NeuroFaith

The Intersection of Science and Faith in the Healing of Trauma and Addiction

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Endorsements

for NeuroFaith

The Intersection of Science and Faith in Healing of Trauma and Addiction

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NeuroFaith: The Intersection of Science and Faith in the Healing of Trauma and Addiction is a groundbreaking and deeply insightful work that powerfully bridges the gap between faith and science. Dr. Jeffrey E. Hansen and Tim Hayden masterfully weave together cutting-edge neuroscience with the timeless truths of faith, providing a comprehensive and compassionate approach to understanding and healing trauma and addiction. This book offers hope and tangible steps for those seeking recovery, while also serving as an invaluable resource for professionals in the field of mental health and addiction treatment. With clarity and heart, NeuroFaith reminds us that true healing involves not just the body and mind, but also the soul. A must-read for anyone seeking to understand the profound connections between trauma, addiction, and faith-based recovery.

Andrew P. Doan, MPH, MD, PhD
Adjunct Associate Professor of Surgery, Uniformed Services University
Ophthalmology and Aerospace Medicine

On a wan November day, I left a funeral thinking, "Thank God I am not deeply involved in this tragedy." The widow had lost her husband to a line-of-duty death and on the same day, her father to a long illness. Pregnant, she would lose her child days later. Three years later I would marry that widow; every November 19th since then for over 40 years, I've learned that time alone does not heal emotional trauma. NeuroFaith springs from Dr. Hansen's lifetime of compassionate service, weaving faith and science into understanding and hope for those who are afflicted or addicted. Such trauma will come into every life—and that makes NeuroFaith a must-read book.

Gary S. McCaleb
Senior Counsel
Alliance Defending Freedom

Dr. Jeff Hansen has been healing members of the military community for decades. For those of us trained to see ourselves as impenetrable, this wealth of resources is a lifeline. Wellness through connection with others and our creator is no matter of blind faith. Jeff , Tim and Earl give a solid vector for those of us carrying hidden wounds.

Pete Grossenbach
US Air Force C-17 Pilot

I have served in Law Enforcement in California for 41 years and have been heavily involved in police chaplaincy and peer support. I also served on a multiagency critical incident stress debriefing team. This past year, I met Dr Hansen at a local church gathering. Our common interests lead us into long motorcycle rides and deep conversations regarding trauma, trauma treatment, and the spiritual vacuum that exists in each of us.

My career has taught me that addiction is an unforgiving salve for the unseen wounds that haunt our heroes. Often our (first responders) coping mechanisms are overwhelmed by the day-to-day real trauma we experience. What can start out as a temporary relief from the stresses of the work environment can quickly lead to dependence and addiction. Modern treatments often neglect the spiritual needs of the patient and thus limits the success of various treatment modalities.

NeuroFaith: The Intersection of Science and Faith in the Healing of Trauma and Addiction offers understanding and answers to break the bondage of addiction and find peace in a world where ideals and reality rarely align.

From the Ragamuffin Gospel by Brannen Manning: "For Ragamuffins, God's name is Mercy. We see our darkness as a prized possession because it drives us into the heart of God."

Patrick Akana
Police Sergeant (retired)

NeuroFaith: The intersection of Science and Faith in the Healing of Trauma and Addiction, perfectly reconciles the disparate approaches of the medical model, the psychological model and the social learning model of addiction medicine. For years, the medical model has been embraced by researchers and therapists alike. The medical model is too reliant on the treatment of symptoms and lacks focus on "Why." To poorly quote Viktor Frankl, if we know the "why," the "how" may become evident. To this end, Dr. Hansen, Mr. Hayden, and Pastor Heverly provide a roadmap for a truly holistic approach. Healing is not accomplished by masking symptoms. It requires an understanding of the root cause of the problem. Including Faith in the "How" discussion adds a powerful tool for those struggling with trauma and addiction. This book shows how Spiritualty and neuroscience are not at odds but complementary and the best approach to using both for recovery.

Salvatore Bitondo, LICSW, BCD
Chief, Family Advocacy Program
Behavioral Health Service Line
Madigan Army Medical Center, JBLM

Fantastic! This book fulfills a long-held wish of mine for a work that complements the insights I have been able to bring to others through Scripture. Perhaps nowhere is this more impactful than in Romans 12:2, where God reveals His profound process of 'renewing the mind.' The book's description of neural pathways wonderfully illustrates how God accomplishes this transformation, reprogramming the brain to form new paths and bring true renewal.

As someone practiced in presenting spiritual truths, I find it seamless to integrate these with the scientific insights so well-articulated here. For readers engaged in science or clinical practice, this book offers a

powerful vision of hope for treating trauma and addiction, pointing toward a profound intersection of science and faith that promises lasting transformation.

In every chapter, scientific truths emerge in a way that resonates deeply, enhancing my understanding of Biblical truths honed over 50 years of Christian ministry. This book has a unique and natural harmony that touches the soul and elevates both the scientific and spiritual pursuits.

Best wishes and blessings in your ministry.

Gary E. Thomas, Assistant Pastor (Retired)
Counseling and Discipleship
Calvary Chapel of Olympia

As a firefighter with over 18 years of service, I've witnessed firsthand the profound impact of trauma and the insidious path it can carve toward addiction. These experiences don't just leave scars; they redefine the fabric of who we are. *NeuroFaith* delivers a biblically-based insight into healing that resonates deeply with me, bridging the gap between the silent pain of trauma and the hope for recovery. This book masterfully combines scientific understanding with faith-driven principles, offering a beacon of real, lasting healing for anyone who has faced the shadows of trauma and addiction. For those seeking hope, resilience, and a renewed sense of self, *Neurofaith* is an invaluable resource that speaks to the heart and soul.

Steven Backus
Phoenix Fire Department

Neurofaith: The Intersection of Science and Faith in the Healing of Trauma and Addiction offers a comprehensive yet concise and fluent blueprint of addiction. Dr. Hansen and Mr. Hayden eloquently translate neuroscientific concepts into easily digestible applications. By breaking down addiction as deeply rooted in trauma and relational wounds, *Neurofaith* provides a compassionate lens to why and how we find ourselves in the throws of the addiction cycle. This work is a great resource for those who have struggled, currently struggle, or love those who struggle; it offers hope in the application of transformative therapeutic techniques and spirituality to navigate healing in connection with others. Having been mentored by Dr. Hansen in concepts of Polyvagal Theory, HeartMath, and Internal Family Systems, I wholeheartedly endorse *Neurofaith* as a must read!

Alayna Collins, M.A.
Psy.D. Doctoral Candidate in Clinical Psychology

Dr. Jeff Hansen's newest book is perhaps the best he has ever written. It is truly "holistic," in that the material he has presented is comprehensive and quintessential to the reader wishing to understand addiction from every possible perspective.

"NeuroFaith the Intersection of Science and Faith in the Healing of Trauma and Addiction" is a book I wish I had in graduate school when I studied to become an Addiction Counselor. The information it contains covers the Biological, Psychological, and Neurophysiology of those struggling with single isolated addictions, as well as a plethora of other addictions. The book is not isolated to therapeutic information covering substance use alone. Dr. Jeffrey Hansen takes us on a deep dive into process addictions as well, such as pornography, and helps us understand the stronghold it has on one's mind, body, and soul.

I believe that Dr. Jeff Hansen's book belongs in the halls of every college and university that offers a degree in addiction studies. Perhaps the most creative and profound parts of his book are where faith and Scripture are interwoven into the fabric of scientific and clinical information. his words from the Bible offer undisputed truth and therefore, in the end, may help to bring healing and restoration to those struggling with addiction.

Bravo Dr. Jeff , Tim Hayden, and Earl Heverly for providing such a valuable book to not just the student of addictionology, but to individuals, couples, and families who struggle to find answers to this hugely growing problem which affects us all in myriad ways.

Libby Smith, Ed.D., Ph.D.
Lead Therapist, Holdfast Recovery

Dr Jeffrey Hansen, Tim Hayden, and Pastor Earl Heverly use their extensive history in treating trauma to call out the lack of connection as a key element leading to addiction. They describe why this disconnection makes it so hard to treat. Their simple to understand description of brain physiology, extensive references, real world examples, and creative use of drawings make this a valuable reference for newcomer as well as expert clinician. The solution that lies in the Intersection of science and faith is a bullseye made clear in this book.

Mike Kimmel
Agape House of Prescott, Executive Director
Retired Senior Director with major Defense and Telecommunications companies

Once again, Dr. Hansen has addressed an incredibly important topic in society: addiction and its far-reaching impact on everyday life. The depth and breadth of the various types of addictions in today's society are shocking.

Dr. Hansen not only explores the causes of addiction but also provides well-researched insights into its effects. More importantly, he offers practical and effective solutions for overcoming this harrowing illness. As a physician, I deeply appreciate the light he shines on the overreliance on medications and the negative consequences that often accompany them. Dr. Hansen's works are an invaluable addition to any professional library. His style is thorough yet concise, well-supported, and actionable.

What stands out most, however, is that Dr. Hansen writes from a place of profound empathy, honed through decades of experience. He demonstrates a genuine desire to bring healing to those struggling with addiction. By highlighting the effects of disconnection, he provides a broader and deeper understanding of the forces that contribute to addiction. Additionally, Dr. Hansen boldly emphasizes the importance of faith in the path to recovery.

Jeffrey Hansen is a man I deeply respect as a provider, a colleague, and a mentor. It is an honor to have him not only as a friend but also as a brother in Christ.

Devin Spera, M.D.
Emergency Medicine Physician

In Dedication

With deep love and respect, we dedicate this book to all military service members, law enforcement officers, and firefighters who have given so much in the service of others. You are our heroes, and we know that many of you carry unseen wounds—of mind, body, and soul. We honor your incredible sacrifices.
We pray that these pages bring you comfort, healing, and renewed strength as you continue your journey. You are always in our hearts, and we are forever grateful for your courage and dedication.

In Appreciation

With heartfelt gratitude to Pastor Earl Heverly, who has been a steady spiritual guide through my (Jeff) life's journey. His wisdom and gentle presence have profoundly shaped this book. More than that, his guidance is woven into the fabric of who I am. Without him, neither this work nor my own growth would have been possible. Pastor Earl has been a source of strength and grace, and sometimes correction, when I've needed it most, and for that, I am eternally thankful.

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By Jeffrey E. Hansen, Ph.D., Tim Hayden,
and Pastor Earl Heverly

Authors' Note on AI Contributions

Limited parts of this book were crafted with the support of ChatGPT, an AI tool that helped refine transitions and assist with research. Every effort has been made to ensure that all sources and information are accurate and reliable. Additionally, some images were created with the help of AI technology. We invite readers to explore the content with an open mind, and where applicable, feel free to consult other sources for further insight.

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Why We Write

A Call To Healing: Where Faith Meets Science

This book is written with a singular purpose: to offer a pathway of hope and healing for those struggling with addiction and trauma by merging cutting-edge neuroscience with the life-transforming power of faith. At Holdfast Recovery and AnchorPoint, we believe in addressing the whole person—mind, body, and soul—so that true, lasting recovery can occur.

At the heart of this story is Brendan McDonough, co-founder of Holdfast Recovery. His personal journey through unimaginable

trauma and redemption serves as the foundation for everything we do. On June 30, 2013, Brendan's life changed forever during the Yarnell Hill fire in Arizona. As the sole survivor of the Granite Mountain Hotshots, Brendan bore the weight of survivor's guilt and grief after losing 19 of his brothers-in-arms. That profound loss plunged him into a battle with addiction as he sought to numb the emotional agony. Brendan's story, detailed in his book *Granite Mountain* and depicted in the film *Only the Brave*, is not only one of survival but of resilience, redemption, and hope.

Brendan had to choose between succumbing to his grief or fighting for his life. With the help of faith, Brendan found the courage to confront his addiction and heal the emotional scars left by the Yarnell Hill fire. Through God's grace, he transformed his pain into purpose, eventually co-founding Holdfast Recovery with Tim Hayden. Together, they envisioned a place where others could not only recover from addiction but also heal from the deep trauma that often lies beneath it.

Tim Hayden's journey was different but no less profound. For nearly two decades, Tim worked in the demanding world of the tech industry, where he built a career around leadership, team development, and strategy. He earned accolades for his integrity and problem-solving abilities, climbing the corporate ladder and enjoying a level of success that many aspire to. But behind the success, Tim struggled with the mounting pressure of a high-stakes career.

At home, Tim was a loving husband, father of three, and foster parent to two more. He was deeply involved in his church, coached youth

sports, and was admired for his dedication to his community and family. But the balance between his family life and his career became increasingly difficult to maintain. The constant travel, endless meetings, and long hours began to take a toll, not only on his physical health but on his emotional well-being.

As the pressure mounted, Tim—like so many others in high-powered careers—began to rely on unhealthy coping mechanisms. He was turning to alcohol while on the road and at home to cope with life's stresses and binge drinking to blow off steam and "have a good time" with friends and coworkers. But alcohol wasn't enough to keep pace with the relentless demands of his life. Tim began using stimulants—energy drinks, excessive caffeine, and eventually, prescription medications— to stay sharp, push through exhaustion, and meet the constant expectations placed on him.

This vicious cycle of stimulants by day and alcohol by night left Tim physically and spiritually depleted. The life he was living felt disconnected from his true calling, the one he believed God had placed on his heart. As the cracks in his life deepened, Tim realized this wasn't the path he was meant to walk. His corporate success, once a source of pride, now felt hollow, and the emotional toll was becoming too great to ignore.

Through prayer and the support of his wife, Tim began to seek out a new purpose—one where his life experiences could be transformed into something meaningful and redemptive. But finding that purpose wasn't easy. Several doors closed before a trusted pastor, recognizing the unrest in Tim's heart, introduced him to Brendan McDonough.

The connection between them felt like divine intervention. Both men had walked through their own valleys of struggle and loss, and both were determined to turn their pain into a purpose far greater than themselves.

In Brendan, Tim saw a kindred spirit—a man who had not only faced unimaginable trauma but who had emerged from it with a renewed sense of mission and faith. Together, they founded Holdfast Recovery, a place where people could not only break free from the chains of addiction but also heal from the deep-rooted trauma that often lies at its core.

As Brendan and Tim's vision for Holdfast Recovery grew, so did their need for clinical expertise. That's when Jeff, a seasoned clinical psychologist specializing in trauma and addiction, joined their team. Jeff brought with him a wealth of experience from his time working with traumatized soldiers, military families, and children. His clinical work at the U.S. Department of Defense, particularly at Madigan Army Medical Center, had given him a deep understanding of how trauma impacts the brain and how faith can be a powerful force in the healing process.

But Jeff's journey wasn't without its own deep emotional wounds. He, too, had faced significant developmental trauma growing up, which left scars that shaped his understanding of pain, loss, and healing. His personal history of trauma and the loss of his twin brother, Greg, after a long battle with depression, gave Jeff a unique perspective on resilience. Through both professional expertise and lived experience,

Jeff developed a deep empathy for those who struggle with addiction and trauma.

Inspired by Brendan's journey and Tim's vision, Jeff joined the mission to develop an innovative treatment model that merges cutting-edge neuroscience with faith-based healing. Their combined efforts created a holistic approach that addresses both the neurological and spiritual aspects of trauma and addiction.

More recently Earl Heverly joined our team to assist in the writing of this book taking the role as our spiritual guide. Following his conversion to Christ as a child, Earl attended the University of Illinois in the 1960's. During that time, his mother and father (a pastor) divorced, which sent Earl into a spiral of lost faith and alcohol abuse. He met and married his wife of 55 years, Nancy. Graduating in 1970 during the height of the Viet Nam war, Earl awaited his draft notice. Months later, he was surprised to be classified 4F and continued in a business partnership.

During that time, Earl's sister and brother-in-law came to visit them. They walked in the front door and announced God had sent them. Indeed, He had. Earl and Nancy tearfully recommitted their lives to Christ, and they plugged into a local church where they learned how to follow Jesus as their Savior and Lord.

The following Easter Sunday, Nancy gave birth to their second child born with a large, brown, hairy birthmark covering the right side of her face. The attending physician was stunned by her appearance, but Earl believed he had to be strong for Nancy and their new daughter.

Earl stayed close, watching every detail of the baby's care and assuring Nancy everything was somehow going to be alright.

After Nancy and baby were deemed healthy (except for this growth), Earl went to the car and prepared to return home to tell their older child about her new baby sister. Sitting in the car, he was overwhelmed by his daughter's disfigurement and cried out to God pleading, "God I'll do anything. Please just help my baby."

Then, as if someone had reached inside him and flipped a switch, Earl suddenly stopped crying. He sat there listening to the silence, then he heard God speak, "Earl, Melissa is Mine. I love her unconditionally. I gave her to you to raise and will always be with her."

God's unmistakable peace filled Earl's heart and mind. But God wasn't done. He continued, "Earl, I want to have that same kind of relationship with you. I will be with you always and will provide everything you'll ever need. But you must give yourself completely to Me."

Hearing these words, Earl surrendered himself, his family, and his future into God's hands and has never looked back. Four years later he began his career as a pastor, teacher and counselor serving in two California churches, as well as teaching in three different Bible colleges. Earl retired in January 2024 after 46 years of pastoral ministry and continues to serve God's people in various capacities throughout northern California.

Together, Brendan, Tim, and Jeff, built a program rooted in the belief that true healing comes from treating the whole person: mind, body,

and soul. This book, *NeuroFaith: The Intersection of Science, Faith, and Healing from Trauma and Addiction*, is an extension of that vision. It reflects their combined journeys and the model of recovery they have developed at Holdfast Recovery and AnchorPoint. Through their work, they offer a pathway of healing that honors the complexities of trauma and addiction while drawing on the life-transforming power of faith.

We invite you to walk this journey with us, not only to understand the interplay between trauma, addiction, and the brain but also to witness the profound power of faith in healing lives. Brendan's story is living proof that even in the face of overwhelming loss, redemption and recovery are possible. His courage and faith, along with Tim's leadership and Jeff's clinical expertise, continue to inspire the work we do every day at Holdfast Recovery and AnchorPoint, where we stand alongside others in their journey toward hope, healing, and transformation.

Introduction

Vice is a monster of so frightful mien
As to be hated needs but to be seen
Yet seen too oft, familiar, with her face,
We first endure, then pity, then embrace.

-Alexander Pope's essay o

vn man

Addiction is a thief. It steals lives, dreams, and futures, leaving destruction in its wake. It's not just a habit or a moral failing; it is a force so consuming that it rewires the brain, distorts reality, and erodes a person's very sense of self. The struggle to escape its grip often feels like fighting an invisible enemy, one that hides in the crevices of the mind and haunts the soul.

Behind every story of addiction lies unimaginable pain: broken families, lost potential, and the weight of shame that crushes even the

most hopeful spirit. Addiction thrives in the shadows of trauma, feeding off emotional wounds that have never fully healed. It traps its victims in a vicious cycle of dependence, where the fleeting moments of relief are overshadowed by deeper and darker lows. The horrors of addiction reach beyond the physical, into the very core of a person's identity, numbing them to the world around them and, worse, to themselves.

Yet, within this seemingly hopeless landscape, there is a spark of light—a chance for recovery, renewal, and restoration. It is here, at the intersection of science and faith, that a path to healing emerges. As Scripture reminds us: *"The Lord is near to the brokenhearted and saves the crushed in spirit"* (Psalm 34:18, ESV). This book introduces you to a new approach: NeuroFaith, where the cutting-edge revelations of neuroscience meet the timeless power of faith.

The Horrors of Addiction: Rewiring the Brain, Stealing the Soul

Addiction is not a simple choice; it is the product of profound changes in the brain. When addiction takes hold, it hijacks the brain's reward system, creating powerful neural pathways that prioritize the pursuit of substances or behaviors over everything else—love, family, work, even survival. The brain, once finely tuned to balance pleasure and self-preservation, becomes enslaved to the cycle of craving and compulsion. In the face of addiction, a person loses control of their decisions. It's no longer just a matter of "willpower"; the brain is no longer working the way it should; the capacity for healthy choices has been highjacked.

But the roots of addiction go even deeper. Beneath the surface of the addiction lies trauma. Trauma etches into the brain, shaping it in ways that make a person more susceptible to the pull of addiction. Whether it's childhood abuse, neglect, or emotional pain, these unresolved

wounds leave scars in the brain's circuitry, making it harder to regulate stress and emotions. Addiction often becomes a coping mechanism, an attempt to numb the pain that never quite fades. This is why addiction is so powerful—it is not just a battle against a substance or behavior but against the unhealed traumas that fuel it.

The horrors of addiction can seem endless: the sense of isolation, the shame that silences those who suffer, the broken promises to loved ones, and the gnawing fear that recovery is out of reach. In this darkness, hope can feel like a distant dream.

The Power of Faith: A Light in the Darkness

But even in the deepest despair, faith has the power to ignite hope. *"The light shines in the darkness, and the darkness has not overcome it"* (John 1:5, NIV). For centuries, faith has offered solace, strength, and healing to those in the throes of addiction. It provides a source of meaning and purpose when everything else feels lost. Faith speaks to the part of us that yearns for connection, redemption, and wholeness–things that addiction steals away and ultimately delivers us from these forces that control us.

What science is now discovering is that faith doesn't just offer psychological comfort—it can physically change the brain. Prayer, meditation, and belief in something greater than oneself activate the brain in ways that can promote healing. Studies show that people who embrace spirituality in recovery have better outcomes—they relapse less often, they build stronger social connections, and they find a deeper and more fulfilling sense of purpose.

Faith offers what addiction seeks to destroy: a sense of identity, of belonging, of being loved and valued despite one's struggles. *"For we are God's masterpiece. He has created us anew in Christ Jesus, so we can do the good things he planned for us long ago"* (Ephesians 2:10, NLT).

Faith gives people the strength to confront their trauma, forgive themselves, believe that change is possible, and experience that change for themselves.

NeuroFaith: The Intersection of Science and Healing

This is where the concept of NeuroFaith comes into play—a powerful fusion of neuroscience and faith. It bridges the gap between science and spirituality, showing how the brain can be restored, and how faith can aid in this process. The brain, though deeply affected by addiction, is capable of change—this is the promise of neuroplasticity, the brain's remarkable ability to rewire itself. With the right interventions, the brain can heal from the damage of addiction. It can form new pathways, create new habits, and break the cycles of craving and dependency.

Faith plays a crucial role in this transformation. When we pray, meditate, or embrace a spiritual practice, we strengthen the very parts of the brain involved in self-control, resilience, and emotional regulation. Faith works as a partner to science, helping the brain to heal, rebuild, and resist the pull of addiction. This isn't a vague promise or wishful thinking—it's grounded in science. Brain scans show that people who engage in regular spiritual practices experience growth in areas of the brain that combat anxiety, depression, and addictive behaviors.

Together, neuroscience and faith form a holistic approach to recovery—one that addresses the brain, the heart, and the soul. NeuroFaith is not about choosing between science or faith; it is about embracing both, understanding that healing comes from integrating the two through the indwelling presence of God.

Trauma, Addiction, and the Journey to Restoration

Trauma sets the stage for addiction, and healing from addiction requires confronting that trauma. But this is where many recovery programs fall short—by treating the symptoms of addiction without addressing the root causes. NeuroFaith takes a different approach. It recognizes that true healing requires a deeper understanding of the brain's response to trauma, and how faith can help heal the wounds that science alone cannot reach.

In this book, we will explore how trauma rewires the brain, how addiction takes hold, and how faith and science together can break these chains. We will hear the stories of people who have walked this path—those who have been broken by addiction yet found healing through the powerful combination of neuroscience and spiritual transformation.

You will learn how trauma shapes behavior, how addiction alters the brain's chemistry, and how recovery is possible—through both scientific intervention and spiritual renewal. You will come to understand that addiction is not a life sentence. *"He heals the brokenhearted and binds up their wounds"* (Psalm 147:3, NIV). The brain can be restored, the soul can be renewed, and lives devastated by addiction can be rebuilt with the help of both science and faith.

This is a journey not just of recovery but of restoration—of becoming whole again and even more, becoming who each person was created to be. NeuroFaith offers a new way forward, a new way to understand addiction, and a new path to healing. Whether you are someone battling addiction, a loved one seeking hope, or a clinician looking for deeper insights, this book will guide you through the horrors of addiction and the promise of transformation through the fusion of brain science and faith.

Our Book's Roadmap to Recovery

As we transition into the core of this book, it's important to set a clear path for what lies ahead. Addiction, as we've discussed, is a powerful force—one that consumes the mind, body, and soul. To understand the full scope of addiction and its treatment, we must explore it from multiple angles: the science that explains its mechanics, the stories that reveal its devastation, and the hope that comes from faith and healing.

In the coming chapters, we will dive deeper into this multifaceted issue, starting with a clear understanding of addiction's scale and impact. Numbers alone can be startling, but they help us grasp the magnitude of the problem we face. From there, we'll break down the definitions of addiction—not just as a diagnosis, but as a concept that can unlock paths to true healing.

We will then venture into groundbreaking territory with epigenetics, exploring how our environments and experiences shape our genes and contribute to addiction susceptibility. Early attachment theory will also guide us, revealing how the bonds we form as children can set the stage for addiction or resilience.

As we move forward, we'll take a close look at how addiction takes hold, from that first taste or experience to the tight grip it eventually secures on a person's life. We will examine the substances and behaviors that most often pull people into addiction, along with a deep dive into the neuroscience behind this process. This is where we'll explore the brain's plasticity and how addiction rewires its functions, making recovery feel daunting—but not impossible.

Following that, we will explore various therapeutic pathways that offer healing and peace. These include cutting-edge approaches like **Polyvagal-Informed Therapy**, which helps regulate the nervous

system and foster safety in the body; **HeartMath®** , a technique that blends emotional self-regulation with heart-brain coherence to enhance resilience; and **Internal Family Systems (IFS)**, a groundbreaking model that helps individuals heal by addressing the different "parts" within themselves that hold trauma and pain. Together, these therapies create a holistic framework for recovery that integrates mind, body, and soul.

We will also explore Johann Hari's model for connected living—a refreshing take on what recovery can look like when we address disconnection at its core. Additionally, the 12-step program serves as a foundational tool, anchoring individuals in hope during the recovery process.

But recovery isn't without its challenges. We'll explore the complexities surrounding medication in treatment, questioning whether we place too much trust in pharmaceuticals and considering alternative approaches.

By the time we reach the conclusion, we will have charted a journey of hope and healing—one that combines the best of science, faith, and community. The road ahead may seem long, but it is one paved with opportunities for renewal, growth, and restoration.

So, as we proceed, know that each chapter builds upon the last. Together, they form a roadmap toward understanding addiction and, more importantly, toward reclaiming lives from its grip.

Welcome to NeuroFaith:

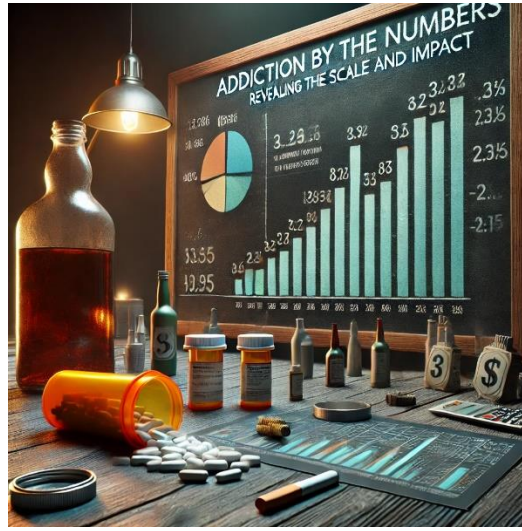
A new path of hope, healing, and restoration!

Addiction by the Numbers

Revealing the Scale and Impact

"The truth will set you free,
but first it will make you miserable."

– James A. Garfield



As nicely summarized by behavioral neuroscientist, and professor of psychology, Dr. Judith Grisel, at Bucknell University, the financial toll of this epidemic is equally

devastating. Substance abuse costs society more than five times as much as the global fight against AIDS and twice as much as cancer. In the U.S., approximately 10% of the nation's healthcare budget is funneled into the prevention, diagnosis, and treatment of substance abuse disorders However, despite these massive investments, the prospects for recovery remain tragically stagnant. In fact, recovery success rates today are no better than they were 50 years ago with traditional treatment methods (Grisel, 2019). Astonishingly, an individual battling addiction has a better chance of surviving brain cancer than achieving long-term recovery from addiction (Grisel, 2019).

The broader implications of substance abuse in the U.S. are just as alarming. Currently, 16% of Americans aged 12 and older meet the clinical criteria for a substance use disorder, a number that represents millions of individuals and families trapped in the grip of addiction The toll on public health is devastating, with excessive drug use accounting for a quarter of all deaths in the country. Globally, every single day, 10,000 lives are lost to substance abuse, a figure that underscores the merciless reach of addiction (Grisel, 2019).

These statistics paint a grim picture of a national catastrophe that shows no signs of slowing down. The opioid crisis is a relentless epidemic, claiming lives at an accelerating pace and leaving behind shattered families and broken communities. Every number represents a person—a life cut short, a family left in grief. The time for change isn't in some distant future; it's right now. If we continue on this path without radically rethinking our approach to addiction and its treatment, the death toll will continue to climb, and society will be

left to pick up the pieces, one life at a time. This isn't just a public health emergency; it's a staggering failure of the systems meant to protect, heal, and restore. How much longer can we afford to let this crisis spiral out of control? The time for action is now—before more lives are irreparably lost.

In an outstanding presentation, Dr. Kevin McCauley (2023) describes the terrors of the opioid crisis, noting that this epidemic in the United States has reached catastrophic proportions, with overdose deaths climbing at an alarming rate. In 2019, there were 70,630 drug overdose deaths, of which 70.6% (49,860) were opioid-related (Hedegaard, Miniño, Spencer, & Warner, 2020). The situation worsened dramatically in 2020, with 91,799 drug overdose deaths, and a staggering 74.8% (68,630) of those deaths involving opioids (Hedegaard, Miniño, Spencer, & Warner, 2021). By 2021, the crisis reached its highest point yet, with 106,699 overdose deaths—75.4% (80,411) linked to opioids (Hedegaard, Miniño, Spencer, & Warner, 2022).

The daily toll of this epidemic is staggering. In 2021, the United States lost 292 people per day to drug overdoses, equating to one death every five minutes. Of these, 220 deaths per day were opioid-related—meaning one person died every seven minutes from opioid overdose (Hedegaard et al., 2022). Since 1999, over one million lives have been lost to drug overdoses, with more than 644,000 of these deaths attributed to opioids (Hedegaard et al., 2022).

What makes these numbers even more shocking is the rapid escalation of the crisis. Between 2020 and 2021, the age-adjusted mortality rate

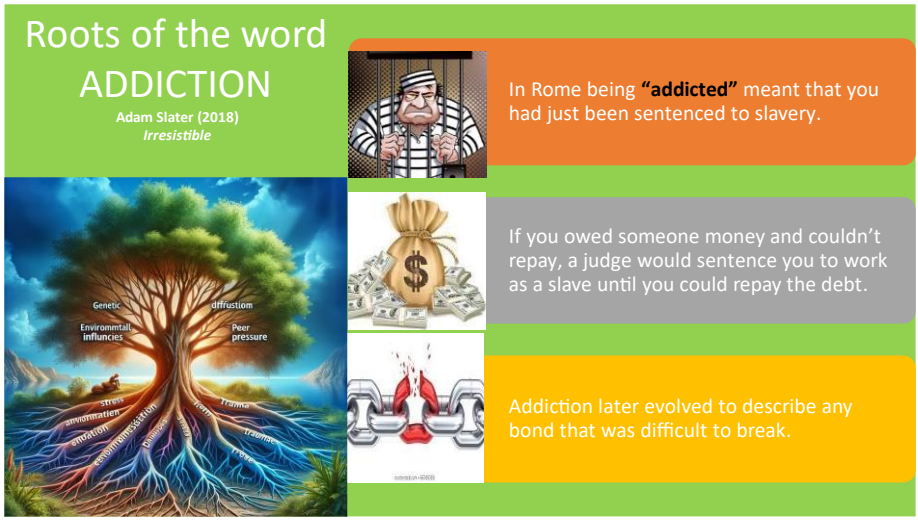
for drug overdoses increased by a staggering 31.4%, reaching 32.4 deaths per 100,000 people (Hedegaard et al., 2022). The continuous rise in opioid-related deaths demonstrates the crisis's relentless grip on the nation, despite widespread awareness and intervention efforts.

Beyond the Label

How Defining Addiction Unlocks True Healing

Definitions are the foundation of clear thinking; without them, we build on sand."

- Mortimer J. Adler



Imagine for a moment that you're standing at the edge of your life, feeling trapped and alone. You've lost yourself in behaviors you can't seem to control, despite the harm they bring. You tell yourself to stop, you swear this time will be different, but the pull is too strong, and it drags you back again and again. You look in the mirror, and instead of a whole person, you see someone broken,

trapped in a cycle you can't escape. This is the reality for so many people struggling with addiction. It's not just about substances or behaviors—it's about pain, trauma, and a search for meaning.

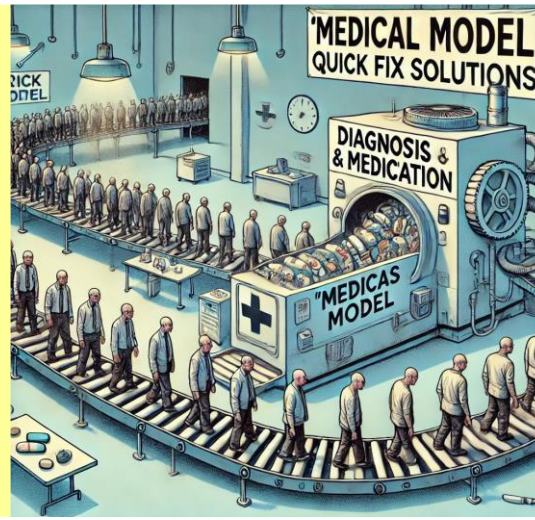
But here's the question that matters: how do we understand this experience? How do we define addiction? Because how we define addiction shapes how we help people. And when we get that definition wrong, we risk offering solutions that don't address the whole person, leaving vital needs unmet.

For years, the **American Society of Addiction Medicine (ASAM)** has defined addiction as a **chronic, relapsing brain disease characterized by compulsive substance use despite harmful consequences**. This medical model emphasizes that addiction affects both the brain and behavior and involves **complex interactions between genetic, environmental, and psychosocial factors**. It frames addiction largely as a disease of the brain, one where individuals are driven by compulsions they cannot control due to altered brain chemistry (ASAM, 2011).

ASAM Medical/Disease Model of Addiction

The ASAM (American Society of Addiction Medicine) disease model of addiction defines addiction as:

- A chronic, relapsing brain disease
- Characterized by compulsive substance use despite harmful consequences
- According to ASAM, addiction affects both the brain and behavior, involving complex interactions between genetic, environmental, and psychosocial factors.

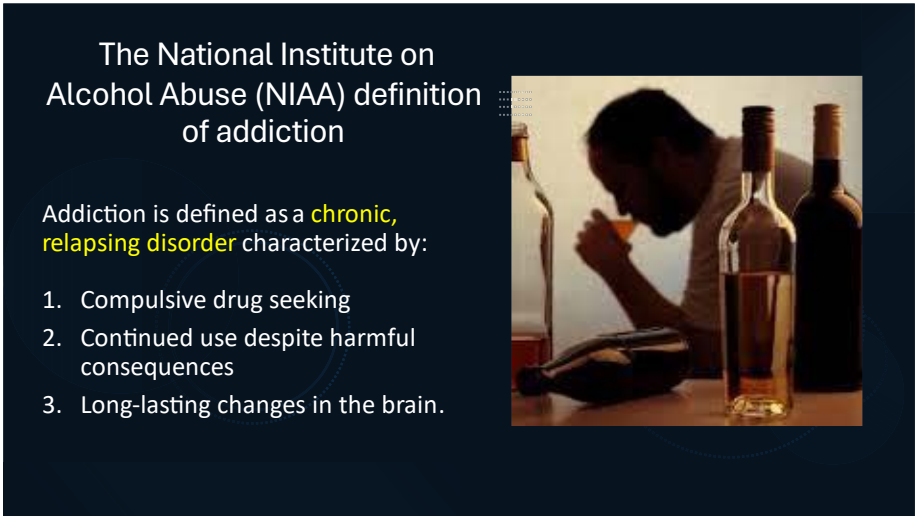


This view has shaped a lot of the treatment approaches we see today, which tend to revolve around **diagnosis and medication**—treating the brain's altered state as the root of the problem. And while this view is valuable in acknowledging the serious impact of addiction on the brain, it leaves out several crucial factors: the person's emotional, psychological, and spiritual life. It forgets to ask, *Why?* Why is this person struggling with addiction? What pain or trauma are they carrying? What unmet emotional needs are driving them to seek relief, even at great personal cost?

If we reduce addiction to just a medical issue—a brain disease that requires treatment through medication and management of symptoms—we risk missing the complexity of the human being in front of us. The conveyor belt image you may have seen—of patients processed like parts in a machine, funneled through medical interventions—paints a powerful picture of what happens when we limit our understanding of addiction to a purely biological problem.

People become cases, symptoms to be fixed. But addiction is never just a physical ailment. It's tied to the heart, the spirit, and the mind. If we only treat the brain, we're leaving the rest of the person behind.

Similarly, the **National Institute on Alcohol Abuse and Alcoholism (NIAA)** defines addiction as a **chronic, relapsing disorder characterized by compulsive drug-seeking, continued use despite harmful consequences, and long-lasting changes in the brain**. This definition reinforces the chronic nature of addiction and the powerful grip that compulsive behaviors can have on a person. It acknowledges that addiction rewires the brain, making it difficult for individuals to break free from the cycle of craving and use (NIAA, 2024).



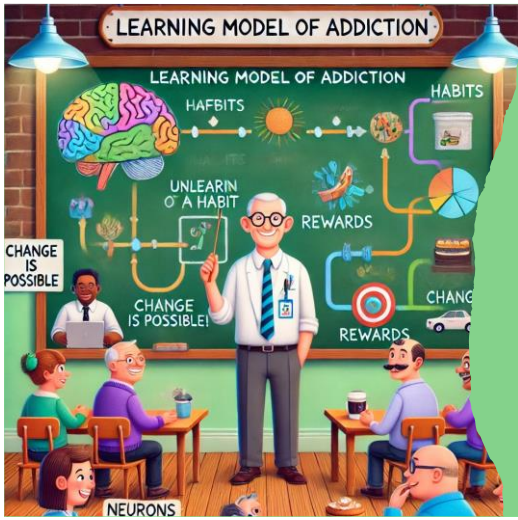
This model, too, has great value in helping us understand the persistent and relapsing nature of addiction, but it doesn't answer the deeper question: *Why?* Why does a person reach for substances in the first place? Why do they seek relief in ways that ultimately harm them? If we only focus on the compulsive behaviors, we risk missing

the emotional wounds, the traumas, and the unmet needs that often drive addiction in the first place. Addiction isn't just about the brain's reward system being hijacked—it's about what a person is running from or trying to cope with.

In fact, research has shown that when addiction is defined as a disease, people often feel relieved initially. Their **anxiety tends to go down** because they feel less personally responsible—after all, it's a disease, something happening *to* them rather than something they can control. However, there's a downside: **outcomes also tend to decline**. When addiction is viewed solely as an external, uncontrollable force, individuals can feel powerless to change their behavior. Their sense of control shifts outward, toward an **external locus of control**, where recovery is seen as something that depends on factors outside themselves, like medication or external support systems.

On the other hand, when addiction is not defined as a disease, the initial reaction is often different. **Anxiety tends to increase** because individuals may feel more responsible for their actions, which can be overwhelming at first. But this is where hope lies: as anxiety rises, so does **the potential for better outcomes**. Without the disease label, individuals are encouraged to see addiction as something they can learn to manage, something they have **internal control** over. This shift from external to **internal locus of control** fosters personal responsibility and empowerment, helping people see that they are not helpless victims of a disease but rather individuals capable of growth, change, and healing (McGregor, Susanne, 2012).

