

CARBYNE

PARTICIPANT RESOURCE GUIDE



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DEFINITIONS

Active Listening

A collection of skills and strategies to help a person become a better listener, empowering them to provide more effective emotional and mental support for others.

Amygdala

Located in the mid-brain, this brain structure is responsible for detecting and responding to perceived danger (real and/or imagined). In cases of PTSI, the amygdala is overstimulated, hypersensitive, and overreactive.

Broca's Area

Located in the mid-brain, this brain structure is responsible for processing and understanding spoken language. Broca's Area is overwhelmed in times of stress and/or trauma. It becomes increasingly less effective, disrupting the person's ability to use language and find words to express themselves.

Burnout

A state of physical and mental exhaustion caused by a depleted ability to cope with daily stressors – not usually trauma-related – work-related.

Compassion Fatigue

Apathy due to strain of exposure to suffering and trauma – numb to the trauma of those around you, callers, etc.

Dissociation

A pre-conscious disconnection or lack of connection in conscious awareness. Dissociated events and experiences are not integrated into one's personal history resulting in disruption or lack of memory for some or all of a traumatic event.

Dream Re-scripting

A cognitive-based tool for altering the impact of nightmares.

Hippocampus

Located in the mid-brain, this brain structure is responsible for processing, encoding, and storing short and long-term memory responses. In times of stress and/or trauma, the hippocampus is overwhelmed and becomes increasingly less effective, leading to disruptions in awareness and loss of memory.

Hyper-Arousal

Over-stimulation is marked by irritability, anger, agitation, anxiety, jumpiness, and hyper-vigilance.

Hypo-Arousal

Under-stimulation is marked by emotional flatness or bluntness, withdrawal, being guarded and shut down, depressed mood and affect, and loss of energy and enthusiasm.



Hypothalamus, Pituitary, Adrenal Axis

Located in the mid-brain and attached to the adrenal glands, these brain structures are responsible for producing and maintaining neurotransmitters that support fight, flight, or freeze responses. In cases of PTSI, the HPA Axis is overstimulated, hypersensitive, and over-reactive.

Intrusive Flashbacks

Unbidden, unwanted memories, thoughts, pictures, feelings, and/or sensations of past traumatic events or experiences.

Limbic System

This brain structure is located in the mid-brain and is responsible for processing emotional responses. In cases of PTSI, the amygdala is overstimulated, hypersensitive, and overreactive.

Nightmares

Terrifying dreams that disrupt standard sleep patterns and processes aggravate PTSI responses and sensitivity.

Prefrontal Cortex

Located front and center in the forehead, the Prefrontal Cortex (PFC) is responsible for conscious thought and higher-level cognitive processing. In times of stress and/or trauma, the PFC is overwhelmed and becomes increasingly less effective, leading to disruptions in the person's ability to think clearly, use abstract cognitive functions, use language (either by understanding what is said to them and/or by having trouble finding words to express themselves), and to modulate and manage their emotions.

Post-Traumatic Stress Injury (aka Post-Traumatic Stress Disorder)

A biological, physiological, neurological, emotional, and psychological cluster of responses to trauma and/or chronic stress. The reactions include hyper-arousal, hypo-arousal, intrusive flashbacks, and dissociative episodes. Post-Traumatic Stress Injury (PTSI) is a preferred term, noting that the above responses are normal reactions to being hurt or wounded and not a pathological break-down

Relaxation Response Training

Herbert Benson, M.D. developed this process of systematically training the brain and body to relax by pairing large muscle groups with physical relaxation from tension with controlled deep breathing and verbal cues.

REM Sleep

Rapid Eye Movement (REM) is a series of episodes during a sleep cycle wherein the person dreams. During this time, the eyes move back and forth under the eyelids.

Resilience

The ability to adapt to and recover from adversity, stress, trauma, and/or tragedy. Resilience can be developed by building healthy, supportive interpersonal relationships, fostering a balanced, realistic, positive outlook, and finding meaning in one's life and activities. To accomplish this, cultivate strengths in four key areas of life: the emotional, mental, physical, and spiritual domains.



Secondary Traumatic Stress

Stress from being exposed to a traumatized individual. This term is used interchangeably with "Vicarious Trauma."

Stress

Ongoing pressures, demands, and conflicts erode a person's physical, emotional, mental, and/or spiritual reserves.

Trauma: Acute

A specific event overwhelms a person's physical, emotional, mental, and/or spiritual equilibrium or worldview.

Trauma: Complex

A series of ongoing traumatic events, frequently beginning in childhood and persisting into adulthood, overwhelm a person's physical, emotional, mental, and/or spiritual equilibrium or worldview.

Wernicke's Area

Located in the mid-brain, this brain structure is responsible for processing and understanding spoken language. In times of stress and/or trauma, Wernicke's Area is overwhelmed. It becomes increasingly less effective, disrupting the person's ability to understand and make sense of what is being said to them.

