

Targeted Herbs, Flower Essences for PTSD

a psychogenomic approach

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What Is PTSD? DSM Criteria

Exposure to actual or threatened death, serious injury, or sexual violence in one (or more) of the following ways:

- ▶ •1. Directly experiencing the traumatic event(s).
- ▶ •2. Witnessing, in person, the event(s) as it occurred to others.
- ▶ •3. Learning that the traumatic event(s) occurred to a close family member or close friend.
- ▶ •4. Experiencing repeated or extreme exposure to aversive details of the traumatic event(s) (eg, first responders collecting human remains; police officers repeatedly exposed to details of child abuse).



What Is PTSD? DSM Criteria

- One or more of the the following symptoms:
- •1. Recurrent, involuntary, and intrusive distressing memories of the traumatic event(s).
- •2. Recurrent distressing dreams in which the content and/or affect of the dream are related to the traumatic event(s).
- •3. Dissociative reactions (eg, flashbacks).
- •4. Intense or prolonged psychological distress at exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event(s).
- •5. Marked physiological reactions to internal or external cues that symbolize or resemble an aspect of the traumatic event(s).



What Is PTSD? DSM Criteria (cont)

- C. Persistent avoidance of stimuli associated with the traumatic event(s) including:
- •1. Avoidance of or efforts to avoid related distressing memories, thoughts, or feelings.
 - •2. Avoidance of or efforts to avoid related reminders that arouse distressing memories, thoughts, or feelings.
- D. Negative alterations in cognitions and mood associated with the traumatic event(s), examples:
- •1. Inability to remember an important aspect of the traumatic event(s).
 - •2. Persistent and exaggerated negative beliefs or expectations about oneself, others, or the world, for example:
 - -"I am bad", "No one can be trusted", "The world is completely dangerous," "My whole nervous system is permanently ruined"
 - •3. Blaming self or others.
 - •4. Persistent negative emotional state (eg, fear, horror, anger, guilt, or shame).
 - •5. Markedly diminished interest or participation in significant activities.
 - •6. Feelings of detachment or estrangement from others.
 - •7. Persistent inability to experience positive emotions.



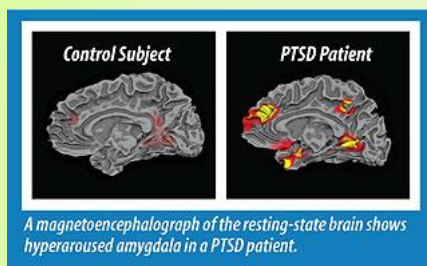
What Is PTSD? DSM Criteria

E. Marked alterations in arousal and reactivity associated with the traumatic event(s), such as:

- •1. Irritable behavior and angry outbursts typically expressed as verbal or physical aggression toward people or objects.
- •2. Reckless or self-destructive behavior.
- •3. Hypervigilance.
- •4. Exaggerated startle response.
- •5. Problems with concentration.
- •6. Sleep disturbance (eg, difficulty falling or staying asleep or restless sleep).



Your Brain On Trauma



The VVA Veteran Online, Sept/Oct 2013.

Brain Changes:
 ↑Amygdala
 ↓PFC
 ↑Hippocampus

Hormone Changes:
 ↑Cortisol
 ↑Epinephrine, norepinephrine
 ↓BDNF
 ↓GABA



C-PTSD (Complex PTSD)

- Dr. Judith Herman of Harvard University
- Symptoms that occur after repeated trauma.
- "Never had a normal."
- Symptoms shared with BPD: 60% or greater
- Additional symptoms (in addition to PTSD):
 - Emotional regulation issues
 - Dissociation or altered consciousness
 - Distorted self-perception
 - Difficulty with relationships
 - Difficulty with having a system of meaning



Trauma and the Genes

- Four key genomics:
 - MTHFr – decreased dopamine and serotonin.
 - BDNF variants – Decreases BDNF
 - SLC (serotonin) variants – Decreases cortisol resilience. Decreases response to SSRIs and serotonin receptor density.
 - Dopamine deletions (DRD2) – decreased dopamine density. Decreased cognition and executive function with trauma, more likely to develop schizophrenia with trauma.

