

NEUROPSYCHE
NETWORK

RECLAIM YOUR BRAIN



A HEALTHY BRAIN HAS A GOOD BALANCE BETWEEN THE PREFRONTAL CORTEX AND THE LIMBIC SYSTEM.

The human brain is the most complex organ in the world. Fortunately, you don't need a PhD to grasp a basic understanding of how it works!

You just need to know two key areas: the prefrontal cortex, or PFC, and the limbic system.

The PFC, which is the brain's most recently evolved region, serves as the control center. It's responsible for complex tasks like organization, impulse control, motivation, and problem-solving.

The PFC is particularly important in managing negative thoughts and emotions, because it helps you analyze them. That's why a well-functioning PFC is crucial to living a positive life. If a person's behavior were guided solely by their PFC, on the other hand, they'd be like the Star Trek character Mr. Spock: perfectly logical and entirely in control of all emotions or urges.

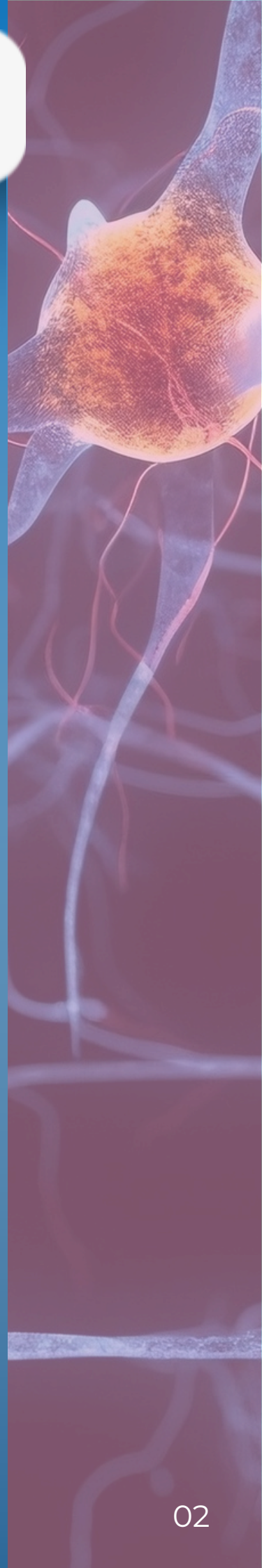
The second key brain area is the limbic system, the emotional center and one of the oldest parts of the brain. The PFC is tasked with keeping it under control.

The limbic system, also called the primal brain, is further divided into four main parts: the basal ganglia, the anterior cingulate, the amygdala and the thalamus. It's responsible for our most basic survival needs, like escaping predators.

So when you encounter something threatening, like a lion, your amygdala sets off an alarm that tells you to fight it or run away: a fight-or-flight reaction.

These emotional reactions helped our ancestors survive, but they can go too far in the modern world. If your amygdala takes over your PFC, you won't be able to calm down or think rationally. Negative emotions like anxiety and fear will take over instead.

So in order for your brain to function well, you need a healthy balance between your PFC and limbic system. Let's take a closer look at how that can go wrong.



EVERY BRAIN NEEDS A UNIQUE AMOUNT OF STIMULATION IN ORDER TO WORK WELL.

Imagine a company headed by an exhausted and overworked CEO, who can't be fired or replaced. How could the company ensure the CEO stays awake? How about hiring a mariachi band to play in their office all night? That would definitely stimulate them!

That's sort of how various factors stimulate different brain regions. A person with ADHD, for example, has an underactive prefrontal cortex. It needs to be stimulated, just like the CEO needs to be stimulated by the mariachi band to stay awake. That's why people with ADHD seek out certain kinds of unusual stimulation.

The author had a very bright client named Jeremy, for instance, who was thrilled to get into med school for the intellectual challenges it would present. Once classes started, however, he found that most weren't exciting and consisted only of boring, repetitive exercises.

Jeremy's brain wasn't sufficiently stimulated, so whenever he tried to cram for exams, he had to turn up the radio and television to keep himself awake - not a great way to study! People like Jeremy have to find ways to make such tasks less boring, or their brains won't be at their top performance.

Some people, on the other hand, have brains that react too strongly to their surroundings. Any minor stimulus might trigger a fight-or-flight response, making them afraid of everything.

Some people have an amygdala so reactive they register even ordinary kinds of stimulation, like being around a talkative person, as threats. Such people regularly need to get away to a calmer environment where they can be alone and recharge.

And over-stimulation or under-stimulation of specific brain regions doesn't just affect how a person studies or reacts in social settings. It can also lead to dangerous addictions, as we'll see in the next Neuropsyché short.



