ANXIETY MANAGEMENT IN CHRONIC PAIN PATIENTS
OPTIONS FOR THE NON-PsYCHIATRIC SPECIALIST

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• NO conflicts of interest to declare

THE WARNING

• 2016 CDC Guidelines
  • #11. “Clinicians should avoid prescribing opioid pain medication and benzodiazepines concurrently whenever possible”

• 2016 FDA safety labeling change warning to patients re: risk
  • “Concomitant use of benzodiazepines and opioids may result in profound sedation, respiratory depression, coma, and death.
  • Reserve concomitant prescribing of these drugs for use in patients for whom alternative treatment options are inadequate.
  • Limit dosages and durations to the minimum required.
  • Monitor patients for signs and symptoms of respiratory depression and sedation.”
THE DILEMMA

- Governmental warnings against concurrent BZD & opioids
- Increasing literature documentation of significant amount of opioid overdose (OD) death linked w/ combined drugs
- Chronic pain & anxiety disorders are common & overlapping
- Use of opioids & BZDs has increased over recent years

- How to practice safely and effectively and in compliance w/ recommendations?

GENERALIZED ANXIETY DISORDER (GAD) DSM-5

DEFINITION

- Excessive worry and uncontrollable anxiety that has been problematic for at least 6 months (more days than not)
- 3 of the following symptoms:
  - Feeling “keyed up” or “on edge”
  - Fatigue
  - Concentration difficulties
  - Irritability
  - Tension in muscles (typically neck & shoulder)
  - Sleep disturbances
    - Falling asleep, staying asleep, non-restful sleep
- 5/S cause significant life distress and not attributed to other physical or mental disorders.

DEFINING CHARACTERISTICS

- Worry
  - Persistent & exaggerated
  - Difficult to control
  - Often unable to pinpoint focus of worry
- Feeling “on edge”, muscular tension, chronic fatigue, irritability
  - Hyper-alert state, scanning environment for threats
- Sleep disturbances & “Racing thoughts”
  - Worry about the degree of worrying
- Chronic Pain commonly associated
INCIDENCE

- One of most common psychiatric diagnosis in primary care
  - Lifetime prevalence 5.1-11.9% in US
  - Women affected 2x more than men
- Often underdiagnosed—5/5 attributed to physical cause
  - Many disorders mimic GAD
  - Estimated 1/3 of affected people seek help for it
- Median age onset age 30
  - May begin in adolescence
- Associated w/ other psych disorders
  - PTSD, OCD, SUD, major depression

RISK FACTORS

- Genetics — inconsistent data
  - Possible trend may be genetic or environmental
- Dysregulation of neurotransmitters—norepinephrine (NE), serotonin (5HT), gamma-aminobutyric acid (GABA)
- Environmental stressors
  - Major negative life event, loss, poverty, other psych disorder
  - Childhood abuse/ trauma
  - High correlation with depression, PTSD, bipolar, social anxiety disorder, OCD, panic disorder

IMPACT ON HEALTHCARE

- 5% of population accounts for >50% healthcare expenditures
  - Intersection of mental health & physical ailments—high risk for high costs
- Risk for psych & physical illness is Bidirectional
  - A physical or psychiatric condition raises risk of developing the other
- Continued need for improved understanding of causes, contributions & interventions
  - Patient & family improvement in QOL
  - Reduction in physical illness severity
  - Lowering healthcare expenditures
"The mind and the body are connected and that’s why God made the neck."

Mark Hyman Rapoport M.D.
* Chief of Psychiatric Services for Emory University

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**NEUROPHYSIOLOGY**

- **Neurotransmitters**
  - Possible imbalance between glutamate & GABA (gamma aminobutyric acid)
  - Hypothalamus-pituitary-adrenal connection (HPA axis) regulates cortisol release & autonomic/CV response
  - Amygdala circuit regulated by:
    - Serotonin, GABA, glutamate, noradrenaline, voltage-gated sodium channels
    - Dopamine added in feedback to prefrontal cortex

- **Biomarker research**
  - Elevated GDNF levels in anxiety disorders (Glial derived neurotropic factor)
  - "Neurotrophic factor that enhances survival and morphological differentiation of dopaminergic neurons and increases their high-affinity dopamine uptake"

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**NEUROPHYSIOLOGY**

- **Neuroimaging Highlights w/ functional MRI** (tracks brain bloodflow/activity)
  - Amygdala hyperactivity: key structure in fear/anxiety
  - Increased blood flow to "the fear network"
    - Amygdala, anterior cingulate cortex (ACC), anterior insula
    - Synapses of ACC highly plastic & can change at any age (i.e. connecting w/ prefrontal cortex)