This is why **Professor Mark Lewis's Learning Model of Addiction** offers such an important shift in perspective in his seminal book, *The Biology of Desire: Why addiction is not a disease*. Lewis defines addiction as a **learned behavior,** not as a chronic brain disease —a result of the brain's ability to adapt and change through repeated experiences. According to this model, addiction is not an irreversible condition but rather a **behavior that can be unlearned**. It happens because the brain, through its neuroplasticity, becomes wired to seek out the rewards and relief that substances provide. Over time, the brain becomes highly sensitive to cues associated with substance use, leading to cravings and compulsive behaviors (Lewis, 2015).



Learning Model of Addiction

Professor Mark Lewis views addiction as a chronic brain disorder, Lewis's model conceptualizes addiction as a learned behavior influenced by neuroplasticity and personal experiences.

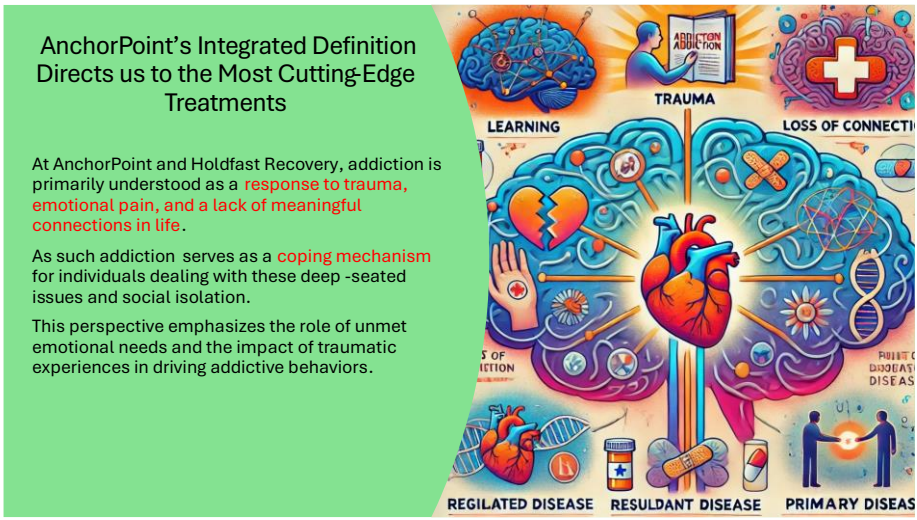
Neuroplasticity and Learning

1. Addiction is seen as a result of the brain's capacity to adapt and change in response to repeated experiences.
2. The brain's reward system becomes highly sensitive to cues associated with substance use, leading to strong cravings and compulsive behaviors.

What's so powerful about this model is that it gives us **hope**. If addiction is learned, it can be unlearned. The brain can be rewired toward healthier patterns, and recovery becomes not just a process of managing symptoms but a journey of **retraining the mind**. This model also shifts the focus back to the person's **life experiences**. Addiction,

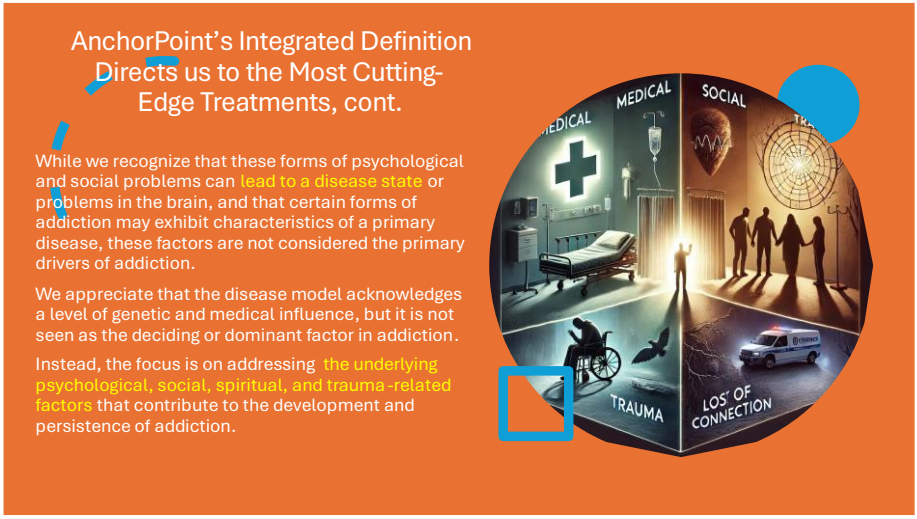
in this view, is not something that happens in a vacuum—it's shaped by personal history, environment, and the emotional struggles a person faces. Lewis's model helps us see that addiction is often a coping mechanism, a way to deal with pain, trauma, or emotional distress.

At **AnchorPoint** and **Holdfast Recovery**, this understanding forms the core of how addiction is treated. These centers see addiction as a **response to trauma, emotional pain, and a lack of meaningful connections**. Addiction, in this view, is not just about the brain's chemistry; it's about the **heart and soul**. When someone is caught in the cycle of addiction, they are often trying to cope with deep-seated emotional wounds, using substances or behaviors as a way to numb the pain or fill the void left by broken relationships or unhealed traumas.



This understanding leads to a **holistic approach** to treatment. At AnchorPoint, they ask the questions that matter: "What's behind this

addiction? What pain are you trying to numb? What loss are you grieving? Where do you feel disconnected from yourself and others?" By asking these questions, they get to the **root of the issue**. They understand that addiction is often a symptom of a deeper emotional struggle, a **coping mechanism** for dealing with pain that feels too overwhelming to face alone.



Because of this understanding, the treatment at AnchorPoint is about much more than just managing cravings or detoxing from substances. It's about healing the **whole person**—their body, mind, heart, and spirit. They focus on **trauma-informed care**, which means they recognize how deeply trauma can affect a person's ability to recover. They provide **personalized treatment plans** that consider each person's unique story, their struggles, and their strengths. And they emphasize the importance of **community and connection** because they know that isolation is one of the most painful aspects of addiction—and one of the hardest to overcome alone.

But perhaps the most transformative part of AnchorPoint's approach is their focus on **spiritual healing**. They understand that addiction is not just a physical or emotional struggle for many people —it's a **spiritual one**. People battling addiction often feel lost, disconnected from themselves, others, and something larger than themselves. That's why AnchorPoint incorporates **spiritual-based therapy**. Their approach is grounded in Christian values, but they are respectful of all spiritual beliefs, knowing that the search for meaning and connection is universal. For many, finding that **spiritual peace** is key to overcoming addiction and rebuilding a life filled with purpose.

So, why does getting the definition of addiction right matter so much? Because how we define addiction determines how we treat it. If we see addiction only as a brain disease, we will offer solutions that focus on the brain. But if we see addiction as a **complex, human experience**—one that involves pain, trauma, disconnection, and the need for meaning—then our treatment must reflect that understanding. It must be **holistic**, compassionate, and person-centered.

At AnchorPoint and Holdfast Recovery, the definition of addiction is broad enough to encompass the **whole person**. And because of that, their treatment is **effective, transformative, and long-lasting**. They offer more than just sobriety—they offer healing, hope, and the chance to rebuild a life filled with **purpose and connection**.

At Holdfast Recovery and AnchorPoint, we embrace a holistic view of healing, where every person is seen for who they truly are—not just their addiction. We welcome you into a space filled with compassion,

understanding, and unwavering commitment to your journey toward lasting recovery.

Our starting point is Trauma-Informed Care. We understand that many who struggle with addiction have endured trauma, and we make it a priority to ensure that your care is sensitive to these past experiences. We create a safe, nurturing environment where healing begins without the fear of retraumatization.

We also believe that your recovery plan should be as unique as you are. That's why we focus on Personalized Treatment Plans, crafted to fit your specific needs, challenges, and strengths. By tailoring our approach, we make your journey more meaningful and effective.

Our philosophy is Holistic. We don't just focus on the addiction—we address the emotional, relational, and spiritual challenges that often accompany it. By treating the whole person, we aim to help you not only achieve sobriety but also find a deeper sense of peace, connection, and purpose.

Connection is key. We know that building relationships and fostering a sense of Community can be transformative. You won't be walking this road alone—we create an environment where you can find the support and belonging that are crucial for long-term recovery.

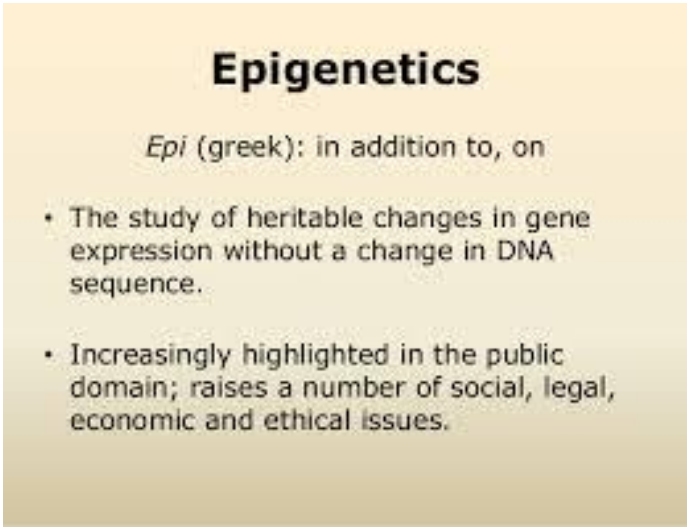
We offer a variety of Therapeutic Modalities to suit your individual needs. Whether you benefit from Cognitive Behavioral Therapy (CBT), Internal Family Systems (IFS), or Polyvagal-Informed Therapy, we make sure you have the tools and resources to heal on all levels—emotionally, mentally, and physically.

Spiritual-Based Therapy is also an essential part of our approach. While we are rooted in Christian values, we warmly welcome individuals of all beliefs. Our goal is to help you find your own sense of purpose and inner peace, whether through faith or another spiritual path.

At Holdfast Recovery and AnchorPoint, you are so much more than a patient—you are a person with a unique story. We are here to walk with you every step of the way, providing the compassionate care and support you need to heal, grow, and rediscover yourself.

Addiction is not a life sentence. It's not a label that defines who you are. It's a condition that can be treated, healed, and transformed. But only if we understand it in its full complexity. And that's why getting the definition of addiction right is so incredibly important. Because when we do, we can offer people the kind of help that **truly changes lives.**

This Crazy Thing Called Epigenetics

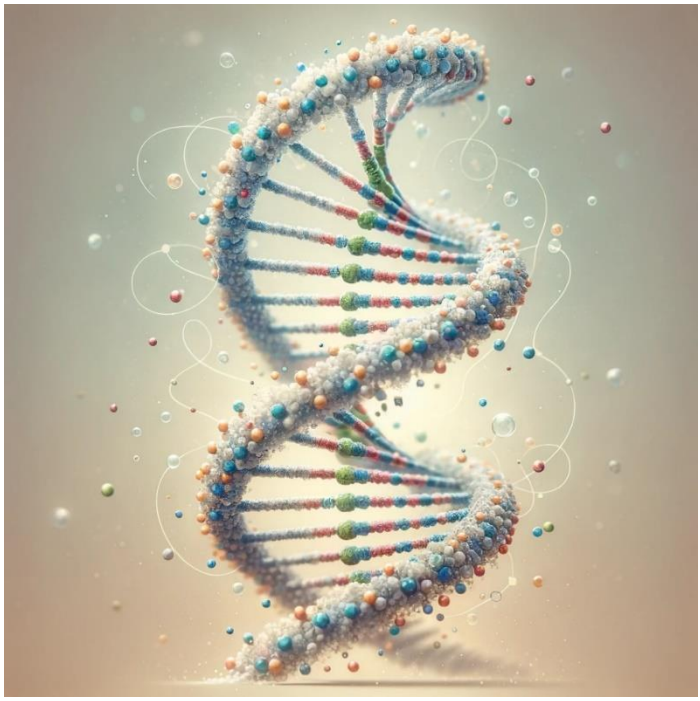


These are exciting times. New science enables us to better understand what external and internal factors alter us. Our physical health, emotional well-being, and longevity are not only impacted by the hard-wired genetic code we inherit, but our genome is also influenced by environmental factors, including our lifestyle. Imagine that the experiences you endure—your stresses, challenges, and even traumas—can leave a lasting impact not only on

your life but also on the lives of future generations. This is the fascinating realm of epigenetics.

Contrary to the long-held belief that DNA is an unchanging blueprint, we now know that our genetic material can be influenced and altered by environmental factors, including stress and trauma. These external forces leave "marks" on our genes, which can then be passed down, potentially affecting the health and behavior of our descendants. As *Exodus 20:5-6 (NLT)* reminds us, *"I lay the sins of the parents upon their children; the entire family is affected—even children in the third and fourth generations of those who reject me. But I lavish unfailing love for a thousand generations on those who love me and obey my commands."* This verse reflects the profound truth that the actions and choices of one generation can affect future ones, much like epigenetics shows how trauma and life experiences leave biological marks that are inherited by our descendants.

Epigenetics offers a powerful perspective on how trauma can influence not only our own biology but also the biological legacy we pass on to future generations. But just as the Bible promises lasting blessings to those who live in love and faithfulness, this science also shows the hope that positive changes and healing can influence future generations. This chapter explores the growing body of research on the epigenetics of trauma and stress, shedding light on how our environment can influence gene expression across generations and challenging traditional views on heredity and resilience.



Epigenetics literally means **"above"** or **"on top of"** genetics. It refers to external modifications to DNA that turn genes "on" or "off." These modifications do not change the DNA sequence but instead affect how cells "read" genes. A very exciting trend in epigenetic research involves investigating the process by which our genetic tendencies are altered or influenced in their expression by outside exposure or stimuli. These epigenetic changes can last through multiple cell divisions for the duration of the cell's life. However, what is particularly compelling is that these changes may persist for multiple generations within our family line (Kain & Terrell, 2018).

Early trauma, for example, is one of the factors that can cause epigenetic changes, which can be passed on to the next generation

and beyond. Researchers have come to appreciate that the horrors of the **Holocaust** not only impacted those who suffered the terror of the concentration camps. The Holocaust remains one of the darkest chapters in human history, with its horrors leaving deep emotional, psychological, and physical scars on survivors. But recent research into epigenetics suggests that the trauma endured during this period didn't just affect those who lived through it—it may have had profound biological effects on their descendants as well. The emerging science of epigenetics shows that extreme trauma, like that experienced during the Holocaust, can alter how genes are expressed, potentially impacting the health and well-being of future generations.

Studies have found that the children and even grandchildren of Holocaust survivors may exhibit altered stress responses and higher risks for mental health disorders, such as PTSD, anxiety, and depression. These changes are not due to alterations in the DNA sequence itself but to "epigenetic marks"—molecular modifications that influence how genes are turned on or off. Research conducted by Yehuda et al. (1998) demonstrated that Holocaust survivors and their descendants show distinct patterns of DNA methylation, a key epigenetic mechanism linked to stress and trauma.

This groundbreaking work suggests that the trauma experienced by Holocaust survivors has been biologically embedded in their descendants. These findings are part of a larger body of research exploring the transmission of trauma through epigenetic changes, challenging our understanding of inheritance. It raises critical questions about how trauma at such a massive scale can shape not only individual lives but also entire family lineages. By exploring the

epigenetics of the Holocaust, we can gain deeper insights into the long-lasting biological effects of extreme adversity and how trauma may echo across generations (Yehunda et al.,1998).

Barbed Wire Clipart. The Holocaust ...clker.com. Wikipedia

Another sad example of the impact o trauma on subsequent generations is the **Dutch Famine in World War II**. In September 1944, trains in the Netherlands ground to a halt. Dutch railway workers were hoping that a strike could stop the transport of Nazi troops and help the advancing Allied forces. Sadly, the Allied campaign failed, and the Nazis punished the Netherlands by blocking food supplies, plunging much of the country into famine. By the time the Netherlands was liberated in May 1945, more than 20,000 people had died of starvation. Pregnant women, it turns out, were uniquely vulnerable, and their children were influenced by the famine throughout their lives. When these children became adults, they ended up a few pounds heavier than average. In middle age, they had

higher levels of triglycerides and LDL cholesterol, and they experienced higher rates of conditions such as obesity, diabetes, and schizophrenia. By the time they reached old age, those risks had taken an enormous toll, according to the research of L.H. Lumey, an epidemiologist at Columbia University. In 2013, he and his colleagues reviewed the death records of hundreds of thousands of Dutch people born in the mid-1940s and found that the people who had been in utero during the famine died at a higher rate by 10% at 68 years of age (New York Times, 2018).

Heijmans and his colleagues found that individuals prenatally exposed to famine during the Dutch Hunger Winter in 1944 to 1945 had, 6 decades later, less DNA methylation of the imprinted IGF2 gene than their unexposed, same-sex siblings. He wrote, "The association was specific for periconceptional exposure, reinforcing that very early mammalian development is a crucial period for establishing and maintaining epigenetic marks. These data are the first to contribute empirical support for the hypothesis that early-life environmental conditions can cause epigenetic changes in humans that persist throughout life" (Heijmans et al., 2008).

Food rations that were dropped into the Netherlands in 1945.
Credit...Dutch National Archive

For the science nerds among us: Three primary mechanisms drive epigenetic changes in gene expression, which I will explain shortly. But first, a biology refresher: DNA from humans is made up of approximately **three billion nucleotide bases**. Four fundamental types of these bases comprise DNA: Adenine, Cytosine, Guanine, and Thymine, commonly abbreviated to **A, C, G, and T**, respectively. The sequence, or the order, of the bases is what determines our life instructions. Interestingly, our DNA sequence is mostly similar to the DNA of a chimpanzee, and only a fraction of distinctively different sequences makes us human. There are about 20,000 genes in total. **Genes** are specific sequences of bases (parts of DNA) that provide unique and tailored instructions on how to make important proteins (What is Epigenetics, 2019). **Proteins** are large and very complex molecules that play many critical roles in the body and do most of the

work in cells. Proteins are required for the structure, function, and regulation of the body's tissues and organs and are made up of hundreds and thousands of smaller units called **amino acids**, which are attached to one another in long chains. There are 20 different types of amino acids, which combine to make various proteins. The sequence of amino acids determines each protein's unique 3-dimensional structure and specific function. Proteins can be described according to their very large range of bodily functions, including antibody, enzyme, messenger, and structural components (NIH, 2020).

With that brief biology refresher complete, we can now explore the three most well-known and best understood mechanisms through which epigenetic changes in gene expression occur. As noted earlier, although a person's complement of genes—in other words, our genome—remains essentially the same from birth onward, aside from mutations that can change gene function, various environmental factors—such as developmental exposures, diet, stress, and emotional challenges—chemically modify DNA and the proteins associated with it throughout a person's life. In addition, an individual's histones, or the proteins around which DNA winds when it is compacted into chromosomes, carry different chemical **tags**, which are also influenced by environmental events. These tags are thought to alter the extent to which DNA is wrapped around the histones, thereby affecting the availability of genes for activation. (Suitable My Nature, 2014; Fraga et al., 2005).

Three basic epigenetic processes:

Epigenetics is like the software that tells your body's cells how to read the DNA code. It does not change the DNA itself but controls which parts of it are active or inactive, or as some say, read or not read. There are three main ways this control happens:

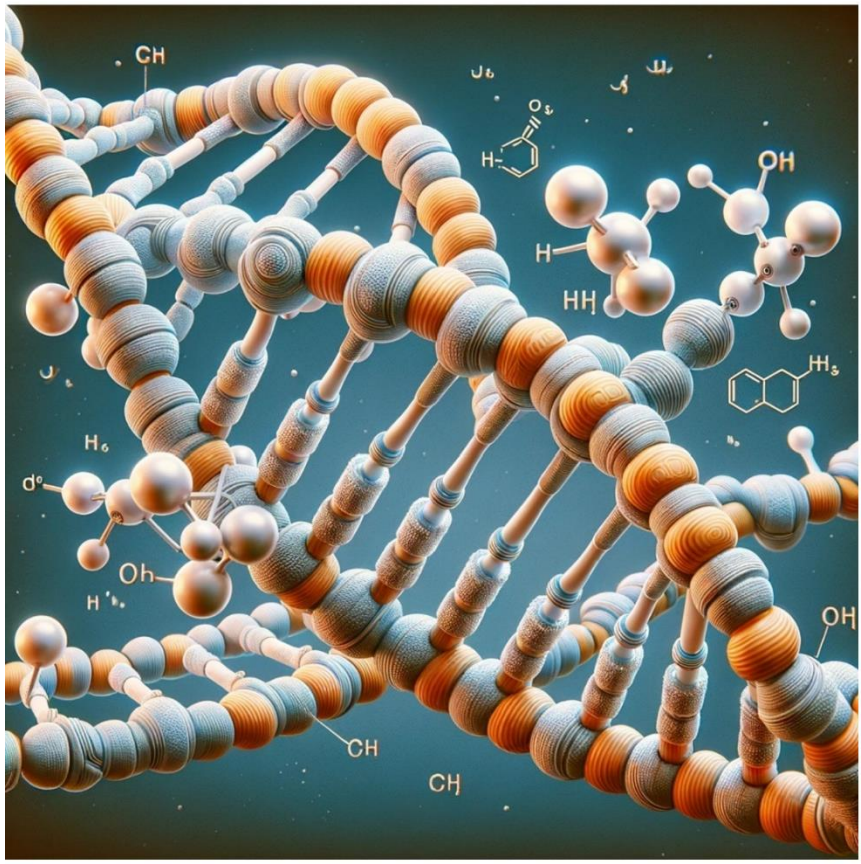
1. **DNA Methylation**: This is like putting a block on a part of your DNA. When certain parts of the DNA get a tiny chemical tag called a methyl group, that part of the DNA is turned off. It is a bit like putting a piece of tape over a light switch so it cannot be turned on. This helps control when certain genes are used by the cell (Moore et al., 2013).

2. **Histone Modification**: Imagine your DNA is wrapped around spools called histones. By changing these spools slightly, the cell can control how tightly the DNA is wrapped. If the DNA is wrapped tightly, it cannot be used much. But if it is loose, the genes can be turned on or read more easily. Different chemical tags can be added to the histones to control this wrapping and unwrapping process (Jenuwein & Allis, 2001).

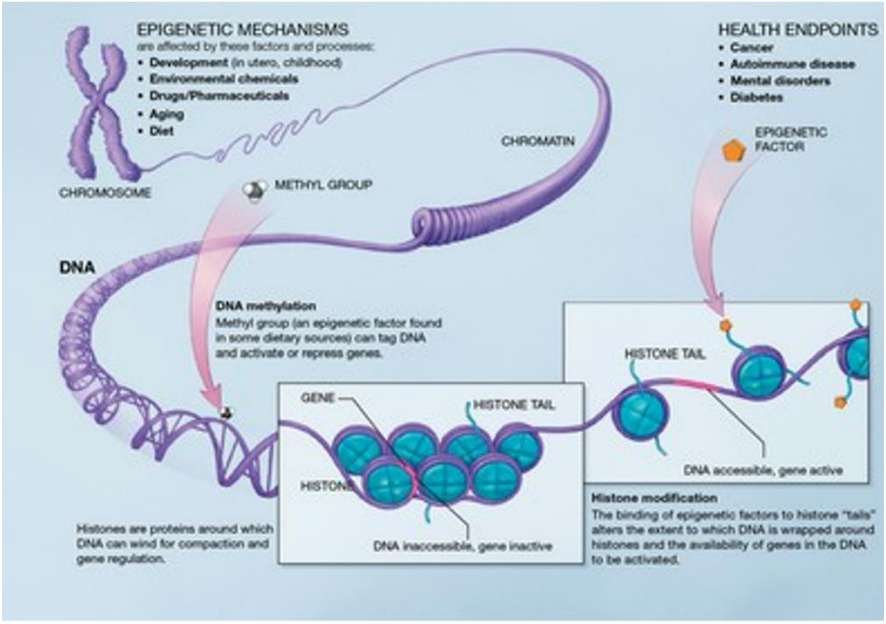
3. **RNA-associated Silencing**: This involves tiny RNA molecules that do not code for proteins but can control whether genes are turned on or off or read or not read. These RNAs can stick to the messenger RNAs (mRNAs) that carry the DNA's instructions to the rest of the cell. When they stick together, the mRNA cannot tell the cell to make a protein anymore. It is like when someone puts a note on your door with

instructions, but then someone else covers it with another note saying, "Ignore this" (Filipowicz et al., 2008).

These processes are like the cell's way of reading the DNA instruction manual, deciding which instructions to follow and which to ignore, allowing it to react to what is needed at any given moment.



Representation of a DNA molecule that is methylated.



Wikipedia (2023)
https://en.wikipedia.org/wiki/Epigenetics

Takeaway: Understanding epigenetics is both fascinating and unsettling. On the one hand, it's incredible to learn how our lifestyle choices can influence our genetic expression and the health of future generations. On the other hand, it's daunting to realize that poor choices—such as neglecting our diet, failing to exercise, living in chronic stress, exposure to environmental toxins, or overreliance on medications—can leave lasting marks on our genome. These changes don't just affect our own physical and emotional well-being; they can also be passed down to our children and grandchildren, potentially shaping their health for generations to come.

However, the flip side of this is equally powerful: positive choices, such as managing stress, nurturing strong relationships, eating well, staying active, and living mindfully, can protect and even enhance the

health of our descendants. This knowledge gives us a sense of responsibility and control over not only our own lives but also the well-being of future generations. As *Deuteronomy 30:19 (NIV)* reminds us, *"This day I call the heavens and the earth as witnesses against you that I have set before you life and death, blessings and curses. Now choose life, so that you and your children may live."* This verse emphasizes the profound importance of our choices and the generational impact they can have, much like the lessons of epigenetics.

With this in mind, we can more fully appreciate how the upcoming discussions—on topics like attachment, adverse childhood experiences (ACEs), Polyvagal Theory, and disconnected living—aren't just abstract concepts. They directly impact our minds, bodies, and even our genes. These factors shape who we are at a fundamental level, influencing not just our own health but potentially the genetic legacy we leave behind. Through the lens of epigenetics, the interconnectedness of our lifestyle, emotional well-being, and genetic health becomes all the more profound.

Early Attachment is Where it Starts

Attachment is a really big deal and has lifelong implications for all of us. Safe and secure attachment are absolutely necessary for developing healthy and secure relationships, emotional health, and the ability to regulate our emotions. Two early pioneers in this field, Dr. John Bowlby (1969) and Dr. Mary Ainsworth (1973), carved the way to our understanding of attachment and child

development theory. They defined attachment as a deep and enduring emotional bond that leads to connections between us across time and space. This attachment is not always mutual and can travel in only one direction. For example, a child can attach to a parent, but the parent does not always attach to the child or vice versa (Kain & Terrell, 2018).

The importance of secure attachment echoes a biblical truth. As *Proverbs 22:6 (NIV)* says, *"Start children off on the way they should go, and even when they are old they will not turn from it."* This verse reflects the profound impact early relationships have on a person's development and well-being throughout their life. When children form strong, healthy bonds early on, it can set a foundation that lasts into adulthood.

By way of background on Dr. Bowlby, in an interview with Dr. Milton Stenn in 1977, Bowlby explained that his career began in the field of medicine, following in the footsteps of his father, who was a surgeon.

His father was a well-known surgeon in London, and John explained that his father encouraged him to study medicine at Cambridge. He followed his father's suggestion but was not terribly interested in anatomy and natural sciences. However, during his time at Trinity College, he became particularly interested in developmental psychology, which led him to give up medicine by his third year. When John left medicine, he accepted a teaching opportunity at a school called Priory Gates for six months, where he worked with maladjusted children. John explained that one of the reasons why he went to work at Priory Gates was because of the influence of an "intelligent" staff member, John Alford. John explained that his experience at Priory Gates had been very influential on him. "It suited me very well because I found it interesting. And when I was there, I learned everything that I have known; it was the most valuable six months of my life, really. It was analytically oriented." He added that the experience at Priory Gates was extremely important to his career in research as he learned that the problems of today should be understood and dealt with at a developmental level (Kanter, 2007).

Bowlby was not the only act in town as he collaborated extensively with Dr. Mary Ainsworth. Mary was born in Glendale, Ohio. When she was 15, she read William McDougall's book, *Character and the Conduct of Life*, which inspired her to pursue psychology. While teaching at John Hopkins, Mary began working on creating a means to measure attachments between mothers and their children. It was this that led her to develop her famous "Strange Situation" assessment, in which a researcher observes a child's reactions after a mother briefly leaves her child alone in an unfamiliar room. The

child's reaction after the separation and upon the mother's return revealed important information about attachment. Based on her observations and research, Mary determined three main styles of attachment: secure, anxious-avoidant, and anxious-resistant. Since these initial findings, her work has spawned numerous studies into the nature of attachment and the different attachment styles that exist between children and their caregivers (VeryWellMind, 2019)

Rudolph Schaffer and Peggy Emerson (1964) analyzed the number of attachment relationships that infants form in a longitudinal study with 60 infants. In their study, infants were observed every four weeks during the first year of life, and then once again at 18 months. Schaffer and Emerson determined that four distinct phases of attachment emerged:

> **"Pre-attachment stage:** From birth to three months, infants do not show any particular attachment to a specific caregiver. The infant's signals, such as crying and fussing, naturally attract the attention of the caregiver and the baby's positive responses encourage the caregiver to remain close" (Schaffer & Emerson, 1964).
>
> **Indiscriminate attachment:** From around six weeks of age to seven months, infants begin to show preferences for primary and secondary caregivers. During this phase, infants begin to develop a feeling of trust that the caregiver will respond to their needs. While they will still accept care from other people, they become better at distinguishing between familiar and unfamiliar people as they approach seven months of age. They

also respond more positively to the primary caregiver" (Schaffer & Emerson, 1964).

Discriminate attachment: At this point, from about seven to eleven months of age, infants show a strong attachment and preference for one specific individual. They will protest when separated from the primary attachment figure (separation anxiety) and begin to display anxiety around strangers (stranger anxiety)" (Schaffer & Emerson, 1964).

Multiple attachments: After approximately nine months of age, children begin to form strong emotional bonds with other caregivers beyond the primary attachment figure. This often includes the father, older siblings, and grandparents" (Schaffer & Emerson, 1964).

As nicely summarized by Lyons-Ruth (1996), the basic attachment styles culminating from John Bowlby and Mary Ainsworth's research and the fourth by Drs. Mary Main and Judith Solomon's (Main & Solomon, 1986) work include:

Secure attachment:

Secure attachment is marked by distress when separated from caregivers and joy when the caregiver returns. Remember, these children feel secure and are able to depend on their adult caregivers. When the adult leaves, the child may be upset, but he or she feels assured that the parent or caregiver will return.

When frightened, securely attached children will seek comfort from caregivers. These children know their parent or caregiver will provide comfort and reassurance, so they are comfortable seeking them out in times of need" (Lyons-Ruth, 1996).

Ambivalent attachment:

Ambivalently attached children usually do not appear too distressed by the separation, and, upon reunion, actively avoid seeking contact with their parent, sometimes turning their attention to play objects on the laboratory floor. This attachment style is considered relatively uncommon, affecting an estimated 7 percent to 15 percent of U.S. children. Ambivalent attachment may be a result of poor parental availability. These children cannot depend on their mother (or caregiver) to be there when the child is in need" (Lyons-Ruth, 1996).

Avoidant attachment:

Children with an avoidant attachment tend to avoid parents or caregivers. When offered a choice, these children will show no preference between a caregiver and a complete stranger. Research has suggested that this attachment style might be a result of abusive or neglectful caregivers. Children who are punished for relying on a caregiver will learn to avoid seeking help in the future" (Lyons-Ruth, 1996).

Disorganized attachment:

Children with a disorganized attachment often display a confusing mix of behavior and may seem disoriented, dazed, or confused. Children may both avoid or resist the parent. Some researchers believe that the lack of a clear attachment pattern is likely linked to inconsistent behavior from caregivers. In such cases, parents may serve as both a source of comfort and a source of fear, leading to disorganized behavior" (Lyons-Ruth, 1996).

In 1978, Mary Ainsworth and her colleagues reported that studies on the three initial attachment classifications revealed: 70 percent of American infants have been classified as secure, 20 percent as avoidant-insecure, and 10 percent as resistant-insecure (Ainsworth et al., 1978). Kain and Terrell (2018) warn of concerning declines in secure attachment, noting that in more recent research populations, the rates of secure attachment have declined by 10 percent (Andreassen et al., 2007).

Studies reveal that interactions during the first three years of life can affect cognitive development and will impact the physical, emotional, and mental health of children as they age and develop (Colmer et al.,

2011). Typically, a parent's emotional response will serve as a **template** for helping their child learn about emotion. As parents model appropriate emotion regulation through conversations or actions, children learn to control/regulate their emotions. In contrast, insecurely attached children may learn to mask their emotional distress or exaggerate it to gain their parent's attention, therefore compensating for a parent who is not consistently responsive (Laible, 2010). This type of maladaptive behavior has devastating consequences, resulting in poor social skills, emotional dysregulation, depression, anxiety, peer exclusion, social rejection, and/or low self-esteem (Lewis et al, 2015; Newman, 2017). So, those of us who are young parents should ensure that we spend lots and lots of time with our infants and children in healthy, safe, and connected ways, particularly early in life, to develop secure attachment so they can have joy, fulfilling relationships, and emotional stability.

Psychiatrist and Internal Family Systems (IFS) leader Dr. Frank Anderson presents a refreshingly new view on attachment as it relates to IFS therapy, which will be explained later in this book in the *Therapeutic Pathway to Peace* chapter. Anderson (2021) notes that he doesn't fully subscribe to the concept of attachment styles as such, nor does he believe they are formed solely in the first few years of life. Rather, he posits that different parts of children attach to different parts of caregivers throughout their lives. He contends that most attachment styles, when seen through an IFS lens, are actually wounds or protective parts that develop as a result of difficult or challenging interactions. They have a tremendous influence on our lives as adults, especially when they are not adequately addressed or

healed. Dr. Anderson adds that we each have different parts that relate to different parts of other people. Finally, he posits that we each have experiences with each of these "styles" or "different parts," which connect to the various parts of people with whom we are in connection (Anderson, 2021).

Takeaway: Attachment is one of the most powerful forces that shapes our emotional lives and relationships, influencing how we connect with others from childhood through adulthood. Secure attachment, formed through safe, consistent, and caring relationships, is key to emotional regulation, building trust, and forming healthy, lasting connections. Early pioneers like Dr. John Bowlby and Dr. Mary Ainsworth showed us just how deep this impact runs. Ainsworth's famous research identified different attachment styles—secure, avoidant, and anxious—that play a major role in how we relate to others, manage stress, and navigate relationships throughout life.

When attachment is insecure—whether due to inconsistent, neglectful, or unavailable caregiving—children can struggle with emotional regulation, anxiety, and difficulties forming healthy relationships. These early interactions profoundly shape mental, emotional, and even physical health, laying the groundwork for how we cope with challenges.

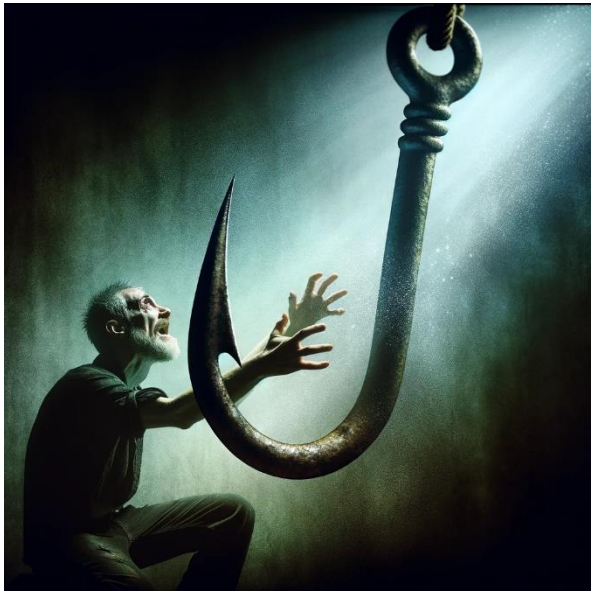
However, recent insights, like those from Dr. Frank Anderson, offer a fresh perspective on attachment. Anderson's work in Internal Family Systems (IFS) therapy suggests that attachment patterns aren't set in stone in early childhood. Instead, he proposes that different parts of our personality attach to different parts of others

and that these attachment styles reflect emotional wounds and protective parts we develop in response to life's difficulties. According to Anderson, healing and growth are possible at any stage of life as we integrate these parts and form healthier connections (Anderson, 2021).

In short, understanding attachment helps us see how our earliest bonds shape our emotional landscape and set the stage for stable, fulfilling relationships. By nurturing secure attachment, especially early in life, we can promote long-lasting emotional health and resilience, not only for ourselves but for future generations. As *1 John 4:18 (NIV)* reminds us, *"There is no fear in love. But perfect love drives out fear, because fear has to do with punishment. The one who fears is not made perfect in love."* Secure attachment, rooted in love and care, can indeed drive out fear, helping us build trusting and fulfilling relationships that last a lifetime.

From First Taste to Full Grip

The Journey Into Addiction



"Shallow men believe in luck or in circumstance. Strong men believe in cause and effect."

– Ralph Waldo Emerson

So, let's look at the root cause of all of this. There are writers who support singular theories, and while each one has its own merit, I believe people fall into addiction for a myriad of reasons. It is important and helpful that we have some understanding of the root causes and the neurological changes that ensue in the brain, body, and soul, as this enables us to deal with **blame and shame,** putting us in a better place to begin the healing process.

We believe that many addictions arise from three main reasons:

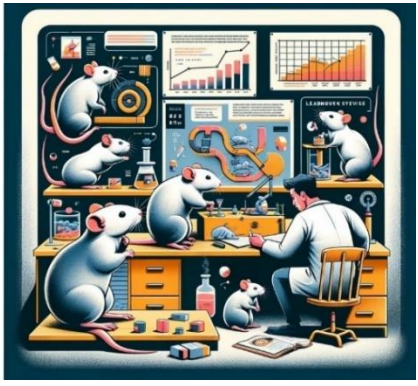
1. Lack of connected living (Hari, 2015)
2. Trauma (Barta, 2018)
3. It started off as just plain fun

While many ascribe **"moral failure"** as a root cause, I disagree with this wholeheartedly. Although a descent into addiction can lead to moral issues (e.g., lying to cover-up, sexual acting out, etc.), it is generally not moral failure that first sets addiction into motion. This is essential to know, as shaming only makes matters worse. Dr. Ted Roberts, who served in Vietnam as a fighter pilot, then became pastor, and subsequently distinguished himself as an expert in the treatment of sexual addictions, writes, "Guilt is about what we have done, but shame is about who we are. With guilt we can always get a fresh start. With shame we are caught in a noose because the

problem stays with us…The critical issue to remember about shame is that it causes incredible pain" (Roberts, 2008, pp. 73 – 74).

Reason One: Disconnection

Johann Hari, author of *Lost Connections* and *Chasing the Scream,* and one of my literary heroes, believes that much of addiction starts with a lack of "connection." In a compelling TED talk on addiction, Hari described the value of **connection** with references to Skinner's research on addiction and ensuing Rat Park research conducted by Dr. Bruce Alexander (2010).



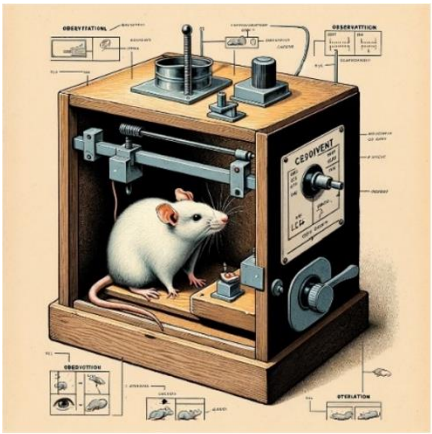
What can rats teach us about addiction?

In the 1960's, well-known psychologist B.F. Skinner conducted a series of studies involving rats in what became known as **Skinner Boxes**. In these experiments, the rats were frequently starved and isolated and could get tiny pellets of food as long as they pushed a little lever within the Skinner Box over and over. In ensuing addiction studies, these rats would be tethered to the box's ceiling with a surgically-implanted needle that extended to the rats' jugular vein, and each time the rats pushed the lever, they would get a small morphine drip into their brain. The result of these rather barbaric and cruel studies was that the rats became hopelessly

addicted, which led Skinner and his colleagues to conclude that the power of the addiction was solely in the drug itself.

