# Neuroscience of Decision-making Under Stress, Lack of Sleep, and Substance Abuse

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# Learning Objectives

- Understand the neurological impact of chronic stress, lack of sleep and substance abuse on decision-making and legal reasoning
- Recognize the cognitive impairments associated with stress, sleep deprivation, alcohol, and stimulant use
- Detect early signs of impaired performance in yourself and your colleagues
- Apply science backed tools and techniques to enhance cognitive clarity and resilience under pressure

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# A little about me

Journalist

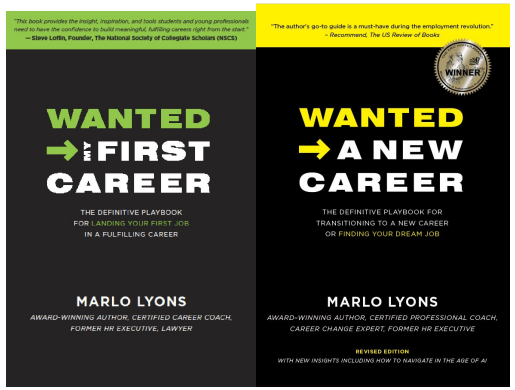
Entertainment Lawyer

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Podcast: *Work Unscripted*




Award-Winning Author



HBR Contributor

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# Prevalence of Stress in the Legal Profession

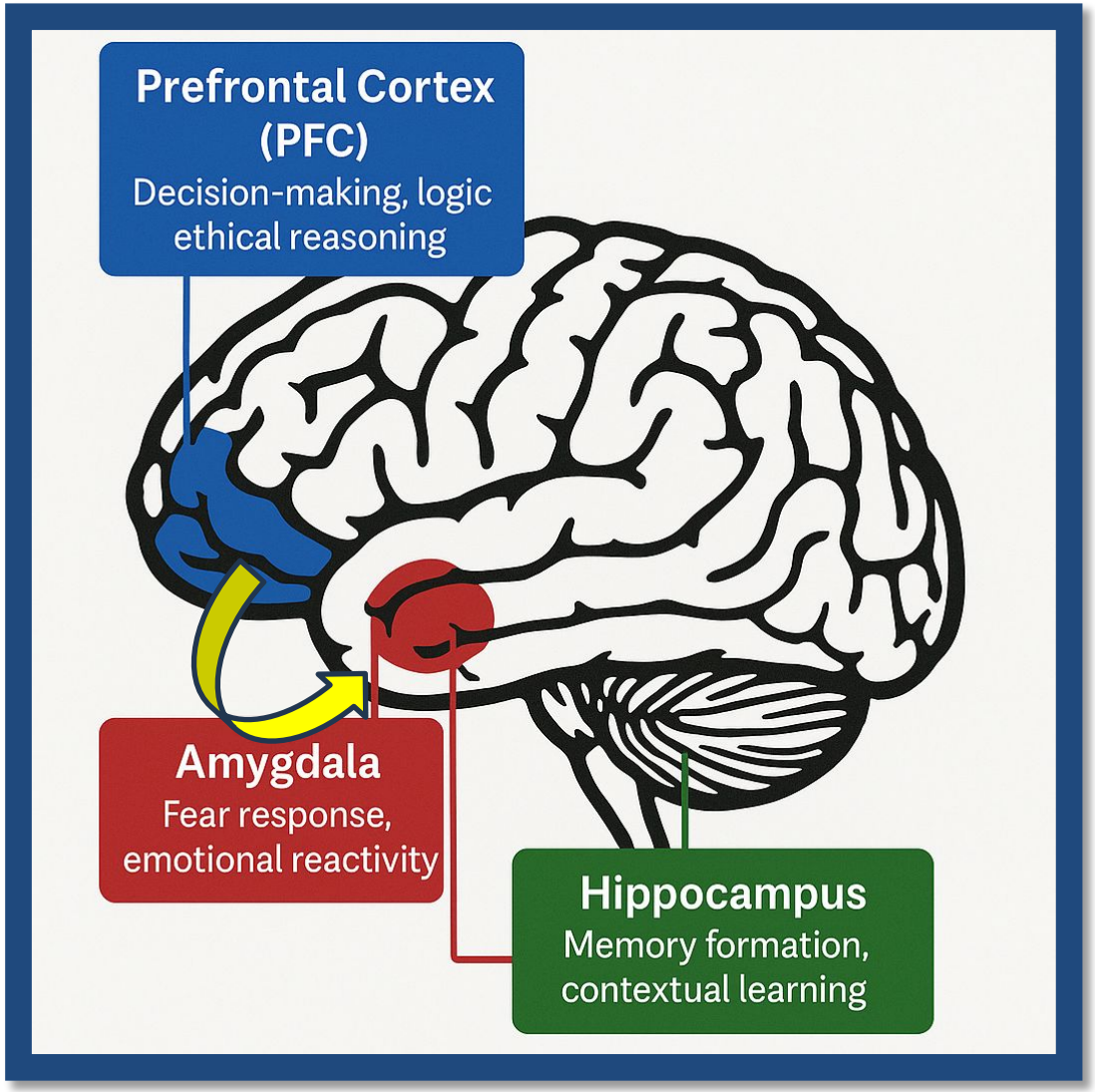


- 92% of lawyers experience stress or burnout
- 25% of lawyers report daily stress
- 76% of lawyers feel overly stressed weekly
- 45% of lawyers experience anxiety tied to workloads
- 69% of lawyers attribute mistakes to stress, burnout or exhaustion

ABA, Gitnux, The Guardian, Patent Lawyer Magazine

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# Neuroscience 101: The Brain

