>
</table>

Note: n = 170. * = $p < .05$; † = $p < .001$. Motive = motive for use; group = probable PTSD/no PTSD; Int = interaction term (motive * group); dep = depressive symptoms; alc = alcohol use. In relation to the regression analyses: step 1 represents the entry of the main effects; step 2 is comprised of main effects and the interaction term; step 3 represents the inclusion of the main effects, interaction, and covariates.
Clinical Evidence

- PTSD

Clinical Considerations
What to do?

- **Therapeutics**
  - Determine cannabis type
  - Track side effects
  - Drug-Drug Interactions
  - Encourage PTSD treatment
    - Cannabis only manages symptoms

- **Problematic Use**
  - Screen
  - Treat
    - Consider PTSD
Clinical Considerations: Knowing What to Recommend
# Why Study Cannabis & Anxiety?


<table>
<thead>
<tr>
<th>Study</th>
<th>Subjects (N)</th>
<th>Cannabinoid</th>
<th>Route</th>
<th>Dose</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Anxiogenic effect</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Karniol <em>et al.</em> (1974)</td>
<td>40</td>
<td>Δ²-THC</td>
<td>Oral</td>
<td>30 mg</td>
<td>Reported anxiety and panic</td>
</tr>
<tr>
<td>Gregg <em>et al.</em> (1976)</td>
<td>10</td>
<td>Δ²-THC</td>
<td>Intravenous</td>
<td>0.022 and 0.044 mg/kg</td>
<td>Intensify scores of STAI during oral surgery</td>
</tr>
<tr>
<td>Naliboff <em>et al.</em> (1976)</td>
<td>15</td>
<td>Δ²-THC</td>
<td>Inhalatory (cigarettes)</td>
<td>14 mg</td>
<td>Intensify FBT and HR means during arithmetic task</td>
</tr>
<tr>
<td>Peters <em>et al.</em> (1976)</td>
<td>10</td>
<td>Δ²-THC</td>
<td>Oral</td>
<td>0.2, 0.4 and 0.6 mg/kg</td>
<td>Increased scores of tension items of SDEQ⁴</td>
</tr>
<tr>
<td>Zuardi <em>et al.</em> (1982)</td>
<td>8</td>
<td>Δ²-THC</td>
<td>Oral</td>
<td>0.5 mg/kg</td>
<td>Increased scores of STAI³</td>
</tr>
<tr>
<td>D’Souza <em>et al.</em> (2004)</td>
<td>22</td>
<td>Δ²-THC</td>
<td>Intravenous</td>
<td>2.5 and 5 mg</td>
<td>Increased anxious scores of VAS⁶</td>
</tr>
<tr>
<td>Ilan <em>et al.</em> (2005)</td>
<td>23</td>
<td>Δ²-THC</td>
<td>Inhalatory (cigarettes)</td>
<td>3.6%</td>
<td>Increased anxious scores of VAS⁶</td>
</tr>
<tr>
<td>Fusar-Poli <em>et al.</em> (2009)</td>
<td>15</td>
<td>Δ²-THC</td>
<td>Oral</td>
<td>10 mg</td>
<td>Increased scores of STAI³</td>
</tr>
<tr>
<td><strong>No effect</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glass <em>et al.</em> (1980)</td>
<td>4</td>
<td>Nabilone</td>
<td>Oral</td>
<td>1 and 4 mg</td>
<td>No significant effect on POMS⁴ anxiety</td>
</tr>
<tr>
<td>Ilan <em>et al.</em> (2005)</td>
<td>23</td>
<td>Δ²-THC</td>
<td>Inhalatory (cigarettes)</td>
<td>1.8%</td>
<td>No significant effect on VAS⁵ anxious scores</td>
</tr>
<tr>
<td><strong>Anxiolytic effect</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Karniol <em>et al.</em> (1974)</td>
<td>40</td>
<td>CBD</td>
<td>Oral</td>
<td>15, 30 and 60 mg</td>
<td>Reported less anxiety and panic induced by Δ²-THC</td>
</tr>
<tr>
<td>Zuardi <em>et al.</em> (1982)</td>
<td>8</td>
<td>CBD</td>
<td>Oral</td>
<td>1 mg/kg</td>
<td>Decreased STAI³ scores elevation induced by Δ²-THC</td>
</tr>
<tr>
<td>Zuardi <em>et al.</em> (1993)</td>
<td>10</td>
<td>CBD</td>
<td>Oral</td>
<td>300 mg</td>
<td>Decreased VAS factor anxiety scores after public speaking</td>
</tr>
<tr>
<td>Crippa <em>et al.</em> (2004)</td>
<td>10</td>
<td>CBD</td>
<td>Oral</td>
<td>400 mg</td>
<td>Decreased VAS factor anxiety scores before SPECT⁸ procedure</td>
</tr>
<tr>
<td>Fusar-Poli <em>et al.</em> (2009)</td>
<td>15</td>
<td>CBD</td>
<td>Oral</td>
<td>600 mg</td>
<td>Decreased skin conductance fluctuation in task with fearful face</td>
</tr>
</tbody>
</table>