- **Study of gambling task w/ uncertainty**
  - GAD w/ impairment in prefrontal cortex & amygdala networks involved w/ decision making when uncertainty exists
  - IU = intolerance of uncertainty
  - 30 sessions of rTMS (repetitive transcranial magnetic stimulation) improved some neural connections and lessened symptoms
**LINK WITH CHRONIC PAIN**

- Anxiety disorders more common w/ chronic pain than in gen population
- Debate— which comes first??
- Anxiety, depression & catastrophizing are inter-related
  - Catastrophizing shows biggest impact on pain experience & more predictive of chronic postop pain
- Catastrophizing = exaggerated negative mindset r/t actual or anticipated pain.
  - 3 characteristics— magnification, rumination, helplessness
  - Report less social support systems
  - Pain Catastrophizing Scale (PCS)— complete & score in 5 min

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**PHYSIOLOGY & PSYCHOLOGY**

- Neural Matrix theory (Melzack at McGill University)
  - Pain processing in brain genetically specified
  - Brain processing modified by experience
  - Increased sensory input to brain— alter sensory thresholds (more sensitive to pain)
  - Cognitive activity that amplifies pain signals— chronic hyperalgesic condition
  - Postulate: **Reduction** relationship between catastrophizing & nociception
    - Initial psychological events/cognitive perspective
    - Experience-related alterations in neural processing— establishing physiological control
  - Neuroplasticity— good news & bad news
    - Change CAN happen
      - Reinforcing cycles/feedback/synapses/neurotransmitter regulation
      - Goes both ways— for negative AND positive reinforcement
EXCLUDING OTHER CAUSES

- Many medical conditions associated w/ anxiety
  - Common ones: hyperthyroid, anemia, cardio dysrhythmias, hypoxemia/SOB/pulmonary dz, adrenal insufficiency, hypoglycemia, hyperparathyroid, hypokalemia, Substance Use Disorder (SUD)
    - Thorough eval to rule these out
- Medications
  - Albuterol, oral contraceptives, diet pills, stimulant meds, caffeine, illicit drugs, & withdrawal from opioids/BZDs
- Treat underlying cause FIRST
  - If S/S persist may add interventions targeting anxiety

DIFFERENTIATING RELATED PSYCH ISSUES

- Depressive disorders & GAD highly correlated
  - GAD: suicidal thoughts uncommon
- Panic Disorder & GAD
  - Panic disorder: attacks often random, w/ a warning or cueing
    - focus on immediate danger/death
  - GAD: panic attacks may be triggered by event/thought
    - focus on chronic somatic complaints
- OCD: Associated w/ primal fears (i.e. germs) & ceremonial rules
  - GAD: worry more about menial, ordinary life issues
- Social Anxiety Disorder
  - Fear of social situations provoking humiliation/judgement
  - GAD: social situations not typical cause of worry; focus on daily life threats

IDENTIFYING GAD

- Generalized Anxiety Disorder 7 item scale (GAD-7)
  - Quick (1 min or less) & valid screening tool
  - Designed for GAD but moderately good for panic disorder, social anxiety disorder, and post-traumatic stress disorder.
  - Surveys the last 2 weeks
    - Scores of 0-3 based on frequency of symptoms
    - Total scores 0 to 21.
    - Interpretation: cut-off scores
      - 5 = mild
      - 10 = mild
      - 15 = severe
  - Recommended cut-off point for referral for further evaluation is 10 or greater.
INTERVENTION & TREATMENT

- Cognitive Behavioral Therapy (CBT) & Pharmacology= top two Rx studied
  - Both show changes on neuroimaging
  - Both efficacious appraoch, equal in meta-analysis
  - Can be used singly or in combination
  - Prescriber or patient preference
  - Severity of anxiety- may need meds; may interfere w/ focus in CBT
  - Comorbidities requiring caution w/ medications
- Environmental/Lifestyle changes
- Herbal supplements/Dietary changes

COGNITIVE BEHAVIORAL THERAPY

- CBT = problem-oriented approach focusing on current problems and solutions
- Less focused on the past compared to psychoanalysis
- Goal Directed and time limited approach (often 10-15 sessions)
  - “Booster” sessions may help maintain benefits
  - If relapse after initial round, may restart full course of CBT
  - Successful via telephone in rural settings