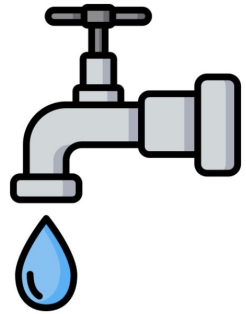



Stressor → Amygdala activates → PFC shuts down → Impaired judgment

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# Types of stress



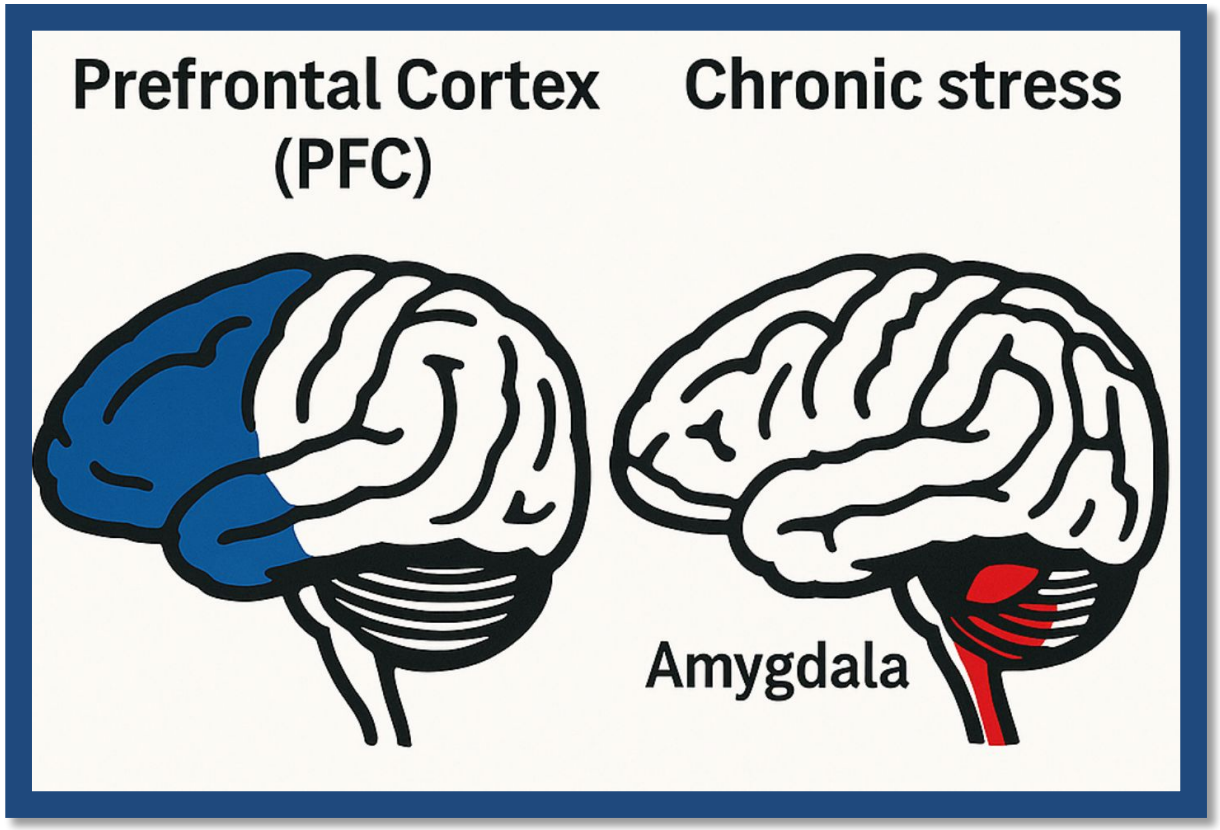
| Acute Stress | Chronic Stress |
|---|---|
| Sudden Deadlines | Daily overload without breaks |
| Fight or Flight = increased focus | Constant cortisol= brain fog, fatigue |
| Helpful in bursts | Harmful when sustained |
| Recovery is possible | No time to reset = impairment builds |

**“Chronic stress impairs the brain’s structure, not just its state.”**

**- Bruce McEwen**
**Author, “The End of Stress As We Know it”**

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# Stress and the Prefrontal Cortex




**Planning | Case strategy**
**Reasonable Judgment | Ethics**

**Working Memory | Cognitive flexibility | Impulse control**

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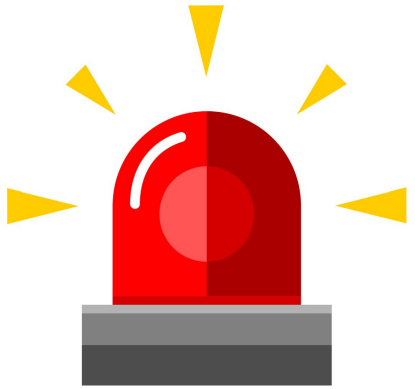
# Symptoms of Impaired Executive Functioning

## What you might notice

- ✔ Impulsivity
- ✔ Rigid or black and white thinking
- ✔ Poor prioritization
- ✔ Repeated mistakes
- ✔ Emotional overreaction
- ✔ Decision paralysis
- ✔ Excessive self-checking and second guessing
- ✔ Withdrawal from collaboration