BRAIN IMBALANCES CAN LEAD TO ADDICTION, BUT MOTIVATIONAL INTERVIEWING CAN HELP.

Have you ever craved alcohol when you felt overwhelmed, knowing it would calm you down? This impulse might seem benign, but it could over time turn into a debilitating addiction.

Addictions often result from brain imbalances. The author had a client named Jill who suffered from an overactive limbic system that left her constantly anxious and stressed. To cope, she smoked marijuana.

Another client named Bart had a weak prefrontal cortex so he had difficulty with self-control. He gradually became addicted to gambling and had accumulated \$100,000 in debt before he finally sought professional help.

If you're struggling with addiction like Jill or Bart, a method called motivational interviewing can help.

Motivational interviewing works by boosting your motivation and willpower and restoring balance to your brain. Give it a try by following the same steps that Bart followed while in therapy:

First, rate your motivation on a scale from one to ten, where one is not motivated and ten is very motivated.

Then ask yourself the following questions: What would your life be like if you made a major change? What would be the advantages and disadvantages of that change?

Now, rate your motivation again. You might find that it has increased, even if just a little!

Next, make a list of your strengths. If you need inspiration, try to think back to any time that you successfully made a life change.

Finally, figure out a small, first step toward your desired change. Every journey starts with a single step; it's okay if it's a small one. Bart's first step, for example, was to stay away from the racetrack, and say "no" to his brother-in-law's invitations to go.



MYNDFUL MEDITATION CAN CALM YOU DOWN AND HELPS TO REBALANCE YOUR BRAIN.

You might be wondering: How can I rebalance my brain? The good news is that you don't always need drugs but can balance your brain with mindfulness.

Myndfulness is a state in which you are conscious of your thoughts, your emotions, and your place in the world – without judging yourself. You can practice myndfulness by taking the time to meditate.

Research that uses magnetic resonance imaging (MRI) scanning technology has found that meditation has the effect of quieting the brain's amygdala. That's why after you meditate, you feel calmer. Meditation also increases activity in your brain's prefrontal cortex (PFC), making you feel happier and more at peace. In sum, meditation makes you feel better because it helps restore your brain balance.

Yet this isn't the only reason myndfulness can help you calm down.

Myndfulness also allows you to distance yourself from unpleasant thoughts.

Imagine you're anxious about an upcoming surgery. Anxiety can be overwhelming in situations such as this. But if you mindfully focus on your anxiety by telling yourself, "Okay, I'm having anxious thoughts right now," you're one step closer to overcoming the anxiety, as you're examining yourself like an unbiased observer.

So, try this simple myndfulness meditation when you need to calm down.

First, sit in a quiet place. Close your eyes and focus on your breathing. Choose a word like "om" or "love" and repeat it every time you breathe out.

If your mynd starts to wander, thinking of a recent conversation or even what you're going to have for dinner, try to let go and refocus on your breathing and your special word. You'll calm down and be able to listen to yourself more deeply.



NEGATIVITY IS ROOTED IN HOW THE HUMAN BRAIN IS WIRED AND MANIFESTS ITSELF IN MANY WAYS.

When was the last time you received an unexpected phone call and immediately assumed the worst? This isn't unusual, as the human brain is hardwired to be more sensitive to negative stimuli.

The brain is divided into two hemispheres, each specializing in different tasks. The left hemisphere oversees logic and language, while the right hemisphere is more responsible for sensory experiences, such as looking at a photograph.

Scientists have found that the right hemisphere of the brain is more "negative" than the left. When a person suffers a stroke located in the brain's left hemisphere, for example, the victim's personality often becomes more negative, as the right hemisphere becomes more dominant. Conversely, people who suffer a stroke in their brain's right hemisphere tend to become happier, often even manic.

Interestingly, the right hemisphere of a child's brain develops first, so in general, humans develop a more negative view of the world from the start. By the time the left hemisphere catches up, we've already collected a range of negative early memories; these lay the foundation for a negative view of life.

Such negative thinking manifests itself in many ways, such as black-and-white thinking and mental filters.

Black-and-white thinking means you think in extremes; your math skills are either terrible, or brilliant. This sort of false dichotomy ignores the "gray" or middle possibility: that your math skills are just fine.

Why is black-and-white thinking negative? It leads you to consider yourself a failure anytime you can't live up to the highest standards. If you don't ace that test, for example, you want to give up entirely.

Negative mental filters make you focus on the negative aspect of a situation, blinding you to any other aspects. If you have big ears, for instance, you might convince yourself that you're unattractive and conclude that you'll never find love.