A decade later, a Canadian researcher, Dr. Bruce Alexander, became very skeptical of this research, given that not all people who take a drug will become addicted to it. Knowing that rats in their natural habitat, like people, are powerfully social, Alexander wondered if the Skinner experiments merely indicated that isolated rats are more likely to become addicted than non-isolated rats. With this premise in mind, Alexander and his research team developed an experiment with two groups of rats, each having free access to drug water, with one group being kept in isolation, similar to the Skinner Box experiments and the other group consisting of several rats together in large open areas filled with fun things that rats love, such as loads of food, platforms for climbing, running wheels, and tin cans to hide in. Happily, the second group, was co-ed, and the rats were free to have sex, which they apparently enjoy similar to humans. The second group setting eventually came to be affectionately known as the **Rat Park.** The results were stunning; the isolated rats in the Skinner Boxes became total addicts, and the rats in the open and enjoyable spaces of the Rat Park never became addicted, in fact, most of them never even touched the morphine water at all. Alexander eventually concluded that addiction was less about the pull of the drug and more about the condition of the life of the rats; specifically, without **connection** and **socialization** a rat is more susceptible to addiction. Moreover, he surmised, "People do not have to be put into cages to become addicted – but is there a sense in which people who become addicted actually feel 'caged?' The view from Rat Park is that today's flood of

addiction is occurring because our hyper-individualistic, hypercompetitive, frantic, crisis-ridden society make most people feel socially and culturally isolated…They find temporary relief in addiction to drugs or any of a thousand other habits (such as media – emphasis mine) and pursuits because addiction allows them to escape from their feelings, deaden their senses, and experience an addictive lifestyle as a substitute for a full life" (Alexander, 2010). Alexander later adds, "Addiction is not about your chemical hooks, it is about your cage, it is an adaptation to your environment."

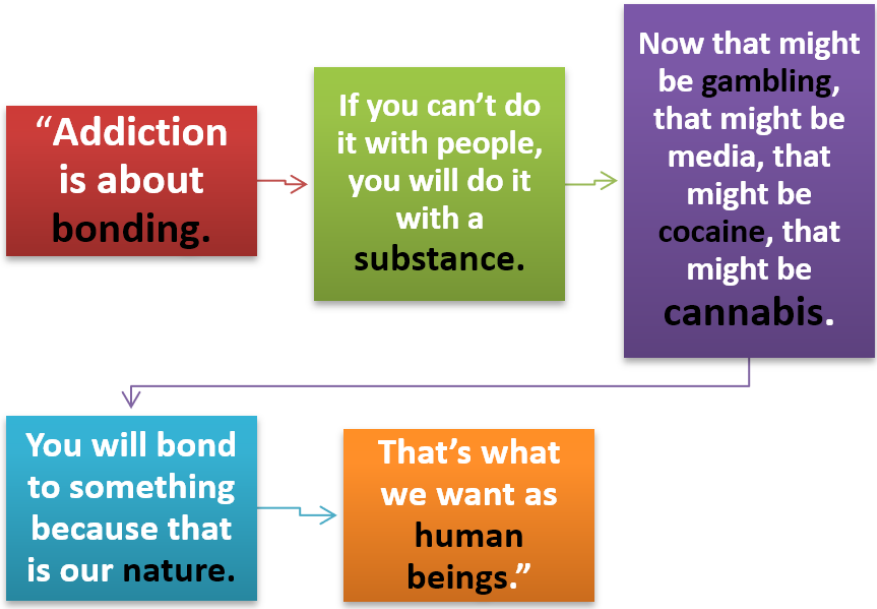


Skinner Box

Rat Park

Hari (2015) in a TED talk nicely summarized his thoughts on the matter, "I've been talking about how disconnection is the major driver of addiction, and it's weird to say (addiction has) grown, because we're the most disconnected society that's ever been, surely." He adds, "Addiction is about bonding. If you can't do it with people, you will do it with a substance. Now, that might be gambling, that might be media, that might be cocaine, that might be cannabis; you will

bond to something because that is our nature. That's what we want as human beings."



Reason Two: Trauma

Trauma exposure, particularly child maltreatment (e.g., neglect, emotional, physical and sexual abuse), has been established as one of the main determinants of emotional dysregulation and well-being and is also a known risk factor for psychiatric disorders, especially depression and PTSD (McLaughlin et al.,2012; McLaughlin et al., 2013). Moreover, several prior studies have shown that trauma exposure is clearly associated with profound deficits in emotional regulation across the entire lifespan, including during preschool (Langevin, Hebert, Allard-Dansereau; Bernard-Bonnin, 2016), adolescence (Shields & Cicchetti, 1997; Vettese, Dyer, Li, & Wekerle,

2011) and even adulthood (Briere & Rickards, 2007; Thompson, Hannan, & Miron, 2014; Dunn et al., 2018).

Trauma occurs when we are faced with an experience that overwhelms our ability to process incoming information, both at the time of that experience and in future situations (Barta, 2018). Dr. Michael Barta suffered from trauma himself as a child, which led him to addictions that ultimately landed him in jail and almost destroyed his life. In his book, *TINSA*, he wrote that trauma occurs when our natural defenses are unable to keep us safe from physical, emotional, or mental threats or harm (Barta, 2018).

In the mid-1980's, Kaiser Permanente commissioned Dr. Vincent Felitti to explore the issues of obesity, as nothing this hospital group was doing helped make a significant impact on improving this epidemic. His research led him to explore the impact of what he called the **Adverse Childhood Experiences (ACE)** Study (Felitti et al., 2014). In this study, people were asked about ten different categories of horrible things that happened to them when they were children, including physical and sexual abuse, family problems, and neglect. The results indicated that with each category of traumatic experience we faced as a child, the likelihood of experiencing depression as an adult increased significantly. (Felitti et al., 2014; Felitti 2004; Felitti and Anda, 2009).

Adverse Childhood Experiences

The ten reference categories experienced during childhood or adolescence are listed below, along with their prevalence in parentheses (Felitti and Anda, 2009):

Abuse

- Emotional – recurrent threats, humiliation (11%)
- Physical - beating, not spanking (28%)
- Contact sexual abuse (28% women, 16% men; 22% overall)

Household dysfunction

- Mother treated violently (13%)
- Household member was an alcoholic or drug user (27%)
- Household member was imprisoned (6%)
- Household member was chronically depressed, suicidal, mentally ill, or in psychiatric hospital (17%)
- Not raised by both biological parents (23%)

Neglect

- Physical (10%)
- Emotional (15%)

Somewhat surprising in the Felitti studies was that emotional abuse was more likely to cause depression than any other kind of trauma – even sexual abuse. This suggests that the way children are treated by their parents is a highly significant predictor of positive outcomes, and when that trust is broken, the consequences can be devastating.

Barta (2018) defines ACEs a little differently, as summarized below:

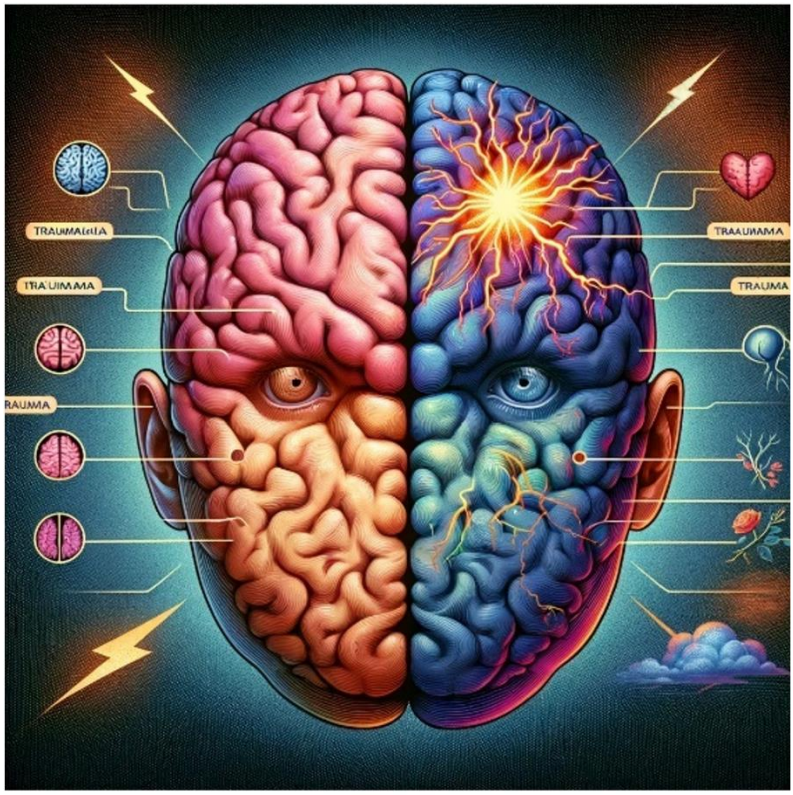
- Sexual assault or abuse
- Physical assault or abuse
- Psychological or emotional trauma
- Serious accidents, medical procedures, or illnesses
- Man-made or natural disasters
- Witnessing violence, including domestic abuse
- School violence, including bullying
- Traumatic grief or unwanted separation
- Terrorism or war
- Betrayal by others, including relational trauma

The experts in the field divide trauma into two categories:

- **Big T trauma:** Traumas associated with horrific single events, such as natural disasters, terrorism, and war.

- **Little t trauma:** Trauma smaller in nature, such as bullying, neglect, and betrayal. I respectfully take issue with the term "little t" as this type of trauma is devastating to normal development, and there is nothing "little" about it.

In my work as a pediatric psychologist, far more of my patients have been subjected to "little t" traumas, and I agree with Barta that these experiences have a tremendous impact on how children view themselves, their relationships, and their place in the world. Moreover, the long-term consequences of these traumas are profound, often resulting in a reduced or impaired ability to respond appropriately to threatening situations. This can lead to chronic hyperarousal, intense anxiety, panic, mood instability, poor emotional/behavioral regulation, feelings of powerlessness, helplessness, shame, and even immobility. Of all traumas, relational trauma is particularly devastating.



Trauma changes the brain neurologically

The implications here are enormous. Specifically, to heal from our addiction, we need to identify when, during our lifetime, others have harmed us —physically, emotionally, mentally, or spiritually— whether the harm was intentional or accidental. Barta (2015) provides several examples of trauma often reported by individuals who suffer from sexual/pornography addiction, as noted below. To be clear, most of us experience at least some of these traumas. If we can resolve them, we can move on and experience a more fulfilling life. On the other hand, many addicts cannot resolve them, and it is those

unresolved issues that open the gateway to addiction as a means of coping.

Examples of small t traumas that can pave the way to pornography addiction, as noted by Barta (2015):

- They were not attuned (well connected) to by their caregiver
- They were invalidated for the child they were
- They were not recognized emotionally
- They were rejected
- They were subjected to parental separation or divorce
- They were made to feel inadequate
- They were made to feel responsible for making the family feel good
- They were sexually abused
- They were punished for being authentic
- They were controlled by anger
- They were made to feel responsible for regulating the feelings and emotions of others
- They were not taught how to deal with their own emotions and/or were punished when trying to do so
- They were made to feel unsafe

- They were inappropriately disciplined/punished – kicked, slapped, or violently shaken
- They experienced the loss of a pet, young love, or friendship

Our experience is that the most common forms of trauma are due to a lack of attunement or connection with parental or adult figures while growing up. As Barta (2015) writes, "These deficiencies are not about bad parenting but about a parent's inability or diminished ability to respond to the child's emotional needs. Most parents are doing the best they can with the tools they have, but whether deliberately or inadvertently, the traumas of our childhood can have tremendous impact on our lives (Barta, 2018, p. 17).

As trauma expert Dr. Peter Levine notes in his book, *Healing Trauma*, "Trauma is much about loss of connection – to ourselves, our bodies, our families, others, and the world around us. This loss of connection is often hard to recognize because it doesn't happen all at once. It can happen slowly over time, and we adapt to these subtle changes sometimes without even noticing them. These are the hidden effects of trauma, the ones most of us keep to ourselves…Our choices become limited as we avoid certain feelings, people, and situations. The result of a gradual constriction of freedom is the loss of vitality and potential for the fulfilment of our dreams" (Levine, 2008, p. 9).

Most important to normal development is **"social engagement,"** which is the ability to know, understand, regulate, and express emotions in the present moment. Even though everyone is born with a social engagement system (i.e., a neurological system that promotes

human connection), we know that early trauma can disrupt normal development. Anda et al. (2018) note, "Early adverse experiences may disrupt the ability to form long-term attachments in adulthood. The unsuccessful search for attachment may lead to sexual relations with multiple partners with resultant promiscuity and other issues related to sexuality." As a result of adverse developmental trauma, the ensuing loss of connection with our inner self, our bodies, others, and the world around us, we are predisposed to engage in maladaptive and/or addictive behaviors to relieve the emotional dysregulation that torments us.

As Dr. Felitti highlighted in an outstanding 2009 lecture, studies reveal numerous alarming long-term consequences of being exposed to ACEs, with the severity of these outcomes increasing exponentially with the number of ACEs experienced. The results indicate that for every category of traumatic experience we have had as a child, we are dramatically more likely to be depressed as an adult. If we have ACE scores of four or higher, we are 260% more likely to have chronic obstructive pulmonary disease than someone with a score of 0, 240% more likely to contract hepatitis, 460% more likely to experience depression, and 1,220% more likely to attempt suicide. If we have had six categories of traumatic events as a child, we are five times more likely to become depressed as an adult, and if we have had seven categories, we are a terrifying 3,100 percent more likely to attempt suicide as an adult (Felitti et al., 2014; Felitti 2004; Felitti and Anda, 2009; Felitti et al., 1998).

ACE Scores and Clinical Outcomes

As Dr. Felitti in a 2009 lecture points out, studies reveal many shocking longterm horrible outcomes when we are exposed to ACEs and this raises exponentially according to how many of them, we have been exposed to.

The results indicate that for every category of traumatic experience we have had as a child, we are dramatically more likely to be depressed as an adult.

If we have ACE scores of 4, we are:

- 260% more likely to have chronic obstructive pulmonary disease than someone with a score of 0
- 240% more likely to contract hepatitis, 460% more likely to experience depression
- 1,220% more likely to attempt suicide

If we have ACE scores of 6, we are:

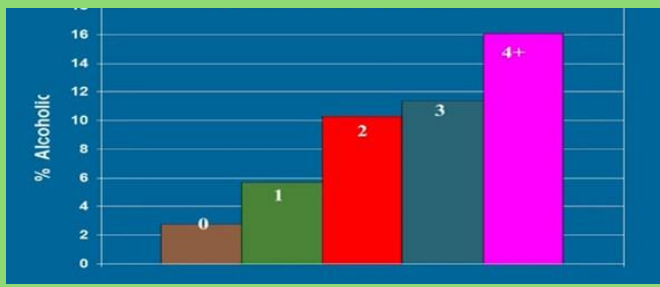
- Five times more likely to become depressed as an adult

If we have ACE scores of 7, we are :

- 3,100 percent more likely to attempt suicide as an adult (Felitti et al., 2014; Felitti 2004; Felitti and Anda, 2009; Felitti et al., 1998).

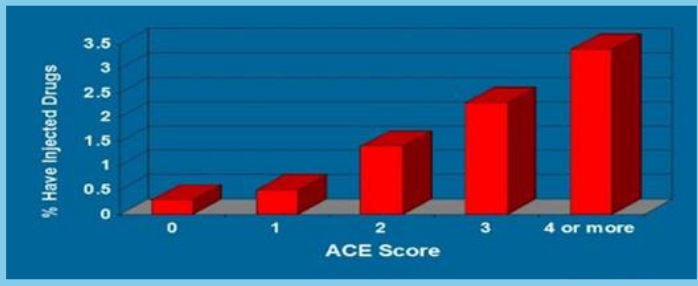
In the 2009 lecture, Dr. Felitti offered the following graphs, which nicely detail the dramatic impact that ACEs have on our society:

Childhood Experiences vs Adult Alcoholism



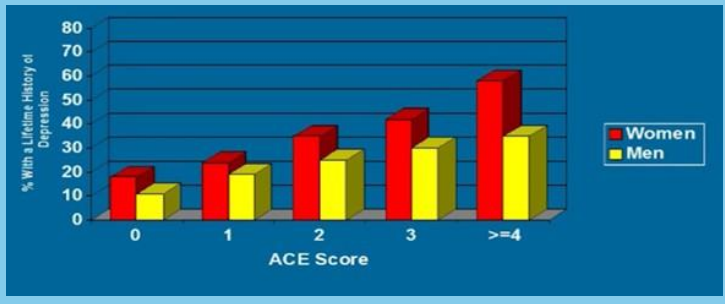
Dr Vincent Felitti (2009)
https://www.youtube.com/watch?v=KEFfThbAYnQ

ACE Score and Intravenous Drug USE

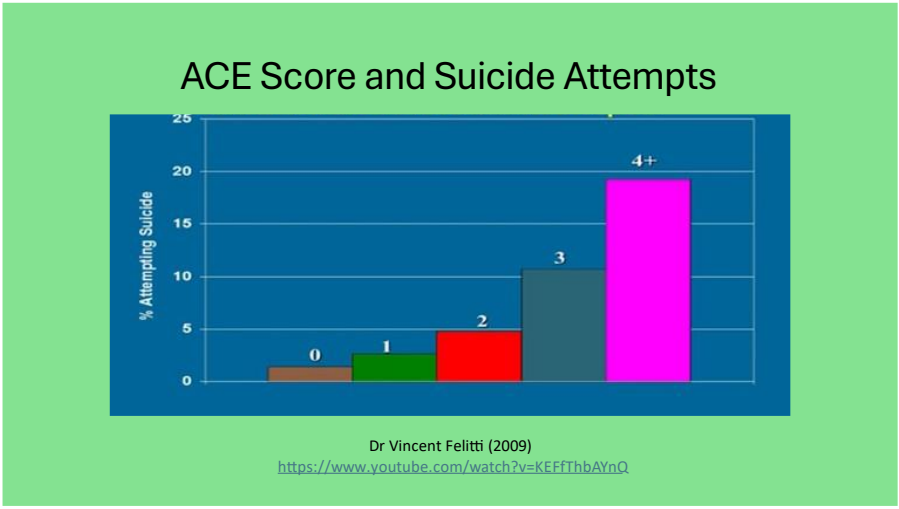


Dr Vincent Felitti (2009)
https://www.youtube.com/watch?v=KEFfThbAYnQ

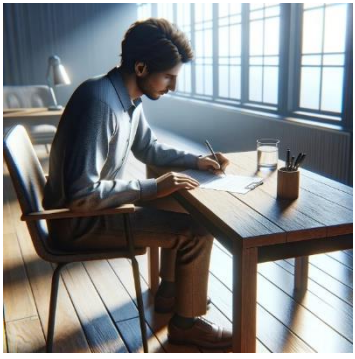
ACE Score and Chronic Depression



Dr Vincent Felitti (2009)
https://www.youtube.com/watch?v=KEFfThbAYnQ



You might want to take a moment and take the ACE quiz yourself to see where you fall.



The ACEs Quiz

For each **"yes"** answer, add 1. The total number at the end is your cumulative number of ACEs.

Before your 18th birthday:

1. Did a parent or other adult in the household often or very often… Swear at you, insult you, put you down, or humiliate you? Or act in a way that made you afraid that you might be physically hurt?

2. Did a parent or other adult in the household often or very often… Push, grab, slap, or throw something at you? or Ever hit you so hard that you had marks or were injured?

3. Did an adult or person at least 5 years older than you ever… Touch or fondle you or have you touch their body in a sexual way? Or attempt or actually have oral, anal, or vaginal intercourse with you?

4. Did you often or very often feel that … No one in your family loved you or thought you were important or special? Or your family did not look out for each other, feel close to each other, or support each other?

5. Did you often or very often feel that … You did not have enough to eat, had to wear dirty clothes, and had no one to protect you? Or your parents were too drunk or high to take care of you or take you to the doctor if you needed it?

6. Were your parents ever separated or divorced?

7. Was your mother or stepmother: Often or very often pushed, grabbed, slapped, or had something thrown at her? Or sometimes, often, or very often kicked, bitten, hit with a fist, or hit with something hard? Ever repeatedly hit over at least a few minutes or threatened with a gun or knife?

8. Did you live with anyone who was a problem drinker or alcoholic, or who used street drugs?

9. Was a household member depressed or mentally ill, or did a household member attempt suicide

10. Did a household member go to prison?

Total ACE score: _____

Source: NPR, ACEsTooHigh.com. This ACEs Quiz is a variation on the questions asked in the original ACEs study conducted by CDC researchers. (cited in Shonkoff, 2015).

Take Away: Most of us will have at least one ACE (Adverse Childhood Experience) in our developmental years, and if not extreme, this will not necessarily harm us. However, if any one ACE is extreme or if there are too many, we can be marked for problems in life. It is essential that we do not sweep our traumas under the rug but rather

deal with them before they deal with us. As *Psalm 147:3 (NIV)* reminds us, *"He heals the brokenhearted and binds up their wounds."* Acknowledging our wounds and seeking healing is essential for breaking the cycle of trauma.

We respectfully and lovingly urge any of us raising children to be ever so mindful of the impact of excessive adversity on our children. We parents should not assume that even though our children appear to be doing well, they are necessarily internally well if they have been exposed to excessive ACEs. We do our children right by getting help to heal the dysfunction in our lives, in our marriages, and/or in our family dynamics and, in so doing, freeing our children from having to pay the price in their own lives and their progeny for possibly generations to come. As *Proverbs 22:6 (NKJV)* wisely advises, *"Train up a child in the way he should go, and when he is old he will not depart from it."* Our responsibility is to ensure our children grow in environments of love, stability, and healing.

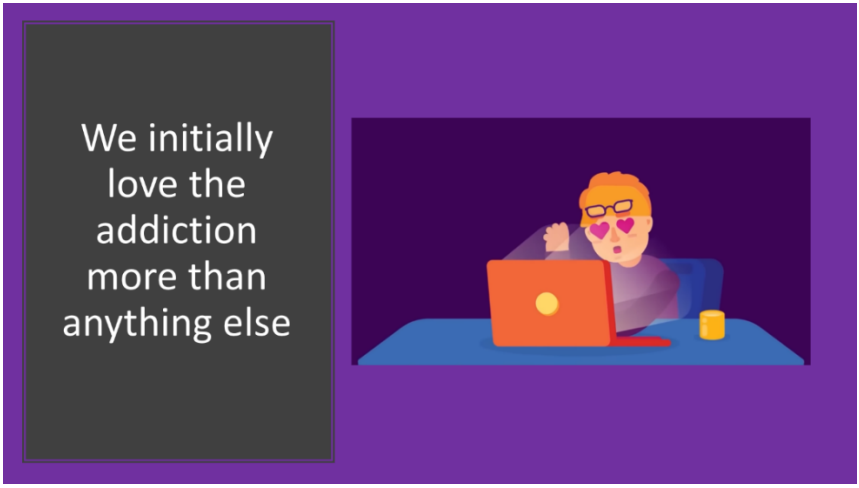
Barta (2018) conjectures, and we agree, that pursuing an addiction is an extremely effective solution that works, but only initially. Addiction, he writes, is a guaranteed solution that promises the prospect of making everything better. Sadly, in the long term, this fix is nothing better than a small bandage on a deep wound. *"There is a way that appears to be right, but in the end, it leads to death"* (Proverbs 14:12, NIV). Indeed, the addiction initially numbs the unbearable pain, but it comes at a price—one that demands payment.

It will cost you your happiness, your ability to connect with a wholesome life, your family, your career, your reputation, your

dignity, and possibly your life. In short, it can cost you everything—and nothing is worth that price. *"What good is it for someone to gain the whole world, yet forfeit their soul?"* (Mark 8:36, NIV). No temporary relief from pain is worth losing the true essence of who you are, your relationships, and your future.

Reason Three: It's Just Fun

Many young people accidentally discover addiction, many others are introduced to it by another person, usually a peer, partner, or a sibling. And indeed, they find it tantalizing and fun. They are not seeking to avoid pain, nor are they necessarily suffering from a loss of connection to good living. So, what starts off innocently enough, ends up changing their neurology, and they "accidentally" become seriously addicted.



And although we love the addiction initially, we become enslaved to it.

The Grip of Addiction

A Closer Look at Substances and Behaviors

In this chapter, we confront the powerful forces behind addiction by exploring the substances that entangle us in a cycle of dependence. From the familiar dangers of alcohol and prescription medications to illicit substances like opioids, cocaine, and methamphetamines, these chemicals manipulate our brains, bodies, and even our sense of identity, drawing us into a battle that can feel impossible to win. However, as *1 Corinthians 10:13 (NIV)* reminds us, *"No temptation has overtaken you except what is common to mankind. And God is faithful; he will not let you be tempted beyond what you can bear. But when you are tempted, he will also provide a way out so that you can endure it."* This verse reminds us that while addiction may seem like an insurmountable force, there is always hope for breaking free, and God provides a way out, even in our darkest struggles.

Facing the reality of addiction can be uncomfortable, even terrifying, but it's also the first step toward freedom. These substances are not just physical chemicals—they are catalysts for cravings, destructive behaviors, and emotional turmoil. They prey on our vulnerabilities, amplifying pain, stress, and trauma while offering a fleeting sense of escape or relief.

But we won't focus solely on the fearsome power of these substances. This chapter is about empowerment through knowledge. We'll examine how each addictive substance hijacks the brain's reward system, creating intense highs that hook people, while leaving behind a trail of devastation—physically, emotionally, and relationally. By understanding how these substances affect us, we can begin to break down the barriers they create on the path to recovery.

We will also consider the broader social and environmental factors that make certain substances more dangerous and accessible. Why are some people more susceptible to addiction than others? What makes one substance more addictive than another? These questions will be addressed as we explore the various pathways into addiction and, more importantly, the pathways out.

In a later chapter, we will explore the neuroscience that connects all forms of addiction, revealing the common threads that link these substances. We'll uncover how the brain's reward system is rewired, why certain neural pathways become hardwired for addiction, and how understanding these mechanisms can unlock the door to recovery. Knowing this science gives us the tools to fight back, regardless of the specific substance involved.

Though the truth about addiction can be daunting, understanding it gives us power. By shining a light on the nature of these substances, we can take away some of their control. We begin to see that addiction, while powerful, is not invincible. Recovery is not just a possibility—it's a journey that many have successfully walked, and one that is fully within reach.

This chapter serves as both a warning and a guide. Yes, these substances can ensnare us, destroy our lives, and even kill us, but armed with knowledge and understanding, we can break free, reclaim our lives, and rediscover hope in the face of addiction.

Alcohol – The Liquid Lure

Alcohol is the ultimate shapeshifter of addiction—slipping through the brain's defenses without binding to any one receptor, yet leaving its mark on nearly every system it touches. Addiction expert and behavioral neuroscientist, Dr. Judith Grisel describes alcohol as a neurological sledgehammer that impacts the brain extensively, targeting numerous areas and influencing nearly every aspect of neural function. (Grisel, 2019). Alcohol stands out as the only addictive substance that doesn't target a specific receptor in the brain, which makes it unique in the world of addiction. Unlike opioids,

which have opioid receptors, or nicotine that locks onto nicotinic receptors, alcohol takes a different, more widespread approach.

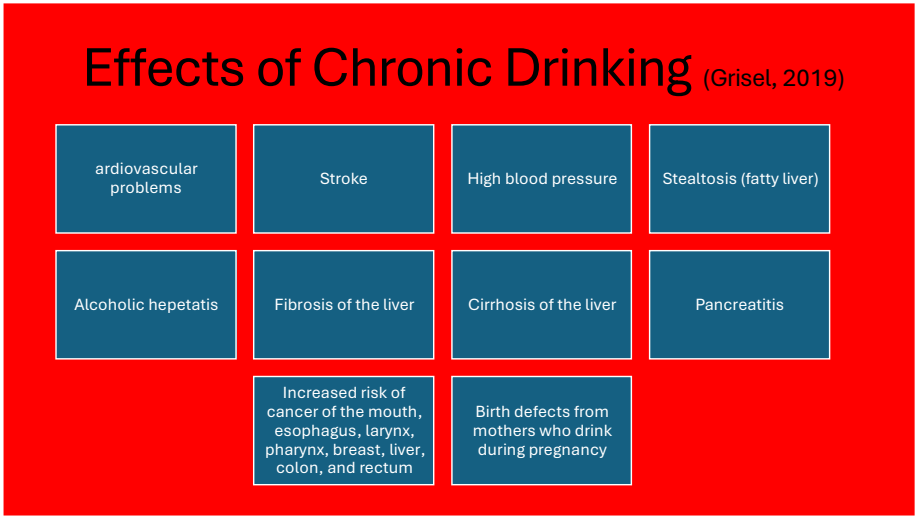
Instead of attaching to just one receptor, alcohol interacts with multiple neurotransmitter systems, producing a broad range of effects. It enhances GABA, a neurotransmitter responsible for calming the brain, creating that familiar sense of relaxation, while simultaneously suppressing glutamate, which normally excites the brain. This double action explains why alcohol slows us down, both mentally and physically.

But alcohol doesn't stop there. It also ramps up the release of dopamine, the "feel-good" neurotransmitter, fueling that initial rush of pleasure and contentment. This dopamine surge, though, is a secondary effect, making alcohol's addictive nature more complex and harder to pin down.

Unlike substances that have a clear, direct pathway to addiction, alcohol subtly weaves its way through different parts of the brain, making its grip both pervasive and personal. It's this scattered impact that makes alcohol addiction so unpredictable and uniquely challenging.

Dr. Grisel notes that about a third of all traffic-related fatalities in the United States are related to alcohol intoxication. She adds that nearly 700,000 students a year in the US between the ages of eighteen to twenty-four are assaulted by another student who has been drinking. She continues by listing the physical impact of chronic drinking:

- Cardiovascular problems
- Stroke
- High blood pressure
- Stealtosis (fatty liver)
- Alcoholic hepetatis
- Fibrosis of the liver
- Cirrhosis of the liver
- Pancreatitis
- Increased risk of cancer of the mouth, esophagus, larynx, pharynx, breast, liver, colon, and rectum
- Birth defects from mothers who drink during pregnancy

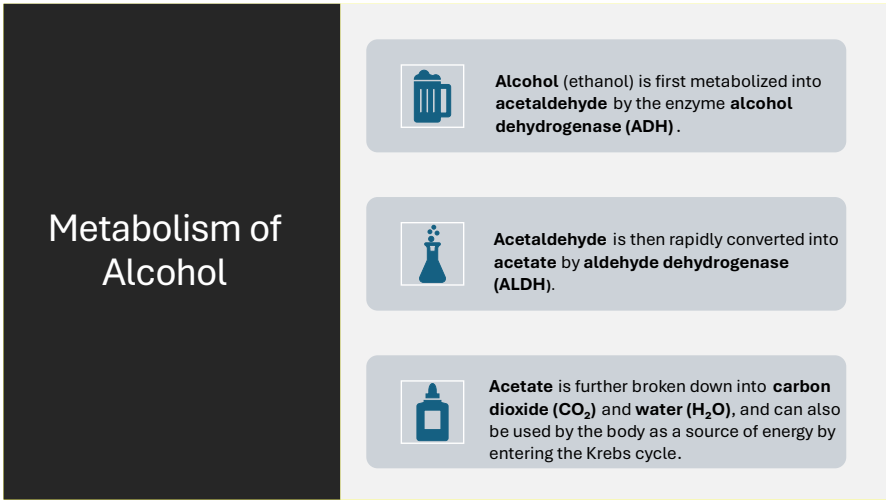


Dr. Andrew Huberman, one of our neurudaoscience heros, is a neuroscientist at Stanford University, and has a deeply personal connection to his research on how alcohol affects the body and brain. Growing up, he witnessed the damaging effects of alcohol addiction in his family and community, which inspired his passion for understanding the science behind addiction and its impact on the

brain. With this background, Dr. Huberman has dedicated much of his work to educating people about the physiological effects of substances like alcohol.

One of the most important insights he shares is how alcohol is metabolized in the body. When you drink alcohol, your liver starts the process of breaking it down. The first stage of this process turns alcohol into **acetaldehyde,** a highly toxic substance that is harmful to almost every part of your body. Acetaldehyde is not just toxic; it's a known carcinogen, meaning it can damage your cells and increase the risk of cancer. Dr. Huberman emphasizes that acetaldehyde is what makes alcohol so harmful because it effectively poisons your body and brain. It is actually this toxin or poison that produces the buzz from alcohol.

As your liver continues working, acetaldehyde is eventually converted into **acetate,** a less harmful substance which the body can use for energy. However, the problem is that while your body is processing alcohol, especially in that first stage, the acetaldehyde circulates through your bloodstream, damaging cells and creating inflammation in your brain and other organs. This is why alcohol can cause hangovers, brain fog, and even long-term cognitive damage.



Dr. Huberman explains that this toxic process happens every time you drink, even if it's just a small amount. Regular drinking increases the accumulation of acetaldehyde in your system, leading to more damage over time. For him, understanding this science is not just an academic exercise—it's personal. His experiences growing up showed him firsthand how damaging alcohol can be, and he now uses his platform to educate others on how alcohol affects the brain, why it's so harmful, and how it can lead to long-term health issues like liver disease, memory problems, and cancer.

In short, when you drink alcohol, your body is going through a process of detoxifying itself, but it's being poisoned in the meantime by acetaldehyde. This insight from Dr. Huberman helps us understand why even moderate alcohol consumption can have harmful effects over time (Huberman, 2022).

Opioids – The Comfort Curse

Opioid addiction doesn't announce itself with a roar—it slips in quietly, often disguised as relief, prescribed by trusted hands. What starts as a solution for pain can quickly spiral into a struggle for survival, as the very remedy becomes the chains that bind. In this chapter, we pull back the curtain on the opioid epidemic, exposing the seductive grip these drugs have on both body and mind, and the devastating toll they take on lives, families, and communities.

Opioids have been used for thousands of years, beginning with the opium poppy, which was cultivated as early as 3400 BCE in Mesopotamia (Brownstein, 1993). The use of opium spread to ancient Egypt and Greece, where it was used both recreationally and medicinally. By the 19th century, morphine, the active ingredient in opium, was isolated, leading to its widespread use as a painkiller,

particularly in the American Civil War. However, the addictive properties of morphine soon became evident, prompting the development of alternatives.

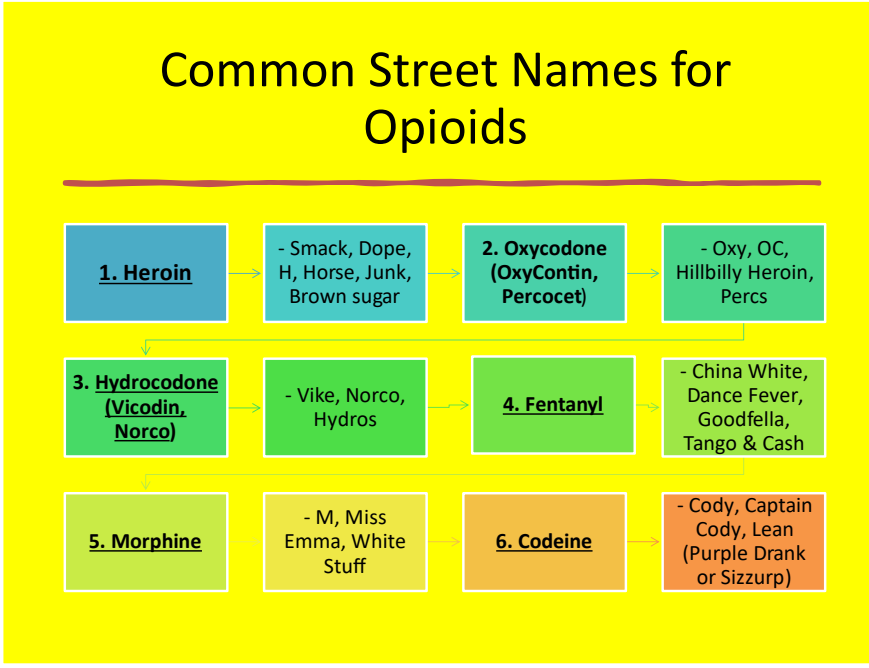
In the early 20th century, heroin was introduced by the Bayer pharmaceutical company as a supposedly safer alternative to morphine, though it soon became clear that heroin was even more addictive (Kolodny et al., 2015). This led to increased regulation, and by the mid-20th century, researchers began developing synthetic opioids. The synthesis of Fentanyl by Paul Janssen in 1960 was a breakthrough, as it was far more potent than morphine and other opioids, allowing for its use in anesthesia and pain management (Stanley, 1992).

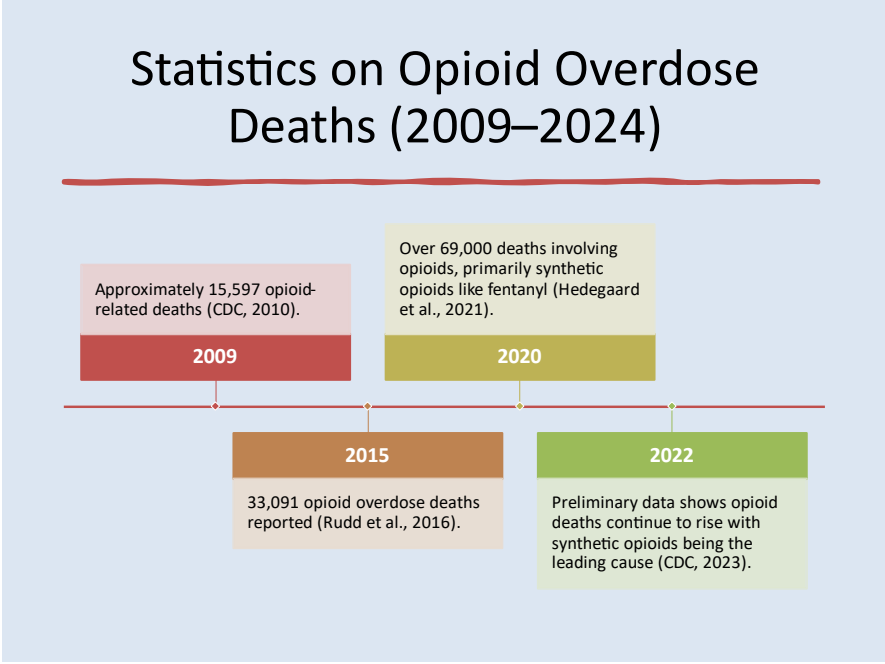
Despite their medical benefits, opioids have remained controversial due to their addictive potential. The late 20th and early 21st centuries have seen an opioid crisis emerge, particularly in the U.S., largely driven by the over-prescription of opioid painkillers such as oxycodone and hydrocodone (Volkow & McLellan, 2016). This crisis has led to widespread addiction, prompting increased attention to the regulation and appropriate use of opioid medications.

Opiods vs Opiates – what's the difference? Imagine you're walking through a garden, and in the middle, you find a poppy plant. From that plant, we can extract **opiates**—the natural compounds like **morphine** and **codeine** that have been used for centuries to relieve pain. These substances are straight from nature.

But, the story doesn't end with the poppy. As science advanced, we learned how to **create powerful drugs** that work like opiates but aren't directly from the plant. These are **opioids**, a broader category that includes both natural and **synthetic** compounds like **Oxycodone**, **Fentanyl**, and **Methadone**.

So, while **opiates** come directly from nature, **opioids** are a modern extension, including everything from the traditional to the lab-made. All opiates are opioids, but opioids also encompass synthetic creations that are even more potent and, at times, more dangerous.





Opioids are powerful drugs that interact with key receptors in our brains, spinal cords, and bodies, designed to naturally ease pain. But when we turn to opioids, their impact goes beyond just relieving discomfort—they can change how we experience pleasure, pain, and even how we feel about ourselves (Kosten & George, 2002).

