

Top Tips to Cope With Seasonal Affective Disorder

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STORY AT-A-GLANCE

- › Seasonal affective disorder (SAD) is a form of depression that occurs seasonally, typically ramping up in the fall and winter months and disappearing come spring
- › An estimated 20% of Americans are affected by SAD each winter
- › Common SAD symptoms include oversleeping, intense carbohydrate cravings, overeating and weight gain. Some people also have trouble concentrating and withdraw socially
- › Two of the most important treatment strategies for SAD are optimizing your vitamin D level and sun exposure. Light therapy has been established as the best available treatment for SAD
- › Other lifestyle strategies that can be helpful in the treatment of SAD include exercise, eating a healthy whole food diet and getting sufficient amounts of marine-based omega-3 fats, optimizing your sleep and addressing your gut health. Energy psychology and cognitive behavioral therapy can also be effective

Editor's Note: This article is a reprint. It was originally published February 14, 2019.

Seasonal affective disorder (SAD) is a form of depression that occurs seasonally, typically ramping up in the fall and winter months and disappearing come spring.^{1,2,3} It's been estimated⁴ that as many as 20% of Americans are affected by SAD each winter.

What differentiates SAD from regular depression is that a full remission occurs in the spring and summer months. Common SAD symptoms include oversleeping, intense carbohydrate cravings, overeating and weight gain. Some people also have trouble

concentrating and withdraw socially, preferring to "hibernate" indoors instead of carrying on with their normal day-to-day activities.⁵

Dr. Norman Rosenthal, clinical professor of psychiatry at Georgetown University School of Medicine, was the first to describe SAD, writing in a 1984 journal article⁶ that the "depressions were generally characterized by hypersomnia, overeating and carbohydrate craving, and seemed to respond to changes in climate and latitude."

Indeed, rates of SAD vary depending on location, with people living farthest from the equator in northern latitudes being most susceptible. In the U.S., for instance, SAD affects just 1% to 1.4% of Floridians compared to 9.7% of people living in New Hampshire⁷ and 9% of Alaskans.⁸

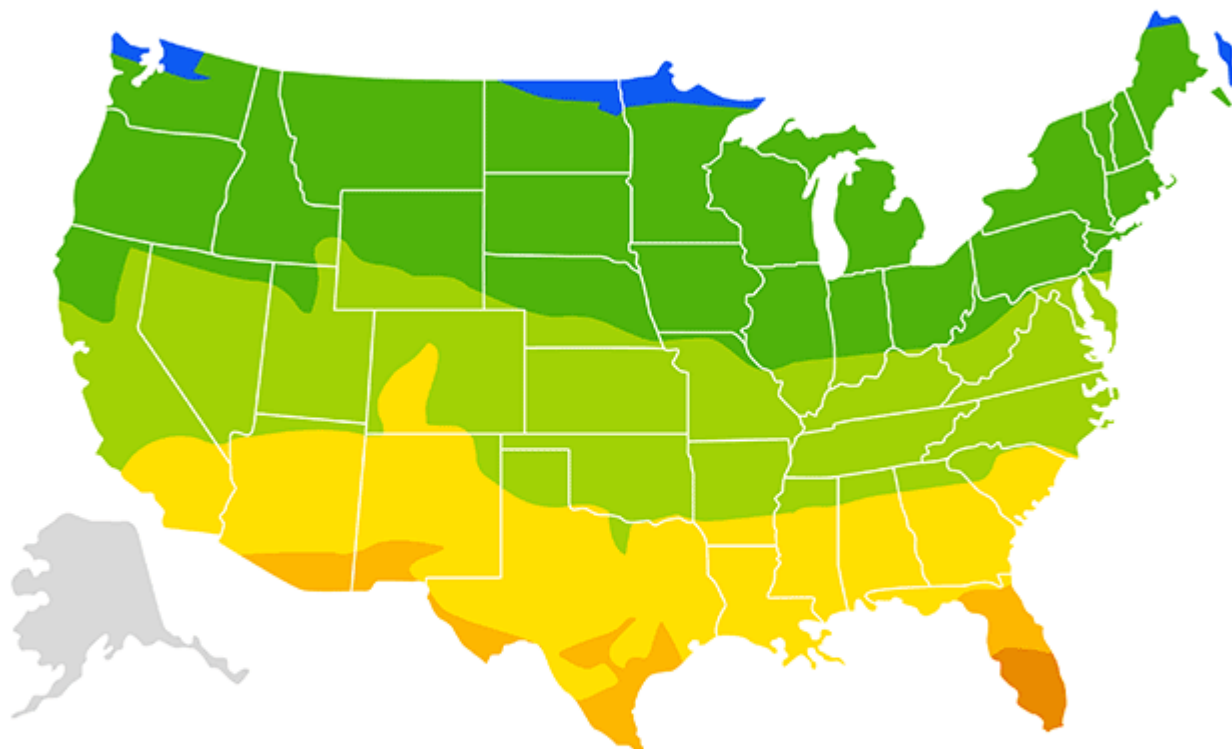
The Importance of Vitamin D

Many have become familiar with the importance of sun exposure for optimizing your vitamin D level,⁹ and there is research showing that not only is SAD more common in people with low vitamin D, but raising your level also improves symptoms of SAD.^{10,11}

Your body produces vitamin D through exposure to UVB light. Unfortunately, for those living in northern latitudes, this may only be an option for a few short months each year. As a general rule, you have to live below 22 degrees latitude if you want to produce any vitamin D at all during the winter. The charts below display the likelihood of vitamin D synthesis across the U.S. by month.