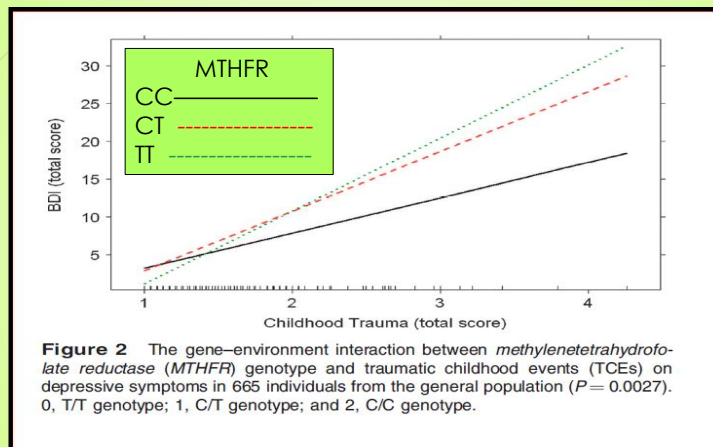


Some genetic variants associated with higher impacts of trauma

- MTHFr – Methylenetetrahydrofolate – associated with lower levels of serotonin and dopamine
- SLC (serotonin transporter) variant – dysregulated cortisol
- BDNF – Brain-derived neurotropic factor – associated with lower physical brain resilience
- DRD2 – Dopamine deletions – higher likelihood of bipolar/schizophrenia following trauma(s)



Gene X Environment Interaction



- Depression scores (BDI) increase with increased childhood trauma
- MTHFR genetic risk amplifies these effects



Lok et al. (2013)

Effects of MTHFr variants

- Reduced production of serotonin and dopamine
 - Family history of mental health and addiction issues
- High homocysteine
 - Family history of cardiovascular disease
- Poor folate metabolism –
 - midline defects, miscarriages, increased risks for many kinds of cancer
 - Macrocytic anemia, functional B12 deficiency
- High histamine levels
 - Allergies, histamine reactions
- Some common combinations of MTHFr genetic variations can result in up to 75% reduced enzyme activity!



Additional methylation functions

- Methylation of metals and other molecules, as part of detoxification
- Methylation of amino acids to make proteins
- Methylation of DNA – affects genetic expression
- Many, many others.



MTHFr “Type”

- Feels great with B vitamins (except folic acid)
- Family/personal history of cancer, miscarriage, birth defects, heart disease
- Family/personal history of depression/anxiety
- Family/personal history of autoimmune disease
- Tends to respond well to antidepressants



What the MTHFr? – botanicals and nutrients

- Spinach - 58mcg/cup fresh
- Mint – dried is high in folate.
- 20% plant folates from fresh veggies is methylated folate.
- Supplements : methylated folate (5-MTHF) and other methylated B vitamins.
- Hypericum – increases serotonin

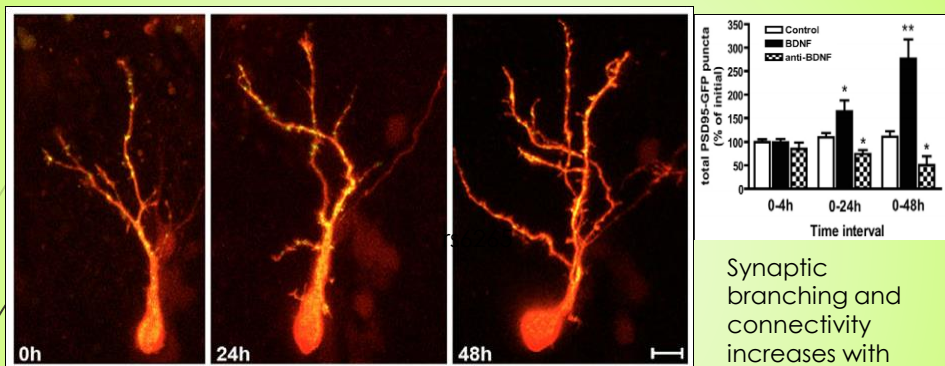


BDNF

- BDNF – Brain-derived neurotrophic factor
- Protein that increases brain growth, or neuroplasticity.
- Low levels of BDNF are associated with Alzheimer's, depression, slow brain trauma recovery, ADHD, and memory issues.



