

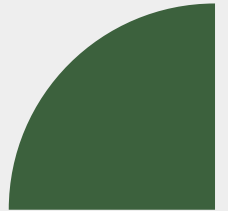
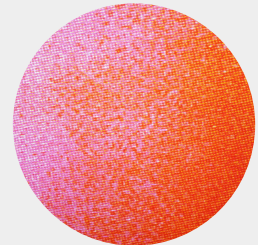
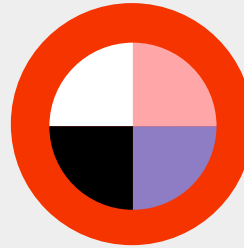
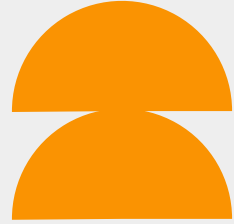
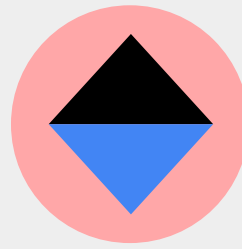
Peak Brain:

The Science of Staying Sharp

Alix Rosenthal + Jennee DeVore



Part Time Health






This presentation is for educational purposes only and is not medical advice. We urge you to seek professional advice for any specific concerns.

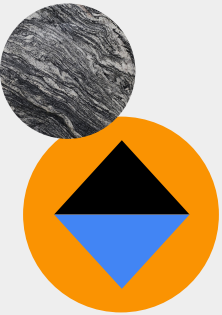




Legal Implications: Educational Imperative

 *California Competence Rule (Rule 3.601(E))*

California lawyers are required to participate in education that supports the prevention and detection of substances use disorders, mental illness, and other mental or physical issues that impair an attorney's ability to perform service with competence.

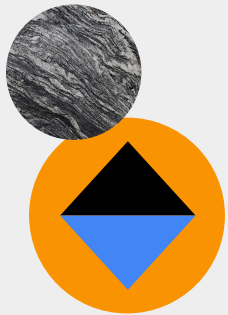
- 
- ◆ Substance use impacts brain health
 - ◆ Brain health is your strategic edge to maintaining professional excellence



Impacts on Your Health

Landmark 2016 study showed the disproportionate impact of mental health challenges and substance use on lawyers. [LINK](#)

- ◆ Over 20% of lawyers report problematic drinking behaviors—nearly double the general population.
- ◆ Nearly 30% of lawyers experience symptoms of depression, and 19% struggle with anxiety.



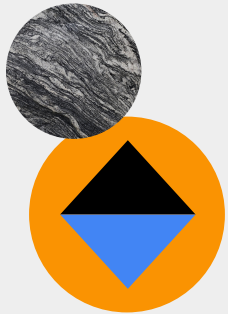
100% of lawyers suffer from work-related health issues

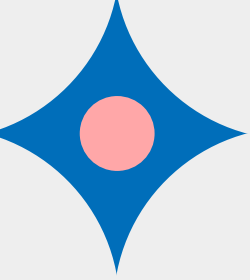


The State of Lawyer Mental Health

2023 ALM/Law.Com Compass Mental Health Survey. [LINK](#)

- ◆ 71% of lawyers reported anxiety, up 5% from 2022
- ◆ 38% reported depression, a 35% increase YOY
- ◆ 31% reported other mental health issues, more than doubling from the prior year
- ◆ Over 76% cited work environment as the primary cause of their mental health issues, with leading factors like lack of sleep and others





Legal Implications: Self-Monitoring

 *California Rule of Professional Conduct 1.16(a)(2)*

A lawyer shall not represent a client or, where representation has commenced, shall withdraw from the representation of a client if:

- ◆ (2) The lawyer's mental or physical condition materially impairs the lawyer's ability to represent the client



Impairments — gradual, hide behind high-functioning appearances



Workaholic and Worn Out: Ethics Issue

"Unchecked work stress and work addiction impair the very cognitive functions lawyers depend on to serve clients competently." *Daily Journal, Feb 6, 2025, [LINK](#)*

- ◆ Prolonged stress deteriorates decision-making ability
- ◆ Chronic stress affects the prefrontal cortex — *responsible for reasoning, impulse control and ethical judgement* — the skills we rely on for our professional competence.