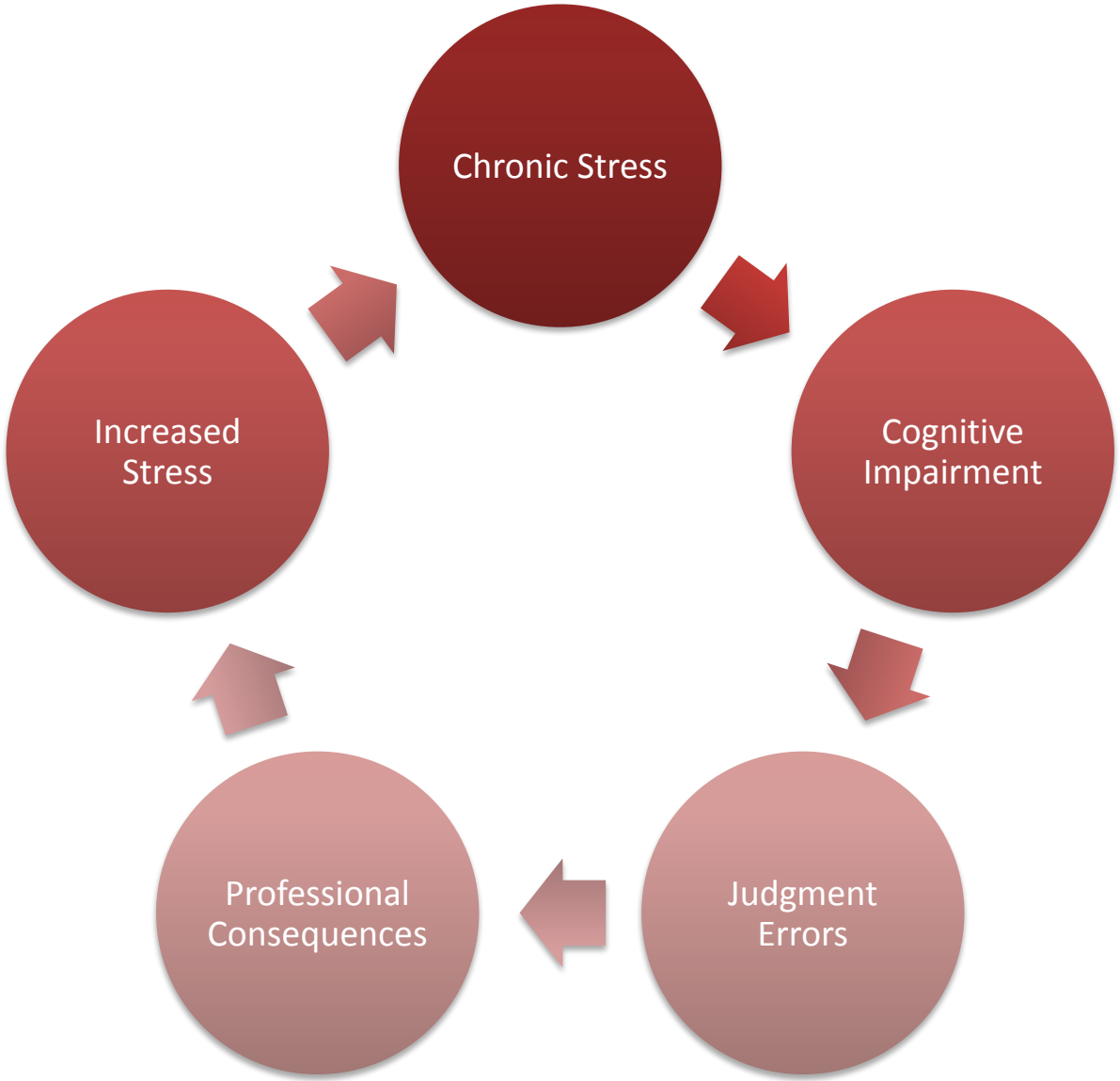
## What is actually happening

- ✔ Lower prefrontal cortex activation
- ✔ Amygdala driven behavior
- ✔ Lower working memory and attention
- ✔ Lower cognitive flexibility
- ✔ Reduced inhibition



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# The Stress Loop




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# Ethical and Professional Risk



**69%**

of lawyers who made professional mistakes linked them to stress, burnout, or exhaustion

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# Ethical and Professional Risk



1. Am I unusually reactive or rigid right now?
2. Have I slept under seven hours for multiple nights?
3. Is there caffeine/alcohol/stimulant rebound in the mix?

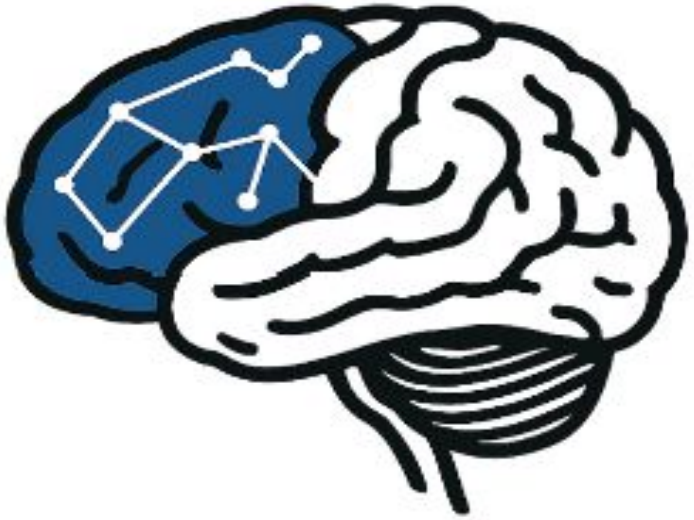
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# Ethical and Professional Safeguards

- Pause and reset
- Leverage a second set of eyes
- Do a three-minute decision reset
- Take microbreaks and visual rest
- Use cognitive reappraisal language

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# Sleep Deprivation: The Hidden Impairment in Legal Practice