Brain-derived Neurotrophic Factor (BDNF)



Synaptic branching and connectivity increases with BDNF



- Met allele** linked to impaired activity dependent cellular secretion and transport
- Met allele** has been associated with decreased working memory, depression and PTSD

GENOMIND®

Martinez-Levy and Cruz-Fuentes (2014); Hosang et al. (2014); Sanchez et al. (2006)

BDNF Met “Type”

- Feels better when exercising!
- History of post-concussion syndrome/TBI
- History of PTSD and/or depression



BDNF – botanicals that increase BDNF

- Turmeric (curcumin)
- Resveratrol
 - Grapes
 - Protective effects from alcohol in wine?
- Green tea
 - Caffeine
 - L-theanine
 - Catechins
- St. John's Wort
- Ginseng (Panax)
- Rhodiola
- Saffron, Perilla oil, Ginkgo, olive oil



Turmeric *curcuma longa*

- Effective as Prozac at 500mg bid x 6 weeks for treating depression
- When a regular part of diet, effective at decreasing consolidation of traumatic memories
- Reduces anxiety-related behaviors in rats following a trauma-like stressor.



Turmeric - interactions

- Anticoagulants – ability to potentiate. Mixed research
- Can potentiate diabetes medication, additive effect of lowering glucose
- May bind to estrogen receptors at high doses



Rhodiola

- Stimulating, golden herb of Siberian origin.
- Showed decreased stress response in rats exposed to trauma-like situations.
- Also used for depression, anxiety, and fatigue.
- Research dosing:
 - Depression - 340mg qd or bid x 6 weeks for depression
 - Fatigue – 50mg bid
 - Anxiety – 170mg bid x 10 weeks.
- Litmus test – coffee?



Rhodiola - interactions

- Escitalopram - "In one case report, a patient taking the selective serotonin reuptake inhibitor (SSRI) escitalopram with rhodiola experienced significant tachyarrhythmia ([19291](#)). Escitalopram is partially metabolized by CYP3A4, and rhodiola inhibits this isozyme. "
- Stimulants – can have additive effects



SLC serotonin

- SLC transporters are a large family of genetic (300+)
- SLC6A4 is associated with serotonin and cortisol dysregulation
- Short and long variants
- S/L – 30% less likely to respond well to SSRI
- S/S 50% less likely to respond well to SSRI AND may also have dysregulated cortisol



SLC6A4 “S” allele modulates cortisol

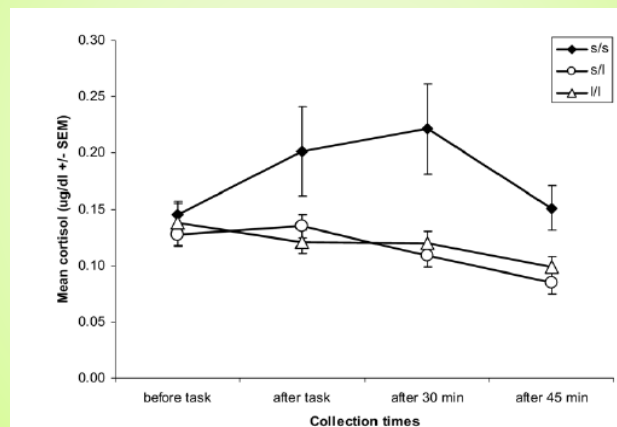


Figure 1. Stress reactivity by genotype.



Gotlib et al. (2008)

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SLC6A4 Serotonin transporter "Type"

- Stress-triggered depression
- Responds poorly to antidepressants, especially SSRIs
- Adrenal fatigue
- Chronic sleep dysregulation
- PTSD



Herbs that modulate cortisol

- Ashwaganda - reduction
- Magnolia – reduction
- Glycyrrhiza – sustain/increase
- (Honorable mention to Rhodiola)



Licorice

glycyrrhiza glabra

Glycyrrhetic acid, a metabolite of glycyrryzic acid, inhibits renal 11-beta-hydroxysteroid dehydrogenase, reducing conversion of cortisol to inactive cortisone in the kidneys

Glycyrrhizin "prevents the development of single prolonged stress-induced fear extinction impairment" – thus theoretically preventing the development of PTSD.



Other uses: ulcers, immune support, URIs, antiviral, hot flashes, PCOS, anything else?