Stress's Impact



Chronic stress over time leads to measurable, lasting impacts on brain health and cognitive function:

Brain Structure Changes

- Shrinks prefrontal cortex neurons, responsible for executive functions like decision-making and emotional regulation. *Neuropsychopharmacol*, 2016 [LINK](#)
- Damage and atrophy hippocampus, impairing memory formation and recall. *Neuropsychopharmacol*, 2016 [LINK](#)
- Overactivation and growth of amygdala, increasing anxiety, fear responses, and emotional reactivity. *Neuropsychopharmacol*, 2016 [LINK](#)



Cognitive Impairments

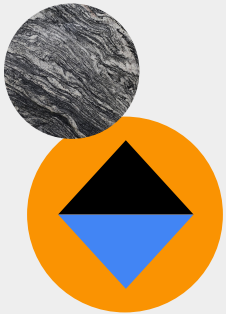
- Reduced attention span and working memory capacity. *Scientific Reports*, 2016, [LINK](#)
- Impaired decision-making and emotional control, leading to impulsive or risk choices. *Brain, Behavior, & Immunity – Health*, 2024, [LINK](#)



This Is the Irony



Your work is giving you health problems that are impairing your ability to excel at your job.





Do these sound familiar?

***BRAIN FOG**

***FORGETTING
DETAILS**

***AFTERNOON
CRASHES**

***INABILITY TO RELEASE ACCUMULATED STRESS**

**Each Are Your Body's Warning Sign of Possible Impairment*



Three-Legged Stool: Foundation of Brain Health





Stool Leg 1:

SLEEP




Your body sends signals that you need better sleep!



Download



Science of Sleep

- ★ Sleep plays a crucial role in consolidating memories and integrating new information into long-term memory. REM sleep, in particular, enhances learning, problem solving and memory retention. Digre, University of Utah, School of Medicine, 6/26/23, [LINK](#)
- ★ Research in 75 year olds indicates that sleeping 6-8 hours per night is associated with the highest cognitive performance and larger grey matter volume in several brain regions. This duration of sleep supports executive function and is linked to better brain structural health. Tai, et al, Nature, 3/3/22, [LINK](#)
- ★ Insufficient sleep disrupts synaptic plasticity, making it difficult to process and remember new information. Diering, Sleep, 10/27/17, [LINK](#)
- ★ Sleep deprivation can lead to irritability, anxiety, and depression, while sufficient rest helps maintain a positive outlook and reduces stress levels. Chattu, et al, Healthcare (Basel), 12/20/18, [LINK](#)
-  Long-term alcohol consumption appears to decrease overall REM sleep, which is crucial for cognitive function and emotional regulation. Martindale, et al, J. of Neuropsychiatry, 2/1/17, [LINK](#)



ACTION

Actionable Steps for Better Sleep

- ★ Your body tells you how much sleep you need – experiment to find the right amount for you.
- ★ Spend time in bright light during the day.
- ★ Stick to the same sleep schedule, even on weekends.
- ★ Create a consistent wind-down routine.
- ★ Create a space conducive to restful sleep: minimize all interruptions & distractions, make it cool & dark.
- ★ Supplements can help to boost sleep hygiene.
- ★ Tools can help you track your sleep.



Stool Leg 2: **MOVEMENT**



Your body sends signals that you need to move!