Brain on 7-8 hours of sleep
Clear, active, lit-up connections

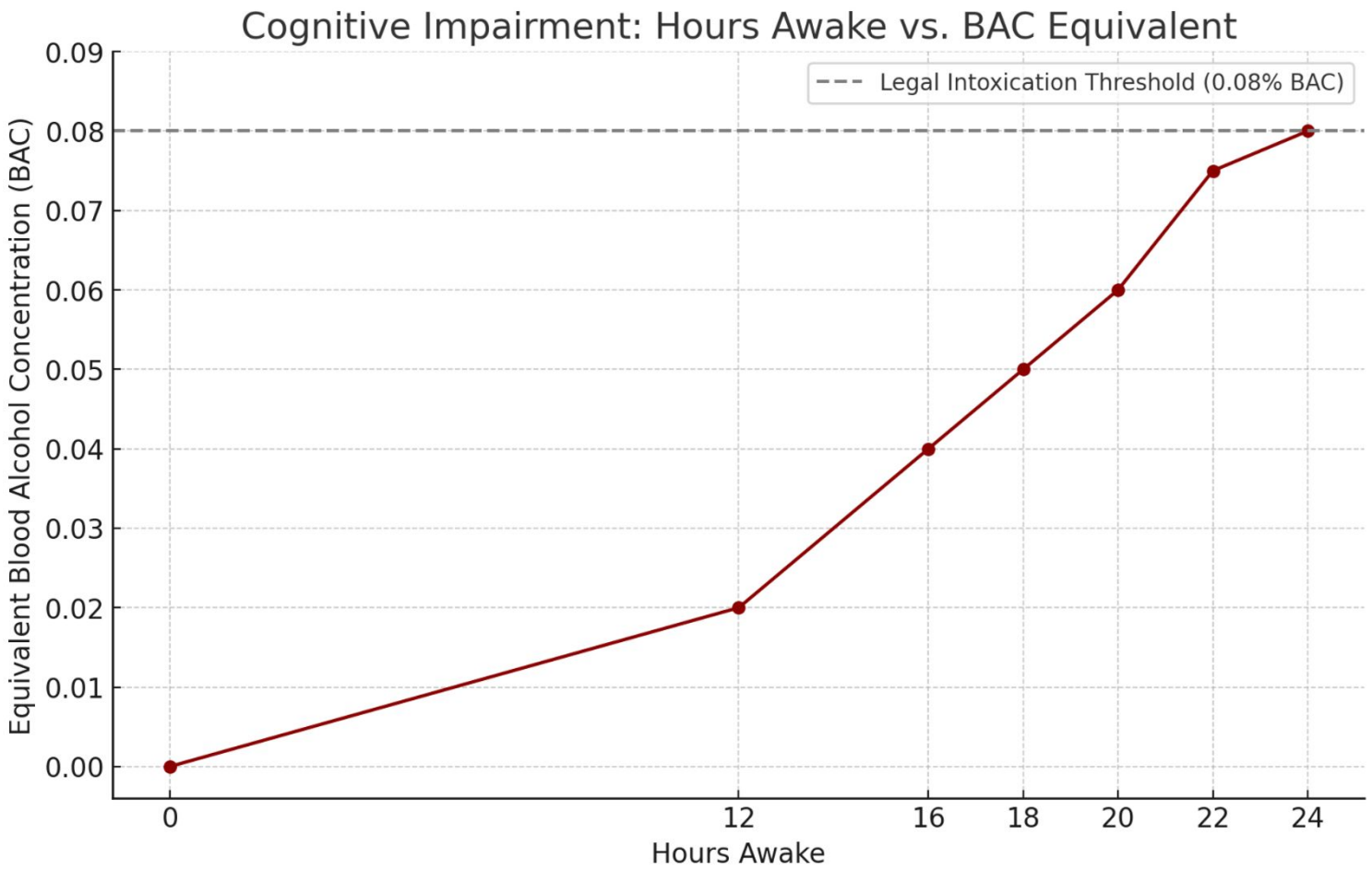


Brain on 4-5 hours of sleep
Dim, disorganized connections, sluggish processing

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— Dawson & Reid (1997), *Nature*

# Sleep Deprivation: The Hidden Impairment in Legal Practice



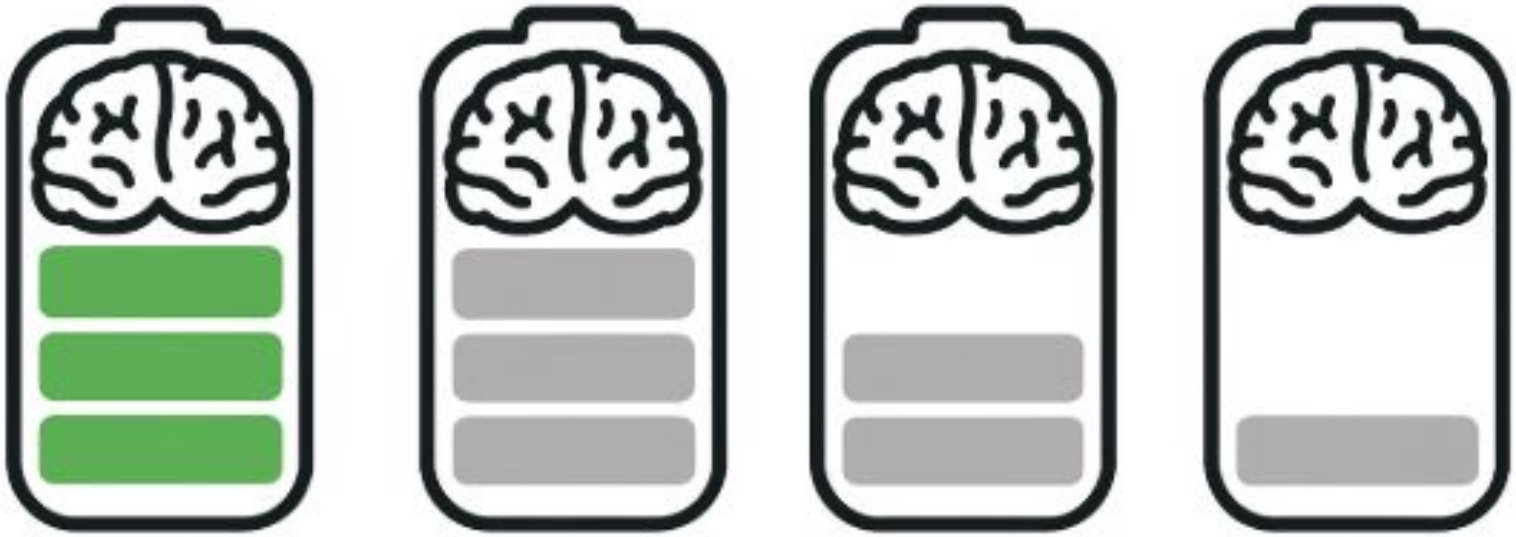

**65%**

of legal professionals get fewer than 6 hours of sleep most workdays!