VITAMIN D SYNTHESIS

FEBRUARY*

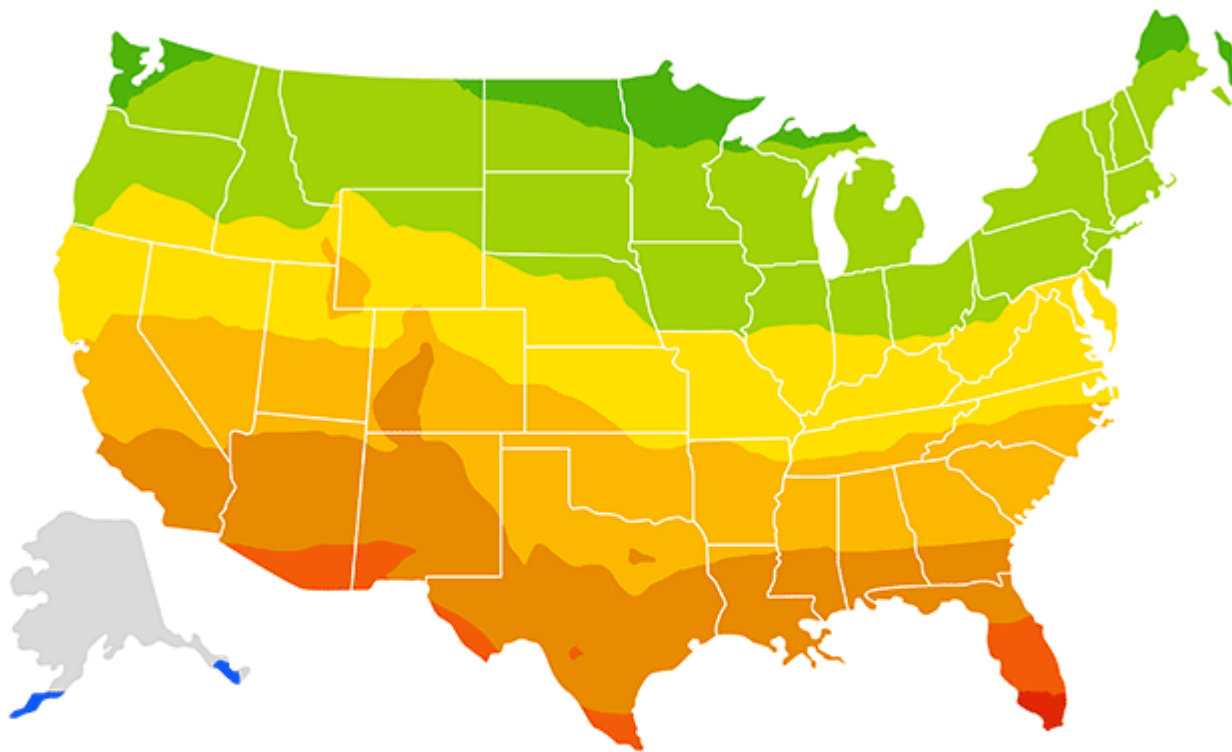


Source for UV index: <https://www.epa.gov/sunsafety/sun-safety-monthly-average-uv-index>

*The figures provided are estimates and can vary depending on the person and/or climate changes.