Binding to Opioid Receptors: When you take opioids, they latch onto special receptors in your brain and nervous system—mainly the mu receptors, which are responsible for those feelings of euphoria and pain relief (Kosten & George, 2002). At first, it may feel like a miracle—a quick solution to escape the pain. But this effect is precisely what can make opioids so alluring, and eventually, so dangerous.

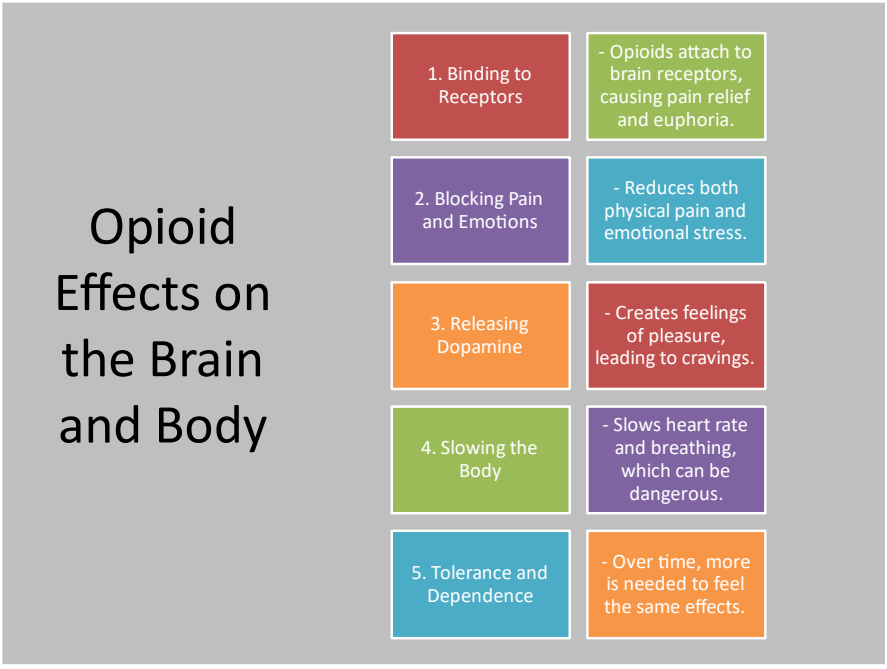
Blocking Pain Signals: Opioids don't just dull physical pain. They also quiet the emotional response to it. You might feel like you're not just

avoiding the physical hurt but also escaping from stress, anxiety, or emotional turmoil. It's easy to see how this can become a habit, as opioids provide both physical and emotional relief (Volkow & McLellan, 2016).

Releasing Dopamine: One of the reasons opioids feel so good is because they release a flood of dopamine, the brain's pleasure chemical. This surge can leave you feeling euphoric, relaxed, even invincible for a while (Koob & Volkow, 2016). But this rush also reinforces the need to keep using. You start chasing that same feeling, trying to recreate the pleasure, and before you know it, you're trapped in a cycle of craving and addiction (Kosten & George, 2002).

Slowing Down the Central Nervous System: Beyond the good feelings, opioids also slow everything down. You may feel calm, your breathing slows, your heart rate dips, and it can feel like the world is finally quieting down. But this sedative effect can also be dangerous. In higher doses, it can cause your breathing to slow too much, leading to respiratory issues or even death (Ballantyne & LaForge, 2007).

Development of Tolerance and Dependence: Over time, your brain adapts to the constant presence of opioids. You find that you need more and more to feel the same relief. What started as a small dose becomes bigger and bigger, and soon, you're dependent on the drug just to function. When you try to stop, your body rebels—nausea, anxiety, muscle pain, sleepless nights—it feels unbearable, pushing you back toward the drug (Volkow & McLellan, 2016).



In the end, opioids trick your body and mind, offering temporary relief at the cost of long-term dependence. They hijack the brain's natural chemistry, making you feel like you can't live without them. But with that understanding comes the power to recognize the trap and seek a way out before it's too late (Koob & Volkow, 2016).

Medication-Assisted Therapy (MAT) for Opiate Addiction

Medication-Assisted Therapy (MAT) is an evidence-based approach used to treat opioid addiction by combining medications with behavioral therapies. This treatment is highly effective in helping individuals reduce or stop opioid use and improve their overall functioning. The primary medications used in MAT for opioid addiction are methadone, buprenorphine, and naltrexone, which help

normalize brain chemistry, block the euphoric effects of opioids, and relieve physiological cravings.

Methadone

- Mechanism: Methadone is a long-acting opioid agonist that works by activating opioid receptors in the brain but at a much lower intensity than other opioids like heroin or prescription painkillers. It helps to reduce cravings and withdrawal symptoms without producing the euphoric high.
- Administration: Methadone is typically dispensed daily in liquid form at certified treatment programs.
- Effectiveness: It has been shown to reduce opioid use, improve social functioning, and lower the risk of overdose (NIDA, 2021).

Buprenorphine

- Mechanism: Buprenorphine is a partial opioid agonist. It activates opioid receptors but to a lesser extent than full agonists like heroin or methadone, which helps reduce cravings and withdrawal symptoms.
- Form: It is often combined with naloxone (as in Suboxone) to prevent misuse by causing withdrawal symptoms if injected.
- Administration: It can be prescribed by a doctor and taken at home as a sublingual tablet or film.

- Effectiveness: Buprenorphine reduces opioid use, helps manage withdrawal symptoms, and improves treatment retention (SAMHSA, 2021).

Naltrexone

- Mechanism: Naltrexone is an opioid antagonist, which means it blocks opioid receptors. Unlike methadone and buprenorphine, it does not activate opioid receptors but instead prevents opioids from producing euphoric effects.
- Form: Available as a daily pill or a monthly injectable (Vivitrol).
- Administration: Unlike methadone or buprenorphine, naltrexone requires full detoxification before use to avoid precipitating withdrawal.
- Effectiveness: It has been shown to reduce cravings and prevent relapse by blocking the effects of opioids (NIDA, 2021).

Benefits of MAT

- Reduced Opioid Use: MAT significantly decreases opioid misuse by helping patients manage withdrawal symptoms and cravings.
- Improved Retention in Treatment: MAT improves retention in treatment programs, leading to better long-term recovery outcomes.

- Lower Risk of Overdose: By reducing cravings and blocking the effects of opioids, MAT helps reduce the risk of fatal overdose.
- Improved Quality of Life: MAT, combined with counseling and behavioral therapies, can help improve the overall well-being of individuals recovering from opioid addiction.

Behavioral Therapies in MAT

MAT is most effective when combined with behavioral therapies such as cognitive-behavioral therapy (CBT), motivational interviewing (MI), and contingency management. These therapies help patients develop coping strategies, change harmful behaviors, and address underlying psychological issues.

Challenges and Considerations

- Access: Some individuals face barriers to accessing MAT due to limited availability of treatment programs, especially in rural areas.
- Stigma: There is still stigma surrounding MAT, as some view the use of medications like methadone as simply "replacing one drug with another."
- Adherence: Long-term adherence to MAT is crucial for success, but some patients may struggle with sticking to the treatment plan.

Cocaine, Meth, and Stimulants - Fast & Furious

Imagine stepping into a world where everything around you speeds up—your heart races, thoughts fire like lightning, and for a fleeting moment, it feels like you're invincible. This is the deceptive allure of stimulants: drugs that supercharge your body and mind, promising heightened focus, boundless energy, and a sense of euphoria that can make the ordinary feel extraordinary. Whether it's the powdered rush of cocaine, the crystalline intensity of meth, or the prescription pills that fuel sleepless nights, stimulants have carved a dangerous niche in both recreational use and addiction.

But these drugs aren't just about momentary highs. With every dose, the stakes get higher. What starts as a quick burst of energy can lead to a spiral of dependence, a relentless chase for the same intensity that drove the first hit. In this chapter, we'll explore the world of stimulants—how they work, why they're so seductive, and the toll they take on both body and mind.

The rise in stimulant-related deaths, particularly from methamphetamine and cocaine, has become a significant public health crisis in the U.S. Over the past decade, these drugs, once known for their euphoric highs, have become increasingly lethal.

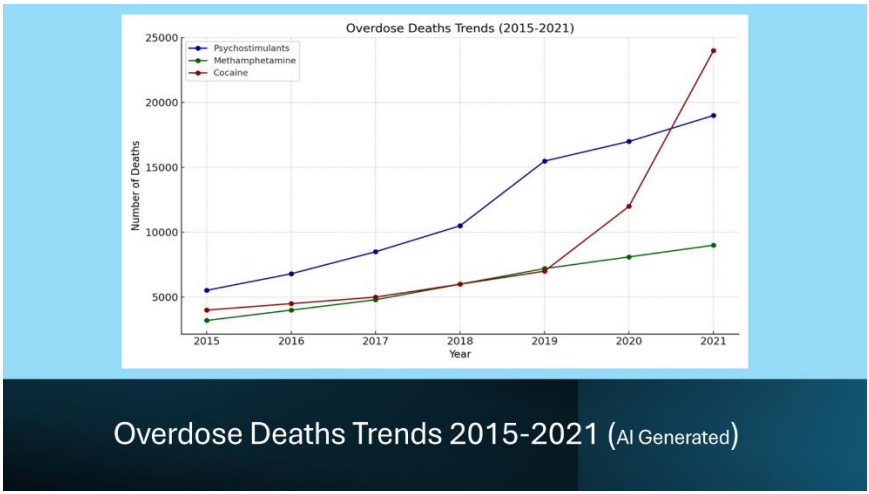
The alarming rise in overdose deaths related to psychostimulants paints a stark picture of the current drug crisis in the United States. Since 2010, rates of psychostimulant overdose deaths have surged, with nearly 33,000 Americans losing their lives to such overdoses in 2021 alone. This represents a staggering 37% increase from the previous year, emphasizing the growing threat posed by these substances. In 2021, psychostimulants were involved in over 30% of all drug overdose deaths in the country (CDC, 2022). This troubling trend has disproportionately impacted certain populations, with

American Indian and Alaska Native communities experiencing consistently higher psychostimulant-involved overdose death rates compared to other racial and ethnic groups from 2004 to 2019 (CDC, 2022).

Cocaine, another dangerous stimulant, has followed a similarly worrying trajectory. After a period of decline in overdose deaths from 2004 to 2012, cocaine-involved deaths began to rise again in 2012. By 2019, non-Hispanic Black people faced the highest overdose death rate involving cocaine, further highlighting racial disparities in the overdose epidemic. From 2020 to 2021, the situation worsened as cocaine overdose deaths increased by more than 12%, claiming the lives of over 24,000 Americans in 2021 (CDC, 2022).

The surge in deaths related to methamphetamine use adds another layer of concern. From 2015 to 2019, overdose deaths involving psychostimulants other than cocaine, primarily methamphetamine, skyrocketed by 180%, jumping from 5,526 to 15,489 deaths. However, this dramatic rise in deaths far outpaced the increase in methamphetamine use, which only grew by 43% during the same period. This discrepancy suggests that factors beyond mere usage rates, such as the potency and contamination of the drugs, may be driving the surge in fatalities (NIH Record, 2021).

These statistics reveal the urgent need for continued public health efforts to address the escalating psychostimulant and cocaine overdose crises in the United States, particularly among the most vulnerable populations.



These numbers underscore a critical shift in the stimulant drug landscape. What once were "party drugs" or productivity enhancers have transformed into deadly substances, taking lives at an alarming rate. The intersection of methamphetamine, cocaine, and the opioid epidemic—fueled by the presence of fentanyl—has made stimulant use more perilous than ever before.

Methamphetamine

Mechanism of Action:

Methamphetamine primarily affects the brain by causing a significant release of dopamine, a neurotransmitter linked to pleasure, reward, and motivation. Methamphetamine enters neurons and triggers the release of large amounts of dopamine, resulting in an intense euphoric feeling. It also blocks dopamine's reabsorption, leading to an accumulation in the brain, which overstimulates the brain's reward circuits (ChatGPT, 2024).

Short-Term Effects:

- Increased energy and hyperactivity

- Euphoria and heightened mood
- Decreased appetite and weight loss
- Increased wakefulness and decreased need for sleep
- Increased heart rate, blood pressure, and breathing rate
- Paranoia, aggression, or irritability
- Anxiety and agitation
- Delusions or hallucinations (at high doses) (ChatGPT, 2024)

Long-Term Effects:

- Severe dental problems ("meth mouth")
- Extreme weight loss
- Memory loss and cognitive deficits
- Psychosis, including paranoia, hallucinations, and violent behavior
- Heart damage (arrhythmia, heart attack, or stroke)
- Liver, kidney, and lung damage
- Skin sores from obsessive picking
- Addiction and withdrawal symptoms (depression, fatigue, craving)
- Chronic methamphetamine use leads to damage in brain areas that regulate emotions, memory, and decision-making, resulting in cognitive impairments.
- Long-term meth use is associated with anxiety, paranoia, hallucinations, and violent behavior. Meth-induced psychosis can mimic schizophrenia (ChatGPT, 2024).

Cocaine

Mechanism of Action:

Cocaine primarily works by blocking the reabsorption of neurotransmitters such as dopamine, serotonin, and norepinephrine into neurons. This blockage leads to a build-up of these chemicals in

the brain, overstimulating circuits related to pleasure and reward, which creates the intense "high" experienced by users (ChatGPT, 2024).

Short-Term Effects:

- Euphoria and intense feelings of pleasure
- Increased energy and alertness
- Heightened confidence and feelings of invincibility
- Increased heart rate, blood pressure, and body temperature
- Decreased appetite
- Dilated pupils and sensitivity to light
- Restlessness, irritability, and anxiety
- Nausea or muscle twitches (at high doses)
- Heart problems, including arrhythmias and heart attacks
- Sudden cardiac arrest or seizures (ChatGPT, 2024).

Long-Term Effects:

- Addiction and tolerance, requiring more of the drug for the same effect
- Chronic cardiovascular issues (heart attacks, strokes, high blood pressure)
- Nasal damage (when snorted), including nosebleeds, loss of smell, or a collapsed nasal septum
- Respiratory problems (if smoked)
- Severe weight loss and malnutrition
- Impaired cognitive function, particularly decision-making and attention
- Mood disorders, such as depression and anxiety
- Psychosis, including hallucinations and paranoia
- Social and financial consequences, including job loss, family issues, and legal problems

- Cocaine use is a major cause of sudden cardiac death because it disrupts the heart's electrical system, causing arrhythmias and heart attacks
- Chronic cocaine use impairs cognitive functions such as memory, attention, and impulse control. It can also result in strokes and seizures (ChatGPT, 2024).

THC – Hazy Days, Heavy Consequences

Imagine a substance so deeply woven into our culture that it is found at parties, in homes, and even in some medical clinics—THC, the psychoactive compound in marijuana. It is often painted as harmless or even medicinal, but beneath the surface lies a more complicated story. While some tout it as a natural remedy or a harmless way to unwind, the reality for many is far more complex. THC has the power to hijack the brain's reward system, leading not only to dependence but also to profound changes in mood, motivation, and mental health.

Dr. Judith Grisel, a renowned neuroscientist, compares the impact of substances like THC to red paint splashed onto a canvas. At first, it seems to color everything in vivid, exciting shades, making even the mundane feel bright and salient. Life feels more interesting, more stimulating, when under the influence. However, once the paint dries and the high fades, nothing seems as colorful. Without THC, the brain struggles to find anything exciting or meaningful. The natural pleasures of life—connection, achievement, or even simple joys—become dull and pale by comparison, leaving the user chasing that artificial vibrancy again and again.

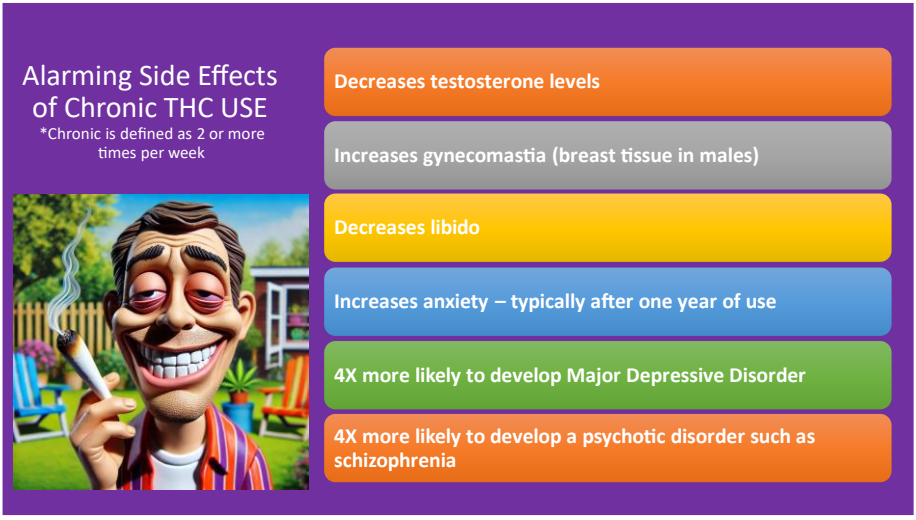
In this chapter, we will explore the hidden risks of THC, especially in today's era of increasingly potent strains, and how its use can evolve from casual experimentation to full-blown addiction. Whether you are someone who uses it, knows someone who does, or simply wants to understand more, this chapter will dive into the real impact THC can have on the brain, the body, and ultimately, on life itself. Let us uncover the truth behind this misunderstood substance.

In recent years, the conversation around cannabis has shifted from taboo to trendy, from illicit to normalized. THC, the psychoactive compound in marijuana, is often marketed as a harmless way to relax, manage anxiety, or enhance creativity. However, the reality for many, especially when use becomes habitual, is far more alarming.

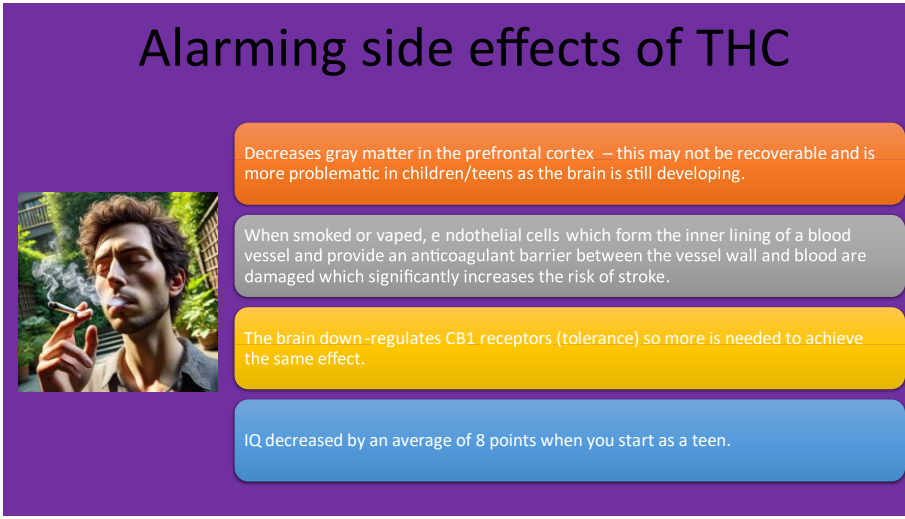
Chronic THC use—defined as using two or more times per week—has been associated with a range of side effects that are not only physical but deeply psychological (Volkow et al., 2014). For instance, THC has been shown to decrease testosterone levels, contributing to

gynecomastia (breast tissue growth in males) and significant reductions in libido (Hall et al., 2019). These changes extend beyond mere physical appearance or sexual function—they have profound implications for mental health and self-esteem.

The psychological consequences are equally concerning. According to Lev-Ran et al. (2014), chronic users are four times more likely to develop Major Depressive Disorder, a statistic that underscores the risk of long-term use. Moreover, chronic THC use significantly heightens the likelihood of developing psychotic disorders, including schizophrenia (Di Forti et al., 2019). A study by Bechtold et al. (2015) reported that frequent users, particularly those starting in adolescence, are four times more likely to suffer from anxiety, often exacerbated by a year of continual use. This compounds the very symptoms that many users initially sought to alleviate.

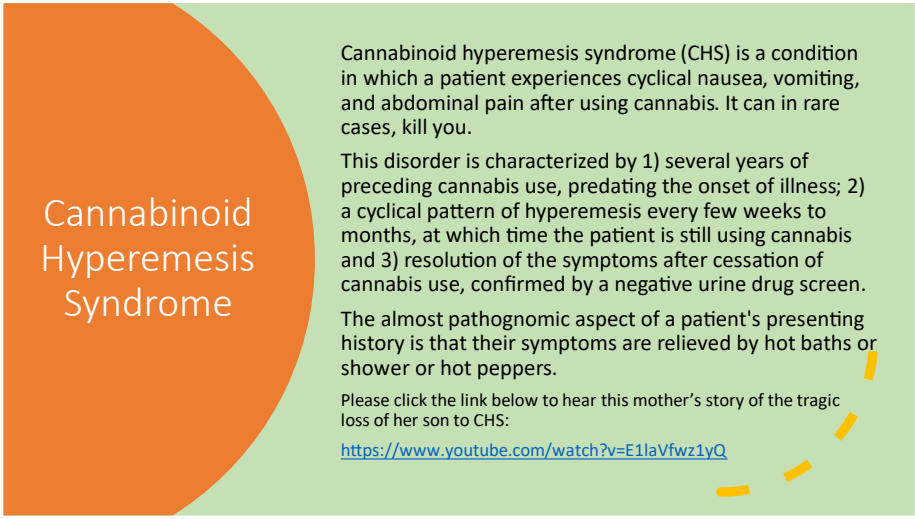


But THC doesn't just manipulate the mind; it also alters brain structure. Research has shown that chronic THC use reduces gray matter in the prefrontal cortex, the region of the brain responsible for decision-making, impulse control, and emotional regulation (Battistella et al., 2014). This effect is especially concerning for adolescents, whose brains are still developing, as the changes may be irreversible.



In addition to its impact on the brain, THC also poses significant cardiovascular risks. Studies indicate that smoking or vaping marijuana can damage the endothelial cells that line blood vessels, increasing the risk of stroke (Wolff et al., 2013). Over time, as tolerance builds, users require more THC to achieve the same effect, leading them deeper into dependency. This increased consumption can further exacerbate the physical and mental toll on the user (Volkow et al., 2014).

Perhaps the most tragic consequence of chronic THC use is Cannabinoid Hyperemesis Syndrome (CHS), a condition characterized by cyclic vomiting, abdominal pain, and a compulsive need for hot showers to alleviate symptoms (Simonetto et al., 2012). In some cases, CHS can be fatal. One devastating case involved a mother who lost her son to this little-known syndrome, emphasizing the potential fatal consequences of prolonged marijuana use.



Despite these risks, many continue to perceive marijuana as harmless or even beneficial. Yet, voices from the medical and scientific communities, such as addiction medicine physician Dr. Ruth Potee (Potee, 2020) and neuroscientist Dr. Andrew Huberman (Huberman, 2021), caution against ignoring the mounting evidence of THC's dangers. They, along with advocates like Kim Porter, have spoken out about the adverse effects of THC use, particularly among teens. Porter (2019) emphasizes the dangers of normalizing THC

consumption in youth, highlighting its damaging effects on developing brains.

What often begins as an innocent attempt at relaxation can spiral into something far more damaging—something that robs individuals of their mental clarity, physical health, and emotional well-being.

Highly recommended lectures on THC

Please click the link below to listen to addiction medicine physician Dr. Ruth Potee's fantastic school talk on addiction and the teenage brain:

https://www.youtube.com/watch?v=25mK4yXzOkQ&ab_channel=1623Studios

Please click the link below to listen to Stanford neuroscientist. Dr. Andrew Huberman's superlative lecture on the dangers of THC use. It the best and most thorough discussion on the topic that I have heard.

https://www.youtube.com/watch?v=gXvuJu1kt48&ab_channel=AndrewHuberman

Cannabis, It's Complicated by Kim Porter who is an excellent advocate against teen use of THC. Please click the link below to listen:

https://www.youtube.com/watch?v=fdguiE_dTu0&t=2s&ab_channel=BeaPartoftheConversation

Pornography – Screen Shackles

Vice is a monster of so frightful mien
As to be hated needs but to be seen
Yet seen too oft, familiar, with her face,
We first endure, then pity, then embrace.

-Alexander Pope's essay on man

Imagine an invisible trap—one that not only captures your attention but your emotions, thoughts, deepest desires, and even your soul. This is the nature of a process addiction, where a behavior, rather than a substance, grips the mind and body with a relentless pull. Unlike drug or alcohol dependency, process addictions hinge on repetitive actions that hijack the brain's reward system. Pornography addiction is one such process addiction, but it stands apart for a disturbing reason: it ensnares both youth and adults alike. With its powerful mix of dopamine-driven instant gratification and endless availability, this addiction becomes a mental prison, distorting

relationships, sexual development, and self-perception in ways that can last a lifetime.

In the words of Stephen Arterburn, world renowned expert on sexual addiction, "*I don't know of any plague to ever reach into the homes and families all over the world and create as much damage or heartaches than the struggle of lust, affairs, pornography, perversion, and sexual addiction. It seems that everywhere I look, it gets worse and worse. The Internet exploded the problem, and now cell phones transport pornography more portably than the computer and facilitates affairs with greater accessibility and secrecy*" (cited in Roberts, 2008, p.9).

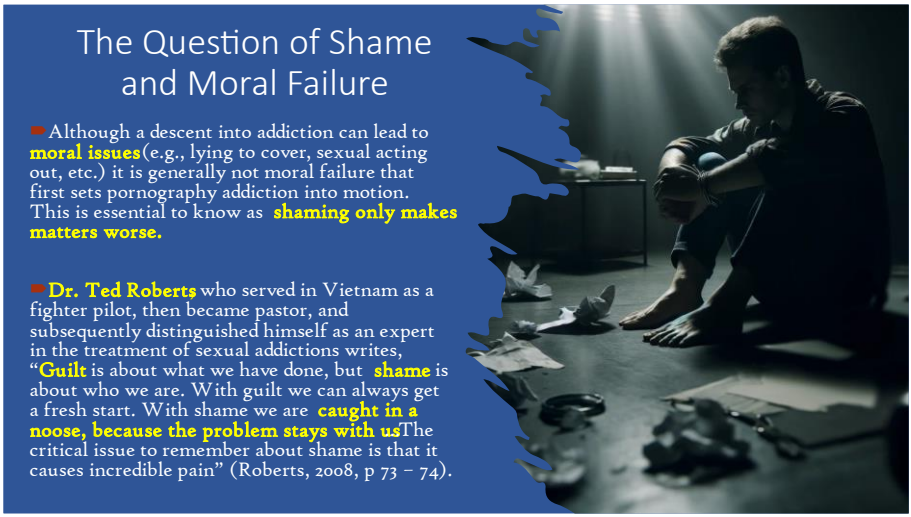
When I first entered the field of Pediatric Psychology over 40 years ago, I never imagined that one day I would be writing about pornography addiction. Yet, after witnessing the devastating impact of the pornography industry on so many of my patients, it has become impossible to ignore. I've seen boys as young as 11 commit acts of sexual violence against children as young as three, driven by the toxic influence of porn. I've watched normal adolescent sexuality—something that should be beautiful and natural—be hijacked and twisted into something perverse. I've seen men lose their careers, their freedom, and their families. Marriages crumble under the weight of this addiction. The toll is staggering, and it grows with each passing day.

The Utah state legislature has taken a strong stance, declaring pornography a national epidemic that is tearing at the very fabric of our society (Barta, 2018). This acknowledgment reflects just how widespread and damaging the issue has become. It's not just an

individual problem; it's a societal crisis that affects everyone, especially the most vulnerable among us.

As a result of these observations, I write this chapter as a conversation with you, no matter your age, gender, life stage, or career. Whether you are personally struggling with pornography or not, chances are, you know someone who is. Understanding the difference between fact and fiction when it comes to this issue, and learning how to break free from its grip, could one day help you save the mind, body, and soul of someone you care about.

I want to make one thing clear from the start: I offer no judgment for those caught in the struggle. I know the grip of pornography addiction all too well. As a teenager and young man, I struggled with an addiction to soft porn magazines, a problem that followed me into my marriage, nearly tearing it apart. I am incredibly fortunate to have had a wife who, instead of walking away, chose to stand by me and support me in seeking help. She guided me toward life-saving therapy with Dr. Ebeye, a compassionate professional who didn't judge me but instead showed me the path to recovery. For this, I will forever be grateful to both my wife and Dr. Ebeye.



Now, before we dive deeper into the effects of pornography, it's important to define our terms. As the Jesuits wisely advise, we must start by naming things. The word "pornography" comes from the Greek: "porne," meaning harlot, prostitute, or whore, and "graphos," meaning writing or depiction. Put together, the word translates to "a depiction or description of the activities of whores" (Catholic News Agency). But this archaic definition only scratches the surface. Webster's dictionary expands it to include "a depiction of licentiousness or lewdness" and "a portrayal of erotic behavior designed to cause sexual excitement" (Webster's Third International Dictionary).

At first glance, these definitions seem straightforward—descriptions of explicit material intended to arouse. However, the true impact of pornography goes far beyond its surface. Pornography rewires the brain in ways that distort the natural development of sexuality, intimacy, and even personal identity. It's not just the viewing of

explicit material that is damaging; it's how repeated exposure alters brain chemistry, often leading to compulsive behavior and unhealthy perceptions of sex and relationships. This is why pornography is classified as a process addiction, akin to gambling or gaming—it's the behavior that ensnares, feeding a cycle of dopamine hits that keeps the individual craving more, despite the harmful consequences.

The effects are wide-reaching. I have seen firsthand how pornography twists healthy adolescent sexuality, turning what should be a beautiful and natural part of life into something warped and perverse. I have worked with men who have lost not only their careers but also their freedom, ending up in jail due to actions fueled by their addiction. Marriages, once strong, crumble under the strain, as trust, intimacy, and emotional connection are eroded. The damage doesn't stop with the individual—it ripples outward, affecting families, communities, and society as a whole.

Neuroscience now tells us that pornography affects the brain much like a drug would. Repeated consumption floods the brain with dopamine, reinforcing the behavior and creating a cycle of craving and reward that is difficult to break. Over time, just like with substance addiction, tolerance develops, meaning that the person needs increasingly more explicit material to achieve the same level of stimulation. This cycle can profoundly distort one's ability to engage in real-life relationships, leading to issues like sexual dysfunction, emotional numbness, and disconnection from loved ones.

The Utah state legislature has recognized this issue as a public health crisis, declaring pornography a national epidemic that is tearing at the

very fabric of society (Barta, 2018). This acknowledgment isn't merely symbolic—it reflects how pervasive and harmful this addiction has become. And while it may be tempting to view pornography as a personal issue, its effects are far-reaching. Children and adolescents are being exposed at younger ages, often before they have the cognitive or emotional capacity to understand what they are seeing. This early exposure warps their understanding of sex, intimacy, and human connection, laying the groundwork for a lifetime of unhealthy relationships and behaviors.

The battle against pornography addiction is not just an individual struggle—it's a societal one. But recovery is possible, as I can personally attest. With support, compassion, and the right therapeutic approach, individuals can break free from the chains of this addiction. This chapter is my attempt to offer that understanding, as well as hope, to those who need it most.

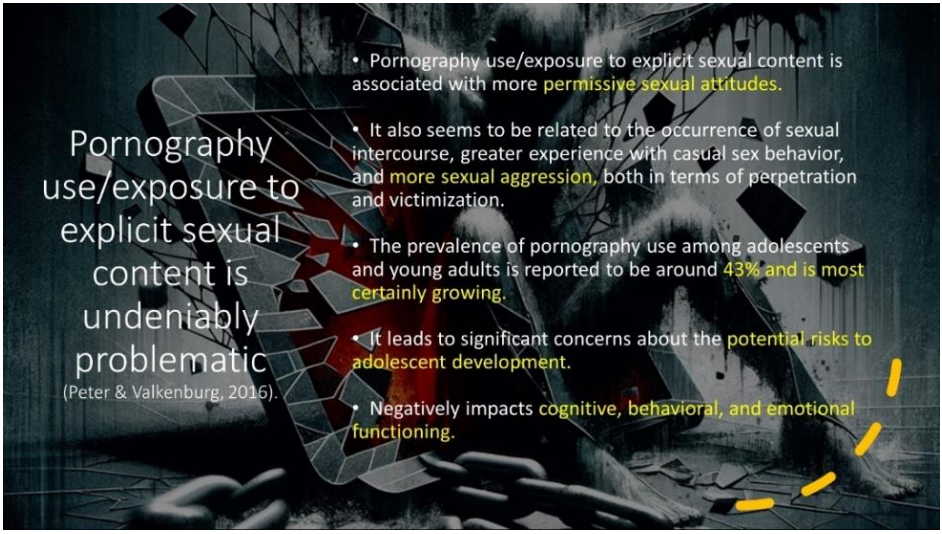
Exposure to pornography and sexually explicit content can have significant impact on children, but there are differences between the two:

- Pornography: Pornography is typically created and distributed explicitly for the purpose of sexual arousal and gratification. It often features explicit sexual acts and is intended for adult audiences.
- Sexually Explicit Content: Sexually explicit content can encompass a broader range of material that includes explicit depictions of sexual content but may not necessarily be created for the sole purpose of sexual arousal. It can include explicit discussions of sexuality, nudity, or sexual behavior.

I count him braver who overcomes his desires than him who conquers his enemies; for the hardest victory is over self.

– Aristotle

Skinner, (2005) writes, "The sexual exposure that we face is unparalleled in the history of mankind. With television, the Internet, magazines, billboards, movies, and DVD's, our society has been dehumanized…The result of this desensitization process is that children and teenagers are faced with sexual decisions before they fully understand the consequences of their own sexual behaviors. A teenager caught up in Internet pornography doesn't understand that his curiosity can lead to an addiction."



If you are struggling with Internet pornography, you are not alone. The following alarming statistics highlight the gravity of the

pornography crisis, as nicely reviewed by Zimbardo & Coulombe (2016) and Covenant Eyes (2019), as well as others:

- In 1997, about six years after the World Wide Web was launched, there were about 900 online porn sites (Ogasa et al., 2011).
- Later, in 2005, about 13,500 full-length pornographic films were released compared to only 600 Hollywood films (Ropelato, 2011).
- From 2001 to 2007, Internet porn went from a $1-billion-a-year industry to $3-billion-a-year in the U.S (Lambert et al., 2012).
- 40 million Americans watch porn regularly (Webroot, 2019).
- The porn industry earns more revenue than CBS, NBC, and ABC combined (Roberts, 2008).
- The societal costs of pornography are staggering. The financial cost to business productivity in the U.S. alone is estimated at $16.9 billion annually, but the human toll, particularly among our youth and in our families, is far greater (Weebroot, 2019).
- 40 million American people regularly visit porn sites (Webroot, 2019).
- 35% of all Internet downloads are related to pornography (Webroot, 2019).

- 34% of Internet users have experienced unwanted exposure to pornographic content through ads, pop-up ads, misdirected links or emails (Webroot, 2019).

- One-third of porn viewers are women (Webroot, 2019).

- Between 2008 and 2011, exposure to porn among boys under the age of 13 jumped from 14% to 49%. Boys' daily use more than doubled. (Sun et al., 2016)

- In 2016, in a study of 1,565 18-19-year-old Italian students (Pizzol et al., 2015), four out of five stated they consumed pornography. Almost 22% (21.9%) reported that it became habitual, 10% stated that it reduced their sexual interest towards potential real-life partners, and 9.1% reported a kind of addiction.

- In 2017, a Swedish study reported that nearly all respondents (98%) had watched pornography, although to different extents. Eleven percent were found to be frequent users (watched pornography one or more times per day), 69% were average users (at least once a month up to several times a week, but less than once per day), and 20% were infrequent users (less than once a month). (Donevan & Mattebo, 2017)

- In 2006, 35% of Dutch children aged 8 to 12 had had a negative Internet experience in the home, involving an encounter with pornography. (Soeters & van Schaik, 2006).

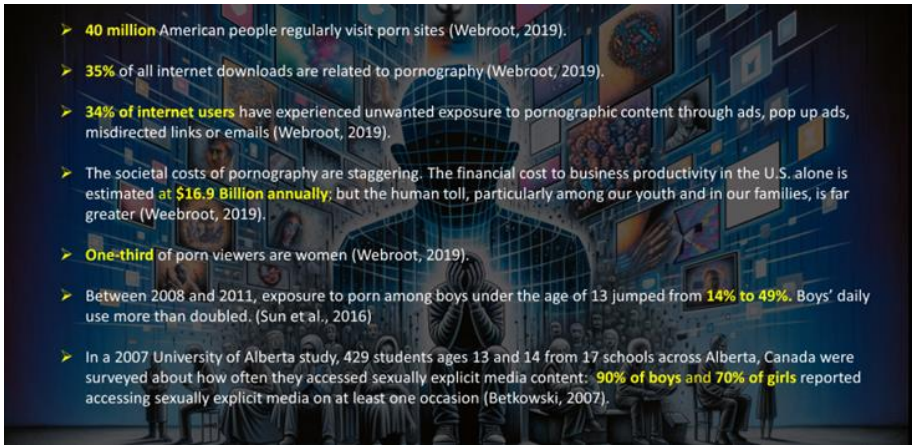
- Well over two-thirds of 15-17-year-old adolescents have seen porn websites when they did not intend to access them, with 45% being 'very' or 'somewhat' upset by it. (Kaiser Family Foundation, 2001)

- According to the National Coalition for the Protection of Children & Families, 2010, 47% of families in the United States reported that pornography is a problem in their homes (National Coalition for the Protection of Children & Families, 2010).

- In 2012, True Research conducted 2,017 online interviews with teens, aged 13-17, and parents of teens (SCRIBD, 2019) and found that 71% of teens have done something to hide what they do online from their parents (this includes clearing browser history, minimizing a browser when in view, deleting inappropriate videos, lying about behavior, using a phone instead of a computer, blocking parents with social media privacy settings, using private browsing, disabling parental controls, or having email or social media accounts unknown to parents). Thirty-two percent of teens admit to intentionally accessing nude or pornographic content online. Of these, 43% do so on a weekly basis. Only 12% of parents knew their teens were accessing pornography.

- In a 2007 University of Alberta study, 429 students aged 13 and 14 from 17 schools across Alberta, Canada were surveyed about how often they accessed sexually explicit media content: 90%

of boys and 70% of girls reported accessing sexually explicit media on at least one occasion (Betkowski, 2007).



- According to a survey conducted by the Barna Group in the U.S. in 2014 (Proven Men Ministries, 2014):

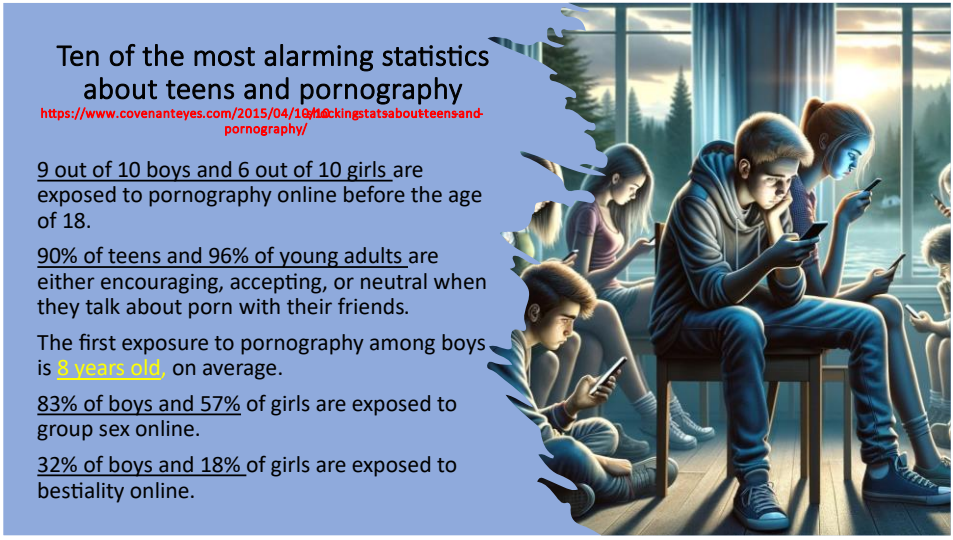
  The following percentages of men say they view pornography at least once a month: 18-30-year-olds, 79%; 31-49-year-olds, 67%; 50-68-year-olds, 49%.