Generalized Anxiety Disorder 7-item (GAD-7) scale:

<table>
<thead>
<tr>
<th>Item</th>
<th>Severe</th>
<th>Very</th>
<th>Somewhat</th>
<th>Slight</th>
<th>Not at all</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Feeling nervous, anxious, or on edge</td>
<td></td>
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<tr>
<td>2. Not being able to stop or control worry</td>
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<tr>
<td>3. Worrying too much about different things</td>
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<tr>
<td>4. Feeling restless, irritable, or moody</td>
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<tr>
<td>5. Feeling so tired that it’s hard to get going</td>
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<tr>
<td>6. Difficulty concentrating or remembering</td>
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<tr>
<td>7. Feeling afraid as if something awful might happen</td>
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</tbody>
</table>

Additive score for all seven items = ___________________________

Total score (certainty rating x 4) = ___________________________

PHARMACOLOGIC HIERARCHY

• First Line
  • SSRIs/ SNRIs & buspirone
  • Pregabalin (World Fed Biological Psychiatry Guidelines)

• Second Line
  • TCAs, AEDs (pregabalin), antipsychotics (quetiapine), hydroxyzine

• Third Line
  • MAO inhibitors
  • Augmentation
    • BZDs

[Locke,Kirst, Shultz. Am Fam Phys, May 2015]

INTERVENTION & TREATMENT: PHARMACOLOGY

• SSRIs & SNRIs- first line recommended
  • No single med shown to be superior
  • Avg 4 weeks to initial clinical effect
    • Continue starting dose 4-6 weeks
    • If poor response, titrate up q 2 weeks till improvement, side effects or max dose
    • If poor/no response at max dose- titrate off & try different SSRI/SNRI
      • Inadequate response to one does not predict poor response to another
    • Partial response at max dose- add adjunctive therapy w/ meds/CBT
      • Robust response- continue x 12 months min
      • If 2 relapses after tapering off med, consider ongoing maintenance Rx

AGITATION & INSOMNIA SSRI SIDE EFFECTS

• Side effects can start in days w/ therapeutic effect delayed for weeks
  • Prevention - start at low/subtherapeutic dose
    • i.e. sertraline 25mg qd x 1 week. If no side effects, up to 50mg x 4-6 weeks.
  • Add low dose BZD if low risk for SUD/misuse or side effects
    • i.e. lorazepam 1-2 mg/day in divided doses
    • Taper off after 4 weeks at 0.5mg/week
  • If higher risk for BZD misuse or side effects
    • Hydroxyzine
    • Pregabalin
  • Reassure patient initial side effects typically resolve
SECOND LINE - TRICYCLIC ANTIDEPRESSANTS

• Effective as SSRIs but side effects limiting
  • Serotonin and NE reuptake action
  • Studied most- amitriptyline (Elavil), imipramine (Tofranil), chlomipramine (Anafranil)
  • Higher doses for depression/anxiety than for pain
    • i.e. amitriptyline 75-200
    • Start low and titrate q 3-5 days
    • Lower dose effect on anxiety uncertain
  • Anticholinergic side effects- constipation, urinary retention, sedation, confusion, cardiac arrhythmias
  • Can be lethal in overdose
    • Avoid if suicide risk
      (WFSBP Guidelines 2012)

SECOND LINE PHARMACOLOGIC AGENTS

• Pregabalin & buspirone
  • Add to SSRI/SNRI
  • Can be used as monotherapy in non-depressed patients
  • Trial 4-6 weeks at max dose before concluding no benefit
• Pregabalin (Lyrica)
  • Mechanism-binds subunit calcium channel in CNS, modulates neurotransmitters
  • 50-300mg/day
  • Shown efficacy in GAD against placebo
• Buspirone
  • Mechanism-exact unknown, binds to serotonin & dopamine D2 receptors
  • Start 10mg /day
  • Increase q2 weeks by 10mg to max 60mg/day
  • Generally well tolerated; can be used alone if no benefit w/ SSRI

OVERLAP WITH PAIN TREATMENTS

• SSRIs- no consistent data for pain relief
• SNRIs- higher norepinephrine reuptake supporting pain relief
  • Duloxetine (Cymbalta) & milnacipran (Savella)
  • Venlafaxine (Effexor)-may need dose >150mg/day to have NE effect vs SSRI
• TCAs
  • Both serotonin and NE reuptake inhibition
  • Shown to be effective w/ pain relief
  • Caution w/ combining classes
    • Additive effects/side effects
    • Serotonin syndrome
WHY ARE BENZODIAZEPINES LAST ON THE LIST?