- ★ Exercise enhances synaptic plasticity, which is critical for integrating new neurons into neural networks. Gou, et al, Front Aging Neurosci, 9/17/19, [LINK](#)
- ★ Increase in brain-derived neurotrophic factor (BDNF) levels in healthy older adults after a 35-minute moderate aerobic exercise session. Coelho, J. Alzheimer's Disease, 10/4/16, [LINK](#)
- ★ Increase in insulin-like Growth Factor 1 (IGF-1) after moderate to high intensity major muscle group weight lifting 3x/week. Rodriguez-Gutiérrez, et al, Aging and Disease, 8/1/23, [LINK](#)
- ★ Physical inactivity linked to elevated inflammatory markers, potentially accelerating neurodegenerative processes. Daniele A, et al, Front. Physiol., 9/26/22, [LINK](#)
- ★ Decline in executive functioning linked to prolonged sitting and physical inactivity. Heiland, E, et al, Frontiers in Human Sci, 9/15/21, [LINK](#)



ACTION

Actionable Steps to Get Moving

- ★ Your body signals when it needs movement – pay attention to stiffness, restlessness, or fatigue as cues to get active.
- ★ Aim 30+ minutes everyday of movement that feels good.
- ★ Avoid prolonged periods of sitting. Get up every 60 minutes, stretch, wiggle, or walk to boost circulation and reset your posture.
- ★ Supplements may optimize recover and muscle health.
- ★ Tools for tracking & reminding are great.



Stool Leg 3: **NUTRITION**




Your body sends signals that you need food & water!



Download



Science of Nutrition

- ★ Imbalances in the gut microbiome can lead to cognitive health symptoms, including memory problems, difficulty making decisions, attention difficulties, brain fog. Prebiotics and probiotics are nutritional supplements and food components associated with gastrointestinal well-being.
Merlo, et al, Frontiers in Nutrition 11/10/24, [LINK](#)
- ★ Consuming ultra-processed foods (UPFs) contribute to cognitive decline. In one study of 11,000 participants, those who reported consumption of UPFs of more than 19.9% of daily calories had a 28% faster rate of global cognitive decline compared with those who reported lower consumption.
Goncalves, et al, JAMA Neurology - 12/5/22, [LINK](#)
- ★ A meta-analysis of 33 studies showed moderate acute dehydration of at least 2% of body weight resulted in significant impairment of cognitive-motor functions, such as short-term memory, working memory, and perceptive discrimination. Wittbrodt, et al, Med. Sci. Sports Exerc, 11/18, [LINK](#)
-  Alcohol can induce an imbalance in your gut (aka dysbiosis), which can affect the production of important neurotransmitters like dopamine, serotonin, and GABA. Chen, et al, Frontiers in Microbiology 7/29/22, [LINK](#)



ACTION

Actionable Steps to Nourish Your Body

- ★ Your body tells you when you need fuel – pay attention to energy dips or difficulty concentrating as cues to refuel.
- ★ Opt for nutrient-dense whole foods, eat the rainbow with a variety, and focus on minimally processed options that provide essential nutrients and energize your body.
- ★ Dehydration can mimic hunger. Target half your body weight in ounces per day, adding more ounces plus electrolytes if you feel thirsty, consume caffeine or alcohol, sweat, or are exposed to heat or humidity.
- ★ Supplements may help support your body's fueling needs.

ACTION



Supplements to Nourish Your Brain

Please consult your healthcare provider before starting any new supplement.

Sleep:

- ★ Glycine offers multiple benefits, including improved sleep quality.
- ★ Magnesium Threonate can cross the blood-brain barrier effectively, potentially enhancing both cognitive function and sleep.
- ★ L-Theanine may ease anxiety, promote relaxation, improve sleep quality.

Mental Acuity:

- ❑ Bacopa may increase blood flow to the brain, improving working memory and processing speed.
- ❑ Alpha GPC may increase acetylcholine, a neurotransmitter important for learning and memory function.
- ❑ Huperzine A also may increase acetylcholine. It is often used to improve memory and learning ability, as well as to treat Alzheimer's disease.

Decline Prevention:

- Lion's Mane is likely protective against brain degeneration, and contains special compounds that can stimulate the growth of brain cells.
- Quercetin & Bromelain, usually taken together, may have protective effects against Alzheimer's and dementia.