Ashwaganda

withania somnifera

Nightshade (Solanaceae) from India

Stress: 300mg bid

Bipolar disorder: 250mg bid improved cognition

Antipsychotic side effects: 400mg tid decreases triglycerides and fasting glucose

Anxiety: 300mg bid x 12 weeks (one trial)

Insomnia: No evidence, but commonly used.

Adrenal support: Reduces cortisol under acute stress

No known studies directly with PTSD.



Ashwaganda and nightshades - precautions



Withania somnifera is in the Solanaceae family.



Subtypes of PTSD?

1. Serotonin deficient
 1. MTHFr variants
 2. SLC serotonin transporter variants
2. Cortisol dysregulation
 1. SLC variant
 2. Pyroluria?
3. Regeneration-compromised
 1. BDNF variant



DRD2 – Dopamine Deletions

- Associated with risk of developing PTSD
- Decreased density of dopamine receptors and synthesis of dopamine
- Also associated with Alzheimer's, depression, substance use and behavioral addictions, Parkinson's, tobacco dependence, and restless leg syndrome.
- Less clear information about this genetic variants, however...
- Dopaminergic herbs that might be helpful:
 - Mucuna
 - Ginkgo
 - Action very much depends on where in the brain dopamine is binding
 - What botanical might be contraindicated here?



Other supportive botanicals for PTSD

- "Nervines"
- GABA-supporting herbs
 - Lower plasma levels of GABA in PTSD
 - GABA supports inhibitory transmission
 - GABA-increasing medications are commonly used in PTSD



Name this herb:


- 1. Has square stem
- 2. Grows in this region
- 3. Evidence base for: reducing inflammation, anticancer, and provides protection against cerebral hemorrhage, prevents seizure, anxiety, and ADHD
- 4. Genus has over 200 species.



Any guesses?



Profile of Scutellaria lateriflora

- A Restorative, Relaxing Nervine
 - INDICATIONS:
 - Acute/chronic anxiety
 - Panic attacks
 - Muscle spasms
 - Insomnia
 - Seizures
 - Non-sedating!
 - No known studies in PTSD
- 
- Mechanism of Action: Binds to GABA A receptor (agonist)
 - What else acts at the GABA A receptors?



Scutellaria lateriflora Usage and Dosage

- Usage: Tincture, dried herb, tea, smoking herb, massage oil
- Dosage
 - Tea – strong cup 1-2 times a day. Infused 3-5 minutes, 1-2 Tbsp per 1 cup water.
 - Tincture - ½ dropperful – 2 dropperful as needed for anxiety or sleep, or daily for prevention of anxiety, or seizures.
 - Capsules 100mg – 350mg dried herb per day (freeze-dried herb)



Scutellaria lateriflora Special Characteristics

Synergy

- Works well in formulas
- Often studied as part of a formula
- Thought to potentiate actions of other herbs



Milky oats Avena sativa - Profile

- Nerve tonic.
 - Tonic, not rescue
- Nutritive and safe
- Neutral to warm, sweet



Avena – indications

- Insomnia from chattery mind
- Being snappy from exhaustion or depletion
- Feeling easily scattered
- Heart palpitations
- “nervous dyspepsia”
- Useful in addiction formulas
- Wired and tired, driven people



Avena - precautions

- Generally well-tolerated
- Celiac – debated.



Avena - dosage

- Tea or tincture from fresh tops
- Can be used in "material" or "drop" doses
 - 1-2 dropperfuls 1-3 times a day OR
 - 7-10 drops prn



Avena – evidence base

- Nothing in the Natural Medicines database per anxiety or as a nervine.
- Herbal folk tradition
- Sources: *Henriette's Herbal*, *The Earthwise Herbal* by Matthew Wood, *Medicinal and Medicinal Plants of the Desert and Canyon West* by Michael Moore



Case – 36 yo male

- Insomniac father
- Never slept well since baby was born 6 years prior
- Sleep latency 1-4 hours most nights
- Startles on waking
- Paradoxical response to Benadryl
- Nonresponse to magnesium, Cortisol Manager, and melatonin, trazodone, or Ambien
- Magic formula – 1-2 gttful scutellaria, humulus lupulus, and avena



Kava *piper methysticum*

In the Piperaceae family



Kava - indications

- Anxiety – GAD and other types of anxiety
- Insomnia – All types, especially when chattering mind is a component
- Pain – Useful in fibromyalgia. Nonopioid mechanism. Antiinflammatory -
- Muscle tension – acts on GABA and inflammation.