BENZODIAZEPINE RECEPTOR ACTION

- GABA: inhibitory CNS neurotransmitter
- GABA receptor activated by multiple drugs
  - BZD, ETOH, anesthetics, barbiturates
  - Keeps receptor Cl- channel open
    - Anxiolysis, sedation, relax muscle, may lower VS
- Dependence develops w/ regular use
- Withdrawal w/ abrupt stoppage of drug
- BZD similar to ETOH withdrawal
  - Potential serious effects- delirium, seizures, autonomic hyperactivity

BENZODIAZEPINE RISK/BENEFIT RATIO

- Quick effect & may speed GAD recovery initially
- Do NOT improve long-term recovery outcomes
- Associated w/ increased mortality risk
  - Tolerance, sedation, confusion, misuse/SUD risk, life-threatening withdrawal syndrome
- Synergy w/ opioids/alcohol/other CNS depressants
  - Potentially fatal respiratory depression
- Recommend
  - Short-term augmentation of acute treatment
  - BZD w/ Intermediate to long onset of action- MAY lower risk abuse/withdrawal
  - Gradual tapered discontinuation; 25% q 1-2 weeks per CDC
**BZD VS OPIOID COMPARISONS**

<table>
<thead>
<tr>
<th>BZD DRUG</th>
<th>ONSET of dose (HRs)</th>
<th>HALF-LIFE (HRs)</th>
<th>OPIOID Drug</th>
<th>Half-Life (HRs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alprazolam</td>
<td>1</td>
<td>11-15</td>
<td>Hydrocodone</td>
<td>3.8-4.9</td>
</tr>
<tr>
<td>Chlordiazepoxide</td>
<td>1</td>
<td>30-100</td>
<td>Hydromorphone</td>
<td>2.5</td>
</tr>
<tr>
<td>Diazepam</td>
<td>0.25-0.5</td>
<td>30-100</td>
<td>Morphine</td>
<td>2-4</td>
</tr>
<tr>
<td>Lorazepam</td>
<td>0.5-1</td>
<td>10-14</td>
<td>Oxycodone</td>
<td>3.5-4</td>
</tr>
<tr>
<td>Oxazepam</td>
<td>0.5-1</td>
<td>5-15</td>
<td>Oxymorphone</td>
<td>7.3-11.3</td>
</tr>
</tbody>
</table>

BZD generally longer lasting—may add to risk

**BENZODIAZEPINE FREQUENCY OF USE**

- 1996 to 2013, benzodiazepine prescription increased 67%, from 8.1 million to 13.5 million. (NIH)
- 2002-2014 patients prescribed both opioid & BZD up by 41%
  - Equals >2.5 million patients on both
- Worldwide 18-50% patients on methadone for Opioid Use Disorder (OUD) on BZD (Am Assoc for the Treatment of Op Dependence)
  - Methadone for OUD & BZD linked w/ poorer outcomes
- > 2 million patients in NC w/ opioid scripts
  - 80% had BZD scripts (Dasgupta, 2016)

**OPIOIDS VS BZD OVERDOSES: RECENT HISTORY**

<table>
<thead>
<tr>
<th>Drug</th>
<th>Methadone</th>
<th>Other Opioids</th>
<th>BZDs</th>
</tr>
</thead>
<tbody>
<tr>
<td>7 year increase (2006 vs 1999)</td>
<td>4,289</td>
<td>6,823</td>
<td>10,379</td>
</tr>
<tr>
<td>% Increase</td>
<td>400%</td>
<td>77%</td>
<td>29%</td>
</tr>
<tr>
<td>2006 hospitalized ODS</td>
<td>5,392</td>
<td>17,945</td>
<td>36,700</td>
</tr>
</tbody>
</table>

*Which problem is the worst?*
*Total number affected, trends of increase?*
GROWING BENZODIAZEPINE USE

- 2000 to 2010 NIH report
  - Treatment admissions for co-abuse BZD/opioids up 570%
  - Treatment admission for all other substances down 10%

- 1996-2013 NIH/NIDA report
  - Number of adults filling a BZD script increased 67%
  - Quantity increased also from 1 kg to 3.5 mg lorazepam equivalents/100,000 adults

- 2001 to 2014 NIDA report
  - BZD overdose deaths grew at faster rate than opioids x 13 years straight
  - More actual opioid OD deaths than opioids
    - 29,000 opioid vs 8000 BZD (2014)