---

¹State-Trait Anxiety Inventory.  
²Forearm Blood Flow.  
³Heart Rate.  
⁴Subjective Drug Effects Questionnaire.  
⁵Visual Analog Scale.  
⁶Profile of Mood States.  
⁷Single-Photon Emission Computed Tomography.
New Directions: Treatment of PTSD

- **Grant 1: Administration**
  - 76 Treatment-resistant Veterans with PTSD
  - 2 sites (Johns Hopkins & Scottsdale) – *Canadian Replication*
  - 4 Conditions (Crossover) – 6 month follow-up
    - High THC/High CBD
    - High THC/Low CBD
    - High CBD/Low THC
    - Placebo
  - Outcomes: PTSD, suicide, functioning, negative consequences

- **Grant 2: Observation**
  - 150 individuals with PTSD (50% weekly users, 50% non-users)
  - 1 site (VA Denver) – Users: Medical & Recreational
  - Objective testing of marijuana
  - 5 time points over 12 months.
  - Outcomes: PTSD, suicide, functioning, negative consequences (trajectory, spontaneous initiation and cessation)
Clinical Considerations: Tracking & Treating CUD
### Cannabis

Have you used any cannabis over the past six months?  **YES / NO**

If YES, please answer the following questions about your cannabis use. Circle the response that is most correct for you in relation to your cannabis use over the past six months:

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How often do you use cannabis?</td>
<td>Never</td>
<td>Monthly or less</td>
<td>2-4 times a month</td>
<td>2-3 times a week</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>2. How many hours were you “stoned” on a typical day when you had been using cannabis?</td>
<td>Less than 1</td>
<td>1 or 2</td>
<td>3 or 4</td>
<td>5 or 6</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>3. How often during the past 6 months did you find that you were not able to stop using cannabis once you had started?</td>
<td>Never</td>
<td>Less than monthly</td>
<td>Monthly</td>
<td>Weekly</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>4. How often during the past 6 months did you fail to do what was normally expected from you because of using cannabis?</td>
<td>Never</td>
<td>Less than monthly</td>
<td>Monthly</td>
<td>Weekly</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>5. How often in the past 6 months have you devoted a great deal of your time to getting, using, or recovering from cannabis?</td>
<td>Never</td>
<td>Less than monthly</td>
<td>Monthly</td>
<td>Weekly</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>6. How often in the past 6 months have you had a problem with your memory or concentration after using cannabis?</td>
<td>Never</td>
<td>Less than monthly</td>
<td>Monthly</td>
<td>Weekly</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>7. How often do you use cannabis in situations that could be physically hazardous, such as driving, operating machinery, or caring for children?</td>
<td>Never</td>
<td>Less than monthly</td>
<td>Monthly</td>
<td>Weekly</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>8. Have you ever thought about cutting down, or stopping, your use of cannabis?</td>
<td>Never</td>
<td>Yes, but not in the past 6 months</td>
<td>Yes, during the past 6 months</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>2</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>
Evidence Based Treatment for CUD
Pharmacotherapy

- **Purpose**
  - Reduce withdrawal symptoms (e.g., sleep disturbances)
  - Reduce the reinforcing properties of cannabis (e.g., blocking receptors)
  - Create adverse effects when cannabis is used (e.g., nausea)
- Limited research
Motivational Enhancement

- Good for those who are not sure if they want to quit
- Primary goal is to resolve ambivalence and develop motivation to change
- Typically brief (1-4 60-90 minute sessions)
- Involves:
  - (1) Open-ended questions
  - (2) Reflective listening
  - (3) Affirmation of the client (rapport building)
  - (4) Periodic summaries of client’s thoughts about drug use (used in combination with assessment data)
  - (5) Elicitation of self-motivational statements (recognitions of disadvantages of cannabis use, how cannabis use is inconsistent with values or goals, and optimism for successful change)
Cognitive-Behavior Therapy

- Typically 6-12 sessions
- Individual or Group
- Major focus on coping strategies
  - Identify Antecedents, Behaviors, and Consequences
  - Learn alternative coping strategies (e.g., relaxation)
- Self-monitoring
- Role-playing
- Planning for “high-risk” situations
  - Relapse prevention
Contingency Management

- Rooted in the manipulation of contingencies
  - Weaken the reinforcement derived from cannabis use
  - Strengthen reinforcement derived from healthy alternatives
- Typically involve monetary reward for abstinence & constant testing of use status (i.e., urinalysis)
- Earnings escalate with each negative cannabis test.
- If urinalysis tests positive, earnings are reset to base amount
- Can be expensive
Summary

- 4 Primary options
  - Pharmacotherapy (little work to date)
  - Motivational Enhancement (brief & helps ambivalence)
  - Cognitive-Behavioral Therapy (breaks down thoughts and behaviors that lead to use)
  - Contingency Management (monetary reinforcement of abstinence)