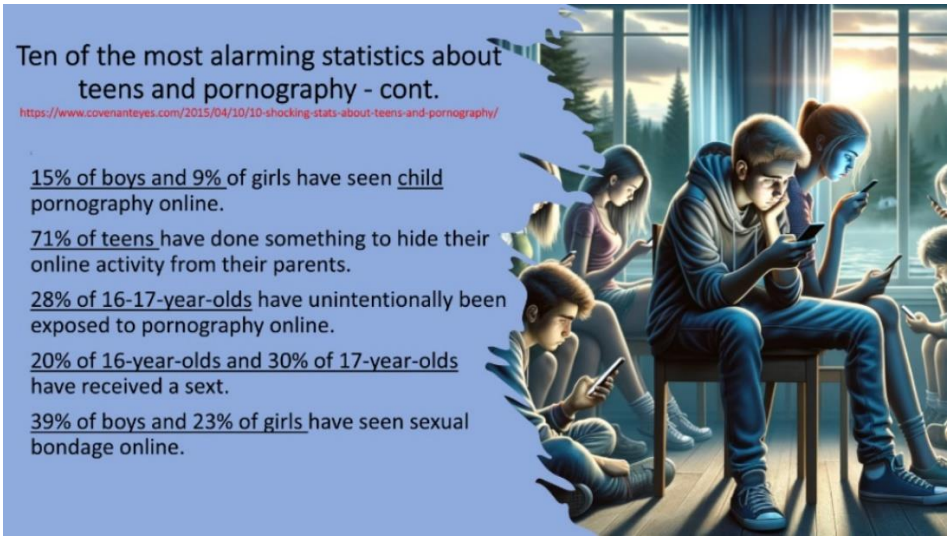
  The following percentages of men say they view pornography at least several times a week: 18-30-year-olds, 63%; 31-49-year-olds, 38%; 50-68-year-olds, 25%.

  The following percentages of women say they view pornography at least once a month: 18-30-year-olds, 76%; 31-49-year-olds, 16%; 50-68-year-olds, 4% .

The following percentages of women say they view pornography at least several times a week: 18-30-year-olds, 21%; 31-49-year-olds, 5%; 50-68-year-olds, 0%.

55% of married men say they watch porn at least once a month, compared to 70% of not married men. Pornography Statistics: 25% of married women say they watch porn at least once a month, compared to 16% of not married women.





Porn use promotes aggressive behavior:

Cited in In his book *How Pornography Harms*, Dr. Foubert (2017) notes over **100 studies** show that pornography is correlated with and is the cause of a **wide range of violent behaviors** and about **50 studies**

that show a strong relationship between pornography and **sexual violence** (Peter et al., 2016 & Malamuth, 2000). Kingston et al. (2009) write that researchers have also found that pornography use specifically increases the likelihood that a man will commit acts of sexual violence against women, especially if the man in question has additional risk factors, such as impulsivity, and if the pornography use is frequent.

Foubert (2017) and Dr. Mary Ann Layden found evidence of increased violent acts toward women by males who consume pornography. She comments that men are much more prone to be both physically and sexually aggressive toward women if they are hostile in attitude toward women, promiscuous sexually, and frequent consumers of pornography. She summarizes her findings by stating that pornography teaches, gives permission, and eventually triggers attitudes and behaviors that are destructive to both the user and others. The damage is evident regardless of sex or of age. In her own words, "Pornography is a widely influential and very **toxic teacher" (**Layden, 2010).

Serial killer Ted Bundy, who was responsible for the brutal murders of at least 28 young women and girls, gave a chilling insight into his psychological unraveling during an interview with Dr. James Dobson, a well-known psychologist, just one day before his execution. During their conversation, Bundy recounted how his exposure to pornography began innocuously, with softcore materials readily available at his local drugstore. But as is common with addictive behaviors, this initial exposure soon escalated.

As Bundy explored more explicit materials, he eventually came across increasingly graphic and violent pornographic content. When Dr. Dobson asked whether the pornography Bundy consumed had included violent imagery, Bundy's response was both alarming and telling. "Yes," Bundy said, "and this is something I want to emphasize as the most damaging kind of pornography."

Bundy went on to explain how violent pornography, in particular, had a profound and destructive influence on him. It was not simply a matter of being exposed to explicit content, but the progressive desensitization that occurred over time, driving him to seek out more extreme and violent material. This cycle of escalation, Bundy claimed, played a significant role in fueling his violent urges, ultimately leading him to act out the fantasies he had internalized from pornography.

What makes this account particularly sobering is the fact that Bundy was not describing an immediate or isolated event, but rather a gradual descent into deeper levels of depravity, catalyzed by his addiction to increasingly violent and explicit content. His chilling testimony highlights the potential for pornography, especially violent pornography, to distort one's understanding of sex, relationships, and even human life itself.

This isn't to suggest that everyone exposed to pornography will become a violent offender, but Bundy's story serves as a stark reminder of the dangerous spiral that can occur when addiction and violent imagery collide. His case underscores the need for society to recognize and address the broader implications of unchecked exposure to violent and degrading material—particularly how it can

fuel distorted behaviors and harmful actions in those susceptible to its influence.

This disturbing revelation from Bundy points to a broader conversation about the long-term psychological and behavioral effects of pornography, especially when it moves into darker, more violent territories. His story is a reminder that the cost of pornography addiction is not only personal but, in some cases, deeply and tragically societal.

Dobson asked if "it fulfilled your fantasies." Bundy said:
"In the beginning, it fuels this kind of thought process. Then, at a certain time, it's instrumental in what I would say crystallizing it ... At that point ... I was on the verge of acting out these kinds of thoughts ... and it happened in stages ... my experience with pornography that deals on a violent level with sexuality is that once you become addicted ... I would keep looking for more explicit, more graphic kinds of materials ... until you reach the point where the pornography only goes so far. You reach that jumping-off point where you begin to wonder if maybe actually doing it will give you that which is beyond just reading about it or looking at it. ..."

Bundy continues:
"The influence of violent pornography-which is an indispensable link in the chain of behavior ... the assaults, the murders and what have you ... I know that I could not control it ... that these barriers that I had learned as a child were not enough to hold me back with respect to seeking out and harming somebody."

Bundy then says:

"I think people need to recognize that those of us who have been influenced by ... pornographic violence-are not some kind of inherent monsters. We are your sons, and we are your husbands. ... Any pornography can reach out and snatch a kid out of any house to-day."

"I've lived in prison for a long time ... and I've met a lot of men who were motivated to commit violence just like me. And without exception every one of them was deeply involved in pornography -- deeply influenced by an addiction. There is no question about it. The FBI's own study shows that the most common interest among serial killers is pornography." (Dobson interview, 1989).

Porn use promotes sexual dysfunction:

Listed below are some of the impacts that pornography has on sexuality.

Inability to achieve **orgasm** during sex: Gary Wilson (2017) in *Your Brain on Porn,* one of the best books on the neurological impact of pornography addiction, writes that years of porn use can cause a variety of sexual symptoms which lie on a spectrum. Often, porn users report that delayed ejaculation or inability to orgasm (anorgasmia) was a prelude to full blown erectile dysfunction.

Citing one 29 year-old young man from Gary Wilson's forum who stated, "*17 years of masturbation and 12 years of escalating to extreme/fetish porn. I started to lose interest in real sex. The buildup and release from porn became stronger than it was from sex. Porn offers unlimited variety. I could choose what I wanted to see in the moment. My delayed ejaculation during sex became so bad that sometimes I could not orgasm at all. This killed my last desire to have sex*" (Wilson, 2017, p. 41).

Unreliable **erections** during sexual encounters: Between 1948 and 2002, the historical rates for ED in men under 40 were consistently around **2% to 3%** and did not go up very much until age 40. (Wilson, 2017). However, as noted by Wilson (2017), at least six studies have found erectile dysfunction (ED) rates of about **14% to 33%** in young men, which constitutes a staggering 1000% increase in just the last 15 years (Park, 2016). In fact, adolescents are suffering disproportionately, as noted in a Canadian study, which showed that problems in sexual functioning are sadly higher in adolescent males than in adult males. In a two-year period 78.6% of **males aged 16-21** reported a sexual problem during partnered sexual activity (O'Sullivan et. al., 2016):

- Erectile dysfunction - 45%
- Low sexual desire - 46%
- Difficulty climaxing – 24%

Objectification of women:

Dr. Foubert (2017) writes that the root of many acts of violence against women, including sexual violence, lies in a process in which a person sees another person as more of an object than a flesh-and-blood human being. In an effort to study this process, a research team from the Netherlands investigated the relationship between adolescents viewing pornography and whether or not they ended up believing that women were more objects than real people. The results revealed that the more frequently young males and females viewed porn, the more they took on a mindset that viewed females as objects (Peter et al., 2007; 2009).

In a review of previous studies on the objectification of women, Klassen and Peter (2015) noted that Internet pornography promotes gender inequality between the sexes because it treats women as sex objects, subordinates them, and depicts rape and violence against them. They conducted a content analysis of 400 popular pornographic Internet videos from the most visited pornographic websites and concluded that objectification was depicted more often for women than for men, and men were shown as dominant and women as submissive.

Instead of women being seen as lovely and beautiful human beings, they are now far too often being devalued to nothing more than an object to satisfy basic animal desires that are triggered and then played out online. Men ask of their partners, and I use that term loosely, to play out their fantasies as spawned by what they have previously seen. There is little to no interest in satisfying the desires of their partners and leaving them happy and fulfilled. Sex is, hence, far too dopamine-driven, with too little **oxytocin.** Oxytocin has been called the **"love hormone"** that also acts as a powerful neurotransmitter in the brain. The body releases oxytocin during physical touch and skin-to-skin contact, such as hugging, cuddling, kissing, and other sexual behaviors. Oxytocin brings on feelings of calmness, security, and contentment—feelings often associated with pair bonding. Oxytocin activates brain areas associated with pleasure and reward, likely because the body releases dopamine in coordination with oxytocin as the result of physical touch. Oxytocin also plays a role in pregnancy, nursing, and mother-infant attachment (The Neurobiology of Romantic Love, 2018).

Destruction of our spirituality:

The impact of pornography on the soul is profound and can lead to the following:

1. **Loss of spiritual integrity:** Specifically, many spiritual and religious traditions emphasize purity of thought and action as a cornerstone of moral living. In these contexts, pornography is often seen as a violation of these principles, leading to a sense of spiritual corruption or impurity. This sense of having compromised one's moral or spiritual ideals can lead to feelings of intense guilt, shame, and a perceived and painful distance from the divine or a higher moral standard.

2. **Erosion of Virtue and Self-Control:** Many spiritual traditions stress the importance of self-control, discipline, and the pursuit of virtue. Pornography addiction can be seen as a failure in self-control, which can have broader spiritual implications, and this loss of control might be viewed as a weakening of the soul's ability to resist temptation and pursue a life aligned with higher spiritual values.

3. **Distortion of Human Dignity and Love:** From a spiritual perspective, human sexuality is seen by many as a sacred expression of love that affirms human dignity. Pornography, by contrast, is criticized for objectifying individuals, as noted earlier, and reducing them to mere instruments of pleasure. This objectification can be seen as a violation of the spiritual principle that views every person as having inherent worth and

dignity. Regular consumption of pornography very likely desensitizes an individual to these spiritual values, leading to a degraded understanding of love and respect.

4. **Impact on Spiritual Growth:** Engaging in behaviors perceived as spiritually harmful can hinder personal spiritual growth. Individuals who feel addicted to pornography often report a sense of stagnation in their spiritual lives, feeling trapped in a cycle that is at odds with their spiritual aspirations. This can lead to a feeling of disconnection from their spiritual journey and a struggle to find meaning and purpose.

Effect on Meditation and Prayer: For those who engage in practices like prayer and meditation as part of their spiritual life, pornography addiction can be particularly disruptive. The intrusive thoughts and guilt associated with the addiction can become obstacles to achieving the peace, focus, and connection with the divine that these practices are meant to cultivate.

Summary: As we come to the end of this chapter, we want to leave you with a message of hope and encouragement. Pornography addiction is a powerful force, but it is not invincible. Like any addiction, it can be overcome with the right support, understanding, and commitment to change. If you or someone you know is struggling, we urge you to take that first step toward freedom.

Remember, you are not alone in this battle. Millions of people are facing the same struggle, and many have found their way out with help, hope, and perseverance. Whether through therapy, community

support, or faith, recovery is possible. It won't be easy, but it will be worth it. The hardest victory, as Aristotle said, is the victory over oneself—but it is the most rewarding one. You have the strength within you to overcome this challenge, and there is a brighter, healthier future waiting on the other side.

As *Romans 12:2 (NIV)* reminds us, *"Do not conform to the pattern of this world, but be transformed by the renewing of your mind."* Recovery is not only possible, but it begins with a transformation of the mind and spirit. No matter how deep the grip of addiction, God offers the strength to break free, renewing both your mind and your heart.

Recovery is not about shame or judgment—it's about reclaiming your life, your relationships, and your sense of self. It's about breaking free from a cycle that distorts your understanding of intimacy and love, and reconnecting with the authentic, meaningful connections that bring true fulfillment. *Isaiah 41:10 (NIV)* offers reassurance: *"So do not fear, for I am with you; do not be dismayed, for I am your God. I will strengthen you and help you; I will uphold you with my righteous right hand."* No matter how overwhelming addiction may feel, you are not alone, and God's strength is with you every step of the way.

Remember, you are not alone in this battle. Millions of people face the same struggle, and many have found their way out with help, hope, and perseverance. Whether through therapy, community support, or faith, recovery is possible. As *Philippians 4:13 (NKJV)* reminds us, *"I can do all things through Christ who strengthens me."* It won't be easy, but with the strength that comes from God, it is absolutely possible and worth it.

The hardest victory, as Aristotle said, is the victory over oneself—but it is the most rewarding one. You have the strength within you, and with God's guidance, you can overcome this challenge. There is a brighter, healthier future waiting on the other side, full of peace, purpose, and restoration.

Inside The Addicted Mind

The Neuroscience of Addiction

"For what I want to do I do not do,
but what I hate I do."

– Romans 7:15

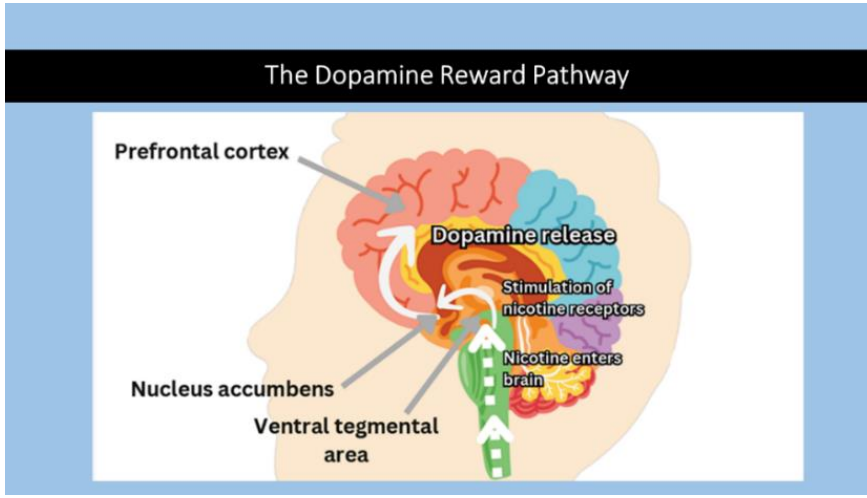
Addiction is a battle between desire and destruction, an inner turmoil where the mind is held captive by the very things it longs to escape. As the Apostle Paul so eloquently expressed in his letter to the Romans, we often find ourselves doing the things we despise, trapped in a cycle we cannot break on our own. This inner conflict is the essence of addiction—a war between the pleasure-seeking centers of the brain and the soul's deeper yearning for freedom and peace.

In his book *Glow Kids*, Nicholas Kardaras emphasizes that to understand addiction, we must first understand the brain's reward system. At the heart of this system is dopamine, the neurotransmitter that fuels the addict's pursuit of pleasure. What starts as a seemingly harmless indulgence soon morphs into a powerful and destructive force, hijacking the brain's natural circuitry and enslaving the individual to the substance or behavior that triggers the release of this "feel-good" chemical.

Just as Paul wrestled with the tension between good intentions and harmful actions, those battling addiction face a constant tug-of-war between seeking satisfaction and spiraling into deeper bondage.

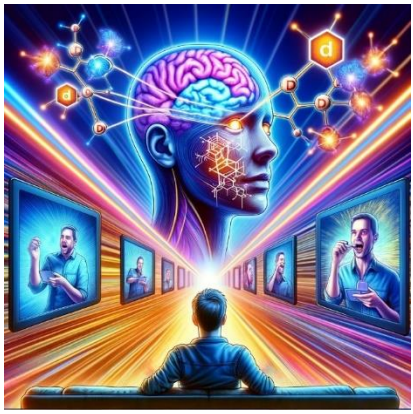
Understanding the neuroscience of addiction not only sheds light on this internal struggle but also offers a path toward healing—a path that acknowledges both the physiological and spiritual dimensions of recovery.

As Kardaras (2016) stated in his book, *Glow Kids*, we need to understand the brain's reward system and the impact of **dopamine** on that reward pathway to fully understand addiction.



Specifically, how much dopamine is activated by a substance or behavior is correlated directly with the addictive potential of that substance or behavior. **Dopamine,** as many of us know, is the "feel-good" neurotransmitter that is the most critical and important part of the addiction process. Dopamine was discovered in 1958 by Arvid Carlsson and Niles-Ake Hillarp at the National Heart Institute of Sweden. As also noted by psychologist Dr. Susan Weinschenk (2009), **dopamine** is created in various parts of the brain and is critical in several brain functions to include:

- Thinking
- Moving
- Sleeping
- Mood
- Attention
- Motivation
- Seeking and reward



Inspired to pursue addiction because of dopamine

When an individual performs an action that is satisfying to a need or fulfills a desire, dopamine is released into the nucleus accumbens, a cluster of nerve cells beneath the cerebral hemisphere specifically associated with reward and pleasure. This is also known as the brain's "**pleasure center**." Basically, engaging in a pleasure-seeking behavior increases dopamine levels so that the dopamine pathway is activated, which tells the person to repeat what s/he just did to continue that "feel-good" sensation, or as Kardaras calls it, "**the dopamine trickle**." From an evolutionary perspective, this dopamine trickle is an important survival mechanism as it rewards, and, thus, incentivizes essential and important biological and social functions, such as eating, procreation, love, friendship, and novelty seeking. Natural dopaminergic activities, such as eating and sex, usually come after effort and delay and as previously mentioned, serve a survival function. These are called the "**natural rewards**" as contrasted with addictive chemicals/behaviors (which can hijack the same circuity). In other words, addictive drugs and behaviors, such as gambling and

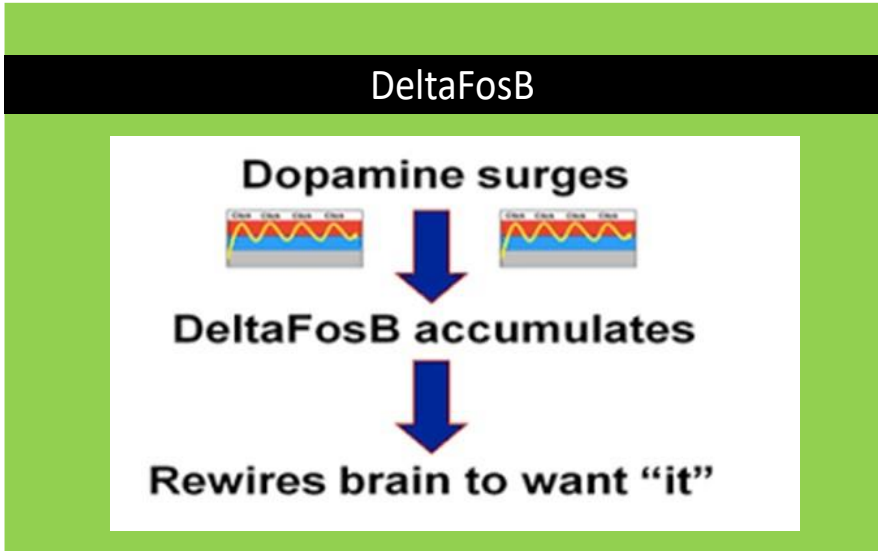
video gaming, actually offer *a short-circuit* to this process, which only ends up flooding the nucleus accumbens with dopamine and does not serve any biological function.

As Wilson (2014) points out, the evolutionary purpose of dopamine is to motivate you to do what serves your genes. The bigger the hit of dopamine, the more you want or even crave the goal. Dopamine surges are the barometer by which you determine the potential value of any particular experience. Moreover, dopamine tells you what to remember by rewiring your brain by virtue of new and even stronger nerve connections.

Although dopamine has been referred to as the "pleasure molecule," it is more about seeking and searching for pleasure, rather than pleasure itself. Dopamine is more involved in drive and motivation to seek. The "final reward," or what we experience as feelings of pleasure, Wilson (2014) writes, involve the release of **endogenous opioids**. You can think of dopamine as "wanting" and opioids as "liking." As psychologist Dr. Weinschenk explains, dopamine causes us to want, desire, seek out and search. However, the dopamine system is stronger than the opioid system, and we hence seek more than we are as satisfied…" Seeking is more likely to keep us alive rather than sitting around in a satisfied stupor. (Weinschenk, 2009). "Addicts want it more but gradually like it less. Addiction might be thought of as *wanting gone amok*." (Wilson, 2014).

Wilson (2014) explains that the neurological process does not stop there. Highly salient activities, in this case, addiction, lead to the accumulation of **DeltaFosB**, a protein that activates the genes

involved with addiction. The molecular changes it potentiates are almost identical for both sexual conditioning and chronic drug use. Specifically, **DeltaFosB** rewires the brain to crave IT, whatever IT is. This is quite adaptive in situations where survival is furthered by overriding satiation mechanisms (e.g., I'm full, I'm done). In terms of the survival of the species, Wilson points out that excess food or sex signals the brain that you have hit the "evolutionary jackpot," and a powerful incentive kicks in gear. For example, wolves, which need to stow away huge amounts of food (up to twenty pounds) of a single kill will continue to consume their kill even though they are full. This is particularly salient in porn addiction. In a sense, dopamine is like the foreman on a construction site barking orders, and **DeltaFosB** is the worker on the site. Dopamine is yelling, "This activity is really important, and you should do it again and again" (Wilson, 2014). **DeltaFosB** is responsible for ensuring that you remember and repeat the activity. This repeated process produces what is called **sensitization,** which is based on the principle, "Nerve cells that fire together, wire together." Repeated activity strengthens cell connections.



As the brain recognizes that it needs a rest, it will kick out **CREB** to slow things down. In essence, **DeltaFosB** acts like the gas pedal, and **CREB** functions as the brakes. It specifically inhibits dopamine and endogenous opioids to take the joy out of the binging/addictive behavior or substance so that you can give it a rest (Wilson, 2014). This numbed pleasure response induced by CREB is often identified as **desensitization,** which leads to **tolerance** - the need for increasingly higher doses to achieve the same effect. Tolerance is a key factor in addiction (Wilson, 2014).

While **CREB** can help to perhaps curb less sensational behaviors, such as too many portions of a good meal, it has little chance against high valence substances, such as cocaine, porn media, and intense game media. This leads to what Wilson (2014) calls "*nature's cruel joke*." Specifically, **CREB's** attempt to suppress dopamine and natural/endogenous opioids is insufficient to shut down the process

in highly salient addictions/behaviors in today's world. Therefore, the person's pleasure response is not sufficiently attenuated, so they are driven to more extreme addiction behavior. In other words, **CREB** can lead to tolerance, which can result in more compulsive use and escalation. So, we see that chronic overstimulation can lead to two opposite effects:

- Increased dopamine activity (wanting/seeking it more) – sensitization via DeltaFosB
- Decreased dopamine and opioid activity (liking it/enjoying it less) – via desensitization via CREB

Sadly, the evolutionary process has not equipped us to withstand such an onslaught of dopamine. When we become addicted, our bodies respond by reducing dopamine levels or shutting down its production, providing some relief to the overwhelmed receptor cells. So, with this reduced capacity to produce dopamine naturally, we enter into a vicious cycle whereby we need to ingest increasing amounts of the

addictive substance in question or engage in the addictive behavior in question just to maintain our dopamine level (Wilson, 2014).

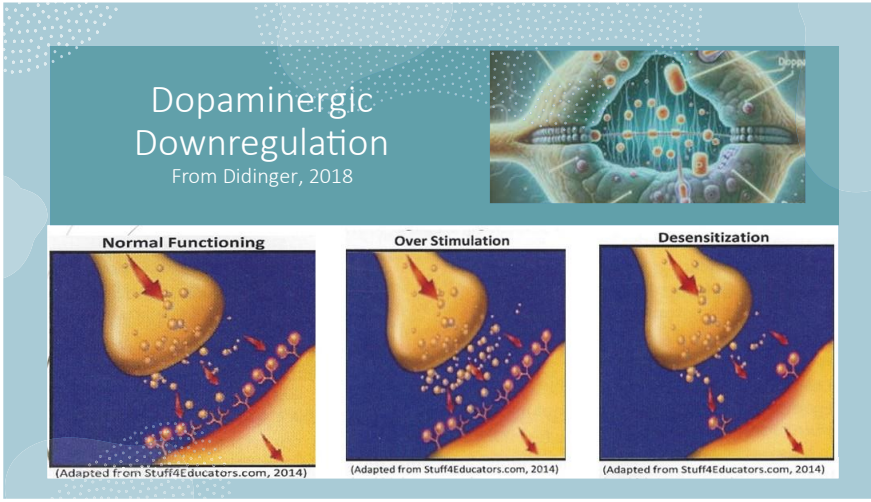
Then, as a "double whammy," this chronic exposure to addictive behaviors or substances then impacts negatively on the prefrontal cortex, which, among other things, is the brain's decision-making center, associated with impulse-control or "braking mechanism." As the prefrontal cortex's braking mechanism becomes increasingly impaired, we are far less able to put on the brakes and refrain from the addictive substance or behavior (Wilson, 2014).

More on **Sensitization** and **Desensitization** on a cellular level:

Sensitization: Dr. Robert Didinger, in his workbook, *Pornography Addiction: Breaking through the Chains*, nicely describes the biological changes on the cellular level that occur. Specifically, the first biological process, sensitization, begins when a source of stimulation is associated with high levels of dopamine, and the brain becomes hypersensitive to this resource. For example, In the case of pornography, the images become burned into memory, creating "super memories" that the brain recalls regularly to stimulate the desire to seek more pornography (Didinger, 2018). So, at the synapse (the space between neurons that connect via tiny vesicles of dopamine that cross over to fire up the next neuron), there is an increase of dopamine vesicles crossing that synapse. The image below, as noted in Didinger (2018) portrays the changes:

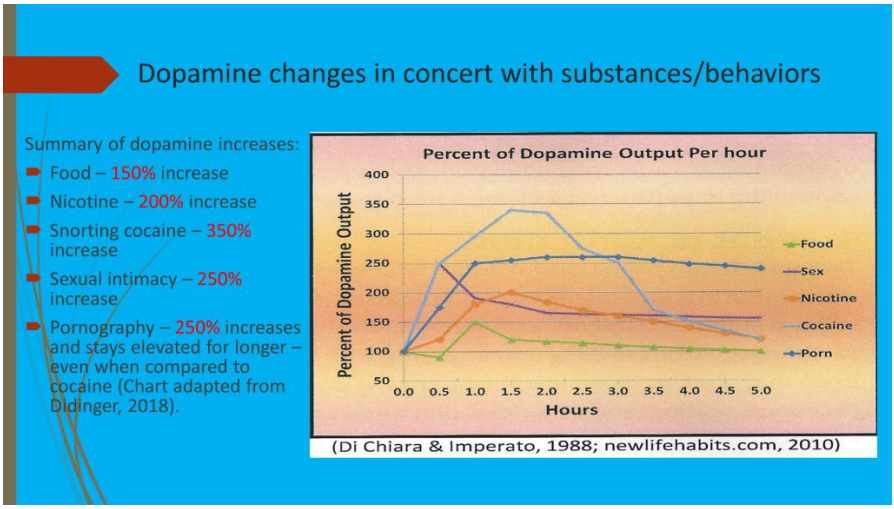
Desensitization: The next step in the process of developing addiction on the cellular level is desensitization, which refers to a general dialing

down (as previously noted) of responsiveness to all forms of pleasure. This process occurs as a result of prolonged dopamine production (Volkow et al., 2101). As Dindinger (2018) notes, when high valence stimuli. such as pornography. are encountered, dopamine increases dramatically, which eventually results in overstimulation, something we might like, but our brain doesn't. As with most biological processes, our brain will seek a state of homeostasis or normalcy. Didinger adds that our brain effectively retaliates by reducing the amount of receptor sites available to receive the dopaminergic stimulation as can be seen in the graphic below (adapted from Didinger, 2018). Sadly, this loss of receptor sites during desensitization effectively and qualitatively changes how we experience normal sources of pleasure. As a result, essential and healthy survival resources, such as friends, food, family achievement, social activities, and dating, become weaker and less pleasurable, and we pursue them less or stop pursuing them altogether. In other words, sources that used to bring us pleasure no longer hit the mark, and we then seek higher and higher valence sources in the quest of more intense dopamine.... thus, we seek more extreme levels of a substance or behavior to achieve this.



The use of drugs increases dopamine the same as sexual intimacy does, **250%**, but what is alarming is that it maintains the dopamine level much longer than sexual intimacy does. Dr. Didinger comments that even with an extremely addictive drug like cocaine, which increases dopamine by **350%**, dopamine levels decrease much faster than with pornography. As such, he notes that the brain interprets pornography to be extremely valuable and necessary for survival, thus essential to maintain, which helps to perpetuate the descent into addiction (Didinger, 2018).

As can be seen in the chart below:

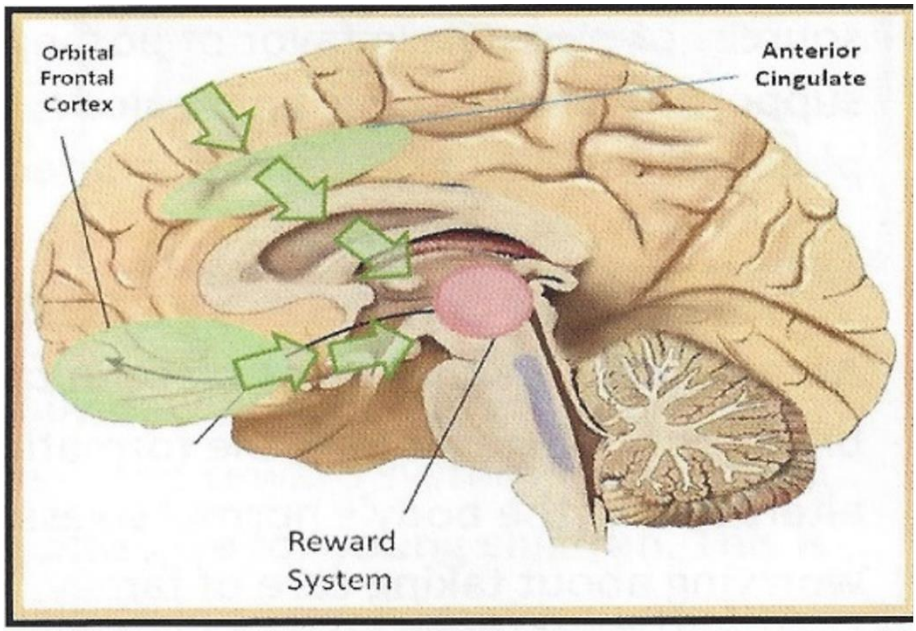


Hypofrontality – Not a good thing:

As Didinger (2018) points out, at the beginning of developing an addiction such as pornography, sensitization and desensitization of dopaminergic pathways are the primary driving forces. Once an addiction is on its way to becoming fully established, hypofrontality kicks in to ensure that the new substance of behavior is maintained. In many ways, hypofrontality is very insidious as it removes our ability to override or stop porn-seeking (Hilton, 2007).

Two areas of the brain, the **anterior cingulate** and the **orbital frontal cortex**, serve as a protective mechanism to counter the reward system's desire for ever-increasing dopamine increase. Specifically, they help us to avoid and/or continue in activities or behaviors that could potentially harm us. For example, Freddy wants to ditch football practice and go off with friends to smoke some weed, which

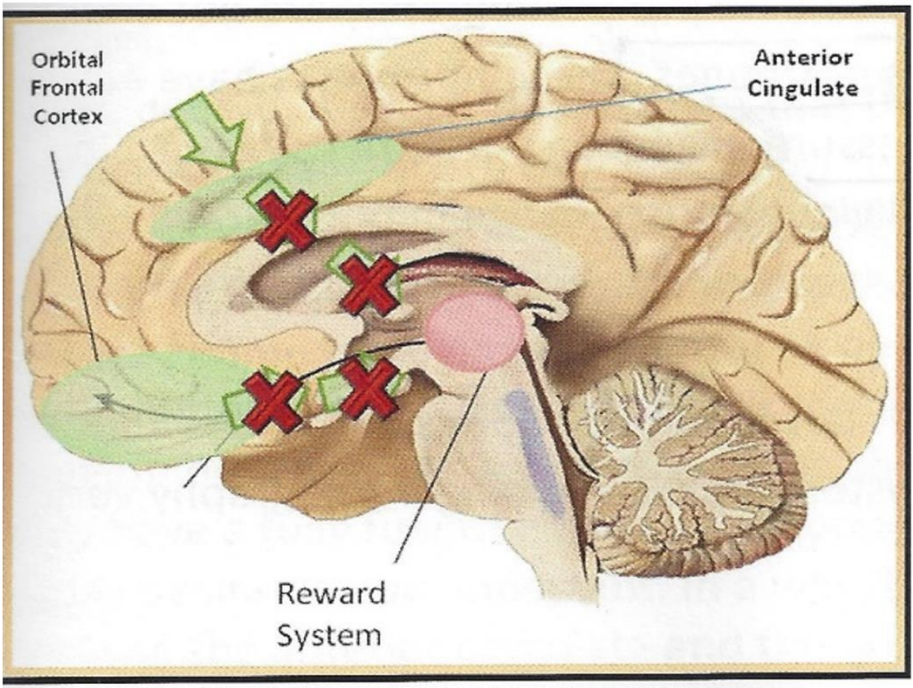
would greatly increase dopamine and help to begin the process of rewiring his brain.



(Adapted from Study Blue, 2007)

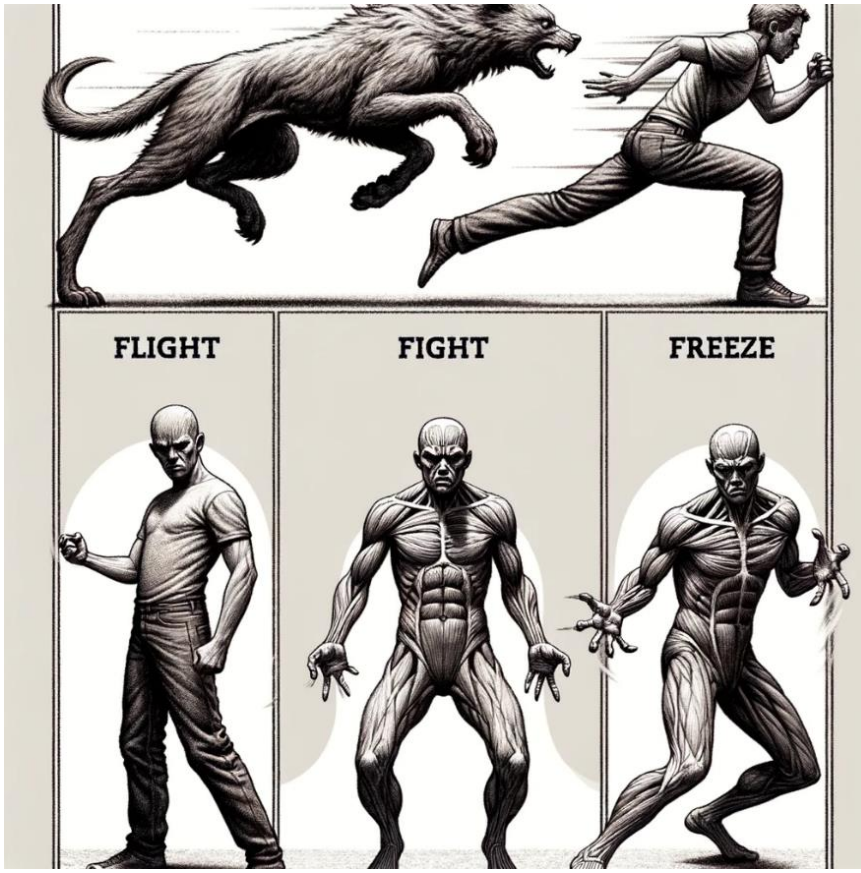
The reward system is successfully shut down

However, the anterior cingulate and orbital frontal cortex jump in and suppress the reward system to avoid the negative consequences of possibly being kicked off the team, not to mention losing the car keys.



(Adapted from Study Blue, 2007)

The reward system fails to shut down



Polyvagal Theory:

In order to move forward in our understanding of what is happening to us as we progress toward addiction, we must understand Steven Porges' Polyvagal Theory and then integrate this knowledge with Triune Brain Theory. So, first, a little anatomy. The Autonomic Nervous System is a control system that acts largely unconsciously and regulates bodily functions, such as heart rate, digestion, respiratory rate, pupillary response, urination, and even sexual

arousal. It has two main subdivisions: Sympathetic and Parasympathetic.

- **Sympathetic Division:** Prepares the body for stressful or emergency situations – fight or flight. Thus, the sympathetic division increases heart rate and the force of heart contractions and widens (dilates) the airways to make breathing easier. It causes the body to release stored energy. Muscular strength is increased. This division also causes palms to sweat, pupils to dilate, and hair to stand on end. It slows body processes that are less important in emergencies, such as digestion and urination (Merck Manual).

- **Parasympathetic Division:** Generally, the parasympathetic division conserves and restores calm/homeostasis. It slows the heart rate and decreases blood pressure. It stimulates the digestive tract to process food and eliminate wastes. Energy from the processed food is used to restore and build tissues (Merck Manual).

Steven Porges discovered that the parasympathetic division of the Autonomic Nervous System consists of two branches that lead to two different responses. The main nerve in the parasympathetic nervous system is the 10th cranial nerve, aka the **vagus nerve,** the largest of the 12 cranial nerves and has huge implications for our well-being and health. The vagus nerve has two very distinct branches**: Dorsal vagal nerve** and the **ventral vagal nerve**.

Dorsal Vagal Nerve: Barta (2018) notes that the most primitive form of defense occurs when the dorsal vagal nerve is activated. When activated, the dorsal vagal nerve promotes shutdown, freeze, and collapse. An example of this shutdown is when a gazelle, for example, is being stalked by a lion and when trapped with no possible way to flee, drops down, and appears to be deader than a doornail. This is not a conscious process but is, rather, a very primitive and unconscious one.

Ventral Vagal Nerve: Barta (2018) writes that the second response of our parasympathetic nervous system (the first being freeze and collapse, as noted above) is responsible for our ability to engage socially and handle social relationships. According to Barta, the social engagement system is controlled by our ventral vagus nerve, a very smart nerve with a rapid response time. As such, it allows us to "know" if we are safe enough so we can calm our defenses through a process of "neuroception." roughly translated as the brain's ability to sense safety. This serves not only bonding needs but allows us to shift out of sympathetic arousal and move into parasympathetic calm or downshift from activation to calm.