— Dawson & Reid (1997), *Nature*

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# Sleep disruption on the Legal Mind



Working Memory

Attention to Detail

Analytical Reasoning

Emotional Regulation

**SLEEP  COGNITION  COMPETENCE**

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# Warning signs of sleep deprivation

| Warning Sign | What It May Signal |
|---|---|
| You reread the same paragraph multiple times and still don't absorb it | Impaired working memory |
| You blank on simple facts or procedural steps | Weakened recall and attention |
| You feel emotionally reactive to minor disruptions or feedback | Reduced emotional regulation |
| You make careless mistakes despite high effort | Decreased attention to detail |
| You avoid complex tasks, preferring easy or repetitive work | Avoidance due to reduced cognitive stamina |
| You procrastinate key decisions or defer judgment | Compromised executive functioning |
| You feel foggy or disoriented in meetings | Cognitive fatigue |
| You lash out, shut down or withdraw socially | Amygdala hijack, social cognition drop |
| You rely on caffeine or stimulants to get through the day | Compensating for poor sleep with artificial stimulation |
| You struggle to recall conversations or client details hours later | Fragmented memory encoding from poor sleep. |

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# Legal Sleep Hygiene Tips

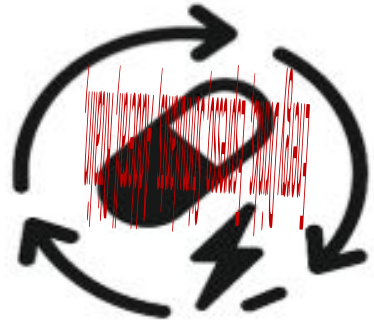


- Establish a wind down routine 30-60 minutes before bed
- Aim for 7-9 hours of sleep, even during busy work times (get a sleep tracker)
- Don’t use your bedroom for work-related activities
- Avoid caffeine after 2PM to minimize interference with sleep cycles
- Keep a consistent sleep and wake schedule, even on weekends
- Use blackout curtains or eye masks to reduce ambient light
- Consider short naps (10-20 min) instead of pushing through exhaustion
- If you can’t fall asleep in 20 minutes, leave the room and do something calming
- Track your cognitive clarity after full nights vs. short nights
- Consider sleep aids (melatonin, magnesium etc.) with doctor’s approval
- Consider grounding sheets

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# Stimulants and the Legal Mind

- ↑ Focus
- ↑ Pressure
- ↑ Jittery
- ↑ Anxious
- ↑ Hypervigilant





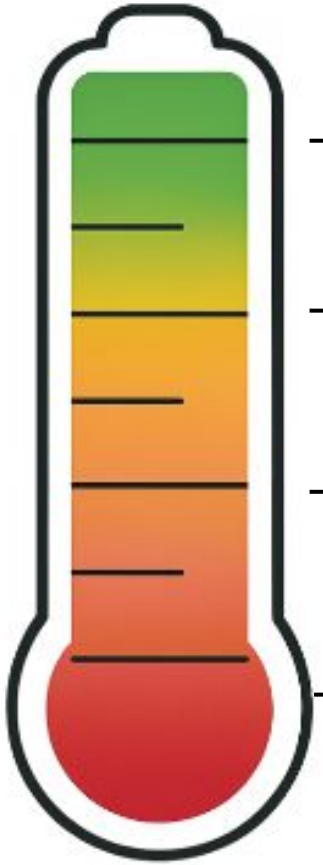

- ↑ Energy
- ↑ Alertness
- ↑ Focused

- ↑ Unfocused
- ↑ Foggy
- ↑ Irritable mood
- ↑ Sleepy but unable to sleep
- ↑ Anxiety




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# Alcohol and Judgment



| BAC % | Cognitive Impact |
| --- | --- |
| .02% | Mild euphoria<br>↓ inhibition |
| .05% | ↓ Judgment, alertness, risky behavior |
| .08% | Legal intoxication (in most states) |
| .10%<br>Ethical red zone | Impaired motor and mental functioning |

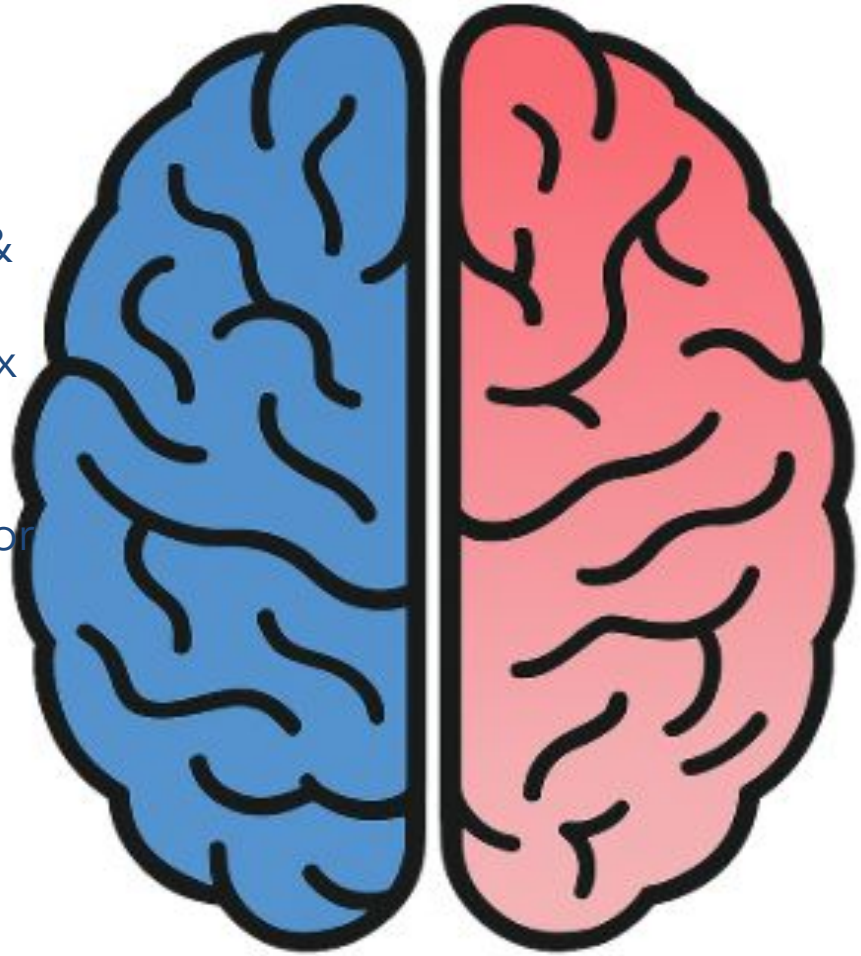


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# The Brain Stressed on Substances