BENZODIAZEPINE & OPIOID OVERDOSE RISK

- Risk known years ago but new attention recent years
- Numbers vary but all show increased risk

- Fatal opioid deaths in UK (Oliver & Keen, 2003)
  - BZD most common additional drug
  - BZD found in 64% of methadone fatalities
  - BZD blood levels were in therapeutic ranges

- VA study (French et al., 2005)
  - 2x increased risk of injury w/ BZD & another drug vs BZD alone

- 2400 Veterans with fatal opioid related deaths (Park et al., 2015)
  - Half occurred with concurrent BZD & opioids
  - Risk increased as BZD dose increased
  - Temazepam with decreased risk of OD death vs. clonazepam

- 2802 people who inject drugs in Canada (Walton, 2016)
  - BZD use with higher mortality risk than all other substances

- Cohort study 2016 of >2 mill pt.s w/ opioid scripts (Dasgupta, 2016)
  - 478 OD deaths (0.022%yr)
  - Rate of OD death 10x higher among pts co-dispensed BZD

- NIH 2018: 25-30% opioid deaths w/ concurrent BZD

BENZODIAZEPINES
COMBOS & QUOTES

• Lesser known: carisoprodol misuse, ED visits doubled from 2004 – 2009, usually in combo with opioids, BZDs, ETOH (DAWN, 2011)

• “Because most prescription drug injury reports have focused on opioids, it is possible that poisonings from BZDs have been somewhat overlooked” (Coben et al., 2010)

• “Restricting benzodiazepine prescriptions to a 30-day supply with no refills might be considered” (Tobin et al, 2010)

NON-PHARMACOLOGIC APPROACHES

COMPLEMENTARY & INTEGRATIVE MEDICINE OPTIONS

COMPLEMENTARY MEDICINE FOR ANXIETY

• Many approaches – not all well studied
• Approaches +/- studies showing safe & helpful effects:
  • Acupuncture
  • Aromatherapy
  • Biofeedback
  • Massage
  • Meditation
  • Music therapy
  • Yoga

(Mayo Clinic Consumer Health Publications online)
INTEGRATIVE MEDICINE (IM) & PAIN/ANXIETY

- 1833 hospitalized patients w/ various types of cancer
- Various IM approaches
  - Body work (craniosacral therapy, massage, reflexology)
  - Mind-body & energy therapies (MBE)
  - Traditional Chinese medicine (acupressure, acupuncture, Korean hand therapy)
- Self reported pain & anxiety scores 0-10 scale before & after intervention
  - 57.4% decrease in anxiety score
  - 46.9% decrease in pain scores
- Body work 18.3% more effective than MBE
- Traditional Chinese medicine 14.2% more effective than MBE


MASSAGE

- Anxiety reduction
  - Swedish massage vs light touch sessions in untreated GAD patients
  - 45 min sessions twice weekly x 6 weeks
  - Massage group w/ statistically significant reduction anxiety scores by week 3
- Inflammatory Biomarker reduction Massage vs light touch w/ 45 min sessions 1-2x/week
  - 2x/week massage w/ highest effect
    - Increased oxytocin, decreased arginine-vasopressin, and decreased ACTH; little effect on lymphocytes or cytokines
  - Change in biomarkers after first session and further reduction after 5 weeks of 2x/week


HERBAL & DIETARY OPTIONS

- Non-FDA regulated supplements - Most lack controlled studies w/ sufficient evidence
- Kava, lavender oil, passion flower, St. John’s Wort, Valerian
- There are side effects and potential drug drug interactions
  - Consult herbal PDR
- Dietary supplements
  - 5-hydroxytryptophan, l-theanine, ashwagandha, n-acetyl-cysteine, vit B complex
  - Some w/ risk of serotonin syndrome if combined w/ SSRIs
FREE HERBAL APP

Free App: HerbList
• From National Center for Complementary and Integrative Health
• Researched based info on safety & effectiveness of common herbs

ENVIRONMENT & LIFESTYLE SUPPORT

• Avoid caffeine
  • Caffeinepolyamines in adenosine receptors make some more sensitive
  • Shows to trigger panic attacks
• Smoking cessation
  • Improves anxiety testing scores
  • Resealing anxiety on cessation
• Sleep Hygiene (habits)
  • Consistent times, quiet bedroom; use dim lights in bedroom, etc.
  • 60 min/3x/week (66-90% of sex heart rate)
  • Walking 3.7 mi/week assoc w/lower anxiety scores
• Physical Exercise
  • 20 min 3x/week (at 60-90% of max heart rate)
  • Walking 4.7 hr/week assoc w/lower anxiety scores
• YOGA
  • Albled body benefits