Opponrent Process Theory

In the complex journey of overcoming addiction, many struggle with feelings of hopelessness, wondering why the battle seems so relentless. But what if there was a powerful tool—an ancient insight—that could help explain exactly what you're going through and offer a roadmap for recovery? Enter Opponent Process Theory, a concept that has stood the test of time and, as addiction expert Dr. Judith

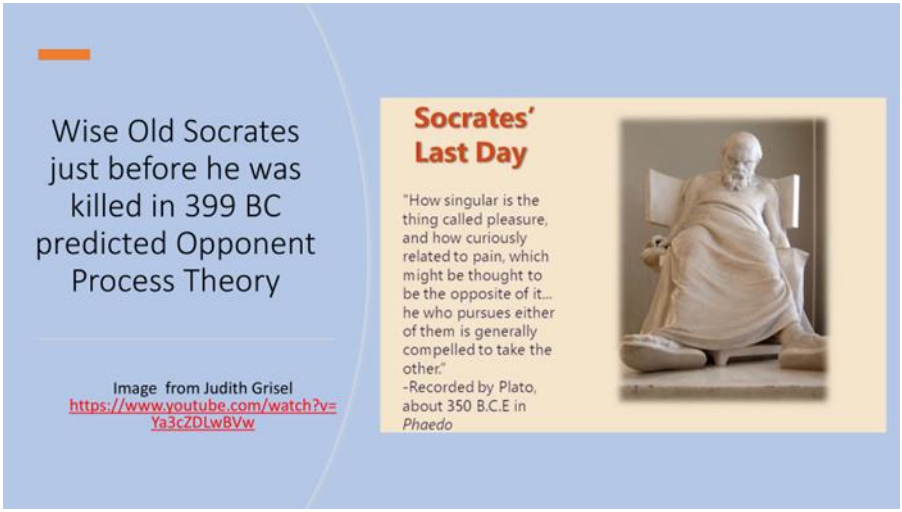
Grisel points out, is key to understanding the very forces that trap people in cycles of addiction.

Dr. Grisel, a neuroscientist who has also experienced addiction firsthand, asserts that this theory can shine a light on why we become habituated, why tolerance builds, and why cravings can feel so overwhelming. Her groundbreaking work, particularly in her book *Never Enough* (2019, 2022), is a must-read for anyone serious about breaking free from addiction's grip. It's not just a scientific explanation; it's a lifeline. Understanding how pleasure and pain are intertwined—and why your brain pushes you toward more of the substance even when it's damaging you—can empower you to take control.

In this section, we will explore a vital, often overlooked body of literature as noted and eloquently describe by Dr. Grisel (2019. 2022) that connects ancient philosophy with modern addiction science. It has the potential to offer profound insights into how cravings and withdrawals work, giving you not just knowledge, but a powerful tool to fight back and reclaim your life.

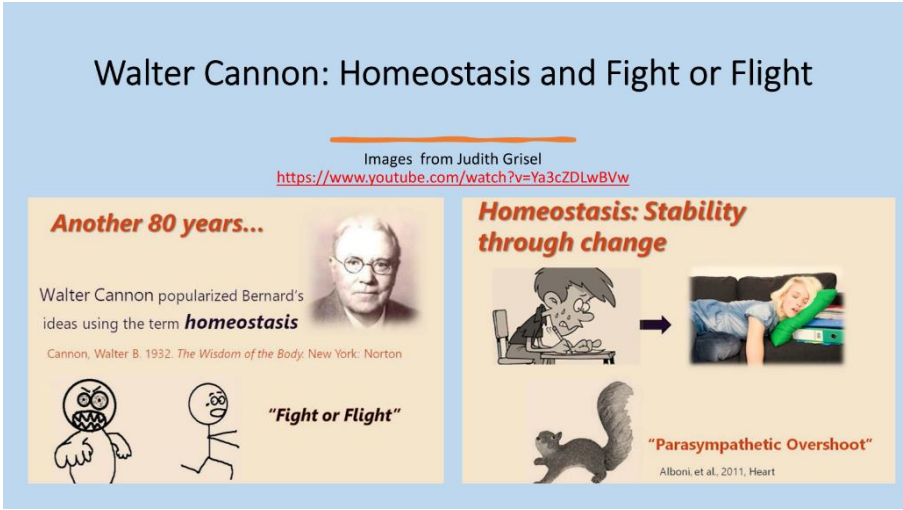
We begin by looking at Socrates, a philosopher from ancient Greece, whose words in 399 BC still resonate with modern scientific understanding. Just before his death, Socrates reflected on how pleasure and pain are deeply intertwined. He observed that those who pursue one are often compelled to experience the other. This insight, known as Opponent Process Theory in modern terms, explains the duality of human experience—pleasure is often followed by pain, and

pain by pleasure. It's a profound observation that laid the groundwork for future discussions on human biology and psychology.

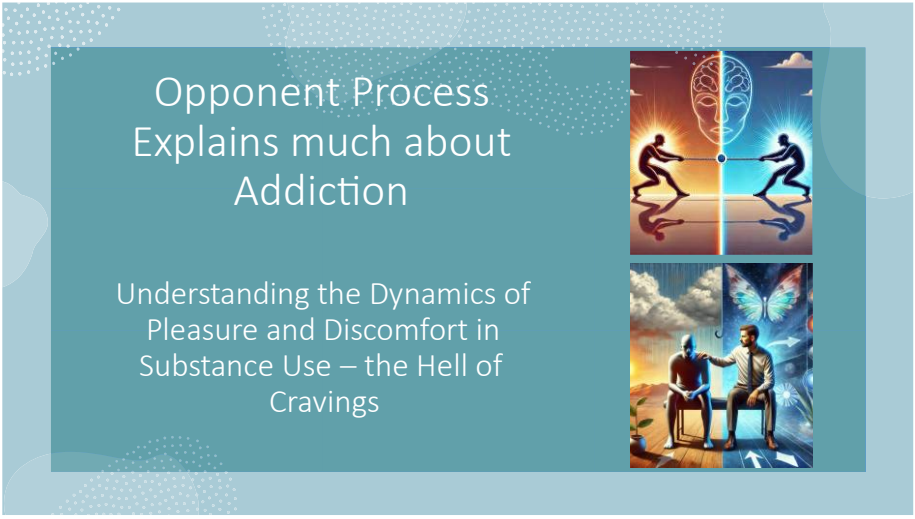


Fast-forward almost two millennia, and we find French scientist Claude Bernard expanding on this idea of balance but in a more physiological context. In the mid-19th century, Bernard introduced the concept of the "milieu intérieur," or the stability of the internal environment. He argued that for organisms to live freely and independently, their internal systems must remain stable, even when the external world is constantly changing. This idea of homeostasis—the body's effort to maintain balance—builds on Socrates' philosophical musings about the natural counterforces of pleasure and pain but brings them into the biological realm.

Another 80 years later, Walter Cannon popularized Bernard's idea of homeostasis and expanded it to include the fight-or-flight response, which describes how the body reacts to threats. Cannon coined the term "homeostasis" to describe the body's ability to maintain stability through change. He demonstrated how, during stressful situations, the body mobilizes resources to either confront or flee from a threat—a physiological response deeply connected to maintaining internal balance. Importantly, after these stress responses, the body seeks to return to equilibrium, often experiencing what's called "parasympathetic overshoot," as it attempts to stabilize after an intense reaction.

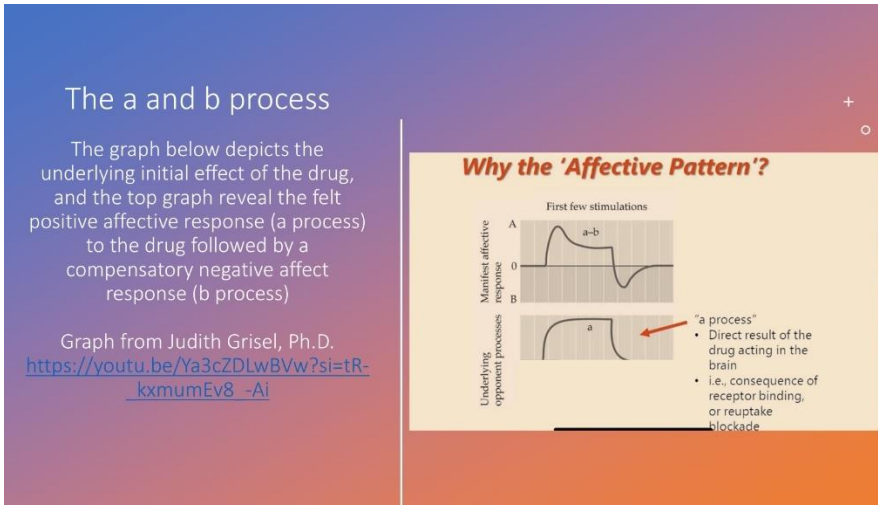


From Socrates' early musings on pleasure and pain, through Claude Bernard's scientific framing of internal stability, to Walter Cannon's work on fight-or-flight, humanity's understanding of balance has evolved. Together, these insights highlight the complex interaction between our internal and external worlds—whether in our emotional states or physiological responses. They form a continuous thread in understanding how humans navigate the opposing forces that shape both our minds and bodies, driving us toward equilibrium in an ever-changing environment.



For many and as noted earlier, addiction begins with the pursuit of pleasure. Substances such as alcohol, opioids, stimulants, and even nicotine activate the brain's reward systems, flooding it with dopamine, the "feel-good" chemical. This rush of dopamine creates a powerful sense of euphoria or relaxation, depending on the substance.

At this stage, the experience is mostly positive. The brain hasn't yet adapted to the substance, and users often feel in control, enjoying the positive effects and the sense of relief or pleasure it brings. This initial period can be seen as the brain's **A-process**—the primary response to the stimulus, which, in this case, is intense pleasure.



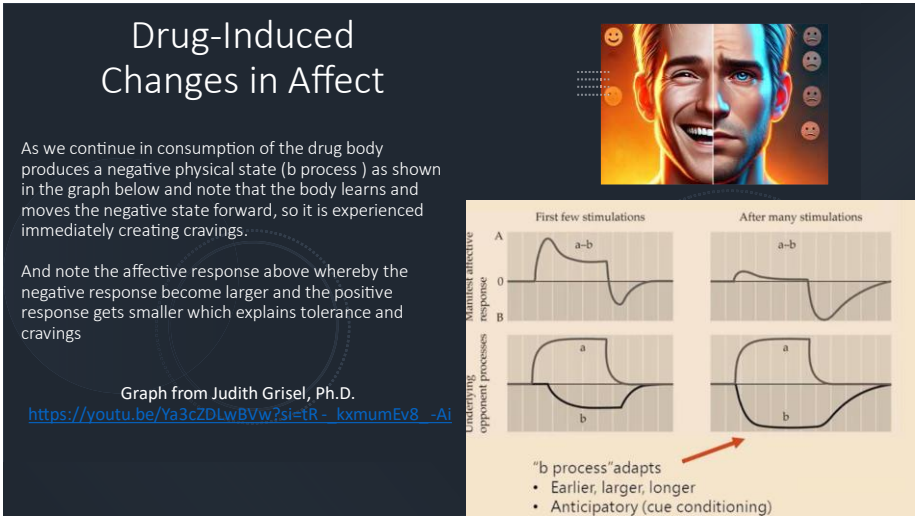
Consider the visual metaphor: two figures in balance, one representing pleasure, the other representing discomfort. At the start, pleasure dominates—represented by the figure in the image exerting force on one side of the balance. But this balance is temporary, as the opposing force begins to build momentum.

The pleasure that once came easily soon starts to diminish. As the brain adapts to the presence of the substance, the receptors in the brain become less sensitive to dopamine. The same amount of substance that used to create a powerful high now results in a reduced effect, leading users to increase the dosage in pursuit of that initial feeling.

This diminishing return is the first sign of the opponent process taking hold.

Discomfort and the Hell of Cravings:

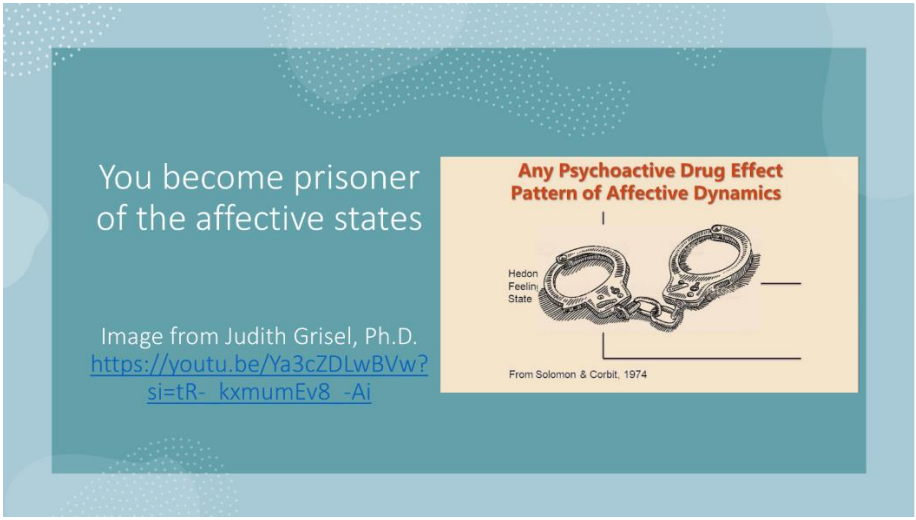
Over time, something profound happens: the **B-process**—the brain's counterbalancing response—becomes stronger. This means that after the initial pleasurable effects wear off, the user experiences discomfort. The brain, in its attempt to return to equilibrium, begins to overcompensate for the euphoric effects of the substance, creating negative feelings such as anxiety, irritability, or physical discomfort.



This is where the "hell of cravings" begins. The user no longer consumes the substance for pleasure, but rather to avoid the intense discomfort of withdrawal. The A-process of pleasure is now short-lived, and the B-process of discomfort dominates. The need to relieve this discomfort drives further use, leading the person into the spiral of addiction.

Cravings are, in essence, the brain's desperate plea to avoid the emotional and physical distress triggered by the B-process. What

started as a search for pleasure has now become a relentless effort to escape pain. Addiction, at this stage, becomes less about chasing highs and more about avoiding the lows. This shift is what makes addiction so devastating—it transforms from a voluntary act into a compulsion driven by the brain's altered chemistry.



The Vicious Cycle of Addiction:

Addiction is not just about using more of a substance to feel good; it's about using the substance to feel *normal*. As the user increases the frequency or dosage of their substance use, the brain's baseline functioning becomes dependent on it. This dependence deepens the cycle: more substance use leads to stronger withdrawal symptoms, which leads to more cravings, and the cycle repeats.

Breaking free from this vicious cycle is incredibly difficult because the brain has now rewired itself to prioritize the avoidance of discomfort.

Even when users want to quit, they face the brutal opponent process that makes quitting feel nearly impossible without intervention.

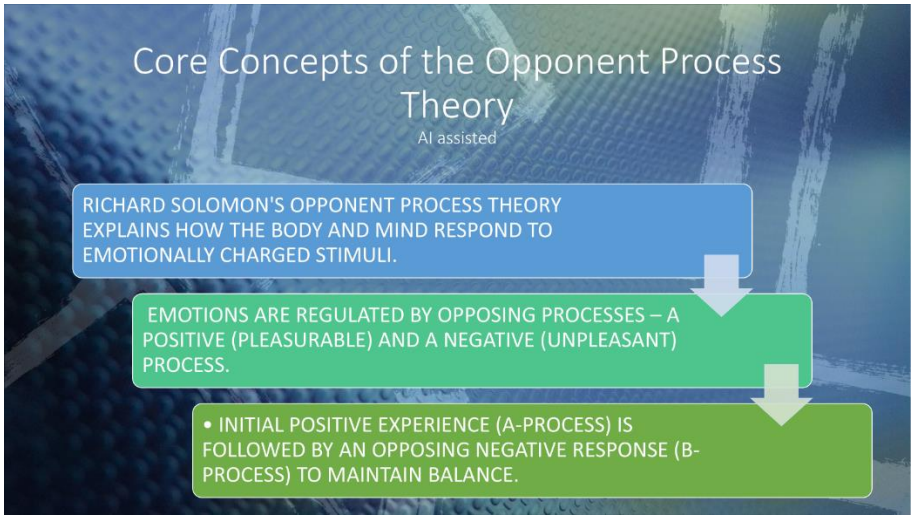
The visual of the opposing forces highlights this struggle: pleasure no longer holds the dominant position; instead, the discomfort and withdrawal symptoms hold sway, forcing the user into repeated substance use to stave off the emotional and physical pain.

Understanding the Opponent Process for Better Treatment

Understanding addiction through the lens of the Opponent Process Theory offers critical insights into why it is so hard to quit. Successful treatments must not only address the user's cravings for pleasure but also focus on reducing the intense discomfort that fuels the cycle of addiction. This is why many treatment approaches focus not only on detoxifying the body but also on restoring balance in the brain's reward systems.

By recognizing that the experience of addiction is about escaping the "hell" of withdrawal rather than just pursuing the "heaven" of euphoria, we can tailor treatments to be more compassionate and effective. Medications, behavioral therapy, and support systems that ease the discomfort and help individuals find healthier ways to cope can provide an escape from the cycle of addiction.

The following two graphics summarize key points:



Summary: The science of addiction reveals the powerful forces at play in the brain, yet this knowledge also provides hope. As we have seen, addiction is not just a moral failing or a weakness of willpower, but a deeply ingrained neurochemical process. The understanding of

dopamine's role and the hijacking of the brain's natural reward system shows us that addiction rewires the brain in ways that make it difficult to break free.

But as overwhelming as this battle may seem, there is always hope for renewal and transformation. The same brain that has been rewired by addiction can also be healed. *"I know that nothing good lives in me. I mean, nothing good lives in the part of me that is earthly and sinful. I want to do what is right, but I cannot.I do not do the good I want to do. Instead, I am always doing the sinful things I do not want to do."* (Romans 7:18-19). In the same way that the Apostle Paul wrestled with doing the very things he hated, we, too, can find hope in his realization that healing and strength come from a power beyond ourselves.

In this battle between desire and destruction, the words of Philippians remind us that we do not face addiction alone. The process of healing requires both understanding the mechanisms at work in our minds and hearts and trusting that the strength to overcome comes from something greater than ourselves. *"Therefore, if anyone is in Christ, the new creation has come: The old has gone, the new is here!"* (2 Corinthians 5:17).

No matter how deeply entrenched the cycle of addiction may seem, healing is possible. With a renewed mind, transformed by knowledge and empowered by faith, the journey toward freedom can begin. This is not the end of the story—there is always a way out, a new path forward. With determination, treatment, and faith, we can overcome the grip of addiction and reclaim the lives we were meant to live.

The Therapeutic Pathway to Healing and Peace

"Come to me, all who are weary and burdened, and I will give you rest. Take my yoke upon you and learn from me, for I am gentle and humble in heart, and you will find rest for your souls."

- Matthew 11:28-29

Addiction leaves deep wounds, not just in the mind, but in the body and soul. However, even in the midst of darkness, there is a pathway toward healing—a journey where rest for the weary can be found, and where hope, rooted in the promise of restoration, begins to grow. As we step into the therapeutic world of healing, we uncover profound wisdom from both neuroscience and Scripture. Together, they form a holistic and transformative approach to recovery.

In this chapter, we will explore three groundbreaking therapies that serve as powerful tools for healing the wounds of addiction: Polyvagal-Informed Therapy, HeartMath® , and Internal Family Systems (IFS). These methods help us reconnect with the body, mind, and heart, aligning them toward peace and wholeness. Just as Jesus invites us to find rest in Him, these therapies work to restore balance, helping us to release the burdens that addiction has placed upon us.

"The Lord is close to the brokenhearted and saves those who are crushed in spirit" (Psalm 34:18). Healing is not just about overcoming addiction—it is about reclaiming peace, reconnecting with our true selves, and finding restoration for the broken pieces of our lives. The therapeutic pathway is not just a journey back to sobriety but a road to lasting peace. So, here we go:

1. **Polyvagal-Informed Therapy**

2. **HeartMath®**

3. **Internal Family Systems (IFS)**

These therapies have the potential to guide us toward lasting recovery and well-being, offering hope for a healthier, more balanced life.

Part 1: Polyvagal-Informed Therapy

Building on what we have previously discussed about the body, specifically the autonomic nervous system, Polyvagal-informed therapy focuses on our body's nervous system and how it responds to stress and safety. It uses the idea that our sense of well-being is closely tied to how our body feels safe, connected, and calm. By understanding and influencing our nervous system's responses, we can more effectively manage our emotions, feel more connected in relationships, and recover from stress and trauma. In essence, we tune into our body's safety signals to improve our emotional health and resilience.

Dr. Steven Porges and his son, Seth Porges, just published a marvelous book, *Our Polyvagal World: How Safety and Trauma Change Us.* Unlike Dr. Porges' earlier works, this book is free of scientific jargon and is incredibly readable and useful. Bravo Steven and Seth! They start the book by summarizing Polyvagal Theory in one sentence: **"How safe we feel is crucial to our physical and mental health and happiness"** (Porges & Porges, 2023, p. XIII).

They later add, "When we feel safe, our nervous systems and entire bodies undergo a massive physiological shift that primes us to be healthier, happier, and smarter; to be better learners and problem-solvers; to have more fun; to heal faster; and generally, to feel more alive (Porges & Porges, 2023, p. XIII). Now, how cool is it that - Polyvagal-Informed Therapy can do all of that by helping us achieve regulation through safety! They point out that trauma affects not only our brains but extends throughout our entire nervous system,

impacting every part of our body. It alters how our senses perceive, how our organs function, and nearly every aspect of our mental and physical health. As such, trauma changes our bodies in addition to our brains, and Polyvagal Theory gives us an explanation for how specifically these changes occur and, more importantly, how we can deal with them and heal.

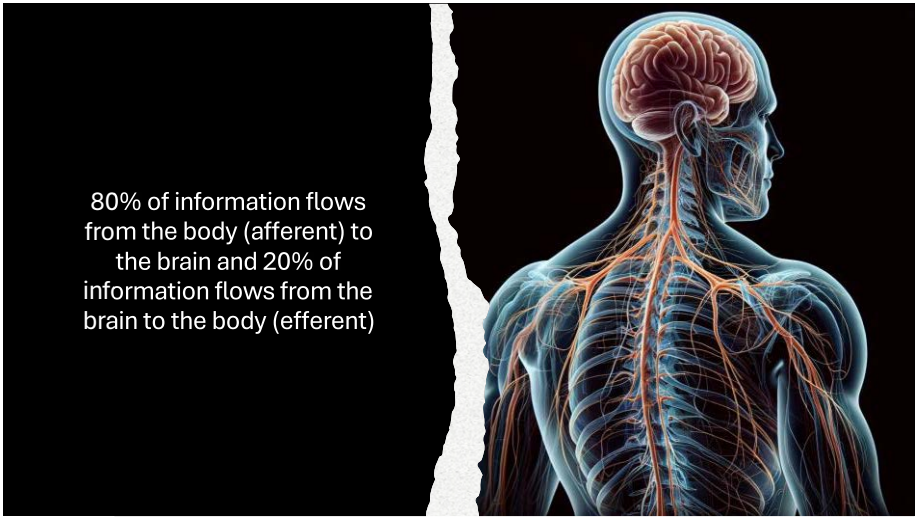
Steven and Seth assert that Polyvagal Theory shifts our discussion away from the actual event to how it transforms and becomes embedded in our bodies, with these changes occurring through the vagus nerve. Therefore, it is through the vagus nerve that we find a way out of neurological disorder and disruption to a pathway to peace and healing. To quote, "A light at the end of trauma's tunnel, and a pathway toward healing and happiness in a world that seems designed to threaten and traumatize us at every turn (Porges & Porges, 2023, p. XIII)." This is neuroscience poetry to me, and my desire for you is that it equally inspires you to feel hope and embark on your own healing journey.

Borrowing from a metaphor of flowing down a stream, the first step in healing is to move our **neuroception** - what our autonomic nervous system is automatically sensing regarding safety and danger without our awareness to awareness of sensing which is called **perception**. Flowing downstream, we can then appreciate what our **physiological state** is causing us to **feel emotionally** and subsequently change the **behaviors** that we engage in. The ensuing **story or narrative** we give to this process to make sense of what we are sensing and feeling, if positive and healthy, helps us correct our autonomic state. On the other hand, if our narrative is false, as it often is (e.g., we often shame and blame ourselves or we catastrophize the situation), then our autonomic state becomes even more activated or shut down, and our subsequent emotions become more anxious or depressed,

respectively, and we enter into a negative feedback loop, a process that leads to emotional problems/illness and/or physical problems.

There are two basic approaches to healing**: Bottom-up and Top-down.**

Bottom-up entails working with the body more directly. It is important to appreciate that, as previously noted, 80 percent of the fibers in the vagus nerve are sensory in that they go from the organs to the brain, and 20 percent are motor in that they travel from the brain to various body organs. (Porges, 2017). This suggests that what our bodies tell us is indeed very important, and we must make every effort to listen and heal on that level. **Top-down** strategies, which involve our thinking and hopefully more rational brain, require a certain level of cognitive development and maturity, so very young children will not be able to benefit from this approach (e.g., Cognitive Behavioral Therapy aka CBT).



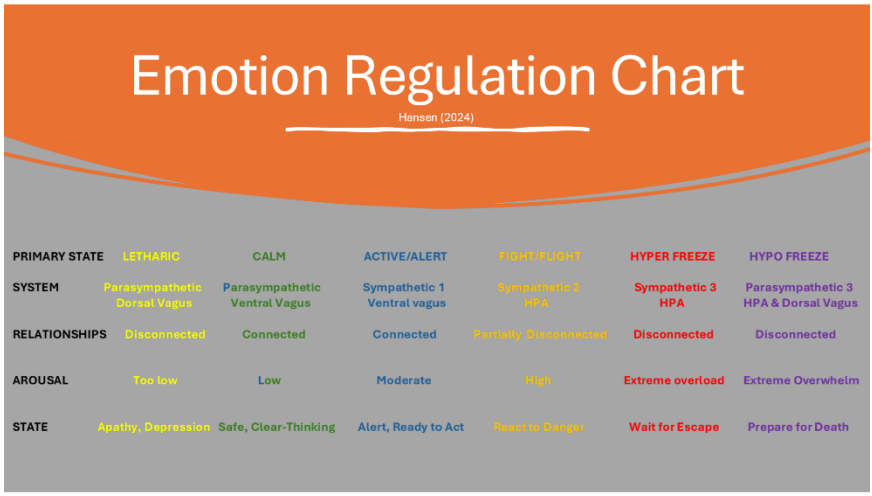
As previously noted by Deb Dana, it is in a **ventral vagal state** and a neuroception of **safety** that brings the possibility for connection, curiosity, and change. She nicely presents a polyvagal approach, which she calls the four R's (the first three are bottom-up (body to brain) and the last is top down (brain to body) (Dana, 2018):

The Four R's

- **R**ecognize the autonomic state
- **R**espect the adaptive survival response
- **R**egulate or co-regulate in a ventral vagal state
- **R**e-story

Recognize the autonomic state

I recommend making the **Emotion Regulation Chart I developed below** as our companion to help us recognize where we are on that continuum of regulation. In doing so, we can make what is **implicit** (under the table and outside of our awareness) **explicit** (on the table and in our awareness). We can use the color codes to describe for ourselves and others where we and others are with just one neutral and non-judgmental word. This is also particularly helpful for children as it helps give them a physical and emotional language that connects the mind with the body.



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If we find ourselves in the **Orange Zone** (note: in the graphic, it is actually red to the **Red Zone,** we are overly activated and prone to experience:

- Rapid heartrate
- Hyperventilation
- Panic attacks
- Inability to focus or follow through
- Distress in relationships
- Emotions of fear, terror, rage, anger
- Possible health consequences, including heart disease, high cholesterol, high blood pressure, weight gain, memory impairment, headaches, chronic neck shoulder and back tension, stomach problems, and increased vulnerability to illness (lower immune response) (Dana, 2018).

If we find ourselves in the Yellow Zone, we are under activated or shutdown and prone to experience:

- Slow heart rate
- Shallow breathing
- Withdrawal from others
- Emotions of sadness, depression, shame, disgust
- Possible health consequences, including chronic fatigue, fibromyalgia, stomach problems, low blood pressure, type 2 diabetes, and weight gain (Dana, 2018)

If we find ourselves in the **Green Zone,** we experience safety and connection and prone to experience:

- Regulated heart rate (vagal brake lowers heartrate by 20 beats per minute)
- Breath is full
- Feeling regulated
- We take in the faces of others
- We can "tune in" to conversations and "tune out" distractions
- We can see the "big picture"
- We can connect with the world and the people in it
- Able to reach out to others
- Able to play and take time to enjoy life and others
- Able to be productive in work
- Able to organize and follow-through
- Able to heal emotionally and physically
- Emotions of happiness, joy, love, peace, calm
- Possible health consequences include a healthy heart, regulated blood pressure, a healthy immune system, decreased

vulnerability to illness, good digestion, quality sleep, and an overall sense of well-being (Dana, 2018)

Respect the adaptive survival response

One of the beautiful aspects of Polyvagal Theory is that it removes **shame** from the equation. Dr. Porges kindly states in reference to clients, *"I was going to say that depending on the age of my client, but actually, regardless of age, the first thing to convey to the client that they did not do anything wrong… If we want individuals to feel safe, we do not accuse them of doing something wrong or bad. We explain to them how their body responded, how their responses are adaptive, how we need to appreciate this adaptive feature and how the client needs to understand that this adaptive feature is flexible and can change in different contexts."*(Porges, 2017, p. 121 - 122). So, rather than shaming a woman for shutting down in dorsal vagal freeze when being molested or raped, which will only fuel her shame, guilt, and emotional pain, we must compassionately inform her that her autonomic nervous system acted brilliantly, interpreting the signals and immobilizing her in a situation where fighting or fleeing might have cost her life. Many a court judge have literally ruined survivors of abuse by blaming them for not running or fighting and invalidated their trauma.

Regulate or co-regulate in a ventral vagal state

Once we recognize that we are dysregulated and have pinpointed which defensive physiological state we are in and where we are on the emotional regulation continuum (see emotional regulation chart

above) i.e., activation or slowing/shutting down, we can act by using **bottom-up** self-regulation strategies and co-regulation strategies.

As Herman Melville once wrote, "*We cannot live for ourselves, a thousand fibers connect us.*" Connection is a biological imperative, according to Porges (2015). Our autonomic nervous system longs for connection, and it is through our biology that we are wired to connect. Co-regulation, as described by Dr. Porges, is the mutual regulation of physiological states between individuals. In life, it occurs first between mother and infant but later extends to friends, partners, co-workers, and groups such as families, to name a few (Porges, 2017).

We humans are social creatures, and "our nature is to recognize, interact, and form relationships" with others (Cacioppo & Cacioppo, 2014, p. 1). As we know, low birthweight babies need to connect for survival and positive co-regulation and connection, and when connected, these babies experience improved heart rate and temperature, breathing stabilization, more organized sleep, rapid improvement in state regulation, and reduced mortality, severe illness, and infection (Jefferies, 2012).

Connection is a wired-in biological necessity, and isolation or even the perception of social isolation can lead to a compromised ability to regulate our autonomic state, which diminishes our physical and emotional well-being (Porges & Furman, 2011). We can all appreciate that when we feel alone, we suffer. In a Ted Talk presentation, Cacioppo (2013) reported a rather shocking meta-analysis study of

over 100,000 participants, which found increased risks of dying early due to the following:

- **Air pollution:** 5% increased risk of dying early
- **Obesity:** 20% risk of dying early
- **Alcoholism:** 30% risk of dying early
- **Loneliness:** 45% risk of dying early

Deb Dana notes that when there is ongoing misattunement, when ruptures are not recognized and repaired, the autonomic experience of persistent danger ends up moving the system away from connection into patterns of protection, and loneliness is the subjective experience (Dana, 2018).

So, when we recognize that we are suffering and dysregulated, it is very helpful and sometimes lifesaving to seek safe refuge in others. Conversely, when we are emotionally regulated ourselves, we can

offer our safe regulation to others, be they adults or children. This is a particularly important and essential component of good parenting. We can gift our safe regulation to ourselves and others by choosing the following strategies below. Remember, through the process of neuroception, others read our cues of safety just as we read theirs. Quid pro quo, we receive back what we give and vice versa. We would do well to practice these strategies, so they become automatic whenever we move out of the **green zone** and want to return.

Here are some interpersonal behavioral cues to be mindful of, as they influence how others co-regulate with you. While they may come naturally to some, for others, they must be learned. When done properly and become a natural flow of your interpersonal style, you will be amazed at how others respond to you. Please do not underestimate the blessings they can bring to your life and the lives of people you care about and/or love.

Kind eyes: As they say, the eyes are the window to the soul.

Melodious voice: Speak with a more melodious voice, full of prosody and life.

Smiling mouth and eyes: Smile not only with your mouth but with your eyes. Whether or not we are aware, our neuroception scans for congruence between the smiling mouth and smiling eyes. Crow's feet wrinkles are testament to someone who lives a more joyful life. So maybe reconsider that Botox.

Avoid leaning in: Leaning in can be perceived as very threatening. Most of us don't like it when others enter our personal space, particularly in western cultures, and the end result is typically defensive activation moving us toward fight or flight or less typically, occasional freeze responses.

Slow and low Breathing: Our lungs are the only internal body organ we can directly control, and proper breathing has a huge impact on our health. Breathe slowly with exhalations longer than inhalations – breathing out slowly accentuates relaxation and actually can slow our heart rate by 20 beats per minute (vagal brake).

Re-story

Now that we, or our loved ones, are in a more regulated state by using the **bottom-up** strategies discussed earlier, we should feel more settled and able to use **top-down** strategies to correct the narrative or re-story the situation—whether it's a current event or something from the distant past. As humans, we naturally seek meaning in our experiences, often creating stories to make sense of our pain (Dana, 2018, 2020; Kain, 2018). Unfortunately, our narratives often skew negative due to the brain's bias toward negativity, a survival mechanism that kept us vigilant for danger (Hanson & Mendius, 2009). While this served us well in the wild, it works against us when the threat is no longer present. Victims of trauma are particularly prone to constructing false narratives about themselves and the world around them (Porges, 2017; Dana, 2018; Kain & Terrell, 2018).

In a more regulated state, however, we have the opportunity to press **Ctrl-Alt-Del** on the old story. We can rewrite a new narrative that better reflects our healing journey and the heroic efforts of our nervous system to protect us through our pain. This new story allows us to embrace both the lessons of the past and the bright possibilities of the future.

As the Bible reminds us, "Do not conform to the pattern of this world, but be transformed by the renewing of your mind" (Romans 12:2, NIV). By renewing our narratives, we transform our minds and begin to see ourselves and our stories in a new light—one filled with resilience, hope, and purpose.

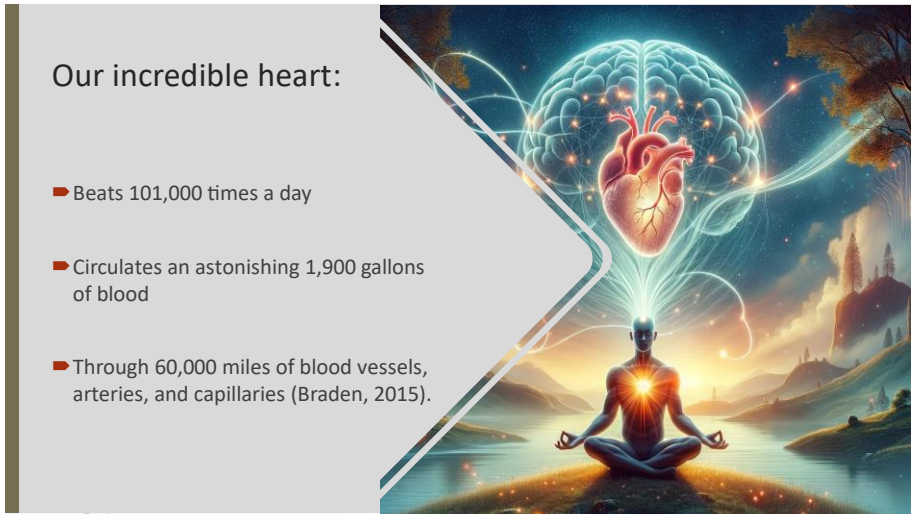
Drs. Kain and Terrell describe this beautifully: "As our capacity increases, our narratives are likely to change, including the sense of success at meeting challenges, developing curiosity, or a willingness to explore. Eventually, our narratives may also include access to a sense of safety and connection. Rather than 'I am constantly afraid and unhappy,' a client will begin telling himself a different story: 'I am stronger than I thought and able to meet challenges with greater balance and success'" (Kain & Terrell, 2018, pp. 101-192). They add, "At the same time, our somatic narratives will begin to change. We may literally experience changes in our symptoms—decreased inflammation, less pain, fewer migraines. Our illness narratives may alter to include the possibility of being free of pain, free of symptoms that have beleaguered us for most of our lives" (Kain & Terrell, 2018, p. 192).

In this process of re-storying, we not only rewrite our past but also open ourselves to a future of peace and healing.

Part 2: HeartMath®

Our heart is an amazing organ and is much more than a pump. It has its own wisdom and intelligence and works cooperatively with the brain. HeartMath® has sought to explore the science of this connection and translate that science into practical ways of healing mental health struggles and thus improving our lives.

The wisdom of the heart is not new—it was known to the ancients and has been referenced throughout Scripture. *"Above all else, guard your heart, for everything you do flows from it"* (Proverbs 4:23, NIV). This verse reminds us that our heart is central to the essence of life, influencing not only our emotions but the quality of our decisions and actions. In modern times, much of this wisdom was dismissed and then forgotten, but it is being rediscovered through scientific and spiritual lenses alike, leading us toward fuller, more meaningful lives.



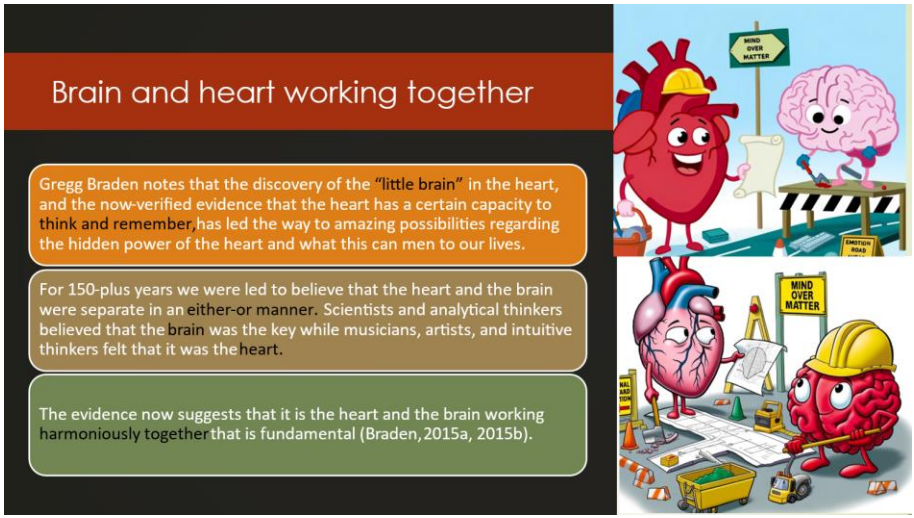
The ancients knew of the importance of the heart, but that wisdom was lost with time. Happily, this knowledge is coming back to us and can lead us to fuller and more meaningful lives.

As some may know, religious and mystery traditions have universally held that the heart has been regarded as a path to deep wisdom in life (Braden 2015b).

In the **Bible**, for example, the heart is mentioned **826 times in 59 of 66 books.** The Bible reveals that our heart isn't a separate part of our being. Instead, our heart is a composition of all three components of our soul- our mind, emotion, and will plus the most important part of our spirit, our conscience (Bibles for America, 2021). Solomon wrote in Proverbs 4:23, "Keep your heart with all diligence; for out of it spring the issues of life." The Bible posits that what is in your heart will direct your life (Back to the Bible, 2019).

The **Quran** similarly notes that our heart is a source of wisdom and guidance and mentions the human heart **132 times.** Of the Qur'anic statements, some describe this sentient organ as having the capacity of being a center of reasoning, intentions, and decision-making. Consequently, human hearts can either be healthy or diseased. (Janat Al Quran, 2017).