Alcohol's Impact



Regular and heavy alcohol consumption over time can lead to more severe and lasting impacts on brain health:

Brain Structure Changes

- Shrinkage of brain tissue, particularly in the hippocampus, which is crucial for memory and reasoning. Harvard Medical School, 7/14/17, [LINK](#)
- Reduction in the size of neurons. National Inst. on Alcohol Abuse & Alcoholism - 2022, [LINK](#)
- Overall decrease in brain volume, with the extent of shrinkage proportional to alcohol consumed. Harvard Medical School, July 14, 2017, [LINK](#)

Cognitive Impairments

- Difficulties with executive functioning, including planning and decision-making. ASME, 1/1/15, [LINK](#)
- Risk of alcohol-related brain damage (ARBD) or injury (ARBI). Future Healthcare Journal - 11/23, [LINK](#)

Increased Risk of Neurological Conditions

- Higher likelihood of developing dementia-like symptoms. British Medical Journal - 8/1/18, [LINK](#)
- Increased risk of stroke due to damaged blood vessels and high blood pressure. Lancet - 10/24, [LINK](#)





Becoming a Super Observer

YOUR BODY IS ALWAYS COMMUNICATING WITH YOU.

**FATIGUE, CRAVINGS, AND MOOD SHIFTS AREN'T
NUISANCES—THEY'RE CLUES.**

THANK YOU!



P A R T T I M E H E A L T H

Part time focus, full time benefit



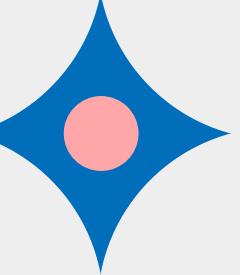
www.parttimehealth.com/contactus



[@parttimehealth](https://www.instagram.com/parttimehealth)



[linkedin.com/companies/parttimehealth](https://www.linkedin.com/companies/parttimehealth)



Appendix: Health Optimization Resources

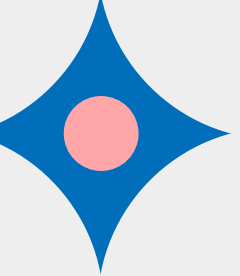
Films/Videos:

- ◆ [Live to 100: Secrets of the Blue Zones](#)
- ◆ [Washington Post Live: Brain Health & Aging](#)
- ◆ [Limitless with Chris Hemsworth](#)

Books:

- ★ *The XX Brain* by Dr. Lisa Mosconi
- ★ *Outlive: The Science & Art of Longevity* by Dr. Peter Attia
- ★ *Forever Strong* by Dr. Gabrielle Lyon
- ★ *Lifespan* by Dr. David Sinclair
- ★ *The Body Keeps the Score* by Dr. Bessel Van der Kolk
- ★ *The Myth of Normal* by Dr. Gabor Mate





Appendix: Health Optimization Resources

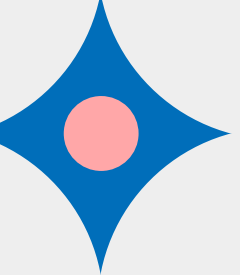


Podcasts & Talks:

Huberman Lab with Dr. Andrew Huberman - discusses science and science-based tools for health optimization

- [How to Use Exercise to Improve Your Brain's Health, Longevity & Performance](#)
- [Episode with Dr. Mary Claire Haver](#) on biology and symptoms of perimenopause and menopause and their effects on body composition, cardiometabolic health, mental health, and longevity.
- [Episode with Dr. Sara Gottfried](#) on female hormone health, puberty, perimenopause, and menopause, hormone testing, the microbiome, stress related hormone challenges, their causes, and various treatments
- [Episode with Dr. Gabrielle Lyon](#) on how healthy skeletal muscle promotes longevity, brain health, disease prevention, ideal body composition, and the health of other organs and bodily systems.