THE REAL NATURAL CURE

• Viewing and spending time in green spaces lowers cortisol, BP, lowers sympathetic activity
  • “Forest bathing” in Japanese culture
• Regular 50 min forest walks vs urban walks on busy streets
  • Lowered anxiety/stress, blood sugar (6%) avg, lower asthma s/s
  • Basal sugar effect lasted 72 hr
  • Mood elevation/less anxiety effect lasted 2-3 days
• Minority disparities
  • 70% of outdoor activity participants are white (Outdoor Foundation 2013)
  • Minorities often viewed parks as unsafe or unpleasant

Locke, Kirst, Shultz, Am Fam Physician, 2015
Azar, Rice Kwakkenbos et al. Disability & Rehabilitation, 2018
Horton, 2018, Northwestern University

15
PARK RX AMERICA

- Park Rx America is a non-profit organization whose mission is to decrease the burden of chronic disease, increase health and happiness, and foster environmental stewardship, by virtue of prescribing Nature during the routine delivery of healthcare.
- Register at www.PRxA.org
- Find parks near any address
- Generate printed or electronic prescription
  - walk/exercise in park for agreed amount time/ week
  - E-script sent to patient via mobile phone or email
- Patient educational handouts
  - HTN, brain health, minorities & outdoor activity
EXAMPLES OF PATIENT EDUCATIONAL HANDOUTS

PATIENT HANDOUT- LOCAL DISCOUNTS & RESOURCES
FOR CAM OPTIONS NEAR MY PAIN CLINIC
COPING WITH ANXIETY- MAYO CLINIC WEBSITE

1. Learn about your disorder. Talk to your doctor or mental health provider to find out what might be causing your specific condition and what treatments might be best for you, including your family and friends and your brain.

2. Take medicions as ordered. For some people with anxiety, medication can make a big difference, especially when it comes to taking your medication.

3. Think about what triggers your anxiety: What causes you stress. Practice the strategies you developed with your mental health provider in a situation with your social network in these situations.


5. Join a support group. Remember that you aren't alone. Support groups offer compassion, understanding, and shared experiences. The National Alliance on Mental Illness and the Anxiety and Depression Association of America provide information on finding support.

6. Learn time management skills. You can reduce anxiety by learning how to use time effectively.

7. Socialize. Don't let worries isolate you from loved ones or activities.

8. Break the cycle. When you feel anxious, take a brisk walk or delve into a hobby to refocus your mind away from your worries.

PARK RX PATIENT HANDOUT; BRAIN HEALTH

1. Exercise in nature more beneficial than indoor exercise on mental well-being (Coss, et al., 2011)

2. A Nature experience reduced rumination and prefrontal cortex activation (Breineke, et al., 2015)

3. Green spaces boost attention

4. Walking in parks improved focus in children with ADHD (Taylor, Kuo, 2009)

5. Group walks in nature lower stress and negative affect (Marcell, et al. 2014)
LIFESTYLE CHANGES FOR GAD - MAYO CLINIC HANDOUTS

- Keep physically active. Develop a routine with activity most days. Exercise is a powerful stress reducer.
- Avoid alcohol and recreational drugs. These substances can cause or worsen anxiety. If you can’t quit on your own, see your doctor or find a support group to help you.
- Quit smoking and cut back or quit drinking caffeinated beverages. Both nicotine and caffeine can worsen anxiety.
- Use stress management and relaxation techniques. Techniques such as visualization, meditation, and yoga can ease anxiety.
- Make sleep a priority. Do what you can to make sure you’re getting enough sleep to feel rested. If you aren’t sleeping well, see your doctor.
- Eat healthy. Healthy eating — such as focusing on vegetables, fruits, whole grains and fish — may be linked to reduced anxiety, but more research is needed.

TAKE HOME MESSAGES

- BZD risk w/ opioids is significant
- BZD use w/ GAD does NOT improve longterm recovery
- Bidirectional effect of mental health & physical health problems
  - Use neuroplasticity for positive brain change
- Know treatment options for GAD
  - Pharmacologic hierarchy (BZD LAST)
  - CBT
  - Non-pharm interventions
    - Herbs, lifestyle changes, exercise, Yoga, massage, acupuncture, NATURE

Anxiety does not empty tomorrow of its sorrows, but only empties today of its strength.
Charles Santley
REFERENCES

- Available on Request