The **Egyptians** likewise believed that the heart, rather than the brain, was the source of human wisdom, as well as emotions, memory, the soul and the personality itself. Physiology and disease were all connected in concept to the heart, and it was through the heart that God spoke, giving ancient Egyptian's knowledge of God and God's will. As such, the heart was considered the most important of the body's organs (Dunn, 2021).

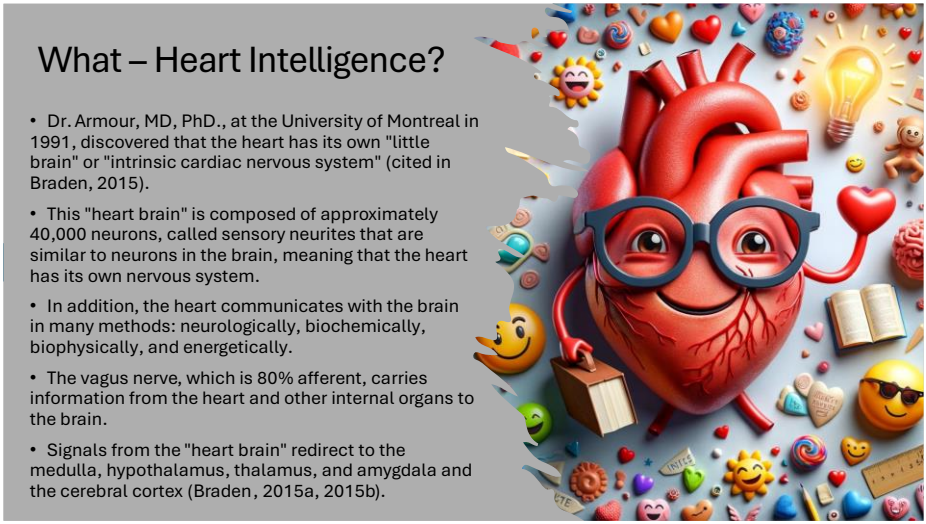


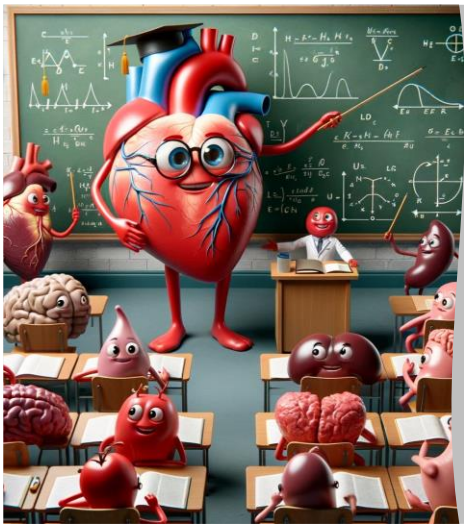
One of my heroes who advocates for new and innovative ways to promote mental health is Gregg Braden. He is an author and speaker who has actively bridged science and spirituality. He has a background in earth sciences and has worked in the aerospace and defense industries during the 1980s. Braden is also widely known for his work in popularizing the concept of HeartMath® . Although not a founder of the HeartMath® Institute, he has been a strong proponent of its work, particularly in the areas of emotional self-regulation and the connection between the heart and brain. Braden's work often explores the role of human emotion in physical health, healing, and the interconnectedness of all life. Braden's approach combines science with spirituality to offer perspectives on personal and collective wellness, emphasizing the importance of harmony within oneself and with the environment. He is a brilliant, sincere, and inspirational speaker, and I encourage you to search out some of his YouTube presentations on HeartMath® . His one entitled "*Practice this*

Technique to Relieve Daily Stress… Three Keys to Heart - Brain - Earth Harmony" is one of my favorites. Give it a try, you will love it.

https://www.youtube.com/watch?v=2nsm8SCWjic&t=1088s&ab_channel=GreggBradenOfficial

Braden (2015a, 2015b) eloquently describes the research that supports the concept of heart intelligence, suggesting that when we are in a calm and positive autonomic state, we can access it much more easily.



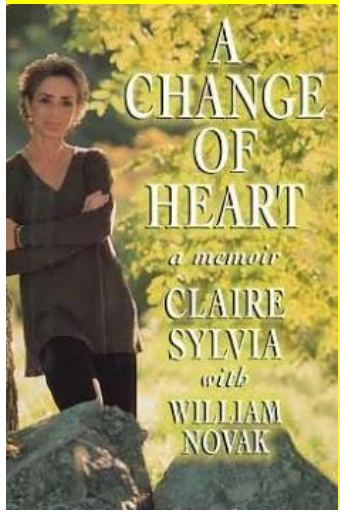


What – Heart Intelligence?

- Braden notes that a key role of the heart brain is to detect changes in the body such as hormone levels and other chemicals and to communicate this information to the brain so it can meet our needs accordingly.
- The heart brain achieves this by converting the language of the body, chemistry, to the electrical language of the nervous system so it makes sense to the brain.
- For example, the heart's encoded messages to the brain informs it as to when we need adrenalin for danger or when we need less in times of safety so the immune system can be turned on (Braden, 2015a, 2015b).

Braden (2020) notes that the heart has over 40,000 cells called sensory neurites, very similar to the cells in the brain, and there is evidence that the heart has a certain capacity for some types of memory as well as a gut level wisdom that guides us (Dispenza & Braden, 2019).

Braden nicely narrates two stories detailed in the graphics below about how memories stored in the neural networks in the heart can be transferred to the heart recipients following transplant surgeries.

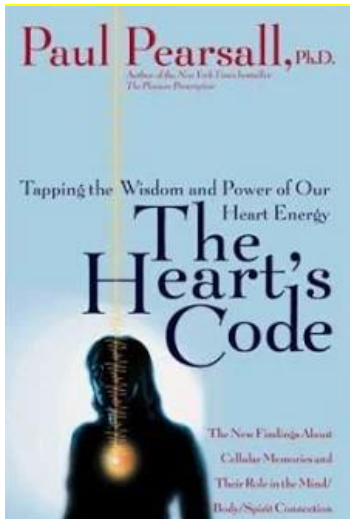


Stories of the Heart:

- Clare Sylva, a professional dancer, in 1998 received the heart and lungs of a young man, Tim, who died in a motorcycle accident.
- Not long after the transplant, she began to crave new foods such as chicken nuggets and green peppers and was specifically drawn to KFC to satisfy her cravings.
- She was able to eventually visit the parents of this young man and discovered that Tim precisely loved the same kinds of foods that she was now craving.
- Clare had acquired her cravings through the phenomenon of memory transference which has become an area of serious study and eventual acceptance.

Please click below for Dr. Braden's enticing discussion:

https://youtu.be/Hir6I-RfOiY



Stories of the Heart

- In 1999, Dr. Paul Pearsall, a neuropsychologist, in The Heart's Code wrote about an 8 -year-old little girl who received a heart from a 10-year-old girl.
- Almost immediately after the surgery, she started having vivid nightmares of being chased, attacked, and murdered.
- Her mother arranged a consultation with a psychiatrist who after several sessions concluded that she was witnessing actual physical incidents.
- They decided to call the police who used the detailed descriptions of the murder (the time, the weapon, the place, the clothes he wore, and what the little girl he killed had said to him) given by the little girl to find and convict the man in question.

Please click below for Dr. Braden's enticing discussion:

https://youtu.be/Hir6I-RfOiY

HeartMath® is a magnificent therapy that uses techniques that focus on heart rate variability and the heart's influence on emotional well-being and stress management. By learning to regulate our heart rhythm, we can achieve a more coherent state, where emotions, mind, and body are in sync. This approach helps reduce stress,

enhance emotional regulation, and improve overall health. In therapy, HeartMath® tools teach us how to access our heart's intelligence to foster resilience, improve decision-making, and deepen personal connections. Learning to live more from the heart is a game-changer, allowing you to relate to others in safer, more profound ways, bringing much more groundedness and stability to your life.

HeartMath® defines heart rate variability (HRV) as the measure of the beat-to-beat changes in heart rate, which reflects the heart's ability to adapt to stress, environmental, and physiological changes. HRV is a key indicator of the autonomic nervous system's efficiency and balance, particularly the interaction between the sympathetic (stress response) and the parasympathetic (relaxation response) branches (McCraty, 2023).

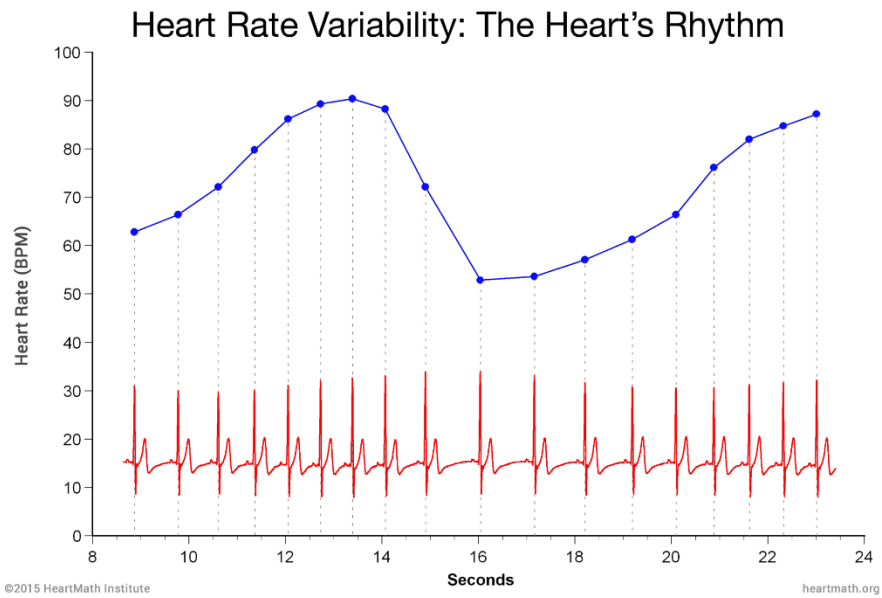


Image courtesy of the HeartMath® Institute – www.heartmath.org.

In practice, HeartMath® uses HRV to assess an individual's level of coherence, a state where the heart, mind, and emotions are in energetic alignment and cooperation. This state is characterized by a smooth, wave-like pattern in the heart rhythm, indicating emotional balance and mental clarity. HeartMath® techniques involve specific breathing practices and the cultivation of positive emotional states to increase coherence, thereby improving HRV. This approach is used to reduce stress, enhance decision-making, and boost overall well-being (McCraty, 2023). The graphic below shows how the heart can shift from a negative and dysregulated state on the left to a more positive and coherent stated.

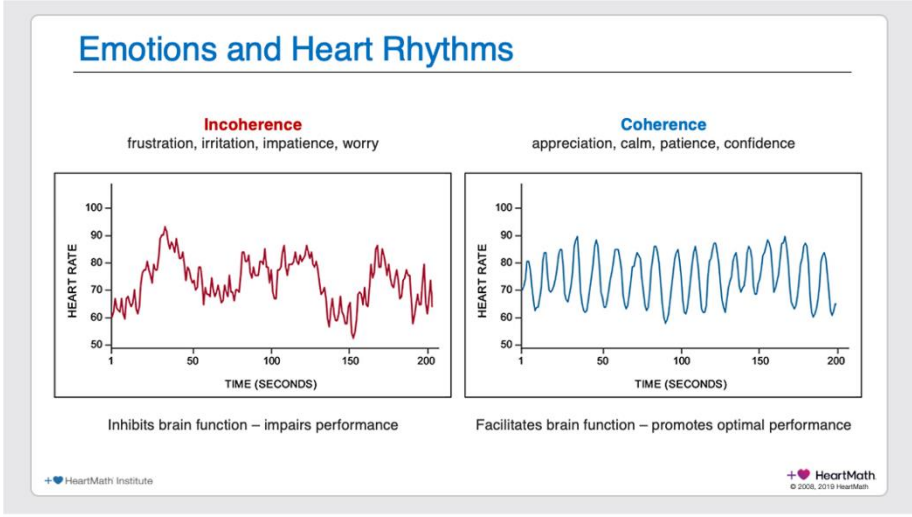


Image courtesy of the HeartMath® Institute – www.heartmath.org.

Once we achieve coherence in the heart, the coherent heart then communicates in four distinct ways to the brain to help the brain, likewise achieve coherence. Dr. McCraty notes that the heart communicates to the brain in four main ways: (1) nerves connecting

the heart to the brain, particularly the vagus nerve, (2) hormones, (3) blood pressure shifts, and (4) electromatic waves (McCraty 2023). This allows the brain to be more integrated and efficient, and on the contrary, an incoherent heart inhibits cortical function. Note that 80% of information flows from body to brain (efferent).

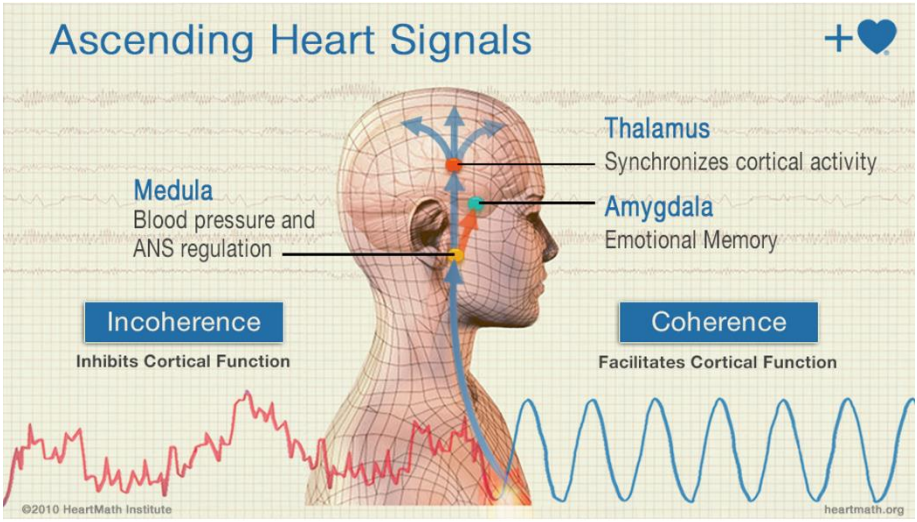


Image courtesy of the HeartMath® Institute – www.heartmath.org.

This following graphic nicely illustrates how an incoherent heart increases the activity of the amygdala and diminishes the activity of the prefrontal cortex (thinking brain/executive functioning). In this state, our thinking is governed by lower brain centers, and we thus make impulsive, emotionally driven decisions. On the other hand, the right side of the graphic demonstrates how a coherent heart signals the amygdala to quiet down, allowing the higher order processes of the prefrontal cortex to reign so great decisions can be thereby authored.

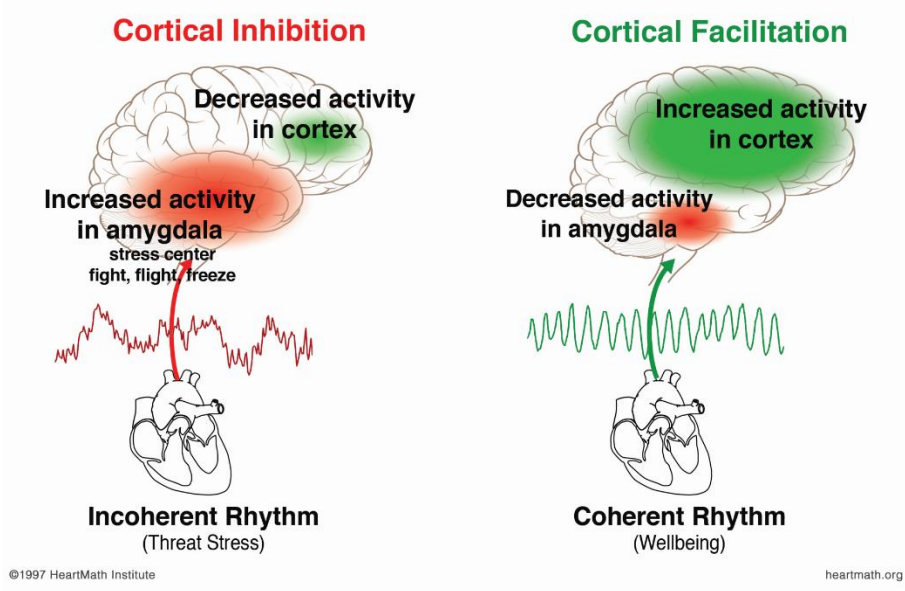


Image courtesy of the HeartMath® Institute – www.heartmath.org.

One very attractive element of HeartMath® is the concept of one person's heart coherence helping another person achieve coherence, which is grounded in the understanding of interconnectedness and the physiological phenomenon known as entrainment. Here is a brief description of how it works, broken down into key points (McCraty et al., 2009; McCraty er al.; McCraty, 2023; Tiller et al., 1996):

1. **Heart Coherence**: As previously noted, heart coherence refers to a harmonious, ordered pattern in the heart rhythms, characterized by a stable, sine-wave-like pattern in the heart rate variability (HRV). This state is associated with positive emotions, physiological efficiency, and a sense of well-being. It is achieved when the heart, mind, and emotions are in energetic alignment and cooperation.

2. **Interconnectedness and Energy Fields**: The HeartMath® Institute suggests that the heart emits an electromagnetic field of up to 10 to 15 feet that can affect the people, animals, and environment around us. This field can be detected by others unconsciously. In a coherent state, the heart's electromagnetic field is more ordered and coherent. If ordered or coherent, the effect on others is positive and if disordered or incoherent, the effect on others is negative.

3. **Entrainment and Resonance**: Entrainment is a physics principle where two oscillating systems assume the same frequency. When applied to heart coherence, entrainment suggests that the coherent heart rhythm of one person can influence and synchronize with the heart rhythm of another person when they are in close proximity, leading to mutual coherence. This is a beautiful form of energetic communication, where the heart's electromagnetic field of one person can influence the heart rhythm of another person.

4. **Emotional Contagion**: On a psychological level, this concept mirrors the idea of emotional contagion, where one person's mood and behaviors can lead to the synchronization of feelings and behaviors in another person. In a positive sense, a person in a state of heart coherence can, through their calm and positive emotional state, help induce a similar state in others, promoting emotional stability and coherence. Thus, this has great implications in helping another person reach the aforementioned autonomic green state when the ventral vagus

nerve is active, which promotes social engagement (Hansen, 2021).

5. **Improved Group Dynamics**: When applied in groups, this phenomenon can lead to improved cooperation, understanding, and a collective increase in coherence among individuals. This not only benefits emotional and mental health but can also enhance group performance, creativity, and problem-solving abilities.

The HeartMath® research supports the idea that practicing heart coherence techniques can not only improve one's own health and well-being but also positively influence the people around us, effectively creating a more harmonious environment and thus making the world a better place to live in.

The coherent HRV of one person positively regulates the other

Heart Lock-In® Technique:

HeartMath® teaches us several different breathing and visualization techniques to help us attain healthy heart rate variability and coherence, each building on the basics of good breathing fundamentals. Below is a description of my favorite, which is called the Heart Lock-in Technique.

The Heart Lock-In® Technique is a practice developed by the HeartMath® Institute, designed to help individuals enter a state of heart coherence, where the heart, mind, and emotions are in alignment. This technique is beneficial for reducing stress, enhancing emotional stability, and fostering a sense of inner peace and well-being. Here is a step-by-step guide on how to perform the Heart Lock-In® Technique:

1. Focus your attention in the area of the heart. Imagine your breath is flowing in and out of your heart of chest area, breathing a little

slower and deeper than usual. Find an easy rhythm that's comfortable.

2. Activate and sustain a regenerative feeling such as appreciation, care or compassion.

3. Radiate that renewing feeling to yourself and others.

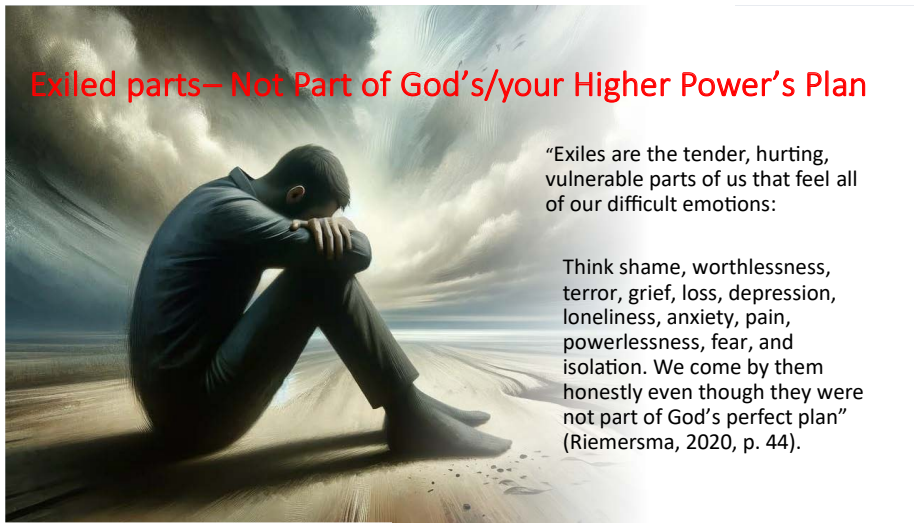
Part 3: Internal Family Systems (IFS)

Among the best top-down therapies is **Internal Family Systems (IFS) Therapy**. During early life, we are often faced with pain and/or trauma that can be so extreme that the fragile and poorly developed ego cannot handle it. Unable to be processed, these pains are stored in "implicit" memory, and as such, are often nonverbal. They become part of what is called the "default mode network," which later becomes the substrate for how we think, feel, and behave. Left unchecked, we must resort to defensive behaviors to keep them from overwhelming us. IFS identifies the pain part as the **exiles** and the defensive parts as the **managers** and **firefighters.**

Internal Family Systems (IFS) is a therapeutic approach that identifies and addresses multiple sub-personalities or parts within each person's mental system.

1. **Exiles**: These are vulnerable, often wounded parts that carry painful memories or emotions, such as trauma, fear, or shame.

In addition to treatment, these might be parts that are deeply hurt or neglected, driving behaviors as a form of escape or coping mechanism. Exiles are often kept out of conscious awareness by the actions of managers and firefighters.



2. **Managers**: These parts are responsible for maintaining a sense of order and control in a person's life. They anticipate and address problems proactively to protect the individual from harm or pain. In the context of addiction, managers might try to keep addictive behaviors in check or rationalize them to maintain a semblance of control. Managers are all about performance – being the best student, employee, or even religious person.

3. **Firefighters**: These parts are more reactive than managers. They emerge when an individual's exiled emotions or experiences become too overwhelming. Their role is to distract and extinguish or numb these distressing feelings, often through impulsive behaviors like substance abuse or other addictive actions. Firefighters serve as a short-term solution to emotional pain but often exacerbate problems in the long run. The ultimate firefighter defenses can be self-injury or even suicide.

4. **Self**: The Self is seen as the core or center of an individual's being, characterized by qualities like compassion, confidence, calmness, and clarity. The Self is not another part but rather the person's true, balanced essence. In IFS therapy, strengthening the Self is crucial, so it can lead and bring harmony among the parts. In addiction treatment, this means helping the individual to access their Self to understand and heal the exiles, manage the managers, and redirect the firefighters in healthier ways. The Self is typified by eight qualities called the 8 Cs.

There are many advantages to IFS as an excellent top-down approach, some of which are summarized below (adapted from ChatGPT):

1. **Promotes Self-Leadership**: IFS encourages individuals to lead themselves with their core Self, which is characterized by qualities such as confidence, calmness, clarity, curiosity, compassion, courage, connectedness, and creativity. This helps make healthier decisions and manage parts that are causing psychological distress.

2. **Improves Self-Awareness and Emotional Intelligence**: By identifying and understanding the different parts within oneself, individuals become more aware of their inner workings. This heightened self-awareness leads to better emotional intelligence, as individuals learn how to manage their emotions effectively.

3. **Encourages Compassion and Understanding**: IFS fosters an environment of compassion and understanding, both for

oneself and for others. By recognizing that every part has a positive intent, even if its actions are counterproductive or harmful, individuals learn to approach themselves and their parts with kindness and empathy.

4. **Addresses a Wide Range of Psychological Issues**: IFS has been applied to a variety of psychological issues, including anxiety, depression, phobias, trauma, and relationship problems. Its flexibility and adaptability make it a suitable approach for many different types of individuals and concerns.

5. **Facilitates Deep Emotional Healing**: IFS therapy goes beyond symptom relief and aims for deep emotional healing. By focusing on the roots of psychological issues, it helps individuals heal the wounds of their parts, leading to lasting changes.

6. **Enhances Relationships**: By improving self-awareness, emotional intelligence, and communication skills, IFS can help individuals build stronger and healthier relationships. Understanding one's own parts can also lead to a better understanding of others, fostering empathy and connection.

7. **Empowers the Individual**: IFS empowers individuals by putting them in the driver's seat for their healing process. The model teaches that individuals have the internal resources they need to heal, and the therapist acts as a guide rather than a rescuer.

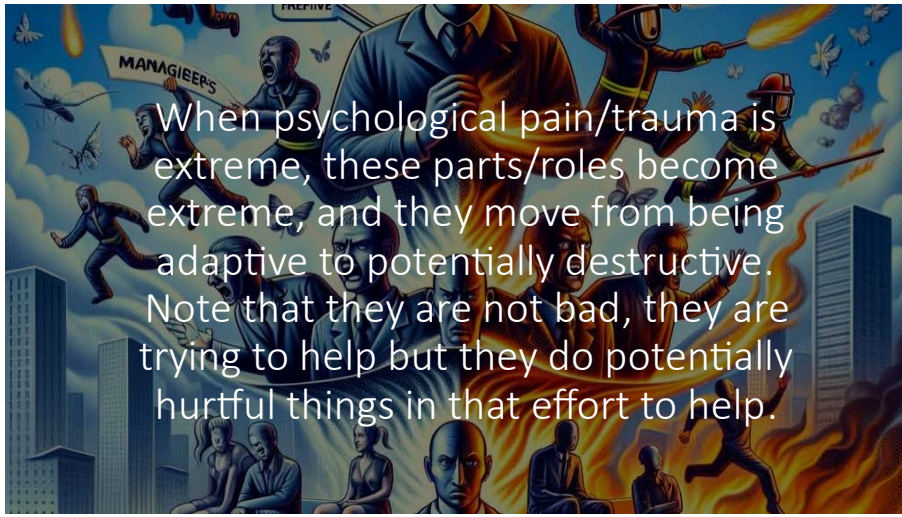
8. **Integrates Well with Other Therapeutic Approaches**: IFS is a non-pathologizing and hopeful model that can be integrated with other forms of therapy, including cognitive-behavioral

therapy (CBT), dialectical behavior therapy (DBT), and more. This makes it a versatile tool in a therapist's toolkit.

9. **Evidence-Based**: Research on IFS is growing, and it has been recognized as an evidence-based practice for treating certain conditions, such as PTSD, demonstrating its effectiveness and reliability.
10. **Cultivates Mindfulness**: The process of identifying and interacting with different parts requires a level of mindfulness, which can improve overall mental health and well-being.

IFS therapy's holistic approach to healing emphasizes understanding and integration of all parts of the Self, leading to profound and lasting psychological change.

In IFS therapy, the goal is to understand the roles of these parts, how they contribute to the problematic behavior, and how to bring them into a harmonious balance under the leadership of the Self. This approach helps individuals address the root causes of their problems and foster a more integrated, healthier state of being (facilitated by ChatGPT).



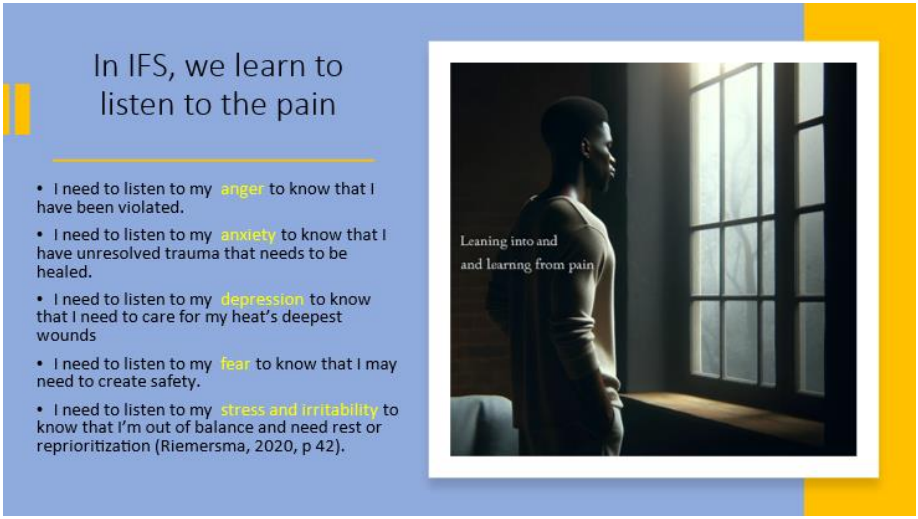
In order to access and resolve the pain that has been largely exiled out of consciousness, we must access the defensive parts and get them to back off from defending as this keeps us distanced from our true self. There are six important steps involved in this process: Find, Focus, Flesh Out, Feel, Befriend, and Fear. This process is described nicely in the two graphics below as adapted from ISAA Counseling (2024):

The Six Fs – cont.

- 4. **Feel:** This is the second stage. Now it's important to see how other parts feel about this part's presence. They might be upset that this specific part is getting attention or be alarmed that it will further imbalance the system. You must judge if you h ave enough core Self energy to move forward. If you don't, you may have to do some work with other parts that are in the way befo re you can proceed.
- Self-energy is measured with the 8 C's: calm, compassion, curiosity, clarity, confidence, courage, creativity, and connection. I f any of the 8 C's are present when dealing with the part, it means Self is present and able to care for it. If more negative o r extreme feelings like anger or anxiety are present it means that another protector part has stepped in to deal with the part you are trying to target.
- 5.**Befriend**: This is the start of stage 3. In the previous steps we created separation between the parts and Self and worked on creating active communication. This step is then about actually forming a relationship between this target part and Self. Wor k happens much more smoothly when the part trusts Self, so this is a good place to start forming that relationship. Ask the par t about its function, what it's trying to accomplish, and how it's trying to help. Let it know that it is valued for its functi on, and that you respect how it's keeping the system safe. Fear: What is this part protecting your from?
- 6. **Fear:** The final step for dealing with protector parts does not feel like a resolution. In this step, we ask the part what it's afra id of. What does it think will happen if it stops being a protector? Here is often where we see the major signs of the exiled pa rts, those things we keep buried down deep so that they can't overwhelm us. If the rest of the steps have been fully realized, Sel f will be able to have the part step aside so it can access whichever exile the protector was caring for. This stage opens a door fo r further exploration that is specific to working with exiled parts. There will be an article on this stage of IFS soon
- Adapted from ISSA Counseling https://issacounseling.com/contact-us/

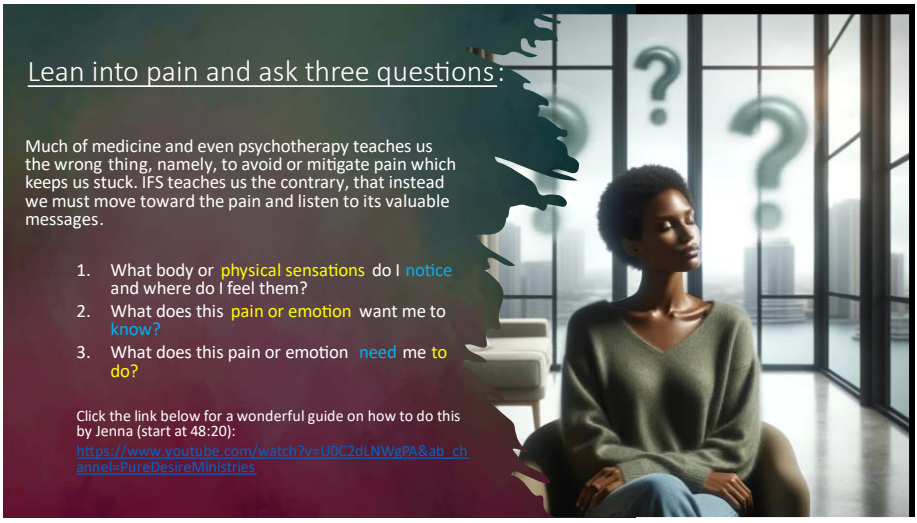
Jenna Riemersma (2020), who holds a master's degree in psychology from Harvard and integrates IFS with faith, in particular, Christianity, is one of my favorite IFS gurus. Her book, *Altogether You* stands among the best and most readable IFS books on the market and is highly recommended. Jenna teaches us that emotions are not to be avoided. Sadly, we live in a culture that teaches us that we

should chase the positive emotions, such as love, joy and happiness, and run from, suppress, medicate away, and avoid the hard emotions, such as sadness, depression, fear, anxiety, grief, and anger. It has been said that words are the language of the mind, and emotions are the language of the body. Jenna encourages us to listen to our emotions as they can guide us. Snuffing them out cuts us off from truths about our lives, but if listened to, emotions can lead us to better truths about our lives and point us to a better way of living. Moreover, they are often the canary in the coalmine, and we know how important they were.



In a wonderful exercise, Jenna suggests that we lean into the pain and do three things, as presented in the graphic below. For more detailed information on this process, I suggest you access her website https://jennariemersma.com/move-toward/. It is an amazing resource (Riemersma, 2024). I have used this exercise many times and have found it liberating to re-frame my pain as positive feedback (yes,

positive, not negative), as it can lead to vital awareness of what that pain wants us to know and do.



Courtesy of my rockstar student, Alayna Collins, M.A., Doctoral Candidate

A Few Thoughts on Finding the Right Therapist and Therapy:

Before we leave this chapter, we would like to say a few words about the importance of finding the right therapy and therapist to meet your needs. This can be difficult as the psychotherapeutic community can be confusing, especially for the first time consumer.

It is unfortunate that there is much to criticize about the current state of psychotherapy. To begin with, psychotherapy's outcomes can be hard to measure, with variable effectiveness across different types of therapy and individual therapists. In some cases, it is reasonable to

be concerned about potential harm, including dependency on the therapist, misdiagnosis, or worsening of symptoms.

Abigail Schrier (2024), in her new book, *Bad Therapy: Why the Kids Aren't Growing Up,* expresses her concern about too many bad therapies. In fact, Abigail devotes an entire chapter to **iatrogenesis,** which refers to any condition, symptom, or complication caused directly by medical treatment, intervention, or advice rather than by the underlying disease or condition itself. She specifically comments on how psychotherapy can be harmful and notes that therapists often do not want to acknowledge that the "medicine" is not working because the therapist is "the medicine." Moreover, she notes that it is often in the therapist's best interest to treat the *least sick for the longest period of time* and, on the other hand, many therapists shy away from more complex clinical presentations, such as complex trauma, bipolar disorder, and borderline personality disorder, to name a few (Schrier, 2024).

Sadly, many therapists are poorly trained, and many others, although well-trained initially, fail to stay current with the literature that either supports or fails to support their therapeutic techniques. Finally, far too many therapists, encouraged by their training institutions, see their primary responsibility as promoting progressive ideology, believing it is in their clients' best interests to expand their thinking to align with the therapist's perspective. This, in itself, is a violation of informed consent. Nowhere is this more evident than in early affirmative care when children are encouraged to progress through radical and permanent physical changes without being able to fully comprehend the consequences of those changes. And yes, the lawsuits are coming and rightly so.

Finding the right therapist for you or your loved one is a tremendously important matter, and it pays to do your homework and carefully evaluate your prospective therapist. If you do, the rewards are considerable. Here is a list of things you may wish to consider:

- **Credentials and Licensing**: Verify the therapist's qualifications, including education, licensing, and certifications. Check with the appropriate licensing board for any negative actions or complaints. You might want to consider seeking a therapist with a Ph.D. in Clinical Psychology from an American Psychological Association (APA) accredited school. Such Ph.D. psychologists are also trained as scientists, enabling them to better understand research and, therefore, more likely to appreciate and apply relevant findings to your concerns. That said, and to be fair, there are many skilled and talented master's-level therapists who also value and follow the research, just as there are many PAs who provide excellent medical care and, in some cases, may even surpass MDs.
- **Consultation**: Many therapists offer a free initial consultation, which can help you gauge compatibility and comfort. Keep score of the initial phone contact. If they are dismissive and unwilling to take the time to connect with you, it can be a negative sign.
- **Recommendations**: Seek referrals from trusted sources or read reviews that can provide insights into the therapist's effectiveness.

- **Comprehensive Training**: Look for a therapist who specializes in treating your specific issues, such as anxiety, depression, or trauma. Ask your prospective therapist if they have a deep understanding and training of various psychological conditions and the skills to address your specific needs effectively.
- **Continual Learning**: The field of psychotherapy evolves with new research; ongoing education allows therapists to stay current with the most effective treatments. Ask about what training your prospective therapist has done or is undertaking to stay current.
- **Client-Centered Approach**: Ask if your prospective therapist will tailor their approach to meet your unique needs rather than applying a one-size-fits-all ideology. Even effective therapies can feel cultish when applied too rigidly and dogmatically to all presenting problems without adaptation or consideration of better alternatives. Please remember, you are seeking a therapist, not a cult leader.
- **Ideology**: Do not be afraid to ask your prospective therapist if they will keep personal ideology out of the therapy relationship and will instead provide treatment in alignment with well-supported empirical and evidence-based therapeutic techniques.
- **You are the boss**: Remember, you are the boss and, as such, your therapist works for you. You have the right to agree, disagree, and/or question. A good therapist will not only respect that but will encourage your right to do just that.

- **Trust Your Instincts**: After meeting with the therapist, trust your gut feeling about whether you can work well together. If it's a bad fit, end it sooner rather than later. To be fair, most therapists are very well-meaning and have a heart to help others. But well-meaning, although wonderful, does not necessarily equate to competence or being a good fit for your unique needs.

The HeartMath® approach reminds us that the heart is more than just a physical organ—it is central to our emotional and spiritual well-being. By aligning the rhythms of our heart, mind, and emotions through techniques like heart rate variability and the Heart Lock-In® technique, we can achieve greater emotional stability, resilience, and clarity. The Bible speaks to the wisdom of guarding and cultivating our heart: "Above all else, guard your heart, for everything you do flows from it" (Proverbs 4:23, NIV).

HeartMath® provides us with practical tools to bring this scriptural truth to life, helping us to live in a state of emotional coherence where our thoughts, emotions, and decisions are more aligned with peace, love, and wisdom. As we learn to regulate our heart's rhythms, not only do we improve our own well-being, but we also positively influence the emotional state of those around us. Just as Philippians 4:7 promises, "And the peace of God, which transcends all understanding, will guard your hearts and your minds in Christ Jesus" (NIV). Through HeartMath® , we can experience this peace in a deeply practical way, bringing balance and coherence to our lives.

Summary: As we conclude this chapter, let's take a moment to reflect on the journey toward healing and peace. Addiction is a profound battle—one that touches the very core of our being, but it's also a

battle that can be won. Through therapies like Polyvagal-Informed Therapy, HeartMath® , and Internal Family Systems, we have seen that there is hope. These approaches offer tools not only to understand ourselves better but also to embrace a life where we are no longer defined by our struggles.

Just as Jesus invites us in Matthew 11:28, *"Come to me, all who are weary and burdened, and I will give you rest,"* the path to recovery is also about laying down the weight of addiction and finding the rest we so deeply need. It's about stepping into the truth that healing is possible, and we are not alone on this journey.

"I can do all things through Christ who strengthens me" (Philippians 4:13). Remember, the road to recovery may have its challenges, but you are not walking it alone. There is a strength within you, bolstered by faith, by knowledge, and by the support of therapies that align mind, body, and spirit. You are equipped for this journey, and with each step forward, you are moving closer to the peace and wholeness you deserve, and God promises. *He forgives all my sins and heals all my diseases* (Psalm 103:3, NLT). *He heals the brokenhearted and bandages their wounds* (Psalm 147:3, NLT).

Healing is not a destination; it's a journey, and you are already on the right path. Stay the course, trust in the process, and know that brighter days are ahead. *"The Lord will fight for you; you need only to be still"* (Exodus 14:14). Let that assurance guide you forward, one step at a time.