Appendix: Health Optimization Resources

Podcasts & Talks (continued):

The Brain-Changing Benefits of Exercise - TED Talk by Dr. Wendy Suzuki

FoundMyFitness with Dr. Rhonda Patrick - science of nutrition, exercise, longevity, brain health, and disease prevention

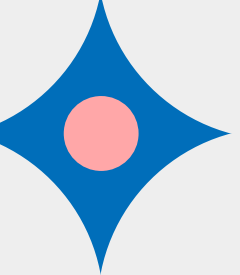
Well Beyond 40 with JJ Virgin - podcast for women over 40, with a focus on fitness

The Drive with Dr. Peter Attia - a deep-dive podcast focusing on maximizing longevity, including physical, cognitive, and emotional health

- ★ [Episode with Dr. JoAnn Manson](#) on hormone replacement therapy and the Women's Health Initiative: re-examining the results, the link to breast cancer, and weighing the risk vs reward of HRT
- ★ [Episode with Dr. Sharon Parish](#) on women's sexual health: Why it matters, what can go wrong, and how to fix it.

Lifespan with Dr. David Sinclair - a limited series updating the science of longevity since his book *Lifespan* came out in 2019





Appendix: Health Optimization Resources

◆ **Supplements:** supplements support brain health, energy, sleep, and recovery—but quality matters. Many products on the market are ineffective or contaminated, so careful sourcing is essential



Retail Sales:

Many online platforms, including Amazon, carry counterfeit or adulterated supplements. Always purchase from reputable sellers.

- ★ ["Where to Safely Buy Real Vitamins and Supplements Online"](#)
- ★ [Vitacost.com](#), GNC, or health food store

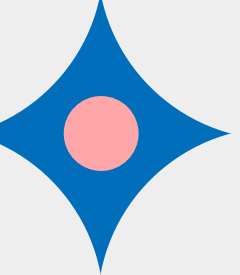


Research:

Supplements are not regulated by the FDA, which means companies can mislabel ingredients, doses, and purity. Third-party testing ensures you're getting what's on the label, free from contaminants like heavy metals and fillers.

- ★ [Consumer Lab](#) - Independent subscription service that reviews and rates vitamins, supplements, herbs, and nutrition products based on rigorous testing.





Appendix: Health Optimization Resources

◆ **Body Measurements:** tracking key metrics support sustained cognitive function, emotional regulation, and professional competence, by optimizing the systems that power your brain.

🩸 **Bloodwork and Health Optimization:**

Routine, proactive blood testing—beyond standard annual labs—can guide targeted lifestyle and supplement adjustments to support brain health, energy, and longevity (ex: InsideTracker, Lifeforce, Function Health)

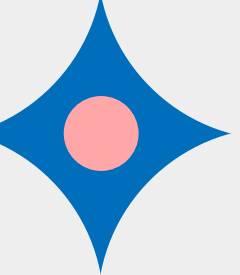


🏋️ **Body Composition:**

Understanding your body's makeup (muscle, fat, bone density) helps support metabolic health, cognitive function, and physical performance

- ★ Dexascan - a scan in a lab, more accurate and more expensive
- ★ Renpho body composition scale - at home, far less expensive, less accurate





Appendix: Health Optimization Resources

◆ Body Measurements (continued):



Continuous Glucose Monitoring + Nutritional Support:

- [Lingo](#) - glucose insights for energy and metabolism
- [Nutrisense](#) - tracks how food affects blood sugar with dietician support



Sleep & Recovery Tracking Devices to Support Quality Sleep:

- Non-Wearables (ex: 8 Sleep Mattress/Topper, Withings Sleep Mat)
- Wearables (ex: Oura Ring, WHOOP Band, Apple Watch, Fitbit, Garmin)



Other Monitor Examples:

- Heart rate monitor for exercise can be utilized to track exertion to optimize cardiovascular health, which is directly tied to brain blood flow (Tip: chest strap is more accurate than a forearm strap, which is more accurate than a watch).