VITAMIN D SYNTHESIS

MARCH*

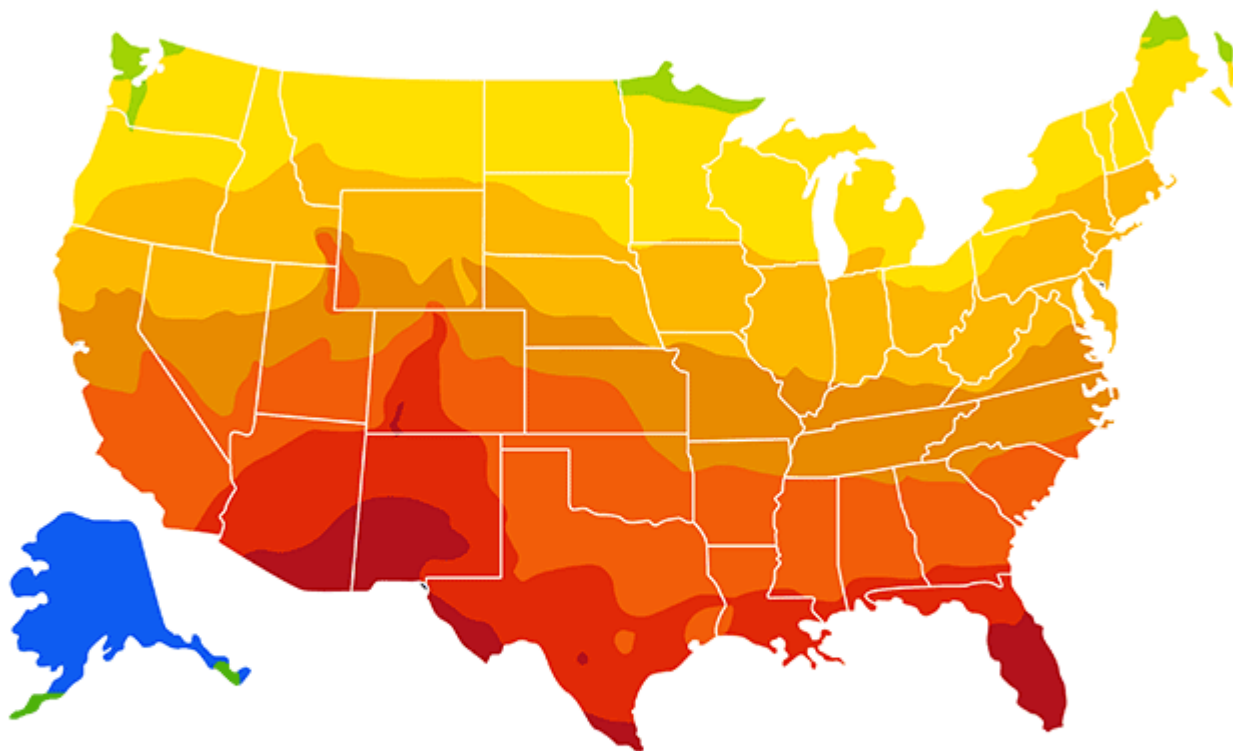


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VITAMIN D SYNTHESIS

APRIL*

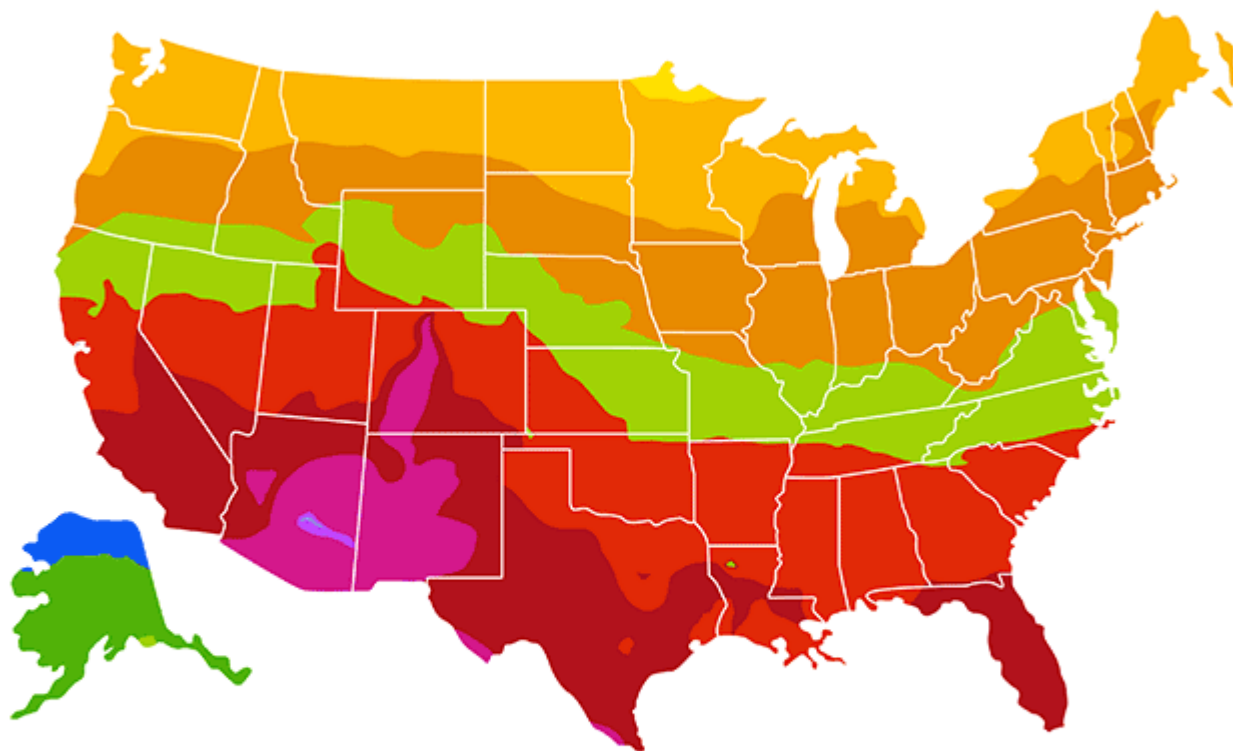


Source for UV index: <https://www.epa.gov/sunsafety/sun-safety-monthly-average-uv-index>

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VITAMIN D SYNTHESIS

MAY*

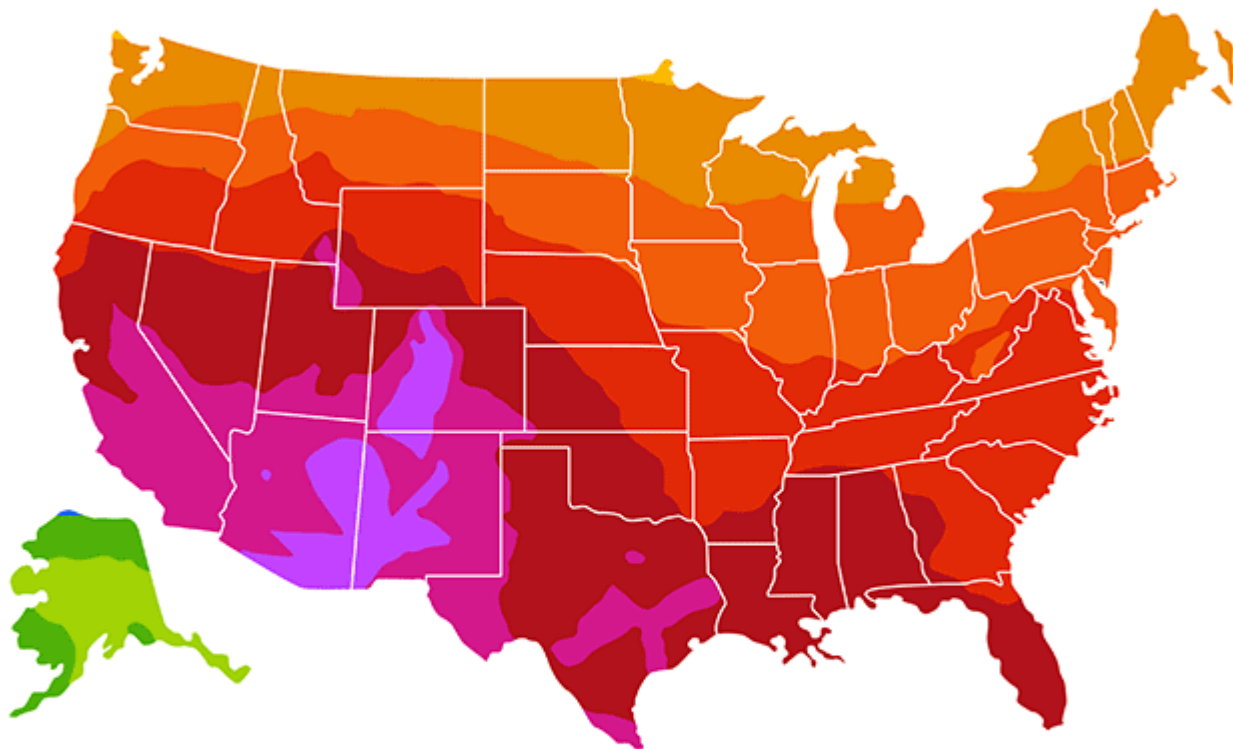


Source for UV index: <https://www.epa.gov/sunsafety/sun-safety-monthly-average-uv-index>

