

## BE WELL

### Support your Brain (and Overall Well-Being) during the Winter Months

It started with rain in December, but we are now well into winter in Vermont. Winter has been scientifically proven to change your brain.<sup>1</sup> As we shift into the winter months, our brains must react to new stressors: less sunlight, shorter days, harsh weather, and extensive changes in our normal routines. When our brains are altered in this way, it also shifts our overall mood and ability to perform complex legal tasks. When we combine these seasonal stresses with the added stress of holidays, it can lead to “Seasonal Affective Disorder” or SAD. This article will outline how SAD affects our brains and what we can do to support our brains and overall wellbeing to mitigate any negative effects during the winter.

SAD affects all of us to varying degrees. We all have different seasonal triggers. (I was triggered by the rainy start to winter back in December). Essentially, when natural sunlight drops and our general routines are altered, our bodies produce less of the mood-regulating hormone serotonin. Serotonin is a natural hormone that lowers or can even prevent feelings of depression. When our serotonin levels are lowered, our brain metabolizes the available serotonin at a faster rate. This leads to an imbalance of chemicals within the brain and may make it harder to regulate or balance our emotions. The result? More emotional reactivity and thereby higher levels of anxiety and feelings of depression. Additional key symptoms of SAD include sleep problems, lethargy, overeating, and generally feeling down and unsociable. These symptoms occur for all of us but can even more drastically affect those with brain or mood-related conditions.

As attorneys, lowered levels of serotonin can negatively influence our ability to complete complex or challenging tasks, which is most of what we do in our daily legal lives! Essentially, our brains either have different resources available during the different seasons to balance our moods, or they have to use different methods to complete the same task in the different seasons.

This is where self-awareness about seasonal effects on your brain and body can help. Here are a few ways to manage the effects of SAD this Winter:

Diet directly influences brain health. “The brain represents about 2% of our body weight, but it consumes about 20% of all of our calories...[essentially] the brain uses more calories than any other organ in our body.”<sup>2</sup> Thus, the brain needs adequate nutrition to function and ensure a vibrant,

sharp and youthful mind, so bring some awareness of the right foods to nurture and support your brain. Some suggestions:

- Avocados have healthy monounsaturated fats, which provide excellent energy for the brain, and avoid the problems associated with simple carbohydrates or saturated fats.
- Green leafy vegetables, such as kale, spinach, collards, and broccoli are rich in brain-healthy nutrients like vitamin K, lutein, folate, and beta carotene. They promote healthy brain function by reducing inflammation and also improve cognitive performance. Magnesium is another important mineral in leafy greens. It helps relax the body by lowering blood pressure and the effects of stress. Specifically, broccoli is a cruciferous vegetable that contains antioxidant compounds that have been linked to reduced inflammation, which protects the nervous system and reduces the burden of pervasive diseases on the body, and improved brain health.
- Fatty fish, such as salmon, cod, canned light tuna, and pollack, are abundant sources of omega-3 fatty acids. These healthy unsaturated fats have been linked to improved memory, mood regulation, and reduced risk of cognitive decline due to their ability to lower levels of a protein that forms damaging clumps in the brains of people with Alzheimer’s disease. Furthermore, tuna contains the amino acid tyrosine, which helps create two of the main neurotransmitters in the brain: dopamine and norepinephrine. Tuna also contains high concentrations of creatine, which facilitates the entry of water into the brain and muscle cells to prevent dehydration.
- Vitamin B12 can be found in foods such as meat, fish, cheese, and eggs.
- Take a daily Vitamin D supplement.
- Flavonoids, the pigments that give berries their brilliant colors, also help improve memory. Specifically, the flavonoids in blueberries are neuroprotective and have been shown to increase neuroplasticity and cerebral blood flow. Blueberries can help protect the brain from oxidative stress and inflammation, so try to eat some daily!
- Coffee and tea have been shown to improve overall mental function.
- Nuts have protein and healthy fats, especially walnuts. They can also help im-

prove memory.

- Egg yolks contain choline, which is an essential nutrient that produces acetylcholine, which “is a neurotransmitter that is very important for the parasympathetic nervous system, and important for memory.”<sup>3</sup>
- Turmeric spice contains curcumin, which has multiple mechanisms to support brain health due to its anti-inflammatory effects.
- Ginger is another spice, which has potent anti-inflammatory effects shown to enhance cognitive function. It also protects the neurons of the brain against oxidative stress that underpin various neurodegenerative diseases, which break down the brain’s functioning.
- Ginkgo biloba enhances memory and cognitive function as it improves blood flow to the brain. It also protects brain cells from oxidative damage.
- Fermented foods, such as kimchi, kefir, kombucha, sauerkraut and yogurt may be beneficial to the brain because the brain and the digestive system communicate through both the nervous and the immune systems. Improving the bacteria in the gut plays a role in improving brain functioning.

You can also modify your behavior to counteract SAD. Some suggestions include:

- Stick to a good sleep routine. Have a goal of sleeping seven to eight hours every night - of good quality sleep. Poor sleep has been linked to rapid reductions in brain volume. Additionally, poor sleep causes protein buildup in the brain that attacks brain cells, which can lead to dementia and Alzheimer’s.
- Stay active, especially in the morning and/or outdoors, if possible. Moving your body for at least 15 minutes in the morning can enable better choices throughout the day. Research has shown that a daily one-hour walk in the middle of the day can be as helpful as light treatment.<sup>4</sup> Any form of exercise or movement can help rewire the brain in the following ways: (1) It helps memory, motor skills, and the ability to learn; (2) Movement pumps more oxygen to the brain and helps release hormones that nourish growth of brain cells; and (3) Regular movement of moderate intensity increases the volume of some regions of the brain.
- Light therapy can be highly effective for

seasonal depression. Light therapy is where a light box is used first thing in the morning to stimulate sunlight.