Window of Tolerance

A term coined by Daniel Siegel, M.D., referring to a range of arousal and awareness. When people are within the "window," they can emotionally and cognitively process events and better use their reasoning and verbal skills.

When a person is outside the "window," they experience either hyper or hypo arousal with the corresponding loss of cognitive, emotional, and verbal skills.



STRESS AND DEPRESSION CHECKLIST

Mental Signs

- $\hfill\square$ Concentration impairment
- □ Eating
- □ Sleeping disturbances
- Psychosomatic symptomology
- □ Addictions
- Depression

Physical Signs

- Fatigue
- □ Vomiting and nausea
- Chest pain
- Twitches
- □ Thirst
- □ Insomnia nightmares

Behavioral Signs

- □ Withdrawal from friends and family
- $\hfill\square$ Pacing and restlessness
- Emotional outbursts

Emotional Signs

- □ Anxiety or panic
- Guilt
- 🗆 Fear
- Denial
- Irritability

- Irritability
- Avoidant behaviors
- □ Changes in libido

Increased personal and professional conflict

- Breathing difficulty
- $\hfill\square$ Grinding of teeth
- □ Profuse sweating
- Pounding heart
- Diarrhea or intestinal upsets
- \square Headaches
- Anti-social acts
- $\hfill\square$ Suspicion and paranoia
- Increased alcohol consumption and other substance abuse
- $\hfill\square$ Depression
- □ Intense anger
- □ Agitation
- □ Apprehension



DREAM SCRIPTING EXERCISE

Introduction: Dreams are mental and emotional processing exercises that allow people to sort out and work through problems. When the issues become too distressing, there is a tendency to wake up in the middle of the dream without completing the problem-solving and learning process. Dreams are symbolic, quasi-hallucinogenic, and not governed by standard rules of physics and logic. Anything can be whatever and wherever you need it.

Steps:

- 1. Write out as much of the dream as you can remember.
 - Write it out in the present tense as if it is happening right now.
 - Read the dream to a trusted, responsive friend as if it were happening at the moment.
- 2. Re-write the end of the dream, changing the ending. Examples:
 - Nightmare 1: Reaching for your weapon and your holster is empty!
 - New Ending: Remembering a backup gun strapped to your ankle.
 - Nightmare 2: Stuck in the back seat of an out-of-control, driverless car!
 - New Ending: Using an "app" on your cell phone so you can drive the vehicle from anywhere.
- 3. Share the new dream ending with your trusted, responsive friend.
 - If they have a suggestion to add to the alternate ending, you can listen to it.
 - You are the final judge, the director.
 - You decide what to keep and what to cut.
- 4. At night, before going to bed:
 - Practice a relaxation exercise.
 - Mentally rehearse the new ending two or three times
 - Repeat each night for two weeks.

Notes:

For the trusted, responsive friend:

Your job to listen to and acknowledge your friend's/partner's thoughts and feelings. You do not have to solve their problems. This exercise works better if you do not try to fix them. Trust them to work it out.

For the dreamer:

Look at the theme(s) of the nightmare. In the examples above, the first dream was about not being protected, being vulnerable, and not having the tools/resources necessary to do the job. The second dream was about not having control, about being trapped.

How might these dreams reflect current-day struggles in your real life?



SUICIDE WARNING CHECKLIST

Recognizing these signs, combined with direct and supportive communication, can help officers talk about suicide and suicidal feelings, allowing them to feel cared for and to seek help.

Some of the warning signs include the following:

- **Talking about suicide or death**, and even glorifying death.
- Direct verbal cues such as "I wish I were dead" and "I am going to end it all."
- □ Less direct verbal cues, such as "What is the point of living?", "Soon, you will not have to worry about me," and "Who cares if I am dead, anyway?"
- □ Self-isolating from friends and family.
- Expressing the belief that life is meaningless or hopeless.
- □ Giving away cherished possessions.
- □ They are exhibiting a sudden and unexplained improvement in mood after being depressed or withdrawn. This is a very dangerous sign because the officer has come to terms with their death and is relieved the end is near.
- □ They are neglecting their appearance and hygiene.
- Annoyed that they are going to do something that will ruin their career, but they do not care.
- Openly discusses that they feel out of control.
- □ Displays behavior changes that include appearing hostile, blaming, argumentative, and insubordinate or appearing passive, defeated, and hopeless.
- Develops a morbid interest in suicide or homicide.
- □ Indicates they are overwhelmed and cannot find solutions to their problems.
- □ Asks another officer to keep their weapon.
- □ They are acting out of character by unnecessarily using or displaying their weapon.
- □ Exhibits reckless behavior by taking unnecessary risks on the job and/or in their personal life. Acts like they have a death wish.
- □ Carries weapons in a reckless, unsafe manner.
- □ Exhibits deteriorating job performance.
- □ Recent issues with alcohol and/or drugs.