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VITAMIN D SYNTHESIS

JUNE*

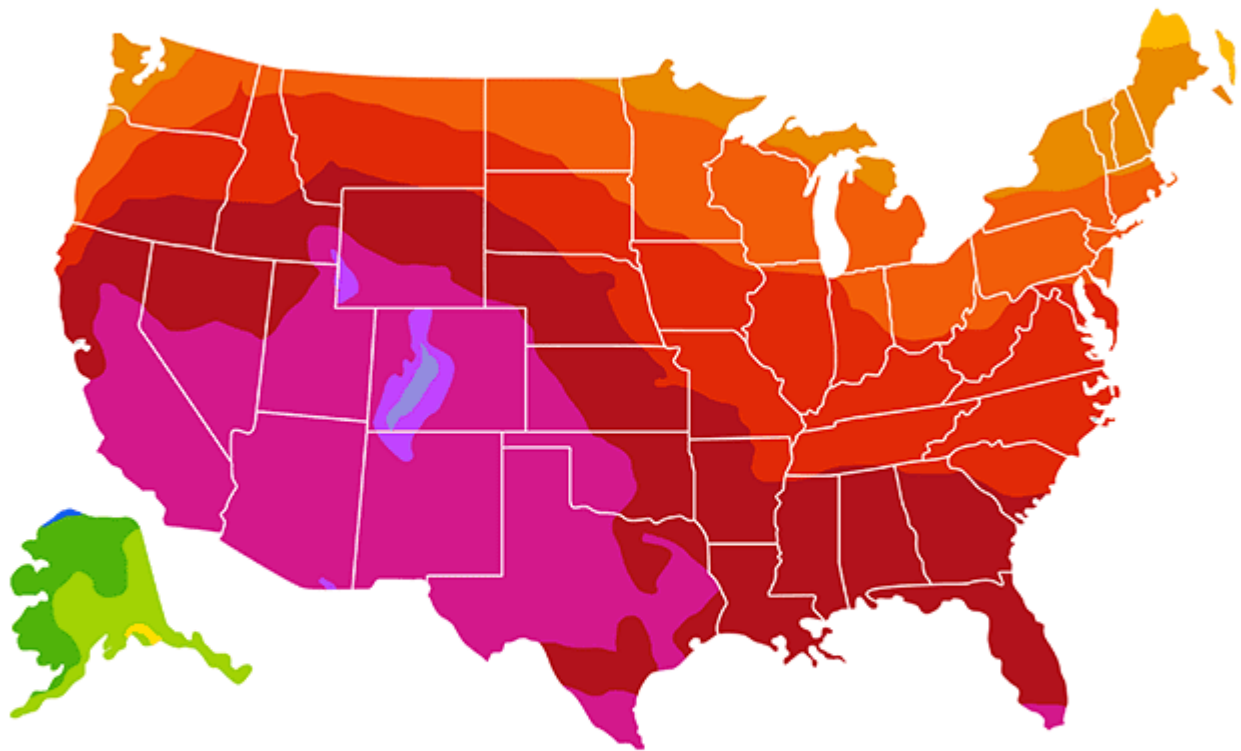


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VITAMIN D SYNTHESIS

JULY*

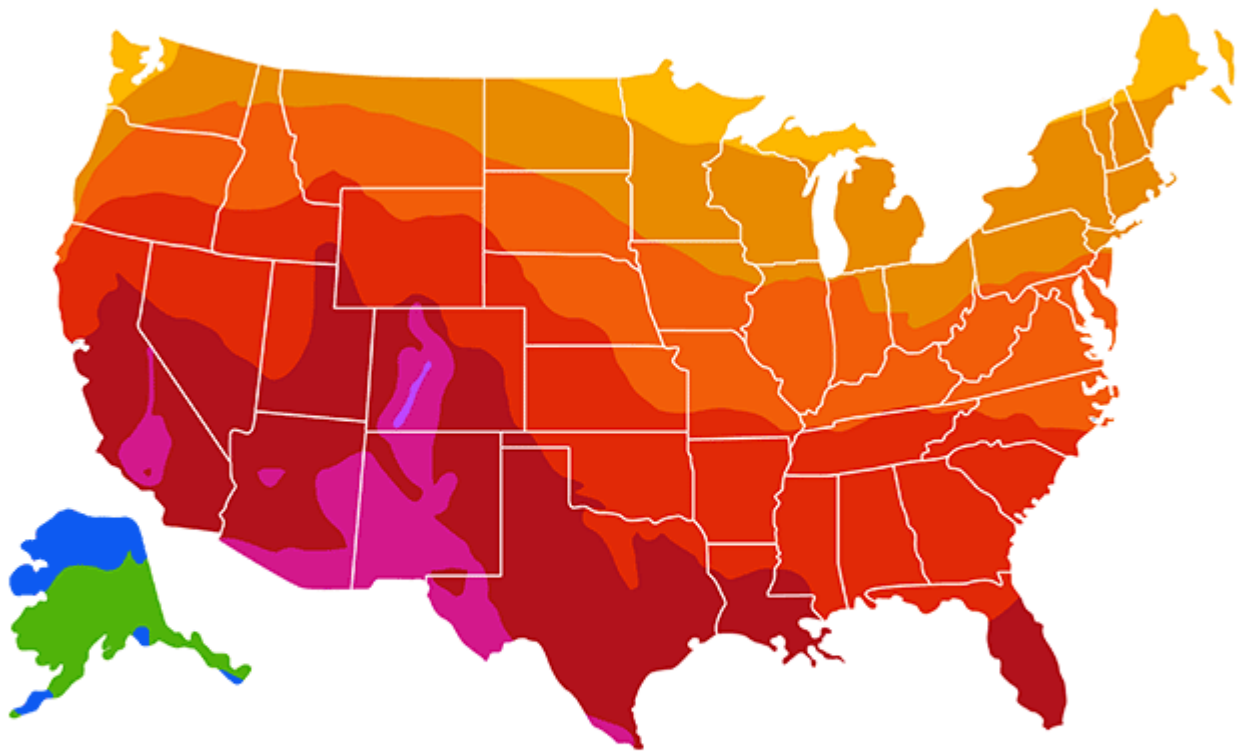


Source for UV index: <https://www.epa.gov/sunsafety/sun-safety-monthly-average-uv-index>