Can maintain cognitive function while using.



Kava – mechanisms of action

- Anti-inflammatory – inhibits COX-1 and COX-2 enzymes
- Anxiolytic effect not thoroughly understood. Does not bind to GABA-A (BZD) receptors. Dopamine antagonism? Inhibits NE uptake?
- Acts on amygdala and hippocampus
- Standardized to kavalactones percentage.



Kava – precautions, contraindications

- Impaired hepatic function – research controversial. 9g daily is considered a high dose which could be problematic. Consider monitoring hepatic function.
- Anticoagulant effect – decreases aggregation of platelets
- Adverse effects: gastrointestinal (GI) upset, headache, dizziness, drowsiness, enlarged pupils and disturbances of oculomotor equilibrium and accommodation, dry mouth, and allergic skin reactions
- Derm: allergic skin reactions, including sebotropic eruptions, delayed-type hypersensitivity, or urticarial eruption. Chronic use of high doses of kava has also been associated with kava dermopathy, which looks like pellagra but does not respond to niacin
- Depression?
- Mouth tingling and numbness
- Alcohol may potentiate



Kava

- CNS depressant interactions
 - "Concomitant use of kava and alcohol, barbiturates, benzodiazepines, or other CNS depressants can increase the risk of drowsiness and motor reflex depression"
 - Risk – high. Levels of evidence – high.
- Hepatic function pathways – CYP 2C9, 2C19, 1A2, 2E1, 3E4 – inhibits.
- Can cause overdose of other medications. These include:



Kava – CYP drug interactions

- clozapine (Clozaril),
- cyclobenzaprine (Flexeril),
- fluvoxamine (Luvox),
- haloperidol (Haldol),
- imipramine (Tofranil),
- mexiletine (Mexilitl),
- olanzapine (Zyprexa),
- pentazocine (Talwin),
- propranolol (Inderal),
- tacrine (Cognex),
- theophylline,
- zileuton (Zyflo),
- zolmitriptan (Zomig),
- celecoxib (Celebrex),
- diclofenac (Voltaren),
- fluvastatin (Lescol),
- glipizide (Glucotrol),
- ibuprofen (Advil, Motrin),
- irbesartan (Avapro),
- losartan (Cozaar),
- phenytoin (Dilantin),
- piroxicam (Feldene),
- tamoxifen (Nolvadex),
- tolbutamide (Tolinase),
- torsemide (Demadex),
- warfarin (Coumadin),
- acetaminophen,
- chlorzoxazone (Parafon Forte),
- ethanol,
- theophylline,
- anesthetics such as enflurane (Ethrane),
- halothane (Fluothane),
- isoflurane (Forane),
- alprazolam (Xanax),
- amlodipine (Norvasc),
- clarithromycin (Biaxin),
- cyclosporine (Sandimmune),
- erythromycin,
- lovastatin (Mevacor),
- ketoconazole (Nizoral),
- itraconazole (Sporanox),
- fexofenadine (Allegra),
- triazolam (Halcion),
- verapamil (Calan, Isoptin)



Kava - dosing

- Generalized anxiety: 50-100mg tid (standardized extract)
- 1-2 tsp per cup of water, decocted. May be more solvent in fats; consider decocting in cold milk.
- 10-60 drops tincture 1-4 times a day (in water for tolerance)
- Can dose prn, prophylactically, or before bed for sleep.
- Large single doses can decrease liver function



Kava – evidence base

Anxiety. “The majority of evidence shows that specific kava extracts standardized to 70% kavalactones are superior to placebo and possibly comparable to buspirone 10 mg or low-dose benzodiazepines such as oxazepam 30 mg.” – NatMed Database 2017

Insomnia – positive evidence for 200mg standardized hs. Negative for 100mg tid.

Not studied in PTSD



Valerian *Valeriana off.*

Common in this region, found in the woods. From Asian and Europe.

Pharmacology: “It’s complicated.”
Beta segment of GABA-A receptor agonist (maybe)
Binds to adenosine receptors
Also slows degradation of GABA
Similar action to benzodiazepine.



