A FREE GUIDE

Healthy Habits to Enhance Psychiatric Interventions

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bespoke treatment

INTRODUCTION

Bespoke Treatment is a mental health facility based in California and Nevada that specializes in interventional psychiatry. In particular, we are experts in both neuromodulation (Transcranial Magnetic Stimulation, neurofeedback) and psychedelic medicine (ketamine and Spravato esketamine). We have witnessed many otherwise treatment-resistant patients go into complete remission with our personalized approach, but our greater goal is to help the community at large by providing additional resources for patients to achieve remission as well. Please note that everything suggested here is 100% optional—we are well aware that for many patients, showing up to appointments alone is borderline insurmountable.

If you're reading this and feel like you're doing the absolute best that you can, then don't finish this guide. Showing up every day for TMS, or finishing your series of ketamine is all that you need to be doing right now.

However, we understand that many patients who seek TMS therapy and ketamine treatment *are* seeking ways to improve the effectiveness and durability of these treatments. This guide is for those willing to do more. This guide contains healthy habits and lifestyle modifications: adopting one or more of these changes may be incredibly helpful for making the most out of your TMS or ketamine treatments.

This list of evidence-based lifestyle modifications is based on what we feel meets our definition of scientific rigor in addition to our criteria for being easily accessible for all patients.

However, it is important to note that **it is perfectly acceptable to choose not to implement these recommendations.** We have seen hundreds of patients achieve remission without implementing a single one of these recommendations.





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In Brief

If you don't want to read the rest, here is a short list of the most important lifestyle modifications for patients at Bespoke Treatment:

- 1. Avoid sugar and alcohol.
- 2. Limit blue light from your computer and phone at night.
- 3. Practice proper sleep hygiene.
- 4. Don't take over-the-counter sleep medication.
- 5. Exercise! Weightlifting, HIIT, yoga, cardiovascular training, or walking are all great.
- 6. Practice breathwork in the method that best suits you.
- 7. Limit social media.



OVERVIEW

NUTRITION

- Reduce sugar intake
- Avoid alcohol
- Reduce caffeine intake





Nutrition

Avoid Sugar

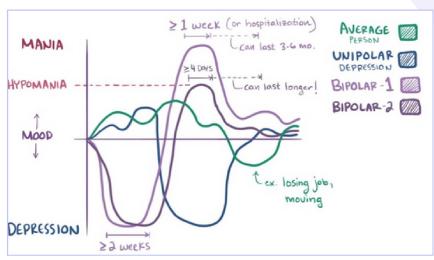
The concept of "healthy eating" can vary greatly depending on the individual and can evolve. However, certain trends are particularly relevant for those with mood disorders.

Avoiding sugar is one of the most significant nutritional changes you can make to improve any type of mood instability.

Sugar is the most common legal drug in the United States. There are consequences to consuming sugar... even if you ignore the relationship between sugar and diabetes, cardiovascular disease, obesity, acne, and tooth decay. What are the consequences? Sugar has severe negative effects on mental health (Jacques et al., 2018).

It is normal for a person's mood to fluctuate throughout the day. However, people with disordered mood patterns do not experience the same mood fluctuations as a neurotypical person.

See the image below:



(IMAGE SOURCE: HTTPS://EN.WIKIPEDIA.ORG/WIKI/MOOD_SWING)

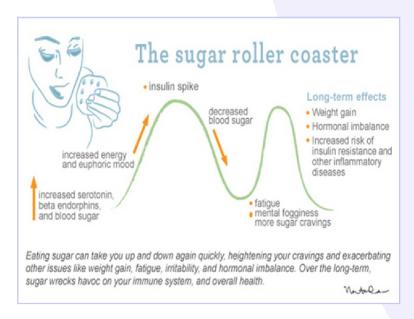
This illustration shows that it is common for individuals *without* a diagnosis of a mood disorder to experience minor fluctuations in mood throughout the day, week, month, and year. These fluctuations tend to be situational.

On the other hand, individuals diagnosed with Major Depressive Disorder tend to have a persistent low mood, and those with bipolar disorder tend to have significant fluctuations between high and low mood states.



A graph of sugar's immediate effect on blood sugar will look similar.

See the image below:



(IMAGE SOURCE: HTTPS://JANESHEALTHYKITCHEN.COM/GOOD-BYE-SUGAR-CRAVINGS-HELLO-HEALTH/)

This graph depicts sugar's emotional and physiological impact on the body and brain.