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VITAMIN D SYNTHESIS

AUGUST*

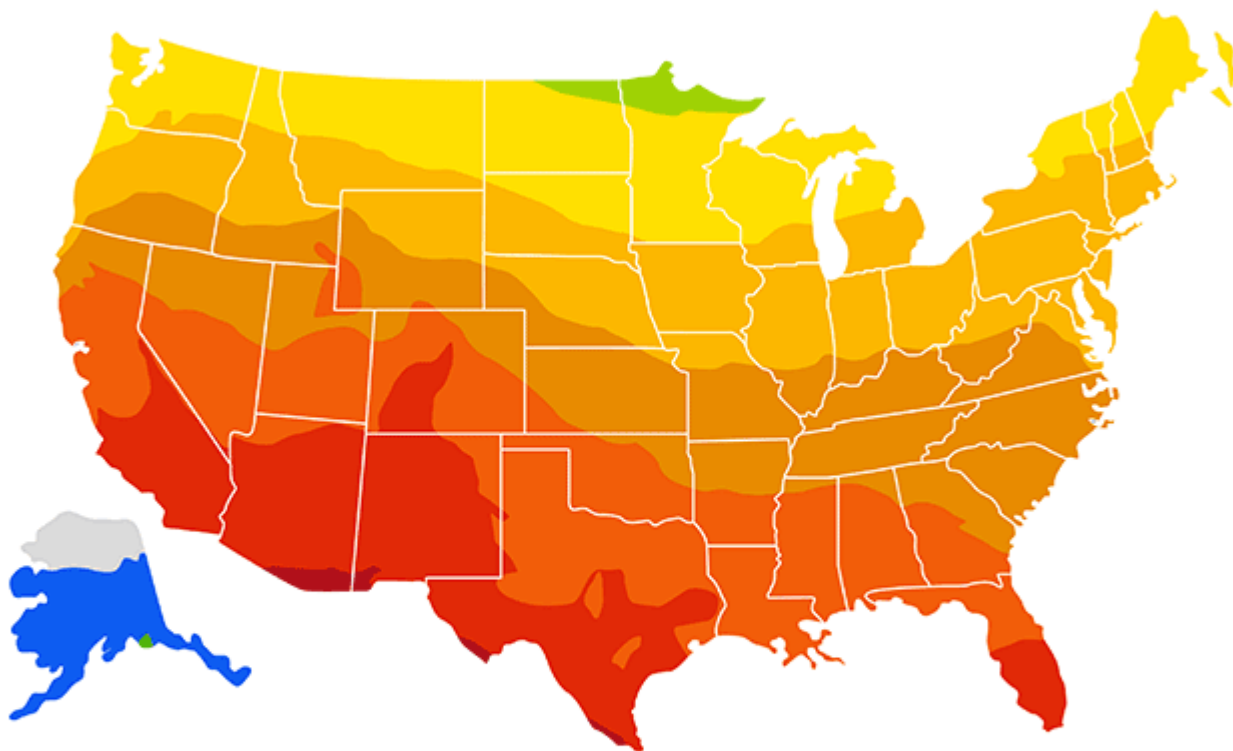


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VITAMIN D SYNTHESIS

SEPTEMBER*

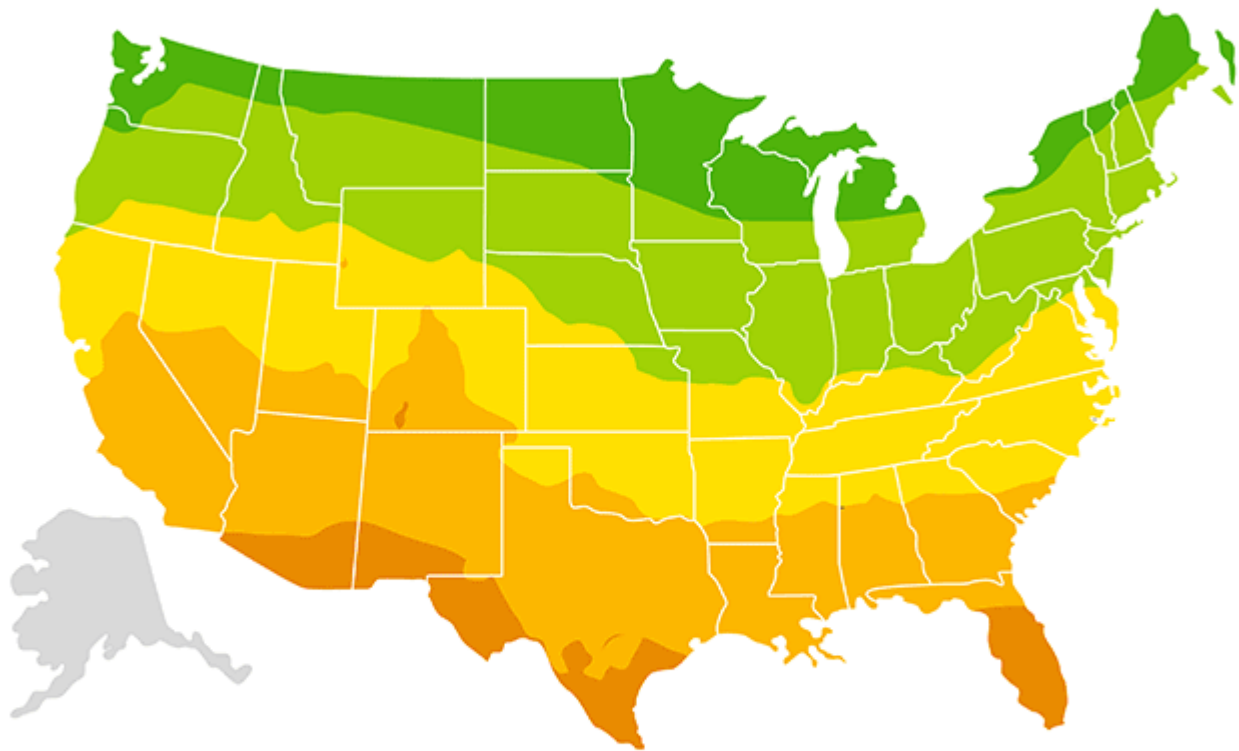


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VITAMIN D SYNTHESIS

OCTOBER*

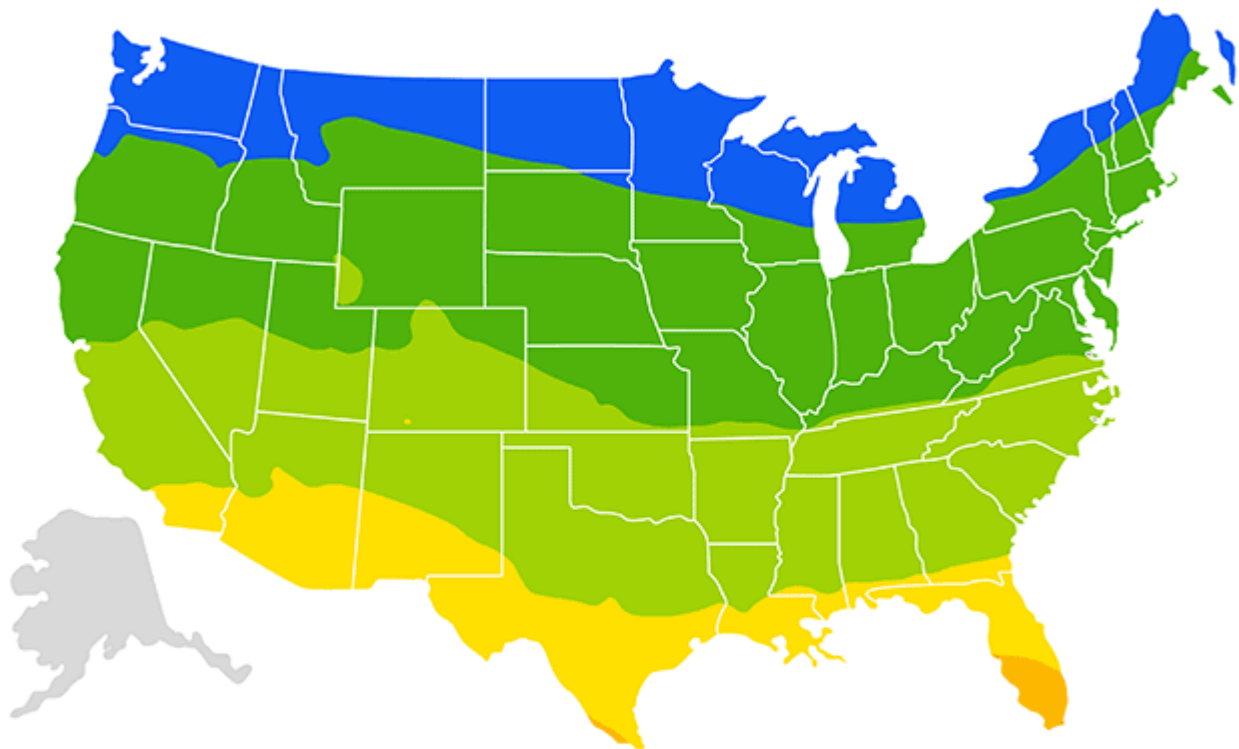


Source for UV index: <https://www.epa.gov/sunsafety/sun-safety-monthly-average-uv-index>

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VITAMIN D SYNTHESIS

NOVEMBER*

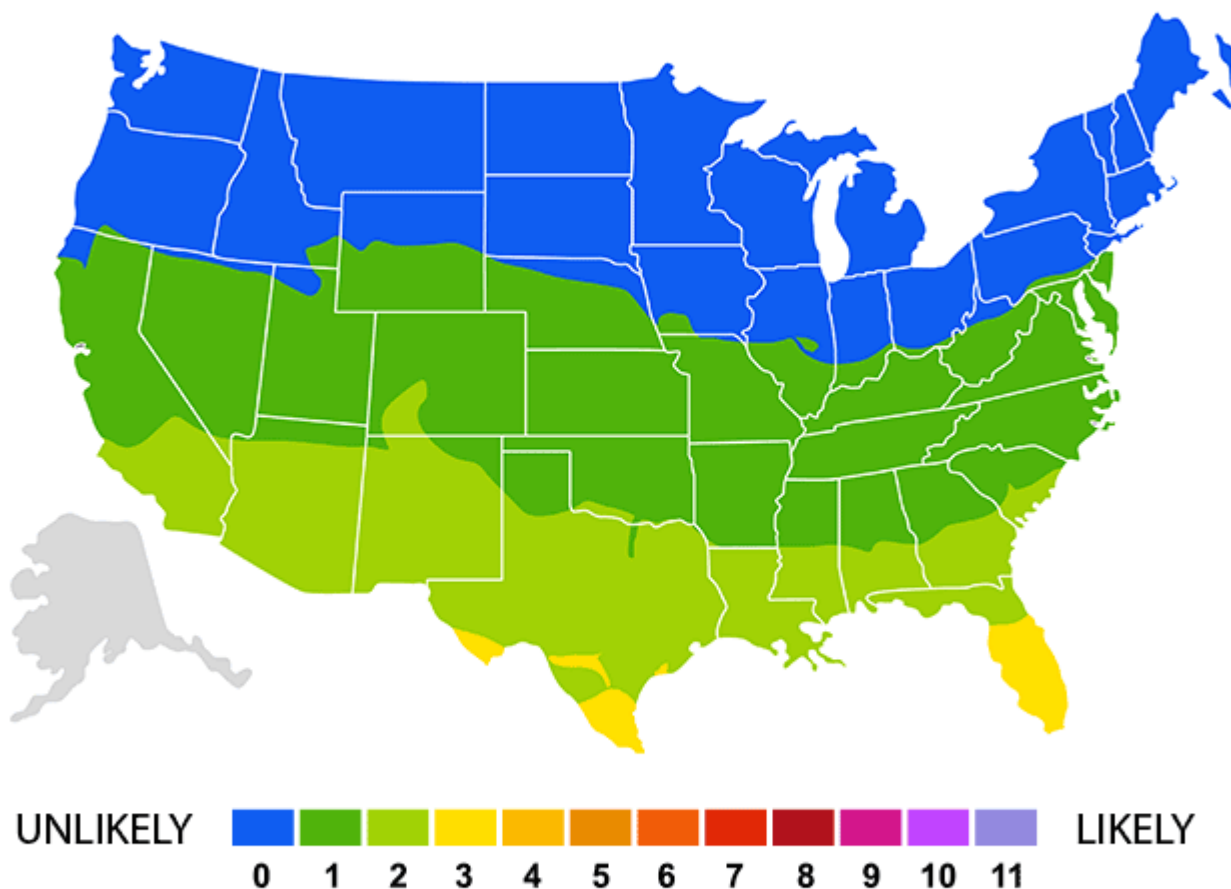


Source for UV index: <https://www.epa.gov/sunsafety/sun-safety-monthly-average-uv-index>

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VITAMIN D SYNTHESIS

DECEMBER*



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While supplementation may be required during months when you cannot produce sufficient amounts through sun exposure, it's important to get your vitamin D level tested before you start taking supplemental vitamin D. This will help you fine-tune your dosage over time.

For optimal health, including mental health, you'll want a **vitamin D level** between 60 and 80 ng/mL¹² (150 to 200 nmol/L), with 40 ng/mL being the lower cutoff for sufficiency.