Suicidal?		
NEED HELP NOW?	OR	OR
Call 911 – or –	1-800-273-TALK	Test Telephone
1-800-SUICIDE (1-800-784-2433)	1-800-273-8255	1-800-4TTY (1-800-799- 4889)



ACTIVE LISTENING SKILLS

WHAT IS ACTIVE LISTENING?

Active listening involves fully paying attention to the speaker. This is different from passive hearing typical in most conversations. It means listening to understand, not to prove a point, and not to find a flaw in their argument. Active listening involves using multiple senses to be present, to show the other person you are genuine with them. We will likely miss the actual message if we are not actively listening.

GUIDELINES

Here are some critical steps to being an active listener. Do not think of this as a checklist where you must mark off each point as you accomplish it. Instead, view this as a collection of tools and learn when to use which ones.

Convey a Non-Judgmental and Accepting Tone

Listen without making judgments. The goal is to see the situation through the other person's eyes. One of the human beings' most basic emotional needs is to be heard and feel important to our partners.

Validation is essential. We want to be understood. Empathizing with and understanding the other person helps form trust in the relationship and the conversation. Saying "I understand how that would upset you" and" I would have reacted the same way" helps the other person feel you are on their side.

Demonstrate That You Are Paying Attention

Make eye contact, lean in towards the speaker when your interest peaks, and share any humor with a smile or other natural response. Brief verbal affirmations such as, "I see.", "I get it.", or "Sure." Can help.

Maintaining connection conveys caring. Being actively engaged helps you pay attention with less chance of being distracted. Playing with a pen, picking up your phone, or looking all over the place gives the impression that you are not interested in what the other person is saying.

Clarify Through Restating and Summarizing

Sometimes people are not as straightforward as we would wish. Give a summary to indicate that you have heard and understood what was said.

A good approach is to paraphrase what the other person said. You can say things like, "To make sure I understand; what I hear you saying is <paraphrase what you think they're saying>. Is that correct?". This shows the other person you are actively seeking to understand them. It gives them a chance to correct you and keep the conversation on track.

Even better, this helps them hear themselves, allowing them to think about what they are saying and feeling.



Asking Questions

Do not be afraid to ask for clarification, particularly when you are trying to grasp their main points. If you feel there might be more relevant information that has not come out yet, it is acceptable to ask a few questions.

Asking, "How did that make you feel?" or "How did that work out?" are effective ways to get the other person to share more about their feelings and thoughts about the event. This helps you understand the situation better. Remember, your goal is not to take over the conversation or fix things but to actively listen to and understand the other person.

Respect the Pace and the Flow of the Conversation

Most conversations have brief periods of silence, sometimes a few seconds, especially with more emotionally tricky topics. Allow the speaker time to finish their thoughts. It may take some practice to know how long to wait before making some type of response. If unsure, it is always better to wait too long rather than speak too soon and interrupt the speaker's thoughts.

When someone has difficulty getting through a tricky topic, it is okay to provide a little encouragement to help them continue speaking or share more details.

You do not want to rush into it or push too hard. Use short and simple questions or encouragers. Examples include "and then?" or "What happened next?"

Watch for Non-Verbal Clues

Much communication happens non-verbally. Most of what a person communicates comes through body language and tone of voice, not the words they are saying. Non-verbal clues help you hone in on how the other person is feeling.

Notice how the other person sits or stands. What is their posture like? Are they gesturing, and if so, how?

Minimal Talking

To be an active listener, you must listen. Your role here is to focus on what the other person is saying. Less talking is better.



GOOD MOOD FOODS

Nourishing food becomes the building blocks for proteins, enzymes, brain tissue, and neurotransmitters transferring information and signals between various parts of the brain and body. Certain nutrients and dietary patterns are linked to changes in a brain protein that helps increase connections between brain cells. A diet rich in nutrients like omega-3s and zinc boost levels of this healthy substance, while saturated fats and refined sugars negatively impact brain proteins.

Trillions of beneficial bacteria live in the gut. Key benefits include supporting your immune system, reducing inflammation in the body, and helping create brain-powering B vitamins.

Here are specific food groups that help promote physical, mental, and emotional health.

Probiotics and Prebiotics

Some gut bacteria boost levels of brain chemicals such as gamma-aminobutyric acid (GABA), which may reduce depression.

Prebiotics are food for probiotics. Probiotics break down prebiotics to reduce gut inflammation and help grow healthy cells.

Eat This:

Probiotics. Yogurt with active cultures, kefir, miso, sauerkraut, kimchi, and some cheeses such as cheddar, mozzarella, and Gouda.

Prebiotics. Beans and other legumes, oats, bananas, berries, garlic, onions, dandelion greens, asparagus, and leeks.