But maybe you're really good-looking, despite your ears! Mental filters make you see only one part of the whole picture.



CHALLENGE NEGATIVE ASSUMPTIONS BY WRITING DOWN YOUR THOUGHTS AND PERSONAL STORIES.

We all tell ourselves stories about who we are and what the world around us is like. Unfortunately, these stories are often negative and inaccurate.

Negative thinking has a big impact on how we view ourselves. The author had a client named Carl who struggled with issues of self-esteem and had problems with his job as an accountant. No matter how hard he tried, he was constantly disorganized, losing documents or forgetting to charge clients on time.

Because of this, he saw himself with a negative filter and convinced himself that he was worthless and incompetent at his job.

Interestingly, Carl turned out to have attention deficit hyperactivity disorder (ADHD). He wasn't lazy or bad at his job, but he did need medication to help him realize his full potential. His disorder was the problem; but Carl instead blamed himself.

While medication helped to balance Carl's brain, he still needed therapy to rewrite the negative stories he convinced himself of over the years. This is where the prescription industry has gone wrong. Without tools and therapy, we are just masking a problem by treating it with pills.

So, how exactly does a person “rewrite” negativity?

The first step is to write down your stories. Thoughts rush constantly through your mind and can disappear before you can fully process them. Slow your thinking by writing down your thoughts!

Once you've put all your thoughts on paper, you can start to think harder about your assumptions.

It's crucial that you challenge any negative stories you've written down. Carl wrote, for example, that he was a terrible student and “didn't try hard enough.” When the author pressed him, however, Carl realized he'd really been a hardworking student who usually got B's and B+'s.

Carl could think of himself more positively once he challenged his negative thoughts and memories.

Writing your thoughts down, examining them critically, and rewriting your own story are all important commitments toward improving your mental health.



IMPROVE YOUR CLOSEST RELATIONSHIPS BY CHALLENGING THE ROLES YOU AND YOUR PARTNER PLAY IN THEM.

If your personal life plays out like a narrative essay, with a beginning, middle, and end, then relationships represent dramatic plot points in your overall story.

You and your partner must play the right roles in this story to be happy. People naturally play roles with their partners, which is fine – as long as the roles aren't based on inferior or superior statuses.

Few people seek out an inferior role in a relationship, so partners often try to dominate each other. They compete for a superior role: the critic instead of the criticized, the victimizer instead of the victim.

Yet if one partner always has the upper hand, the other partner may feel resentful. Relationships based on these sorts of emotions are stressful and unhealthy.

In a healthy relationship, on the other hand, partners have equal roles. These roles don't necessarily have to be similar as long as they're equal. Partners shouldn't have to fight over dominance.

If you find yourself unhappy in your role, change it! Once again, mindfulness can help you here.

Ask yourself why you've taken on this particular role in your relationship. Maybe you're playing the victim because you feel guilty when you're assertive, for instance. If this is the case, psychotherapy might help you deal with your issues.

Or perhaps your partner habitually puts you down. You react defensively, creating a constant critic-criticized dynamic. If you fall into this sort of pattern, talk with your partner. Discuss how you can both change roles to make things better.

Playing a role like a victimizer or a victim can quickly become a habit. Mindfulness helps you defeat such habits as it gives you a better understanding of your situation, allowing you to assess your behavior and regain self-control instead of acting impulsively.

Over time, being mindful will empower you to overcome unhealthy behavior in your relationship.



NEUROPSYCHE

SUMMARY

Maintaining a healthy brain comes down to keeping a balance between the more primal limbic system and the more recently evolved prefrontal cortex. If one area is overactive or underactive, it can cause problems such as ADHD, anxiety or addiction. This is where mindfulness can help! When you learn to focus your thoughts and view emotions like an outsider, you can control your behavior, make positive long-term changes, and ultimately reclaim your brain.

Actionable advice:
Get your brain checked out.

Sometimes, the underlying cause of a brain imbalance is an injury. Even seemingly harmless actions like a fall, when you were younger or too many soccer headers, can have lasting effects. So if you're suffering from certain behaviors you can't explain, visit a neurologist. You never know what they might find.

Suggested further reading:
The Brain that Changes Itself by Norman Doidge

How can stroke victims who become paralyzed start using a fork or buttoning their shirts again? Well, contrary to what was believed for so long, the brain is not hardwired. It can change, regenerate and grow. Drawing on real-life cases of scientists, doctors and patients, *The Brain that Changes Itself* (2007) shows us how, rather than relying on surgery and medicine, we can alter our brains through thought and behavior.