GrassrootsHealth has an online vitamin D calculator that can help you estimate the oral dosage required to get you into a healthy range, based on your starting blood level.

Considering vitamin D's impact on mental health and brain function, it would certainly be prudent to make sure your vitamin D level is optimized if you struggle with SAD. Vitamin D is only part of the equation, however, as sunlight influences your mood in general, and SAD specifically, in other ways as well.

SAD Linked to Circadian Rhythm Disruption

Your body's **circadian rhythm**, which directs a whole host of physiological processes, is calibrated by exposure to natural sunlight and darkness. When sunlight is lacking, it can disrupt your circadian rhythm, triggering SAD.

For instance, sunlight helps keep your level of the protein SERT low. As a key player in transporting the neurotransmitter serotonin, known to play a role in mood, having a low level is a good thing, as higher SERT levels are linked to lower serotonin activity and increased depression. As noted in the journal *Depression Research and Treatment*:¹³

"In one study,¹⁴ people with SAD had 5 percent more SERT, a protein that assists with serotonin transport, in the winter months than in summer ... Throughout the summer, sunlight generally keeps SERT levels naturally low. But as sunlight diminishes in the fall, a corresponding decrease in serotonin activity also occurs."

Melatonin is another important player that is influenced by your circadian clock and exposure to bright full-spectrum light. Your master biological clock resides inside the suprachiasmatic nucleus (SCN) of your brain, which is part of your hypothalamus. Based on signals of light and darkness, your SCN tells your pineal gland when it's time to secrete melatonin and when to turn it off. One of melatonin's primary roles is regulating your body's circadian rhythm.

When it gets dark, your brain starts secreting melatonin (typically around 9 or 10 p.m.), which makes you sleepy. Levels typically stay elevated for about 12 hours; then, as the

sun rises, your pineal gland reduces your production and the levels in your blood decrease until they're hardly measurable.

In people with SAD, melatonin production appears to be disturbed. Some may overproduce melatonin, leading to feelings of sleepiness and lethargy. In others, melatonin production may be phase-delayed, which means it's produced at the wrong time.¹⁵

The combination of low serotonin and excess melatonin may prove to be especially problematic for your circadian rhythm, and there's evidence that, for people with SAD, "the circadian signal that indicates a seasonal change in day length has been found to be timed differently, thus making it more difficult for their bodies to adjust."¹⁶

Proper Light Exposure Is Crucial Treatment for SAD

According to an overview of SAD in the journal *Psychiatry*,¹⁷ "Light therapy is established as the best available treatment for SAD." Indeed, light therapy alone has been found to be more effective than the antidepressant Prozac.¹⁸ Even placebo was more effective than the drug — a finding that highlights the fact that drugs are not the answer for this condition.

Interestingly, while daylight as a whole is beneficial to fight off the winter blues, blue light has been found to be particularly beneficial. According to one 2010 study,¹⁹ blue light appears to play a key role in your brain's ability to process emotions, and its results suggest that spending more time in blue-enriched light could help prevent SAD.

It may be even more effective than the bright white light typically used in light boxes to treat SAD and other forms of depression. In a previous interview, researcher Dan Pardi explains the peculiar effect blue light has on your brain, which sheds further light on why it's so important to expose yourself to blue light during daytime hours, and why you need to avoid it at night:

"[R]ods and cones in the eye ... are specialized cells that can transduce a photo signal into a nerve signal ... In the mid-90s, a different type of cell was

discovered ... [called] intrinsically photosensitive Retinal Ganglion Cells (ipRGC).

It does the same thing as rods and cones: It transduced light to a nerve signal. But instead of the signal going to your visual cortex, it goes to your master clock. Those cells are most responsive to blue light.

If you can block blue light, you can actually create something called circadian darkness or virtual darkness. What that means is that you can see, but your brain doesn't think that it's daytime; your brain thinks that it's in darkness.

That is actually a practical solution for living with artificial light in our modern world ... With more awareness, future digital devices will adjust lighting in the evening to automatically dim and emit amber/red light [instead of blue]. This is much better for healthy circadian rhythms and sleep quality."

Blue light is prevalent in outdoor light, so your body absorbs the most during the summer and much less in the winter. Because of this, the researchers suggested that adding blue light to indoor lighting, as opposed to the standard yellow lights typically used, may help boost mood and productivity year-round, and especially during the winter.

Timing and Intensity of Light Exposure

If you know that SAD symptoms tend to come back for you every winter, you may want to start light therapy in late summer. Keep in mind, however, that blue light at night should be avoided as it will inhibit melatonin production and impair sleep.

So, to be clear, you only want to expose yourself to blue light in the morning, and possibly afternoon, but not in the evening. Findings differ on the issue of the most effective timing, but at least one meta-analysis²⁰ found the largest mean effect size among those exposed to bright light in the morning and evening.

To be on the safe side, I'd suggest avoiding light therapy once the sun begins to set, to avoid further disruption of your circadian rhythm. The light intensity is also important.

Outdoor light is in the neighborhood of 10,000 lux, and this is the level of intensity you're looking for.²¹

This is about 100 times stronger than a normal light bulb, so to be effective, you'll need to get a special light box, and make sure it generates at least 10,000 lux and emits white and blue light, not yellow or infrared. As noted by the authors of a 2015 paper addressing the assessment and treatment of SAD:²²

"In the Scandinavian countries, light rooms, where light is indirect and evenly distributed, are available. Typically, light boxes filter out ultraviolet rays and require 20 to 60 minutes of exposure to 10,000 lux of cool-white fluorescent light daily during fall and winter."

Additional Treatment Strategies for SAD

In addition to optimizing your vitamin D and getting daily light therapy, the following strategies may also be helpful in the treatment of SAD:

Exercise – Exercise is a well-recognized tool for improving your mental health. In my 2008 interview with Dr. James Gordon, a world-renowned expert on mind-body medicine for the treatment of depression, he stated that physical exercise is at least as good as antidepressants for helping people who are depressed, as it increases serotonin.

It also boosts brain cells in your hippocampus, which are sometimes reduced in people with depression. He's far from the only one to come to this conclusion.

A 2013 meta-analysis²³ published in the Cochrane Database of Systematic Reviews found exercise is moderately more effective than a control intervention, which in some cases was pharmaceuticals, for reducing symptoms of depression.