Good Mood Vitamins

A deficiency in vitamins B12 and B9 is associated with depression. Vitamins B1, B6, A, and C all play crucial roles in brain function and mood regulation.

Eat this:

B12 & B9 in legumes, citrus fruits, bananas, avocados, leafy greens, asparagus, beets, nuts, seeds, fish, and shellfish.

B1 & B6 in the foods above and soybeans and whole grains.

Vitamin A in sweet potatoes, carrots, spinach, and black-eyed peas.

Vitamin C in citrus, cantaloupe, strawberries, and broccoli.



Good Mood Minerals

Iron, magnesium, and zinc are essential to proper brain function. Deficiencies in these minerals have been linked to depression.

Eat this:

Iron-rich foods: Shellfish, lean red meats, eggs, legumes, pumpkin seeds, broccoli, spinach, and dark chocolate (in moderation).

Magnesium-rich foods: Avocados, bananas, dried apricots, nuts and seeds, legumes, and whole grains.

Zinc-rich foods: Seafood (cooked oysters), lean beef, and poultry

Omega-3 Fatty Acids

Omega-3s are crucial to mental health. Omega-3s protect neurons from excessive inflammation.

Eat this:

Cold-water fatty fish: Salmon, mackerel, tuna, herring, and sardines. Grass-fed beef contains more omega-3s than conventional beef. Omega-3- fortified foods on the market, especially eggs, milk, and yogurt.

Herbs and Spices

Many seasonings help prevent oxidative stress. Pair with antidepressant foods to double their mood-boosting effects.

Eat this:

Saffron increases levels of the good mood neurotransmitters glutamate and dopamine. Oregano contains carvacrol, which may have neuroprotective and antidepressant effects (The positive impact of carvacrol has been demonstrated in animal studies. To date, there are no such studies with humans.)

Turmeric contains curcumin, which may reduce depressive symptoms

Other mood-boosting herbs: Lavender, passionflower, and chamomile are all herbs that can be helpful for depression. They are easiest when enjoyed as teas.



HEALTHY NEUROCHEMICALS AND EXERCISE

Serotonin: The Mood Stabilizer/Calming Hormone

What it does for you:

It helps produce a sense of well-being, diminishes depression Improves appetite, memory, and sleep.

How to Increase Serotonin Levels

- Go Outside in the Sunshine
 10-15 minutes of sunlight increases serotonin & vitamin D
- Get a Massage Increases serotonin & oxytocin; decreases cortisol (stress)
- Physical Movement Stretching, Pilates, Yoga, and/or cardio work Increases & balances serotonin and dopamine

Dopamine: The Reward Chemical

What it does for you:

Creates a sense of exhilaration and a feeling of bliss Increases motivation, concentration, and learning

How to Increase Dopamine Levels

- Make to-do lists (Daily & long-term)
- Each time you tick off a task or goal, you increase dopamine levels
- Create something
- Writing, music, art & crafts, and/or building projects
- Meditate regularly
- Exercise regularly
- Vary the types of exercise you enjoy the most.

Oxytocin: The "love" Hormone

What it does for you:

Creates feelings of being close to and connected with others Increases feelings of arousal, trust, and self-esteem.

Reduces stress

How to Increase Oxytocin Levels

Physical touch

Cuddling, hugging, making eye contact, and even shaking hands

Socializing

Connecting or talking with friends and family (Also reduces cortisol)

Listening to music

Slow-tempo music calms the brain & increases oxytocin

Getting a massage

Meditate

Exercise



Endorphins: The Body's Pain Killers

What it does for you: Create feelings of euphoria and pleasure Relieves pain and reduces stress How to Increase Endorphin Levels: Laughter or crying Creating music or art Getting a massage Meditate Exercise or stretching Can include high-intensity, interval training



TACTICAL BREATHING EXERCISES

What it does for you:

It helps calm and regulate the autonomic nervous system (ANS). Lowers stress, anxiety, and depression. Increases relaxation and improves mood and focus.

Box Breathing

Steps:

- 1. Breathe in through the nose for 4 seconds.
- 2. Hold your breath for 4 seconds.
- 3. Breathe out through the mouth for 4 seconds.
- 4. Hold your breath for 4 seconds.
- 5. Repeat 3-5 times.

BOX BREATHING BREATHING

Breath

In

4x7x8 Breathing

Steps:

- 1. Breathe in through the nose for 4 seconds.
- 2. Hold your breath for 7 seconds.
- 3. Exhale through the mouth for 8 seconds allow your breath to make noise as you release the air from your lungs.
- 4. Repeat 3-5 times.

Tactical Breathing Tips:

- 1. If possible, sit comfortably.
- 2. Close your eyes to reduce stimuli and enhance focus on breathing.
- 3. If you notice your mind wander, calmly bring your attention back to your breath.