

# “The Underaroused Brain: Why Dopamine Matters—and What You Can Do About It”



In today's article, we're diving into a crucial—but often overlooked—brain state that I see frequently in my neurofeedback practice. Thank you for joining us.

The brain state I am referring to is called underarousal—and it may be one of the most critical brain patterns to understand if you or your child struggles with attention, motivation, [ADHD](#), panic or anxiety attacks, OCD, as well as emotional ups and downs, or even anxiety.

Now, this isn't just a label I toss around casually. Underarousal is a documented neurological condition, repeatedly confirmed by brain imaging—like fMRI, QEEG, and SPECT scans. It shows up most often in the prefrontal cortex—the part of the brain responsible for executive functions like focus, planning, emotional control, and impulse regulation.

When the brain is underaroused, these functions go offline. And here's the key: at the core of this underaroused state is often a dopamine problem. Not always, but it is one component you can begin to manage better for you or your child.

Let's unpack that.

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## What Exactly Is Underarousal?

Underarousal means the brain—particularly the frontal lobe—isn't generating or maintaining enough activity to function at its best. From a neurological perspective, the lights are on but dim...and not well-regulated.

This isn't just about being unfocused, distractable, or anxious. It is more than that. It's about the front lobe of the brain, which manages all things human, that is idling – rather than focusing, processing, managing

emotions, making wise choices, etc. The engine is ready, but the accelerator cannot activate the frontal lobe enough to thrive.

This often shows up in children as ADHD, distractibility, impulsivity, daydreaming, anxiety, worry, OCD, or emotional meltdowns. In adults, it may look like all of the above, and perhaps more chronic procrastination, brain fog, low motivation, and that constant feeling of being one step behind in life.

Here's the part most people miss: these are not personality flaws. They're symptoms of a brain that cannot stimulate the frontal lobe adequately. That problem, as seen in the QEEG mapping, is often tied to low or poorly regulated dopamine.

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## The Dopamine–Underarousal Connection

So, what is dopamine, exactly?

Dopamine is a neurotransmitter—one of the brain's chemical messengers—and plays a central role in motivation, reward anticipation, energy, pleasure, focus, and emotional resilience.

We feel alert, focused, and capable when dopamine is available and balanced. We can plan, follow through, and enjoy the process along the way. But when dopamine is low or not used properly by the brain, everything starts to slip.

Tasks feel overwhelming. Joy feels distant. Focus feels impossible. And emotional reactivity tends to increase.

And this is what underarousal means on a chemical level: the brain isn't receiving the dopamine it needs to maintain optimal function in the frontal lobes. These regions help us resist impulses, calm ourselves when overwhelmed, and hold steady, organized thinking throughout the day.

Now, in traditional medicine, this underarousal is sometimes managed with stimulant medications—because these do boost dopamine temporarily. But they also come with risks: side effects, tolerance, dependency, and often, a return of symptoms when the medication wears off.

What's more, these medications don't *teach* the brain to self-regulate. They only mask the issue for as long as the chemical is present.

In our practice, we do things differently. At Capital District Neurofeedback, we use real-time neurofeedback feedback to retrain the brain to generate more stable and appropriate activation levels in these frontal networks. And yes, this includes training the brain to regulate dopamine more effectively over time.

However, we also coach our clients on naturally supporting dopamine to get the best results. In part two of this series, you will learn about common strategies to enhance your available dopamine, without medication or psychotherapy.

[Learn more hear about the common anxiety disorders.](#)

[View the slide presentation for the article "The Underaroused Brain: Why Dopamine Matters—and What You Can Do About It" here](#)

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