Other research²⁴ published in the American Journal of Preventive Medicine found that aerobic exercise "at a dose consistent with public health recommendations" is an effective treatment for mild to moderate depression.

If you can, do your workouts outdoors so you can get some sunlight exposure at the same time. As Dr. Meir Kryger, professor of medicine at Yale School of Medicine, told NBC News,²⁵ "The worst thing you can do is stay indoors and not be exposed to natural sunlight at all." As an alternative, Rosenthal suggests doing your workout in front of a full-spectrum light box.

Optimize your sleep — You were designed to go to sleep when the sun sets and wake up when the sun rises. If you stray too far from this biological pattern you will disrupt delicate hormonal cycles in your body, which can affect both your mood and your health.

The link between depression and lack of sleep is well established. More than half of people diagnosed with depression struggle with insomnia. In one study, 87% of depression patients who resolved their insomnia had major improvements to their depression, with symptoms disappearing after eight weeks.²⁶

While there are individual differences, as a general rule, aim for eight hours of sleep per night. If you struggle with insomnia or poor quality sleep, review the many suggestions listed in "[Sleep — Why You Need It and 50 Ways to Improve It](#)."

Clean up your diet — A factor that cannot be overlooked is your diet. Foods have an immense impact on your mood and ability to cope, and eating a diet of fresh, whole foods as described in [my nutrition plan](#) will best support your mental health.

Refined sugar and processed fructose are known to have a very detrimental impact on your brain function and mental health in general. A classic book on this subject, "The Sugar Blues" by William Dufty, delves into this topic in great detail. Cutting out artificial sweeteners will also eliminate your chances of suffering their toxic effects.

Interestingly, vegetarians are four times more likely to suffer from SAD than nonvegetarians, so a primarily plant-based diet may not be ideal during the winter season. Vegetarians are also twice as likely to suffer from nonseasonal depression,²⁷ which suggests nutrient deficiencies may be involved in both.

Optimize your omega-3 status – One nutrient that is extremely important for healthy brain function and mental health is marine-based omega-3, found in small fatty fish such as sardines and anchovies. Wild-caught Alaskan salmon is another good source, as is krill oil, if you need a supplement. As with vitamin D, your best bet is to get tested, to ensure your omega-3 index is at 8% or above.

One 2009 study²⁸ showed that people with lower blood levels of omega-3s were more likely to have symptoms of depression and a more negative outlook while those with higher blood levels reported the opposite emotional states.

Optimize your gut health – Fermented foods such as fermented vegetables are also important for optimal mental health, as they are key for optimizing your gut health. Many fail to realize that your gut is literally your second brain, and can significantly influence your mind, mood and behavior.

Energy psychology – Energy psychology can be likened to psychological acupressure. It's based on the same energy meridians used in traditional acupuncture, but doesn't require needling. One form of energy psychology is the **Emotional Freedom Techniques** (EFT), which has proven effective against depression, anxiety and other emotional challenges.

Speaking to CBS News, Pittsburgh area therapist Joan Kaylor stated, "By tapping on these points, this can have an effect on seasonal affective disorder by removing the sadness, by removing both the emotional component, as well as any physical sensations."²⁹

Cognitive behavioral therapy (CBT) – Another option is CBT, which helps to modify behaviors, thoughts and emotions that may be affecting your mental health and happiness, and has been shown to be effective for those with SAD.

Research published in the American Journal of Psychiatry found CBT works the same as light therapy in improving SAD symptoms,³⁰ and you may want to consider a combination of the two. Speaking with NBC News, Dr. Norman Rosenthal, clinical

professor of psychiatry at Georgetown University School of Medicine and author of "Winter Blues: Seasonal Affective Disorder: What It Is and How to Overcome It," said:³¹

"Several controlled studies have shown that CBT can be extremely valuable not only in helping people who have SAD, but in preventing subsequent episodes. SAD is an illness where your behavior will have a major play.

Also, if you don't know what's going on, you begin to blame yourself and think you're a failure. CBT can correct dysfunctional behaviors that may [arise from SAD] like lying in bed late with covers over your head, which is the worst thing you can do as you're depriving yourself of natural light when it is most effective: in the morning."

In closing, it may be worth noting that it's natural for your body to want to slow down somewhat in the wintertime. While this can be difficult when your work and personal life dictate otherwise, allowing yourself to slow down a bit and surrender to the overwinter process³² may ultimately help you to respect your body's circadian rhythm and recharge.

That said, this doesn't mean you should plant yourself on the couch for the winter and not venture outdoors. On the contrary, staying active and spending time outdoors during the day are among the best "cures" for SAD.

Sources and References

- [1, 7, 17 Psychiatry 2005 Jan; 2\(1\): 20–26](#)
- [2, 5 NIH, Seasonal Affective Disorder](#)
- [3 Medical News Today November 24, 2017](#)
- [4 Psychology Today Seasonal Affective Disorder](#)
- [6 Arch Gen Psychiatry 1984 Jan;41\(1\):72-80](#)
- [8, 13, 15, 16, 21, 22 Depression Research and Treatment 2015; 2015: 178564](#)
- [9 International Journal of Environmental Research and Public Health 2018; 15\(12\): 2794](#)
- [10 J Nutr Health Aging. 1999;3\(1\):5-7](#)
- [11 The Journal of Nutrition, Health & Aging 1999, 3\(1\):5-7](#)
- [12 PLOS ONE June 15, 2018](#)
- [14 European Neuropsychopharmacology October 2014; 24\(Supplement 2\): S319](#)

- ¹⁸ JAMA Psychiatry 2016;73(1):56-63
- ¹⁹ Proc Natl Acad Sci U S A. 2010 Nov 9;107(45):19549-54
- ²⁰ Acta Psychiatr Scand. 1997;96:117–21
- ²³ Cochrane Database Syst Rev. 2013 Sep 12;9:CD004366
- ²⁴ Am J Prev Med. 2005 Jan;28(1):1-8
- ^{25, 31} NBC News November 7, 2017
- ²⁶ New York Times November 18, 2013
- ²⁷ Journal of Affective Disorders January 1, 2018; 225: 13-17
- ²⁸ Psychother Psychosom 2009;78:125–127
- ²⁹ CBS News November 3, 2017
- ³⁰ Am J Psychiatry. 2015 Sep 1;172(9):862-9
- ³² Merriam-Webster, Overwinter