### Healthy State

- Balanced dopamine & serotonin
- Calm prefrontal cortex
- Regulated attention and memory
- Goal-directed behavior



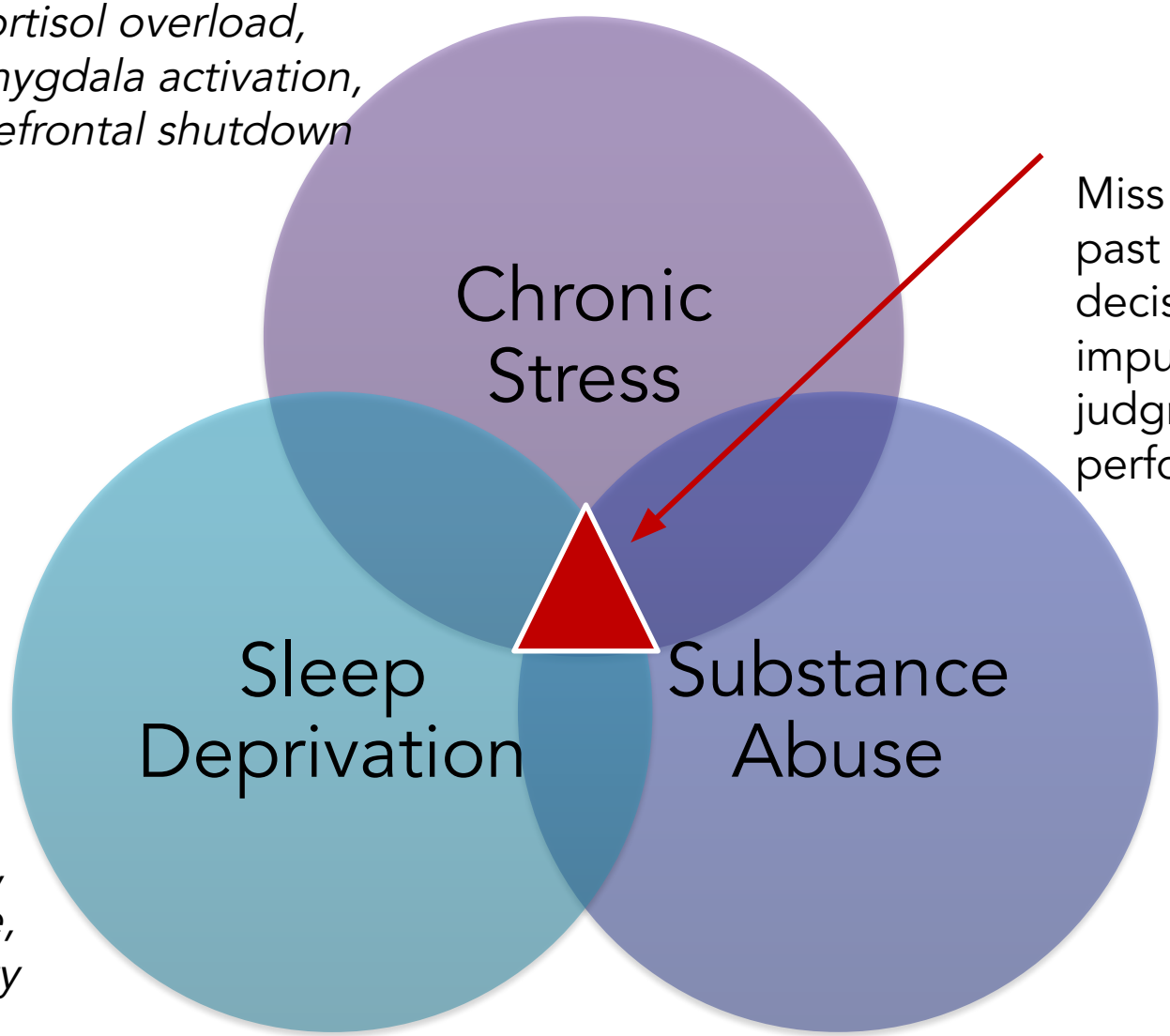
### Unhealthy State

- Overstimulated dopamine
- Hyperactive amygdala
- Suppressed prefrontal cortex
- Inhibited memory and learning disruption

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# When Stress, Sleep Loss, and Substances Collide

*Cortisol overload, amygdala activation, prefrontal shutdown*




EXECUTIVE FUNCTIONING COLLAPSE

Miss ethical red flags, rush past nuance, making poor decisions, demonstrating impulsivity, making judgment errors □ performance decline

*Impaired memory, slow reaction time, emotional volatility*

*Neurochemical disruption, rebound crashes, false clarity*

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# How the Brain Compensates (Hint: Poorly)