- These are often used in combination (e.g., Motivational Enhancement & Cognitive-Behavioral Therapy)
Evidence Based Treatment for PTSD & SUD
Concurrent Treatment of PTSD and Substance Use Disorders Using Prolonged Exposure (COPE)

- Combines two evidence-based treatments for patients with SUD
  - 12 weeks of concurrent prolonged exposure treatment for PTSD combined with CBT for SUD (alcohol and drugs)
- Brief, individual sessions can be applied to any type of traumatic event
- Appropriate for men and women, as well as veterans and civilians
- Demonstrated positive results for both alcohol and drug use disorders, and among childhood and adult traumas.
Concurrent Treatment of PTSD and Substance Use Disorders Using Prolonged Exposure (COPE)

- Session 1: Introduction to COPE
- Session 2: Common reactions to trauma and craving awareness
- Session 3: Developing the *in vivo* hierarchy and craving management
- Session 4: Initial imaginal exposure
- Session 5: Imaginal exposure continued and planning for emergencies
- Session 6: Imaginal exposure continued and awareness of high-risk thoughts
Concurrent Treatment of PTSD and Substance Use Disorders Using Prolonged Exposure (COPE)

- Session 7: Imagine exposure continued and managing high-risk thoughts
- Session 8: Imaginal exposure continued and refusal skills
- Session 9: Imaginal exposure continued and seemingly irrelevant decisions
- Session 10: Imaginal exposure continued and anger awareness
- Session 11: Final imaginal exposure and anger management
- Session 12: Review and termination
Kicking the Habit

This app was developed by the VA Center for Excellence in Substance Abuse Treatment and Education with funding from the VA National Center for PTSD.
You've been active 1 day in a row

The VA offers several treatments, like therapy, meds, and treatments for multiple problems.

Let's Begin >
Part I: Connecting to Existing Services

- Lesson 1: Getting help as soon as you’re ready is critical
- Lesson 2: Multiple treatment exist and picking the right one is important
- Lesson 3: The VA offers several treatments, like therapy, meds, and treatments for multiple problems
- Lesson 4: Use available resources to figure out local treatment options
- Lesson 5: Decide if seeking local treatment or using Part II of this app is right for you
Part II: SUD Treatment

- Lesson 6: PTSD describes not recovering from normal reactions to a traumatic event
- Lesson 7: Although substance use problems vary in severity, they interfere with living a health life
- Lesson 8: PTSD often occurs with substance use problems, and can do so for different reasons
- Lesson 9: Identifying goals and values can help with quitting substance use
- Lesson 10: Substance use can interfere with achieving and living a valued life
- Lesson 11: Keeping track of daily substance use patterns is important
- Lesson 12: Motivation and confidence to quit can change, and monitoring them can help you adjust
Part II: SUD Treatment

- Lesson 13: Thinking about pros and cons of quitting substance use can help increase motivation to quit
- Lesson 14: Knowing why you use substances is important for replacing use with healthier options
- Lesson 15: Developing a list of health alternatives to substance use can help you quit
- Lesson 16: Rewarding yourself for meeting your substance use goals can help you stay quit
- Lesson 17: Set a quit date as you finish preparing to quit
- Lesson 18: Practicing short periods of abstinence can help you stick with a quit attempt
- Lesson 19: Get social support on board to help you stay quit
- Lesson 20: Start the quit attempt!
- Lesson 21: Prepare for situations when staying quit will be difficult
- Lesson 22: Practice saying “no thanks.”
Tools & Measurement

Guided Audio
- Positive Imagery Exercise 3:02
- Belly Breathing 2:52
- Body Scan 3:33
- Instrumental with Bells 2:10
- Silence with Bells 5:19

Video Testimonials
- Get the Help You Deserve 0:59
- Finding Hope 3:19
- Treatment and Support 2:19
- Drinking 2:03
- PTSD Triggers 1:03

Forms and Surveys
- Suicide and Crisis Hotlines
- Readiness Ruler
- Problems and Needs
- Treatment Information
- Readiness Questionnaire
- Personal Values
- Personal Goals
- Interference Questionnaire
- Motivation to Quit
- Pros and Cons
- Reasons for Using
Tools & Measurement

To Sleep
- not at all
- all the time

To feel numb/detached
- not at all
- all the time

To distract
- not at all
- all the time

To feel less on edge
- not at all
- all the time

To feel good

List at least three people who you can contact for support when your quit attempt gets difficult.

Name and Phone Number

Rate how ready you are for changing your substance use habit using the following scale:
- not at all
- extremely

Rat e how confident you are that you can keep from using during a quit attempt:
- not at all
- extremely

Name and Phone Number
Thank You!
PTSD Consultation Program
FOR PROVIDERS WHO TREAT VETERANS

PTSDconsult@va.gov
(866) 948-7880
www.ptsd.va.gov/consult