Valerian - indications

- Insomnia
- Anxiety: research shows whole extracts work and single-molecule extracts don't for anxiety. (NatMeds Database, 2017)
- Depression – higher dose (1000mg plus SJW) worked, lower dose (500mg plus SJW) didn't.
- Sensory processing – anecdotal.
- Dysmenorrhea
- Warming – avoid in hot constitutions.
- Not studied in PTSD



Valerian – precautions and contraindications

- Paradoxical reactions
- Well-tolerated, generally. Possible SE: headache, excitability, insomnia, uneasiness, ataxia, and hypothermia.
- GI sx most common but rare.
- Potential to interact with tamoxifen or increase risk of breast cancer
- Possible increased bleeding risk – d/c two weeks prior to surgery.
- Short-term mild impairments in vigilance, concentration, and processing time for complex thoughts, as well as mild fatigue have been reported in trials - NatMed DB.



Valerian - Dose

- 100mg qd – tid.
- Bitter as a tea
- Tincture – 1-3mL qd – tid.



Passionflower – Passiflora spp.

Wild vine growing on roadsides in the southern US, and Latin America.

Many varieties.



Passiflora- Indications

Anxiety – Generalized. Worked as well as a benzo (oxazepam) but longer onset.

Insomnia – research is unclear but it's very commonly used.

ADHD – in ages 6-12, bid dosing x 8 weeks is equivalent to low-dose methylphenidate.

Opiate withdrawal sx (in combo with clonidine)

Preoperative sedation.

No studies for PTSD



Passionflower – adverse effects, precautions, action

- Not much for adverse effects of precautions
- Very safe and mild
- GABA reuptake inhibitor.
- Affinity for GABAA and GABAB receptors



Passionflower - dosing

- In research:
 - 400mg bid for anxiety
 - 45 drops daily for anxiety
 - 90 mg daily for anxiety
- Tincture 1mL-3mL up to tid.
- Tea – 1-3mL dried herb infused in tea x 5-15 mins.



Drop dosing Echinacea

At low doses interacts with cannabinoid-2 receptors

Anxiety protocol – 1-2 drops prn for acute anxiety.



Hohmann J1, Rédei D, et al. "Alkamides and a neolignan from Echinacea purpurea roots and the interaction of alkamides with G-protein-coupled cannabinoid receptors." *Phytochemistry*. 2011 Oct;72(14-15):1848-53. doi: 10.1016/j.phytochem.2011.06.008. Epub 2011 Jul 19.



Lavender *lavendula off.*

- Clinical research shows that taking a specific capsule containing lavender oil (Silexan) 80 mg daily for 6-10 weeks improves anxiety, remission rates, and sleep scores compared to placebo in patients with mild to severe anxiety.
- In one clinical study, consuming lavender oil 80 mg daily for 10 weeks improved remission rates by 42%.



Lavender *lavendula off.*

- In one clinical study, taking a capsule containing lavender oil 80 mg daily for 6 weeks improved anxiety scores, remission rates, and quality of sleep compared to baseline; however, lavender was not more effective than lorazepam (Ativan)
- -Nat Med Database 2017



Case – 31 yo female

- Pt. presented to clinic for anxiety and insomnia.
- Insomnia life-long, thought nightmares and waking startled recent x 2 months
- Childhood trauma (sexual abuse and a bipolar parent).
 - ACE score 5-6
- Having anxiety attacks at work x 2 months, hyperventilation. No prior hx anxiety attacks.



Case – 31 yo female

- Ran basic labs. Labs pending.
- Did flower essence consult in first visit.
- Prescribed: Star of Bethlehem, aspen, cherry plum, white chestnut, mimulus.