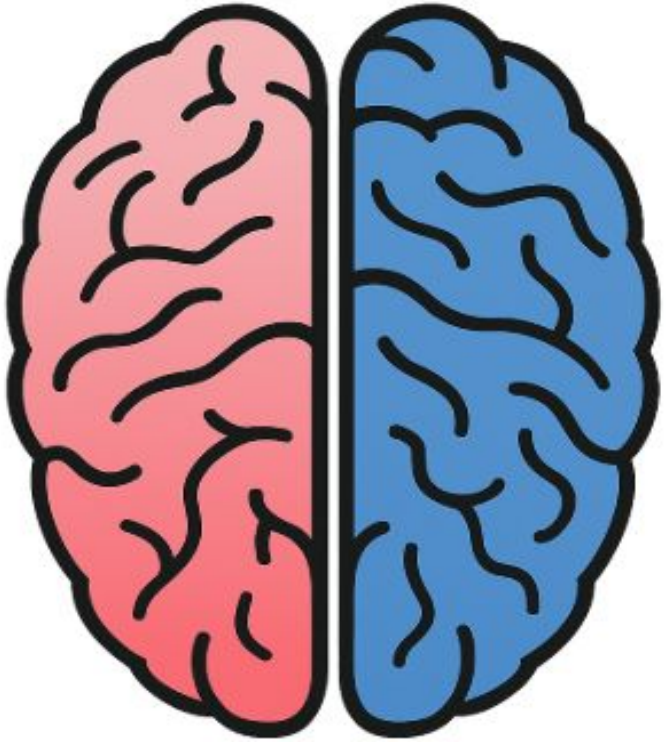
| Normal Executive Brain | Overloaded Brain |
|---|---|
| Analyzes facts | Jumps to conclusions |
| Weighs options and outcomes | Chooses fastest option available |
| Balances emotion and logic | Defaults to emotion or habit |
| Considers long-term impact | Fixates on short term relief |
| Solicits feedback | Withdraws or avoids collaboration |

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# Stress Brain v. Resilient Brain

Stress Brain

- Hyperactive amygdala
- Shrinking prefrontal cortex
- Impaired memory
- Emotionally reactive
- Rigid or impulsive decision-making



Resilient Brain

- Regulated amygdala threat response
- Strong executive control
- Adaptive learning and recall
- Emotionally regulated
- Flexible, thoughtful decision-making

Neuroplasticity: The ability of the brain to form and reorganize synaptic connections, especially in response to learning or experience

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# Breathwork & Heart Rate Variability (HRV)

Overwhelmed brain → Calm brain



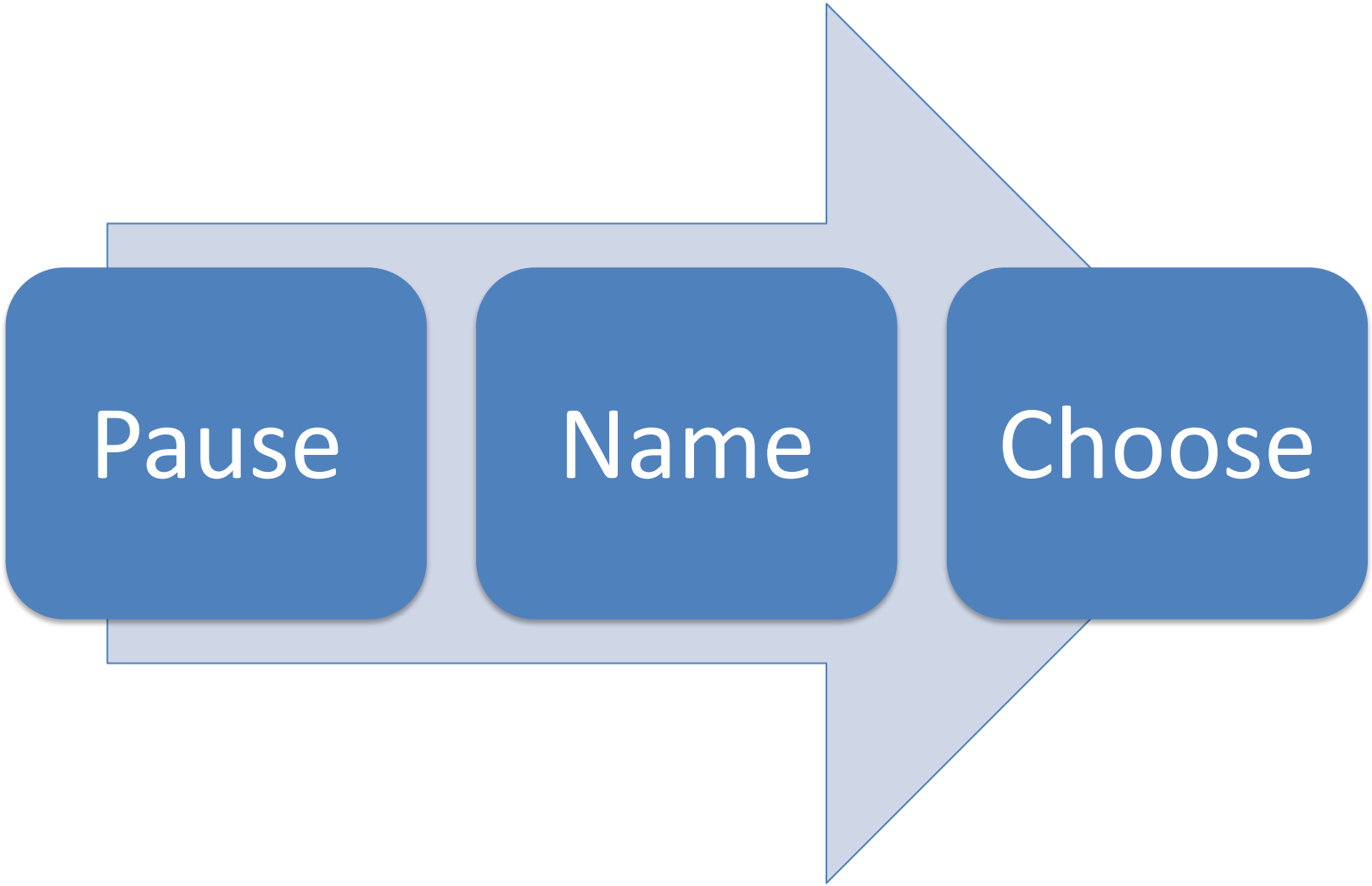
Box Breathing
Inhale for 4 seconds
Hold for 4 seconds
Exhale for 4 seconds
Hold for 4 seconds

Repeat for 60 seconds



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# The 3-Minutes Decision Reset




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# Tactical Recovery: Micro Breaks