This chart demonstrates that sugar initially provides a euphoric effect. A "comedown" soon follows, leading to symptoms that look eerily like some symptoms of depression.

Unfortunately, people with mood disorders tend to be more sensitive to the ebbs and flows of blood sugar levels. This means that a neurotypical person might be able to eat a candy bar and go about their day. However, a person with Major Depressive Disorder will have a very difficult time when their blood sugar decreases again, often leading to a momentary worsening of symptoms.

Societies with higher sugar consumption have a near-perfect correlation with increases in incidences of Major Depressive Disorder (Westover et al., 2002). Sugar has been linked to negative changes in the human prefrontal cortex and amygdala, two areas implicated in depression, anxiety, PTSD, and ADHD (Jacques et al., 2018).



Nutrition

Avoid Alcohol

Alcohol should be avoided — or at least limited — for similar reasons to sugar. The initial euphoric effect of alcohol is ultimately negated by a hangover that seriously exacerbates symptoms of depression.

Limit Caffeine

Limiting caffeine may or may not be beneficial. It depends upon your personal sensitivity to caffeine. For some, caffeine can have a similar "comedown" and interfere with the quality of sleep. For others, it can be quite helpful in assisting with activities of daily living.

Increase Consumption of Probiotic- and Fiber-Rich Foods

The consumption of probiotic foods and higher intake of fiber has been significantly associated with lower levels of depressive symptoms (Lai and Boag, 2023).

The reason for this association is thought to be due to the complex interactions between the gut microbiome and the brain.

The gut microbiome is made up of trillions of microorganisms that play a crucial role in digestion, nutrient absorption, and immune function. These microorganisms also produce neurotransmitters, such as serotonin and dopamine, which are important for regulating mood.



MAIN POINTS

SLEEP

- Limit blue light at night
- Decrease waking time spent in bed
- Avoid OTC products with Diphenhydramine



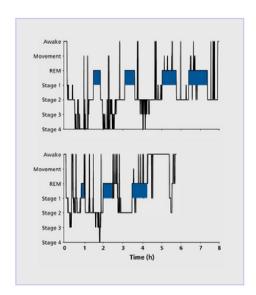
Sleep



Overview

Sleep plays a crucial role in regulating brain health and can have a more significant impact than supplements, medications, and other interventions.

However, individuals with depression often experience significant sleep disturbances. 97% of depressed individuals report difficulty sleeping (Nutt et al., 2008). Insomnia is the most common sleep difficulty among people with depression. Insomnia is characterized by difficulty falling or staying asleep. In some cases, the opposite can occur. Some individuals may experience hypersomnia, or excessive sleepiness, often sleeping for 15 or more hours a day.



The left image compares the average sleep cycle for a neurotypical person and the average sleep cycle for a person with a mood disorder. In both cases, they shift through various stages of sleep in a well-studied pattern: one moves through the initial, "light sleep" stages of 1 and 2 relatively quickly and enters the deep sleep stage in about 45 minutes. On average, a neurotypical person will experience brief stages of REM sleep every 90 minutes. This frequency increases as sleep duration increases. Ultimately this results in more frequent occurrences of REM sleep as the night progresses. Individuals with depression often have disrupted sleep patterns, characterized by increased periods of wakefulness during the night, decreased overall sleep duration, minimal deep sleep, and a higher proportion of light sleep with a moderate amount of REM sleep.

(IMAGE SOURCE: HTTPS://JANESHEALTHYKITCHEN.COM/GOOD-BYE-SUGAR-CRAVINGS-HELLO-HEALTH/)

Why Sleep and Sleep Hygiene Matter

Why is sleep so important? When we sleep, our brain eliminates waste that has developed over time, prunes unnecessary neural connections, decreases neuroinflammation, consolidates newly learned skills and ideas, creates new responses to stressors, and regulates emotions globally (Tamm et al., 2019). The current consensus among researchers is that sleep dysregulation in depression is caused by circadian rhythm dysregulation. Interventions such as medications, TMS, and biofeedback tend to help improve sleep, but several sleep hygiene tips can be highly effective, too.

Sleep Hygiene Tips



Limit Blue Light at Night

The most important sleep hygiene trick is to limit blue light at night. From an evolutionary perspective, blue light at night is completely unnatural; blue light inhibits the release of endogenous hormones such as melatonin.

When the sun sets, melatonin is created in the pineal gland and triggers sleepiness. Morning light (which is also blue) immediately prevents the release of melatonin, leading to what would normally be a feeling of wakefulness.