Bach flower remedies for trauma

- Star of Bethlehem
 - Shock or trauma, either recent or from a past experience; need for healing and comfort from the spiritual world
- Cherry Plum
 - Fear of losing control, mental and emotional breakdown; desperate or destructive impulses; acute tension and rigidity
- Rock Rose
 - Gripping terror, panic; fear of death or annihilation; lack of embodiment and presence for the immediate situation
- White Chestnut
 - Worry-bound repetitive thoughts, chattering mind; restless and agitated mental condition; insomnia
- Mimulus
 - Over-exaggerated concern for daily life events, extreme apprehension of new thresholds of experience
- Aspen
 - Fear of the unknown, vague anxiety and apprehension, hidden fears, nightmares; easily startled or frightened

Five Flower Essence (aka Rescue Remedy)

Clematis, Cherry Plum, Impatiens, Rock Rose, and Star of Bethlehem



Specific Trauma Remedies: Arnica

- Arnica - Disconnection of Higher Self from body during shock or trauma; dissociation, unconsciousness, dysfunction or latent illness deriving from past trauma



Specific Trauma Remedies: Black Eyed Susan

- Black-Eyed Susan –
- Avoidance or repression of traumatic or shadow aspects of the personality, addictive or hypnotic behavior due to loss of consciousness



Specific Trauma Remedies: Golden Ear Drops, Echinacea

- Golden Ear Drops - Suppressed toxic memories of childhood; feelings of pain and trauma about past events, affecting present emotional identity
- Echinacea - Shattered by severe trauma or abuse; physical or emotional disintegration of Self Identity; poor immune function; vacant presence



Yarrow for protection

- Three Yarrows – boundaries
 - Pink yarrow – Emotional boundaries, dysfunctional merging with others
 - Wild, or white yarrow – Energetic boundaries, chemical/energetic sensitivities
 - Golden yarrow – Social boundaries, using drugs/behaviors for social masking



Depression Remedies Borage and Buttercup

- Borage - Heavyheartedness or grief, lack of confidence in facing difficult circumstances; depressive behavior
- Buttercup - Feelings of low self-worth, inability to acknowledge or experience one's inner light and uniqueness; self-deprecating



Credit: Commons.wikimedia



Sensory Remedies

Dill, Corn, Indian Pink

Dill - Overwhelm due to excess stimulation, hypersensitivity to environment or to outer activity, sensory congestion

Indian Pink - Psychic forces which are easily fragmented by too much movement; frayed and overwhelmed during multi-leveled activity



Sensory Remedies

Dill, Corn, Indian Pink

- Corn - Inability to stay centered in the body; disorientation and stress, particularly in urban or crowded environments



World Remedies

Scotch Broom, Red Clover, Green Cross Gentian

- Scotch Broom – Disheartened and depressed; overcome with pessimism and despair, especially regarding one's personal relationship to world events
- Red Clover – Susceptible to mass hysteria and anxiety, easily influenced by panic or other forms of group thought
- Green Cross Gentian – Feelings of overwhelm, despair and defeat with regard to the condition of the earth; bereft and discouraged when living connection with the earth is disrupted due to natural or man-made catastrophe; ability to carry the elemental "cross" of the world



Case – 42 yo female

- PTC for crying spells, constipation alternating with diarrhea, depression, and anxiety x 12 months. Onset occurred with changes in menstrual patterns.
- PHQ-9 = 15/27, GAD-7 = 15/21
- Recent job was in politics, a burnout schedule.
- Testing showed: Low-normal T3, Low-normal histamine, Low-normal magnesium, High copper/zinc ratio, Serotonin transporter hetero, COMT Met/Met, BDNF variant.
- Flower essence 2oz (oz) liquid - agrimony, aspen, cherry plum, elm, gentian, gorse, larch, red chestnut, star, pine, white chestnut, wild rose.
- Two weeks later PHQ-9 was 10, added:
 - HLC Intensive capsules
 - Panplex 1 tid with meals
 - DHEA 10 mg 60c 1 cap bid
 - Elimination diet
- 5-htp 100 mg
- Vitamin C 1000mg sustained release
- Folic Acid Pure
- Niacinamide 100c 500mg



Case – 42 yo female

- 2 months later: "I was doing better but the last two weeks I've felt a lot worse." More teary. Not sleeping well. Having no energy. Not feeling like I want to get out of bed. "I think the elections really bummed me out." However, mood got worse prior to the elections.
- PHQ-9 – 12.
- On elimination diet



Case - 42 yo female

- One month later:
- Returned to regular diet, noted no changes with elimination/reintroduction
- PHQ-9 – 4



Questions?

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 - Dr.elissa@amendaclinic.com
- Or in the herb garden at home or at the office...



Thanks so much!