- Keep warm with hot drinks and hot food. Wear warm clothes and shoes and aim to keep your living environment between 64- and 70-degrees F.
- Keep your mind active. Take up a new interest or hobby or set yourself a challenge to learn something. The critical aspect is to have something to look forward to and concentrate on. Do something every day that stretches you and takes you a bit out of your comfort zone.
- Socializing is extremely beneficial for our mental health. Keep in touch with people you care about. Say yes to invitations to social events.

Additionally, practicing mindfulness improves your overall self-awareness. It can help you identify when you are feeling the "winter blues," which enables you to take action to improve your overall wellbeing. Mindful practices can also support the brain to release more "happy chemicals." These include calming and relaxing hormones and neurotransmitters, such as serotonin (discussed above), but also dopamine, which plays a role in pleasure and reward behavior, endorphins, which possess morphine-like effects and blocks pain, and oxytocin, which promotes feelings of love, trust, and connection. The combination of these happy chemicals also reduces the levels of stress hormones, decreases reactivity, and relieves symptoms of anxiety, depression, and insomnia.

Mindfulness practices also shrink the Amygdala (the part of the brain responsible for the sympathetic/stress reaction), which leads to being able to do more in less time. The volume of gray matter in the brain is increased, which improves short-term memory. With increased respiration and better air intake, the brain can now engage in complex cognition and thinking. Overall, the brain can now operate at its peak because it is both relaxed and alert.

Mindfulness is becoming a global phenomenon for a good reason. Just learning how to be present throughout your day, become more conscious of life as it happens, and noticing any tension or preoccupations of the mind without judging or analyzing improves your mental health and combats the effects of seasonal stress. Overall, practicing mindfulness in a consistent manner can "PERMANENTLY REWIRE" your brain to raise levels of happiness. And who doesn't need that as we enter 2024?

Here are some mindfulness breathing practices that you can use this winter:

- 4-7-8 Pranayama Method (complete at least 4 full cycles, but I like to complete 12 full cycles for a more profound ef-

fect)

- Inhale through nostrils steady for 4 counts;
- Hold breath for 7 counts;
- Exhale out mouth steady for 8 counts.
- Pause. Notice effects.
- Lengthening Exhale Breath Practice (complete for 3-5 mins)
  - 4 count Inhale
  - 4 count HOLD
  - 8 count Exhale
  - Pause. Notice effects.

Stay happy and healthy this winter and join me in 2024 through mindful sessions and CLEs and presentations at various legal events and conferences with the Vermont Bar Association. If you are ready to improve your overall wellbeing and need someone to help support you, please contact Samara Anderson at [thehappyhumanprojects@yahoo.com](mailto:thehappyhumanprojects@yahoo.com) to discuss opportunities to incorporate mindfulness and wellness into your stressful lives as attorneys through private group workshops, courses or 1:1 coaching.

Ending Mindfulness Quotation by Eckhart Tolle: "Rather than being your thoughts and emotions, be the awareness behind them. Take a moment of stillness and allow this moment to be without imposing thought. This way we become aware of the space, rather than the content."



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*Samara D. Anderson, Esq. is a Technical Regulatory Compliance Advisor for the Department of Children and Families, a Registered 200-hour Yoga Medicine™ Yoga Teacher (completing her 500-hour certification), a Mindfulness Based Stress Reduction (MBSR) Teacher-in-Training, and a social entrepreneur teaching mindfulness to stressed professionals while creating a non-profit community farm in Vermont to use therapeutic animals, nature, and mindfulness to heal people. She also co-chairs the VBA Lawyer Well-Being Section.*

<sup>1</sup> Rachel Moss, [Neuroscientist Reveals How Brain Changes in Winter – And it Explains a Lot](https://www.huffpost.com/entry/neuroscientist-explains-how-your-brain-changes-in-winter_uk_63889380e4b0d174095f3539), Huff Post (Dec. 22, 2022) [https://www.huffpost.com/entry/neuroscientist-explains-how-your-brain-changes-in-winter\\_uk\\_63889380e4b0d174095f3539](https://www.huffpost.com/entry/neuroscientist-explains-how-your-brain-changes-in-winter_uk_63889380e4b0d174095f3539)

<sup>2</sup> 11 Foods Experts Say Can Boost Your Brain Health and Help Ward Off Dementia, Huff Post (Dec. 19, 2023), available at [https://www.huffpost.com/entry/best-foods-for-brain-health\\_1\\_65788abfe4b0881b791896e6](https://www.huffpost.com/entry/best-foods-for-brain-health_1_65788abfe4b0881b791896e6)

<sup>3</sup> Id.

<sup>4</sup> Health Scotland, [Do You Have the Winter Blues?](https://www.nhs.uk/health/scotland/healthy-living/mental-wellbeing/low-mood-and-depression/do-you-have-the-winter-blues/#:~:text=Get%20more%20light%20for%20SAD,a%20window%20can%20also%20help.) (Jan. 4, 2023) <https://www.nhs.uk/health/scotland/healthy-living/mental-wellbeing/low-mood-and-depression/do-you-have-the-winter-blues/#:~:text=Get%20more%20light%20for%20SAD,a%20window%20can%20also%20help.>