Unfortunately, we live in a digital society. That means nighttime blue light exposure is common. Typical blue light sources include televisions, computer screens, and phones.

However, most phones allow you to begin restricting the blue light once the sun begins to set. For instance, Apple products have a feature called "Night Shift" that we recommend always turning on.

Decrease Waking Time Spent in Bed

Additionally, it's important to begin to change your brain's association with your bed by practicing proper sleep hygiene. A simple change to implement is decreasing the time you spend awake in bed. Only using your bed when you're ready to fall asleep will teach your brain to associate your bed with being asleep.

Darken Your Room

A dark environment creates better conditions for sleep. Make sure your bedroom is dark and all lights are off when it's time to sleep. Consider buying an eye mask to block out any external light.

Create, and Stick to, a Sleep Schedule

Having a schedule in place and creating a sleep routine is a great way to build consistent sleep habits. Create a sleep schedule and stick with it: set a time that you want to start going to bed, and set a time that you want to wake up. Our bodies are always searching for homeostasis and will adapt quickly once a pattern has been developed.

Sleep Hygiene Tips



Avoid Over-the-Counter Products Containing Diphenhydramine

Many people ask about over-the-counter supplements to help with sleep. **Products with Diphenhydramine (Benadryl, Advil PM, NyQuil) should only be used rarely.** Chronic use of Diphenhydramine has been linked to dementia, sleep architecture irregularities, and rapidly increasing tolerance — meaning that the dose that works on day 1 might not work on day 5.

Avoid Over-the-Counter Products Containing Doxylamine

Doxylamine is another common ingredient in over-the-counter sleep aids, and it has similar health issues as Diphenhydramine. Melatonin can be helpful, but it very much depends on the person. It can be helpful for some, but others may experience excessive grogginess the following day.

Consider Swapping These Products for Melatonin

If you use the above products for sleep, consider an alternative such as low-dose melatonin. With melatonin, less is more. The original clinical trials at MIT used a smaller dosage of melatonin compared to what's available at most stores (Zhdanova et al., 2001). They found that the optimal dosage was .3mg. Most stores sell tablets between 3mg (yes, 10x the optimal dosage) and 10mg. These are all way too strong and tend to lead to more negative side effects.

Melatonin should be taken at sunset to mimic the endogenous activity of natural hormones most closely.



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MAIN POINTS

EXERCISE

- Get moving in a way that feels good to you
- Start with small manageable goals



Exercise

Exercise and Mental Health



Individuals with Major Depressive Disorder (MDD), in particular, tend to display decreased working memory performance, which corresponds to frontoparietal hypoactivity compared to non-depressed controls.

Physical fitness has been shown to both normalize frontoparietal hyperactivity and increase working memory performance (Schwefel et al., 2023) which will result in increases in both memory and attention and likely materialize in other executive function domains.

Additionally, physical fitness is correlated with decreased anxiety sensitivity—the fear of anxiety or anxiety-related symptoms—meaning that physical fitness may provide a buffer for anxiety-related concerns (DeWolfe et al., 2023). Exercise has been shown to increase mood and boost blood oxygenation levels in the prefrontal cortex. The prefrontal cortex is an area of the brain partly responsible for mood (Damrongthai et al., 2021) that has been highly implicated in depression. Healthy participants have been shown to demonstrate higher levels of cognitive function after moderate physical activity compared to those who have been sedentary.

Additionally, exercise has been shown to help the brain respond to stress, reduce the incidence of chronic disease, increase neuroplasticity, increase neurogenesis (the literal creation of new brain cells), improve memory, and modulate energy and nutrient partitioning into the brain and body (Raichlen et al., 2017).

We know that depression symptoms can make getting to the gym or going for a run a major challenge. Still, if possible, we encourage you to move in a way that feels sustainable and comfortable.

Exercise Methods to Consider

Running

Recent research has shown that running therapy outperformed antidepressants. This research showed larger improvements in the running therapy group and larger deterioration in the antidepressant group (Verhoeven et al., 2023).

Weight Lifting or Strength Training

While aerobic exercise has been well-studied for improvements in cardiovascular health and anaerobic exercise for bone health, there doesn't appear to be any significant difference regarding which type of exercise works better to improve mood (Ossip-Klein et al., 1989). This means that running or weightlifting are both adequate substitutions for one another if there is at least a moderate amount of physical exertion.