Box Breathing or
Triangle Breathing




Visual rest




Stretching/Walking




Nonproductive time

Brain Reset
Executive Function Refresh
Nervous System Signal Shift

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# Cognitive Reappraisal

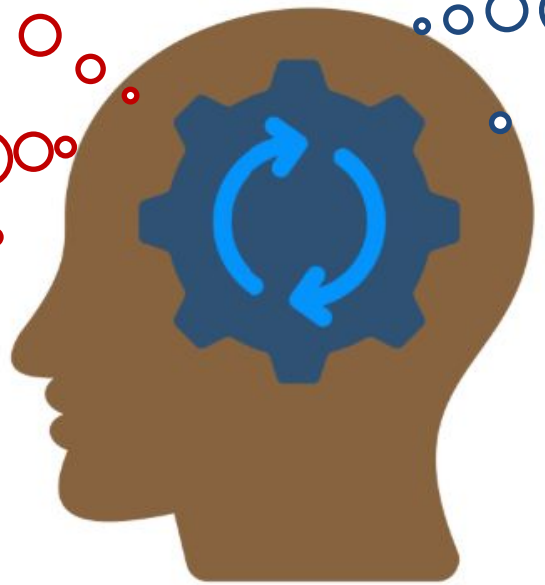
Automatic Thought

Reappraised Version

I'm going to mess this up

I'm going to look stupid in this meeting

This client is impossible



I'm learning something challenging

I've done the prep and my goal is contribution not perfection

This client is stressed and how I respond could change the outcome

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# Confidence Journaling



What went right today?

*"I spoke up in a strategy meeting I normally just listen to."*

What does that say about me?

*"I can trust my preparation and voice in a room of senior leaders."*

Where can I apply that again?

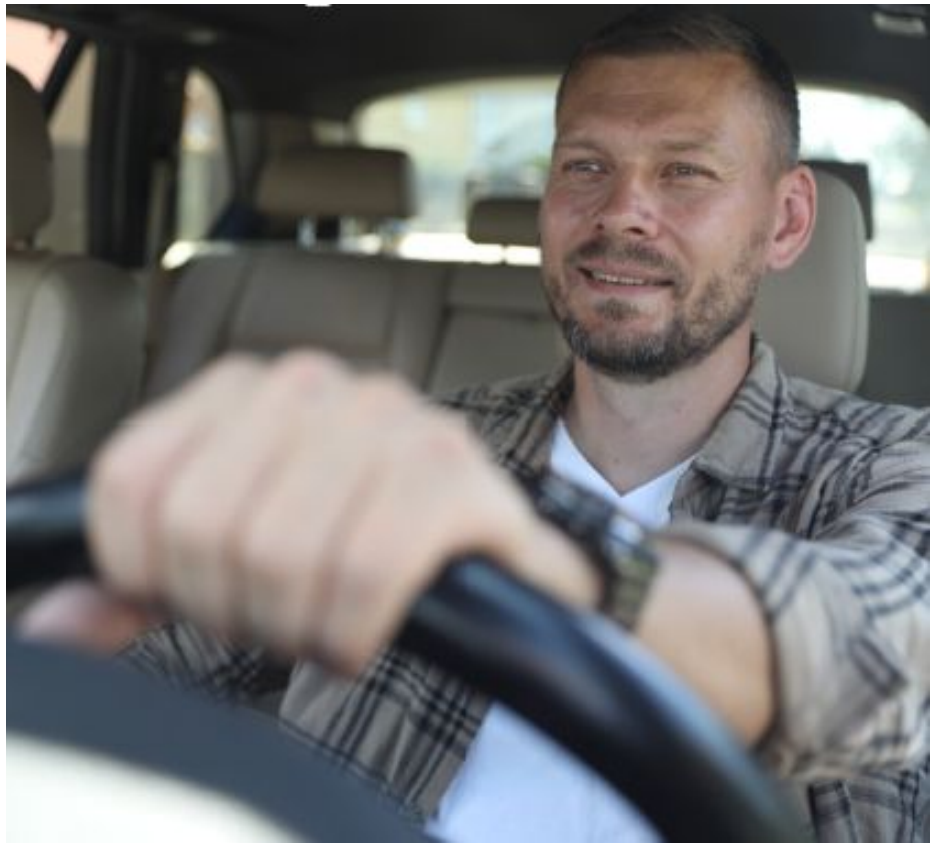
*"Next time I hesitate to speak, I'll remember this moment."*

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# Feedforward: Future Focused Feedback



You missed the structure again in that agreement.



You seem to still be struggling with the structure of those agreements. Next time try this checklist.  I think you'll feel stronger about the output.

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# Integration: connect it to your practice

## Create a stress and decision-making self-audit:

- ☐ I've sent an email while angry or exhausted that I later regretted.
- ☐ I often push through fatigue without taking recovery breaks.
- ☐ I regularly sleep less than 7 hours a night.
- ☐ I regularly use caffeine or other substances to maintain performance.
- ☐ I use alcohol or other substances for stress relief.
- ☐ I've missed details or made decisions I'd normally avoid when under pressure.
- ☐ I ruminate on mistakes rather than learning and moving forward.
- ☐ I have relied on shortcuts instead of strategy recently.

2-3 Yeses = apply tools and techniques to regain cognitive control

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# Integration: connect it to your practice

Process the information about how your brain works

1. Stress shrinks strategy
2. Sleep restores control
3. Substances short-circuit clarity

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# Integration: connect it to your practice

- ✔ Test one tool this week to lower stress
- ✔ Shift one conversation in your head
- ✔ Reframe one belief

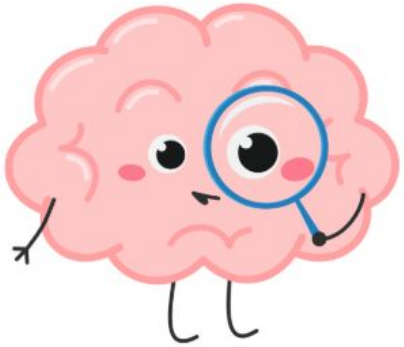
# Final thoughts



Knowledge



Clarity



Ethics



Judgment

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# Neuroscience of Decision-Making Under Stress

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Work Unscripted Podcast

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