Newer research has shown that an 8-week strength training program can improve symptoms of both depression and anxiety with effect sizes that rival—if not surpass—traditional antidepressant medications (O'Sullivan et al., 2023). Increases in strength did not correlate with the antidepressant and anxiolytic effects, meaning one needs not become Arnold Schwarzenegger to feel relief from depression and anxiety.

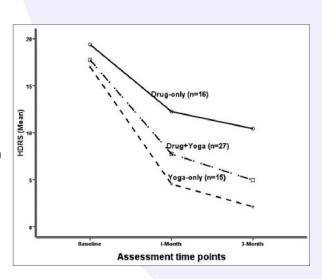
Exercise Methods to Consider (Cont.)



Other studies have shown that decreases in depression scores can be seen after just two weeks of a home-based bodyweight training routine (Sandra et al., 2023). Finally, weight training has been shown to be an especially effective intervention for trauma survivors (Nowakowski-Sims et al., 2023).

Yoga

The mood-boosting benefits of yoga have been discussed colloquially for hundreds of years, but there has been a historical dearth of evidence to showcase these benefits. A head-to-head trial of yoga therapy in a clinically depressed population compared 3 groups: yoga therapy only, medication only, and medication + yoga. The yoga-only group outperformed both the medication and medication+yoga groups, albeit the sample size was not particularly large (Gangadhar et al., 2013). In a more recent randomized controlled trial, 64 participants with moderate to severe



Major Depressive Disorder engaged in at least one heated yoga class per week which resulted in significant improvements in mood. Yoga therapy alone accounted for a 59.3% response rate and 44% remission rate, respectively (Nyer et al., 2023).

High-Intensity Interval Training (HIIT)

For people with PTSD in particular, multiple studies have found that High-Intensity Interval Training (HIIT) can be a particularly helpful non-pharmacological intervention. HIIT can enhance memory, reduce anxiety, and prevent cognitive decline (Koyuncuoğlu et al., 2021). Other studies have found that HIIT can significantly reduce symptoms of PTSD (Bryan, 2021).

Walking

Walking for 7,500 – 10,000 steps throughout the day is a good place to start. One small study asked participants to walk for 10,000 miles per day for 12 weeks, and those participants "had significantly lower anxiety, depression, anger, fatigue, confusion, and total mood distress scores compared with measurements taken before the intervention" (Takács et al., 2019). When attempting to get 10,000 steps per day, it is perfectly fine—and even encouraged—to start with smaller, more manageable goals (e.g., 2,500 steps per day for a week, followed by 5,000 steps the second week, etc).



MAIN POINTS

MINDFULNESS

- Establish a mindfulness practice
- Consider meditation or breathing exercises



Mindfulness





Meditation and breathing exercises are both mindfulness-based practices that can help individuals manage stress, improve mental clarity, and promote overall wellbeing.

Meditation

Meditation involves sitting quietly and focusing on the present moment, without judgment, while allowing thoughts and sensations to come and go. There are many different types of meditation, including mindfulness meditation, loving-kindness meditation, and transcendental meditation. Regular meditation practice has been shown to reduce symptoms of anxiety and depression, improve cognitive function, and enhance overall well-being (Balban et al., 2023).

Breathing Exercises

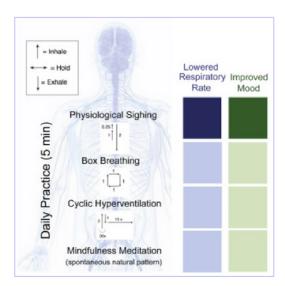
Breathing exercises, on the other hand, involve intentionally slowing down and deepening the breath, which can have a calming effect on the body and mind. There are many different types of breathing exercises, including deep belly breathing, alternate nostril breathing, and box breathing. Regular practice of breathing exercises has been shown to reduce stress and anxiety, improve cardiovascular function, and promote overall well-being.

What to Know About Establishing a Mindfulness Practice

Both meditation and breathing exercises can be practiced anywhere, at any time, and require no special equipment or training. They can be particularly beneficial for individuals who experience high levels of stress or struggle with anxiety or depression.

By incorporating these mindfulness-based practices into their daily lives, individuals can cultivate greater self-awareness and emotional regulation, and reduce the negative impact of stress on their health and well-being.

The image to the right shows four common breathing and meditation practices.



(IMAGE SOURCE: BALBAN ET AL., 2023)

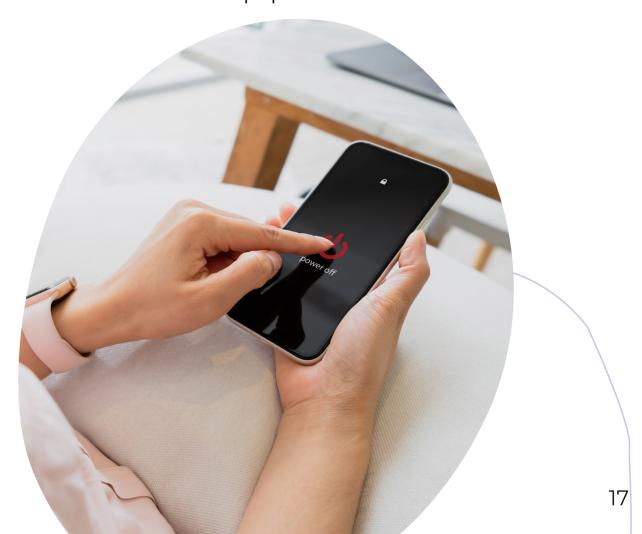
One can obtain many of the same benefits of meditation with a home-based biofeedback device. If you would like a solution that doesn't involve meditation, we highly recommend the emWave 2 biofeedback device by Heartmath.



MAIN POINTS

REDUCE SOCIAL MEDIA USAGE

- Reducing social media can provide mood-boosting benefit
- Social media can interfere with sleep patterns



Reducing Social Media



Why Consider Reducing Social Media Use?

Do you scroll when stressed, anxious, or sad? You may want to consider cutting back on your social media time. Research has shown that social media use can be linked to an increased risk of depression, particularly among young people. Various studies have historically found somewhat weak links that social media use can lead to feelings of social comparison, anxiety, and low self-esteem.

Excessive Social Media Use is Associated With Higher Levels of Addiction, Depression, and Anxiety

Roberts & David (2023) examined the relationship between the "flow" state and social media use on Instagram and TikTok and divided this flow state into several categories, including "telepresence" (e.g., the feeling of immersion within the app), time distortion, and enjoyment, among others. Telepresence, in particular, was associated with higher levels of addiction, depression, and anxiety.

Too Much Social Media Use May Worsen Self Perception

More recently, the relationship between social media and mood disorders has been illuminated. Time spent on social media significantly worsens mental health in various cohorts. For example, a 2023 study by Thai et al. used an experimental paradigm to reduce the time that over 200 college students spent on social media. The participants limited their use to no more than 60 minutes per day. The group that successfully reduced their time on social media reported improved body image and overall appearance.

Social Media May Negatively Impact Sleep

Another study (Boniel-Nissim et al., 2023) examined the sleep habits of adolescents in 18 different countries and found that "social jetlag" from excessive social media use can interfere with natural sleep patterns, which can thus have trickle-down effects into further developments of depression and anxiety. This study also revealed that girls seemed to be more adversely affected by sleep disturbances caused by social media.

Reducing Social Media

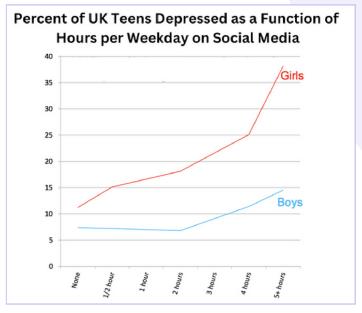


Social Media May Have a Causal Effect on Depression

The amount of time spent on social media is correlated with rates of depression, such that the more time spent on social media, the more depressed one is likely to be.

In the past, it wasn't clear if this relationship was unidirectional or bidirectional because of the correlational nature of these studies. More recently, it seems that social media use is a causal factor in depression, at least in a cohort of UK teens (Kelly et al., 2019).

Jon Haidt at NYU further demonstrated this while highlighting the very significant adverse effects of social media on women.



(IMAGE SOURCE: HTTPS://JONATHANHAIDT.SUBSTACK.COM/P/SOCIAL-MEDIA-MENTAL-ILLNESS-EPIDEMIC)

The above graph depicts a modest dose-response effect between depression and social media use, with a massive increase in rates of depression after using social media for over 4 hours per day. Jon Haidt has reported on a surprising convergence of the trend of social media adversely affecting mental health outcomes, with an effect size of around .1 to .2, depending on the particular study.

While many opponents of this work critiqued the effect size for being quite small, these effect sizes are actually quite high for social science. As such, it is important to limit social media exposure when in treatment in order to fully commit and focus on your recovery.

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