Johann Hari's Model

For Connected Living

"Come, et us return to the Lord.
He has torn us to pieces, but He will heal us;
He has injured us, but He will bind up our wounds" (NLV)

– Hosea 6:1

In this chapter, we dive into the critical role that connectedness plays in our emotional and spiritual well-being. As we explored in the previous chapter, effective therapeutic modalities like Polyvagal-Informed Therapy, HeartMath®, and Internal Family Systems are crucial for healing trauma and addiction. However, even the best therapies cannot reach their full potential unless we address the core issue that often lies at the heart of our struggles—disconnection.

Johann Hari, one of Jeff's favorite authors and one who has been instrumental in his own path to healing, in his insightful book *Lost Connections*, emphasizes that depression, anxiety, and addiction are not just issues of chemical imbalances in the brain but are deeply tied to the disconnections we experience in life. These disconnections from meaningful work, relationships, nature, and even from hope itself can leave us feeling isolated and broken. Understanding these

disconnections is foundational to healing. As it is written, *"Though one may be overpowered, two can defend themselves. A cord of three strands is not quickly broken"* (Ecclesiastes 4:12, NLV). This Scripture speaks to the strength found in connection, whether it's with others, ourselves or God.

"The Lord God said, 'It is not good for the man to be alone.'" (Genesis 2:18, NLV). God designed us to live in connection, and disconnection from the essential elements of life can lead to profound suffering. Johann Hari's work reveals that the root of many mental health challenges lies in how we have become disconnected from the people and purposes that give our lives meaning. Whether it's the loss of deep relationships, meaningful work, or our relationship with the natural world, these disconnections create a fertile ground for despair. Healing, then, is not only about therapy but about reconnecting with the fundamental aspects of life that nourish our souls.

"I will refresh the weary and satisfy the faint." (Jeremiah 31:25, NLV). Reconnection is essential for therapeutic methods to truly work. Without addressing the underlying disconnections, treatment remains incomplete. As we explore the nine key areas of disconnection identified by Hari, including the critical element of faith, which we will add as the foundation of all connections, we will understand how to restore our emotional, spiritual, and mental health. The journey to recovery is not just about overcoming addiction or trauma—it is about rediscovering the connections that breathe life into our existence.

Just as Scripture reminds us, *"Bear one another's burdens, and so fulfill the law of Christ"* (Galatians 6:2, NLV), living a connected life brings healing, hope, and peace.

Johann's personal story is compelling—he has struggled with depression since childhood, and his need to find answers led him on a three-year journey around the world. He spoke with some of the world's leading experts in psychiatry, neuroscience, and social sciences and explored different cultures to uncover the real causes of depression and anxiety. What he discovered could be life-changing for anyone dealing with emotional pain or addiction and serves as a foundation on which other therapies should be built.

Johann found that much of what we have been taught about depression, particularly that it is purely a chemical imbalance, is not the full picture. Instead, he identified several key disconnections in our lives that contribute to emotional suffering. These include disconnections from meaningful work, relationships, nature, and even a hopeful future. His insights show us that the struggles many of us face today are not just personal failings or flaws; they are rooted in how disconnected we have become from the things that give our lives purpose and joy.

For those of you working through trauma or addiction, this knowledge offers real hope. Not only can we heal from these disconnections, but by understanding them, we can also prevent future struggles. In this chapter, we will explore seven of the most important dimensions of disconnection that Johann identified, and

we will add an eighth, disconnection from faith, which we believe is essential to living a meaningful and connected life.

Recovery is not just about overcoming addiction or trauma—it is about rediscovering the connections that make life fulfilling, connections that may have been lost along the way. We encourage you to consider reading **Lost Connections** for yourself; it is a book that has profoundly impacted my perspective, and we are confident it can bring you new insight and hope as well.

He discovered that there are nine underlying dimensions:

1. **Disconnection from Meaningful Work**: Feeling unfulfilled or lacking control in one's job can contribute to depression.
2. **Disconnection from Other People**: Loneliness or a lack of meaningful relationships impacts mental health.
3. **Disconnection from Meaningful Values**: Living by external values, such as material success, instead of intrinsic values that bring joy.
4. **Disconnection from Childhood Trauma**: Unresolved trauma from childhood can affect adult mental health.
5. **Disconnection from Status and Respect**: Feeling inferior or experiencing social status anxiety can lead to depression.

6. **Disconnection from the Natural World**: A lack of connection to nature and spending too much time indoors can negatively affect one's mood.

7. **Disconnection from a Hopeful or Secure Future**: Pessimism about the future or financial insecurity can lead to anxiety and depression.

8. **The Real Role of Genes and Brain Changes**: While not a "disconnection" in the same way as the others, Hari discusses the overemphasis on the biological causes of depression without considering environmental and social factors.

9. **Disconnection from a Meaningful Society**: Feeling disconnected from society or feeling that society is moving in a direction that doesn't align with one's values.

We will summarize most of Johann's disconnections points and add one on the value of faith. Note that I will share substantial content from his superlative book as it is hard to duplicate perfection. Again, we urge you to purchase your own copy of *Lost Connections.* That said, here goes:

Cause One

Disconnection from Meaningful Work

Johann noted that the polling company Gallup conducted the most comprehensive study to date on work satisfaction/dissatisfaction between 2011 and 2012 to determine how people across the world felt about their work. Of the millions of workers across 142 countries, Gallop determined that only 13 percent reported that they were "engaged" with their work (Hari, 2018). On the other hand, 63 percent were "not engaged" - meaning no passion in one's work. Finally, 24 percent were "actively disengaged" - which translates to acting-out their unhappiness. In sum, twice as many people hate their jobs as love their jobs. In an effort to better understand high rates of depression and suicide in civil servants, investigators determined that

a **lack of control** and little connection between **effort** and **reward** were highly predictive (Marmot et al., 2002).

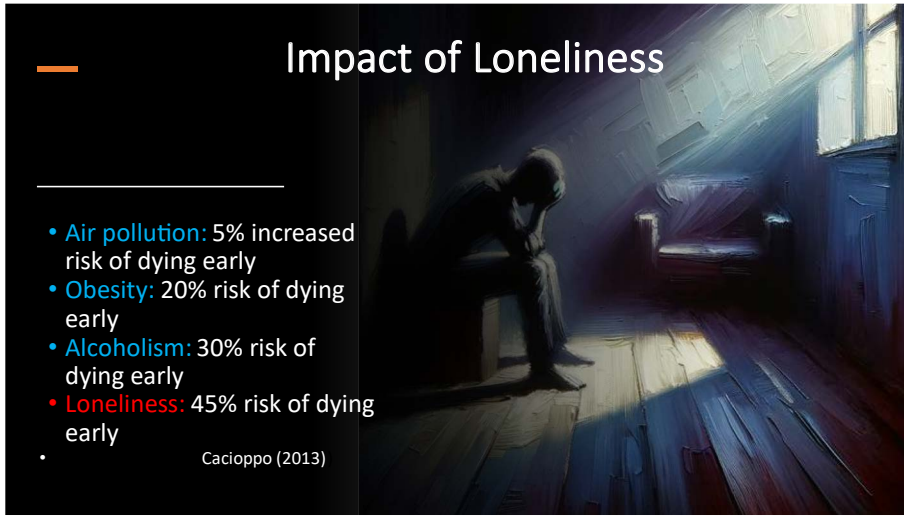
The above studies suggest that we need to develop a sense of empowerment, purpose, and accomplishment in what we do. If we are unhappy with our job, we can try to make changes to make it better. If that does not work, we can consider looking elsewhere. I see far too many unfulfilled people in my practice come home from work and bathe themselves in unhealthy life patterns, including addictions, to ease the pain. This is no more evident than in the military, where the demands are particularly stressful.

Cause Two

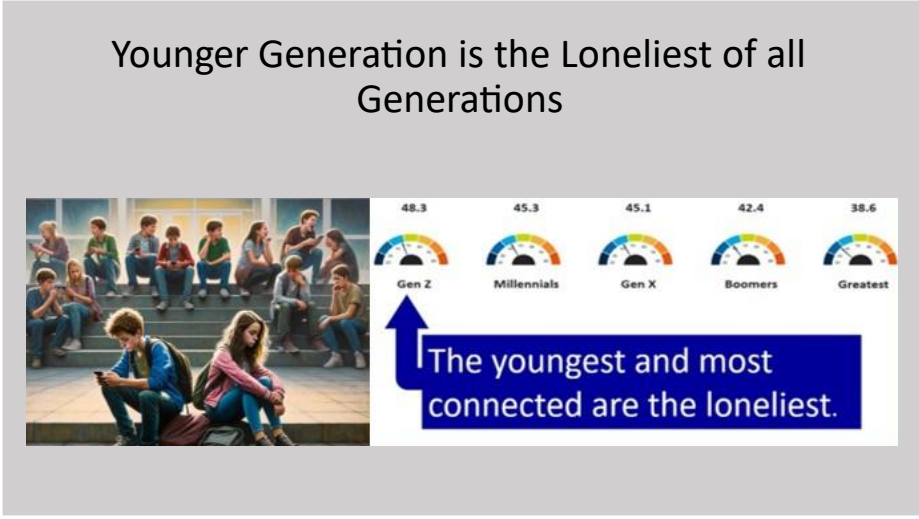
Disconnection from Meaningful People

Dr. John Cacioppo et al. (2006, 2008, 2010), a neuroscience researcher, studied the impact that loneliness has on health. He and his colleagues determined that loneliness causes **cortisol** levels to go through the roof – as much as that caused by some of the most disturbing things that can ever happen in your life. As Hari (2018) summarizes Cacioppo's research, "Becoming acutely lonely, the experiment(s) found, was as stressful as experiencing a physical attack." Another researcher, Lisa Bergman, followed both isolated and highly connected people over nine years and found that isolated people were two to three times more likely to die during lonely periods and that, specifically, almost everything during lonely periods becomes more fatal for lonely people, including heart disease, cancer, and respiratory problems (Pinker, 2015). In short, loneliness can be deadly (Monbiot,

2014). In addition, Cacioppo et al. (2010) conducted a five-year longitudinal study, which showed that loneliness is not merely the result of depression but indeed leads to depression as well. In this study, he found that on a measure of 0 percent loneliness to 100 percent loneliness, moving from 50 percent loneliness to just 65 percent loneliness increases your chances of becoming depressed by eightfold. He concluded that loneliness is causing a significant amount of depression and anxiety in our society. In a Ted Talk presentation, Cacioppo (2013) reported a rather shocking meta-analysis study of over 100,000 participants, which found increased risks of dying early due to the following:



A 2018 study conducted by Cigna (see diagram below) revealed that compared to older generations, the youngest is the loneliest generation ever (Cigna, 2018).



The implications of this research are clear; specifically, it is to our benefit that we stop isolating ourselves and connect in positive and fulfilling family and social relationships.

Cause Three

Disconnection from Meaningful Values

Family Values

Johann notes that an American psychologist, Tim Kasser, has spent much of his professional career investigating the impact of values on our emotional and physical health. He specifically researched what philosophers had been suggesting for thousands of years - that you will be unhappy if you overvalue money and possessions or if you think about life primarily on how others perceive you. (Belk, 1983). Kasser's research specifically determined that the more materialistic we are, the more likely we are to score higher on measures of depression. In

his studies, materialistic people were having a tougher time with life in general. They tended to be sicker and angrier. "Something about a strong desire for materialistic pursuits," Kasser wrote, "actually affected the participants' day-to-day lives" (Kasser, 2002). Johann notes that materialistic values, which tell us to spend our way to happiness look like real values, yet they do not give us what we need from values, namely, a path toward a satisfying and fulfilled life and instead fill us with **"psychological toxins,"** which can distort our minds (Hari, 2018).

Values are the compass that guides us, shaping our identity, decisions, and purpose. Among them, we strongly believe that gratitude stands out as one of the most powerful values, especially in recovery. We have found that practicing gratitude not only enhances emotional resilience but also rewires the brain to prioritize positivity over negativity. Research shows that gratitude boosts serotonin and dopamine—the brain's natural mood stabilizes, which helps to reduce cravings and anxiety (Watkins et al., 2003).

We contest that from a faith perspective, gratitude becomes an important act of worship and trust, which aligns us with God's promises and purpose. It enables us to recognize that even in hardship, there are many blessings, and that we are not alone. As we focus on gratitude, we root ourselves in values that build resilience, renew hope, and foster a life of meaningful, faith-driven recovery.

In my (Jeff) family therapy sessions with media and porn-addicted teens and young adults, I ask the family to define, evaluate, and clarify

their family values and additionally determine what their family name means. In addition, I sometimes assign them to develop a family ***Coat of Arms*** (a pictorial symbol to identify their family values and what they stand for). Sadly, there is far too little discussion about family and personal values these days. Good values are like a compass that helps keep us on a "true north" path toward healthy living.

Cause Four -
Disconnection from Childhood Trauma

As we have discussed in earlier chapters, unresolved childhood trauma is often the fuel driving many into process and substance addictions. While we will not repeat this discussion here, it is very important to recognize that trauma often creates a lingering "fire" within, as Johann Hari (2018) described: “There’s a house fire inside many of us.” For many, these addictions become a desperate attempt to smother that internal blaze. Without fully addressing these deep-seated wounds, attempts to stop addictive behaviors can be overwhelming, if not even impossible. Many may discover that they successfully curb one addiction, only to substitute it with another, as they continue to seek relief from the unresolved pain that lingers.

But there is hope, and healing is possible. Jesus Himself extended compassion to the brokenhearted, reminding us that we do not have to carry our burdens alone. He invites us to "Come to me, all who are weary and burdened, and I will give you rest” (Matthew 11:28, NIV). True recovery requires more than just abstaining from harmful and addictive behaviors; it calls us to bring our pain into His light and let Him heal those wounded places that He can heal. Addressing the trauma underlying addiction is not about re-living past hurts, but rather, opening ourselves to God’s transformative grace and love.

As we walk this path, remember that healing is a journey. Through faith, counseling, and support, we find not only relief from addiction but also a new identity and wholeness. With Christ as our foundation, the cycle of substitution can be broken, making space for true freedom, restoration, and lasting peace.

Cause Five

Disconnection from Status and Respect

🌟 Status and Respect 🏆

Robert Sapolsky's baboon research revealed that baboons with the lowest status must compulsively show that they know they are defeated. They do this by making subordinate gestures – lowering their heads, crawling on their bellies, etc. Moreover, when a baboon is looking and acting this way, and when no one is showing him any respect, he will look a lot like a depressed person in that he will keep his head down, he will not want to move, he will lose his appetite and all energy, and when someone comes near him, he will pull away (Sapolsky, 1992, 2002). Sapolsky subsequently determined that depressed humans are flooded with the same stress hormone, namely cortisol, that low-ranking baboons experience and that the same

constellation of changes in the brain and pituitary and adrenal glands also occur (Sapolsky, 1992, 2002).

As noted earlier, spending much of the day in media does not afford us the necessary time and experience to build real 3D relationships, nor do we develop competence in a world that will ask much of us and, as a result, we will most assuredly lose "status and respect," not only from others, but we will also lose self-respect and self-confidence. We need to ensure that we are unplugging to develop those necessary skills. As Twenge (2006), in her book, *Generation Me*, astutely pointed out, self-esteem is not based on air but on mastery and real-world competence.

Cause Six

Disconnection from the Natural World

Our children no longer learn how to read the great Book of Nature From their own direct experience or how to interact creatively with the seasonal transformations of the planet. They seldom learn where their water comes from or where it goes. We no longer coordinate our human celebration with the great liturgy of the heavens.

-Wendell Berry

Chilean primatologist Isabel Behncke has spent much of her professional career studying the behavior of chimpanzees and

Bonobos in both the wild and captivity. She noted that Bonobos in the wild can become sad or depressed, but there is a limit to how far they will go. However, in captivity, Bonobos often become so deeply depressed to the point they will scratch themselves until they bleed and can develop tics or start to rock obsessively, whereas, in their natural habitat, these behaviors are never observed (interview with Isabel Behncke cited in Hari, 2018). Elephants in captivity will often grind their tusks- which is a source of pride – against the walls to the point that they become stumps, and some elephants in captivity are so traumatized they will actually sleep upright for years; all behaviors that are never seen in the wild (Sutherland, 2014). Isabel Behncke postulated that, similar to the animal world, we, too, are more prone to depression when we starve ourselves from connection to the natural world (interview with Isabel Behncke cited in Hari, 2018). Berman (2012) conducted a study that asked city dwellers to simply take walks in nature and then evaluated their mood and concentration and predictably found that everyone reported feeling better and noted improved concentration, and most interestingly, previously depressed people reported five times greater improvement than non-depressed people. The scientific evidence is very clear that exercise indeed improves depression and anxiety (Strohle, 2009); however, getting out and exercising outdoors has even better rewards. For example, Gilbert (2009) reported that both people who run on treadmills in the gym and people who run in nature show a reduction in depression; however, this is significantly greater for people who run in nature.

Richard Louv, who coined the term **Nature Deficit Disorder,** wrote that humans are hard-wired for a genuine nature connection. Louv believes that the exponential increase in emotional and psychological problems in kids today are all related to an erosion of their connection with nature and immersion into the digital world (Louv, 2005). We need to ensure that we are unplugging and going outside to bond with nature, play, and reap the benefits of exercise. Doing this in a social context is even better.

Exercise and Brain Research

Health Alerts from Harvard Medical School

"In a study done at the University of British Columbia, researchers found that regular aerobic exercise, the kind that gets your heart and your sweat glands pumping, appears to boost the size of the hippocampus, the brain area involved in verbal memory and learning. Resistance training, balance and muscle toning exercises did not have the same results.

The finding comes at a critical time. Researchers say one new case of dementia is detected every four seconds globally. They estimate that by the year 2050, more than 115 million people will have dementia worldwide.

Exercise helps memory and thinking through both direct and indirect means.

The benefits of exercise come directly from its ability to reduce insulin resistance, reduce inflammation, and stimulate the release of growth factors (BDMF) chemicals in the brain that affect the health of brain cells, the growth of new blood vessels in the brain, and even the abundance and survival of new brain cells" (Goldman, 2014).

Regular exercise changes the brain to improve memory, thinking skills - Harvard Health

Research, as summarized by Bathina et al. (2015), reveals that exercise increased brain derived neurotrophic factor (BDNF), which acts on health in the following ways:

BDNF Promotes Brain Health

1. Promotes growth and differentiation of neurons and synapses.
2. Serves as a neuroprotective factor, helping to support the survival of existing neurons and encouraging the growth of new neurons and synapses.
3. Influences mechanisms of memory and cognition, contributing to the processes of learning and memory.

4. Influences neurotransmission, including glutamatergic and GABAergic synapses, which can impact serotonergic and dopaminergic neurotransmission.

Cause Seven

Disconnection from a Hopeful and Secure Future

Johann notes that as Native Americans were stripped of their identities, they lost their connection to the future, became increasingly depressed, and then often resorted to alcohol abuse, which resulted in addiction. I would conjecture that as we lose connection with our true identities, not only within our families but within our culture, we will further retreat to media in hopes of cultivating an identity. Sadly, the cyber-world cannot fill this need and only perpetuates a sense of disconnection, loneliness, and feelings of despair about a probable insecure future. We need to ensure that

we have hope for what lies ahead, and that life has purpose and meaning. This can only happen when living a connected life.

One of the most influential studies highlighting the value of hope in mental health and its role as an antidote to depression and suicide is the work by Snyder et al. on Hope Theory. Snyder's research has been foundational in psychology, particularly his article "The will and the ways: Development and validation of an individual-differences measure of hope" (Snyder et al., 1991). This study introduced the Hope Scale, a tool used to measure a person's hopeful thinking, and discussed how hope consists of agency (goal-directed determination) and pathways (planning to meet goals), contributing significantly to positive outcomes in mental health.

Snyder's hope theory posits that higher levels of hope correlate with better psychological wellbeing, including lower levels of depression and reduced suicidal ideation. According to Snyder, hope acts as a buffer against the development of mental health issues by fostering resilience, enhancing problem-solving skills, and encouraging positive future-oriented thinking. In clinical settings, hope has been integrated into therapeutic interventions, showing promising results in improving mental health outcomes (Snyder et al., 1991; Snyder 2000).

Cause Eight

Disconnection from Faith (emphasis mine)

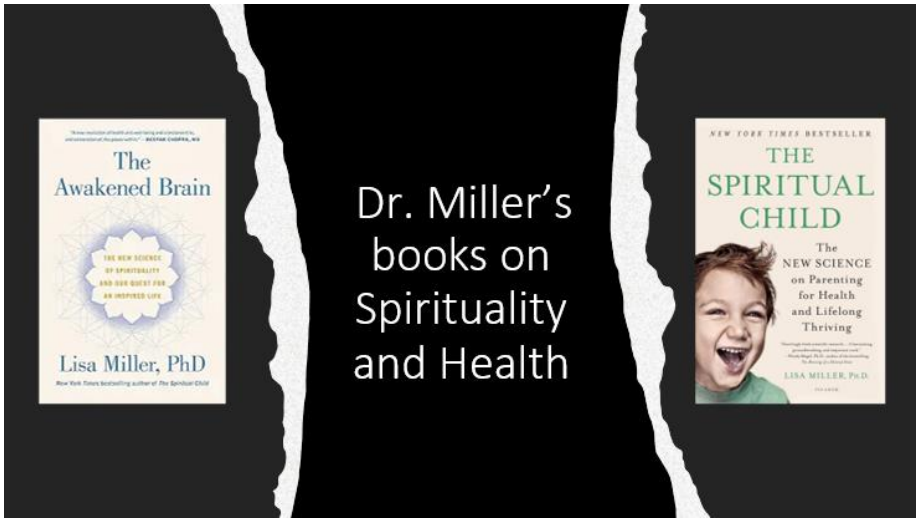
"Man is not destroyed by suffering; he is destroyed by suffering without meaning."

-Victor Frankl

Although not specifically mentioned by Johann, we clearly believe that faith can be fundamentally important, which by now is obvious to you as you are reading this book.. Observational studies suggest that people who have regular spiritual practices tend to live longer (Strawbridge et al., 1997). Another research study investigated 1,700 older adults and found that those who attended church were half as likely to have elevated levels of interleukin-6 (IL-6), associated with an increased incidence of disease. These authors concluded that religious commitment might improve stress control by affording better coping mechanisms, richer social support, and the strength of personal values and worldview (Koenig et al., 1997). Spirituality is

essential to the "existential domain," as measured in quality-of-life scores. Positive reports on those measures, i.e., a meaningful personal existence, fulfillment of life goals, and a feeling that life to that point had been worthwhile, correlate with a good quality of life for patients with advanced disease (Cohen et al., 1995).

The most widely known and my favorite researcher on spirituality and its relationship to mental health is Dr. Lisa Miller, a prominent clinical psychologist and a leading researcher in the field of spirituality and psychology. She is best known for her work on the impact of spirituality and religion on mental health. Dr. Miller has extensively studied the scientific underpinnings of spirituality and its relationship to wellness, especially in preventing depression and substance abuse among adolescents and adults. Miller serves as a Professor in the Clinical Psychology Program at Teachers College, Columbia University. She is also the Founder of the Spirituality Mind Body Institute at Columbia University, where she leads research initiatives to explore the integration of spirituality into psychological practice. Dr. Miller's amazing work emphasizes the protective factors that spirituality and religious beliefs can provide against various mental health challenges.



In her seminal book, "The Awakened Brain: The New Science of Spirituality and Our Quest for an Inspired Life," she presents compelling evidence and insights into the profound benefits of spirituality on mental health and well-being. Drawing on her extensive research in the field, she makes several key conclusions regarding the positive impact of spirituality:

1. **Enhanced Resilience**: Miller argues that spirituality and a deep sense of connection to something greater than oneself can significantly boost resilience against stress and adversity. She provides evidence that people with a strong spiritual life tend to recover more quickly and thoroughly from life's challenges.

2. **Decreased Risk of Depression**: One of the critical findings shared in the book is the protective effect of spirituality against depression. Miller's research suggests that individuals

with a rich spiritual life have a lower risk of falling into depression, and if they do, they often experience a milder form.

3. **Improved Emotional Well-being**: The book also highlights that spirituality is linked to enhanced emotional well-being, including feelings of happiness, contentment, and purpose. Miller posits that spiritual practices and beliefs contribute to a more optimistic outlook on life.

4. **Increased Connectivity**: Miller discusses how spirituality can increase a sense of connectedness, not only with the divine or a higher power but also with the community and the world at large. This sense of belonging can be profoundly healing and fulfilling.

5. **Support for Physical Health**: While the primary focus of "The Awakened Brain" is on mental and emotional health, Miller also touches upon the interplay between spirituality and physical health. She suggests that the mental health benefits associated with spirituality can indirectly support physical health by reducing stress and promoting healthier lifestyle choices.

Personal note from Jeff: *Johann Hari's work was profoundly helpful to me (Jeff) as it summarized much of what I did to get myself once again regulated emotionally and back on track, so much so that I felt compelled to write him a letter of gratitude.*

Hi Johann,

I have been wanting to write to you for quite some time and on this cold and wet Saturday evening in the Pacific Northwest, I am finally reaching out.

By way of introduction, I am a clinical pediatric psychologist working at Madigan Army Medical Center, one of the largest Army training hospitals in the US. I also have a small private practice in Olympia, Washington State. But this is not really that relevant. What is relevant and what connects me to you is that I, too, have struggled with profound depression, so severe, in fact, that it landed me in the psychiatric ward at St. Peter Hospital some twelve years ago after hitting a point of deep depression – precipitated by my wife's cancer diagnosis, my daughter's possible lymphoma diagnosis, my son's deployment to Fallujah, Iraq in 2008, and the loss of my financial stability due to heavy real estate investment losses during the financial collapse and worldwide recession of that time. After my total emotional collapse, I embarked on a long journey of recovery, one that took me almost eight years. Once recovered, I began to do an internal assessment and inventory of the many things I did to bring back wholeness to my life and, by way of a gift, once nearing completion of that inventory, I happened to hear your interview by George Noory on Coast to Coast radio. I was immediately captivated by your story. I bought your book, Lost Connections, and was nothing short of validated, blessed, moved, intellectually challenged, and deeply touched by your words. You helped lend credence and validation to my struggle and to what it took to save myself and heal. I came to know you as a fellow traveler in the struggle of life. I have

watched nearly every YouTube and Ted Talk interview and presentation you gave and came to know you as a sort of friend, if not even a brother, in the life experience we all share.

I am very happy to say that my life is now nothing short of amazing. I left my very lucrative full-time private practice where money ruled, toxic relationships reigned, and fulfillment in service to others diminished. I returned to an Army medical center, perhaps by universal design, the one where I once served when I was on active duty some two and a half decades ago - with half the pay but twice the fulfillment, as I was no longer working for the mighty dollar but was instead dedicated to the service of others. In short, I found my soul.

My journey to hell and back, the lessons learned, and your book all contributed to my salvation. Johann, I cannot thank you enough – for your humility in sharing your story, your brilliance in researching the truth, and your courage in sharing it. You have helped to enrich and save the lives of many, not the least of which is mine.

I have applied your teaching not only to my life but to the lives of the many severely disturbed and often emotionally challenged patients I serve at Madigan and in my private practice. I have developed your multi-point model of connection into a therapy protocol for many of my patients at Madigan Army Medical Center, as well as in my private practice, which I have affectionately named The Center for Connected Living, LLC. In addition, I have a personal interest and passion for helping those who are imprisoned by media and pornography addiction, the epidemic plagues of modern culture, and I use your model of connection

as one of the key components of recovery for them both in my therapy and my speaking engagements.

I hope you don't mind, but I have made considerable reference to your work in my papers and PowerPoints, which I have developed for my patients at Madigan and in my private practice. Should you ever wish to peruse them, you can find them on my website: ***jeffreyhansenphd.com****. No worries if you choose not to review them but suffice it to say that you are helping restore the emotional lives of many, my friend.*

I hope to meet you one day and have the privilege of shaking your hand. You are the best of humanity, and I am honored to count you as one of my literary mentors.

With fond regards,

Jeff

Johann's reply (and I am so honored):

Dear Jeffrey,

I am so moved by your email and what you have achieved. You should be really proud of yourself to have built so much after the pain you were in and using it to help people.

If I am ever in Olympia again, I will buy you dinner.

Very best wishes,

Johann

Summary: We wholeheartedly believe that it is essential to acknowledge the profound role that faith and spirituality play in fostering mental health and overall well-being. As the research suggests, regular spiritual practices offer not only a sense of purpose and meaning but also tangible health benefits, such as stress reduction and improved resilience. As believers, we recognize the power of faith in shaping our lives and our connections with others. Scripture speaks to the importance of this: "A cheerful heart is good medicine, but a crushed spirit dries up the bones" (Proverbs 17:22, NIV). Our spiritual health can profoundly influence our emotional and physical health, acting as a source of strength in difficult times.

Dr. Lisa Miller's research provides compelling evidence that spirituality can serve as a protective factor against depression and addiction, confirming what many of us have experienced firsthand—when we are grounded in faith, we are better equipped to navigate life's challenges. As Jesus reminds us, *"Come to me, all you who are weary and burdened, and I will give you rest"* (Matthew 11:28, NIV). This invitation to lean into faith is a reminder that spiritual connection is integral to the healing process.

Living a connected life means more than just addressing the biological or psychological aspects of our struggles. It involves restoring our connections to God, to each other, and to the deeper values that give life meaning. As we work through trauma, addiction, or any emotional struggle, let us not forget the profound wisdom of faith and the healing power of connectedness—both with our Creator and

the people He places in our lives. It is in these connections that we find true wholeness.

Anchored In Hope

The 12 Steps As A Foundation For Healing

At Holdfast Recovery and AnchorPoint, the 12-Step program forms the spiritual heart of our recovery process. However, what sets our approach apart is how we seamlessly integrate the 12 Steps with powerful therapeutic models, such as Polyvagal-Informed Therapy, HeartMath® , Internal Family Systems (IFS), and Johann Hari's connection-based healing model. Together, these therapies provide a holistic approach to healing, not only from addiction but from the deeper emotional and relational disconnections that often fuel it.

The 12-Step program, born from the vision of Bill Wilson in 1935, was a response to his personal struggles with alcoholism. Wilson, inspired by a spiritual awakening and his friendship with Dr. Bob Smith, laid the foundation for Alcoholics Anonymous (AA), which has since transformed millions of lives worldwide. As Wilson once said, "I realized that my journey was not just about sobriety, but about spiritual transformation." This spiritual transformation, at the core of the 12-Step program, aligns with the biblical teaching in James 5:16: "Confess your sins to each other and pray for each other so that you may be healed" (NIV) (Alcoholics Anonymous World Services, 2001; Kurtz, 1979).

Over the decades, AA evolved into a community-based model of support, helping individuals surrender control, acknowledge a higher power, and heal fractured relationships. But while the 12 Steps address spiritual and social aspects, they don't always tackle the deep-rooted trauma or neurological changes caused by addiction. This is

where we integrate other therapies to enhance and deepen the recovery process.

Polyvagal-Informed Therapy helps individuals better understand how trauma and stress impact their nervous system. Addiction often thrives in an environment of chronic stress, which leads to dysregulation of the nervous system. By calming the body's stress responses and promoting a sense of safety, Polyvagal Therapy allows participants to feel secure enough to engage with the deeper work of the 12 Steps, such as personal reflection, making amends, and rebuilding relationships.

HeartMath® adds another dimension to this process by fostering heart-brain coherence. This science-backed approach teaches emotional self-regulation and stress management, which supports the emotional balance needed to fully engage in recovery. Proverbs 4:23 reminds us, *"Above all else, guard your heart, for everything you do flows from it"* (NIV), reflecting HeartMath® 's emphasis on the heart's pivotal role in emotional well-being and decision-making.

Internal Family Systems (IFS) further enriches the recovery journey by helping individuals recognize and heal the wounded parts of themselves that have contributed to their addiction. IFS teaches that we all have various internal "parts"—some protective, some wounded. The 12 Steps ask us to examine our lives and make amends, and IFS deepens this work by helping individuals approach their past with self-compassion and understanding. By healing these internal parts,

individuals can experience greater internal harmony, which reinforces the transformative power of the 12 Steps.

Johann Hari's connection-based model of healing, discussed in *Lost Connections*, offers yet another layer of depth. Hari's research highlights how addiction is often rooted in disconnection—from meaningful work, relationships, and even ourselves. He argues that reconnection is the key to overcoming addiction. The 12 Steps naturally foster reconnection to a higher power and community, but by integrating Hari's insights, we extend the process to rebuilding connections with nature, meaningful work, and a hopeful future. His model aligns with Ecclesiastes 4:9-10, which says, *"Two are better than one, because they have a good return for their labor: If either of them falls down, one can help the other up"* (NIV).

In short, our integrated approach at Holdfast Recovery and AnchorPoint combines the spiritual foundation of the 12 Steps with cutting-edge therapies like Polyvagal-Informed Therapy, HeartMath® , IFS, and Johann Hari's connection model. This fusion not only addresses the addiction but also the underlying disconnections and traumas that have perpetuated the cycle of addiction. The goal is not just sobriety but the complete restoration of a connected, purposeful, and fulfilling life.

Now that we have explored how our NeuroFaith approach weaves together the spiritual and emotional strength of the 12 Steps with modern therapies—like Polyvagal-Informed Therapy, HeartMath® , Internal Family Systems, and Johann Hari's connection-based

model—let's dive into the 12 Steps themselves. These steps are not just tools for recovery; they are a way to reclaim connection—connection to ourselves, others, and a higher power. They offer a path from isolation to community, from shame to self-compassion, and from chaos to peace.

Each step invites us to take action, reflect deeply, and embrace change. For many, the 12 Steps have been a lifeline—providing hope, structure, and transformation in the face of addiction. When you approach them with an open heart and a willingness to grow, these steps become a foundation for healing that reaches every part of life.

Here are the 12 Steps with a Christian focus: as eloquently written by Senor Pastor (retired) Earl Heverly and shared with permission (Heverly, 2024).

Step 1: We admit we are powerless over our addictions and compulsive behaviors and that our lives have become unmanageable.

The first step to healing is acknowledging that we can't do life alone. This is where we stop pretending that we're in control of our lives and humbly admit we need help. This is the courageous first move toward healing and freedom.

I know that nothing good lives in me, that is, in my sinful nature. For I have the desire to do what is good, but I cannot carry it out. Romans 1:18 (NIV)

Step 2: We believe that a power greater than ourselves can restore us to sanity.

This is where hope begins. Putting our trust in the belief that healing is possible through Something greater and bigger than ourselves gives us the strength to keep moving forward.

For God is working in you, giving you the desire and the power to do what pleases Him. Philippians 2:13 (NLT)

Step 3: We make a decision to turn our lives and wills over to the care of God as we understand Him.

Surrender is not about giving up; it's about handing our lives completely over to a loving God who guides and cares for us.

Trust in the Lord with all your heart and lean not on your own understanding; in all your ways acknowledge Him, and He will make your paths straight. Proverbs 3:5-6 (NIV).

"I am the resurrection and the life. Anyone who believes in Me will live, even after dying. Everyone who lives in Me and believes in Me will never ever die." John 11:25-26 (NLT)

And the outcome of declaring our commitment to Him:

If you openly declare that Jesus is Lord and believe in your heart that God raised him from the dead, you will be saved. For it is by believing in your heart that you are made right with God, and it is by openly declaring your faith that you are saved. Romans 10:9-10 (NLT)

Sample prayer:

Dear God, I don't understand everything yet, but I believe You love me and made me for Your purposes. I'm sorry I've lived for myself instead of for You. I ask for Your forgiveness and thank You for sending Jesus to pay for my sins. I want Him to be the Lord of my life. I receive Your gift of eternal life and Your Holy Spirit who will help me serve You and live a life that pleases You. Amen.

Please let us know if you prayed this prayer. We'd like to pray for you and with you and have some additional information to share with you at no charge, to help you grow in your newfound faith in Jesus. Jeff can be reached at jeff.hansenphd@comcast.net. Tim can be reached at tim@holdfastrecovery.com. Earl can be reached at revhev@comcast.net

Step 4: We step into the unknown, trusting that God's plan for us is good, even when we can't yet see it.

"For I know the plans I have for you," declares the Lord, "plans to prosper you and not to harm you, plans to give you hope and a future." Jeremiah 29:11 (NIV)

Step 5: We make a searching and fearless moral inventory of ourselves.

This step requires real, deep and complete honesty with ourselves about ourselves. It's not always easy to look at our mistakes and failures. But with God's help, it's a necessary step toward understanding the roots of our struggles.

Test me, O Lord, and try me, examine my heart and my mind; for your love is ever before me, and I walk continually in your truth. Psalm 26:2 (NIV)

Step 6: We admit to God, ourselves, and another human being the exact nature of our wrongs.

There is healing power in confession. By sharing our burdens, we release the shame that often keeps us trapped and experience the forgiveness we so desperately need.

Therefore, confess your sins to each other and pray for each other so that you may be healed. James 5:16 (NIV)

Step 7a: We are entirely ready to have God remove all these defects in our character and replace them with righteousness.

Readiness to change is key. Here, we open ourselves to true transformation, trusting that God helps us shed the things that no longer serve us but harm us, then making us into the people we were meant to be.

Do not conform any longer to the pattern of this world but be transformed by the renewing of your mind. Then you will be able to test and approve what God's will is—his good, pleasing and perfect will. Romans 12:2 (NIV)

Step 7b: We humbly ask Him to remove our shortcomings.

In this step, humility takes center stage. We ask for God's intervention, knowing we cannot change on our own. It's in this moment of vulnerability that we discover the path to strength.

If we confess our sins, He is faithful and just and will forgive us our sins and purify (cleanse) us from all unrighteousness. 1 John 1:9 (NIV)

Step 8: We make a list of all persons we have harmed and become willing to make amends to them all.

Healing broken relationships is an essential part of recovery. We take responsibility for our actions, then prepare to make things right with those we have hurt along the way.

"Do to others as you would have them do to you." Luke 6:31 (NIV)

Step 9: We make amends to such people wherever possible, except when to do so would cause injury or harm to them or others.

Making amends is an act of love and accountability. This step restores broken connections and allows us to rebuild trust one relationship at a time.

Fools mock at making amends for sin, but goodwill is found among the upright. Proverbs 14:9 (NIV)

Step 10: We continue to take personal inventory, and when we are wrong promptly admit it.

Recovery is a journey, not a destination. Staying on track requires regular reflection, allowing us to course-correct and continue growing along the way.

Search me, O God, and know my heart; test me and know my anxious thoughts. Point out anything in me that offends you and lead me along the path of everlasting life. Psalm 139:23-24 (NLT)

Step 11: We seek through prayer and meditation to improve our conscious contact with God as we understand Him, praying only for knowledge of His will for us and the power to carry it out.

Building a relationship with God is ongoing. Through prayer, Scripture reading and meditation, we deepen that connection and find the strength to walk in His will.

May our Lord Jesus Christ Himself and God our Father, who loved us and by His grace gave us eternal encouragement and good hope, encourage your hearts and strengthen you in every good deed and word. 2 Thessalonians 2:16-17 (NIV)

Step 12: Having a spiritual awakening as the result of these steps, we try to carry this message to others and practice these principles in all our affairs.

The gift of recovery is meant to be shared. As we experience healing, we are called to help others along the way. In doing so, we continue to live out the principles of the 12 Steps in everything we do.

We urge you, brothers, warn those who are idle, encourage the timid, help the weak, be patient with everyone. Make sure that nobody pays back wrong for wrong, but always try to be kind to each other and to everyone else. 1 Thessalonians 5:14-15 (NIV)

The gift of recovery is meant to be shared. As we experience healing, we are called to help others along the way. In doing so, we continue to live out the principles of the 12 Steps in everything we do.

These steps, intertwined with the therapies we've discussed, form the heart of our approach at Holdfast Recovery and AnchorPoint. Together, they provide a roadmap not only for overcoming addiction but for reconnecting with life in its fullness—physically, emotionally, and spiritually. You are not alone in this journey, and with these tools in hand, true transformation is possible (ChatGPT assisted).

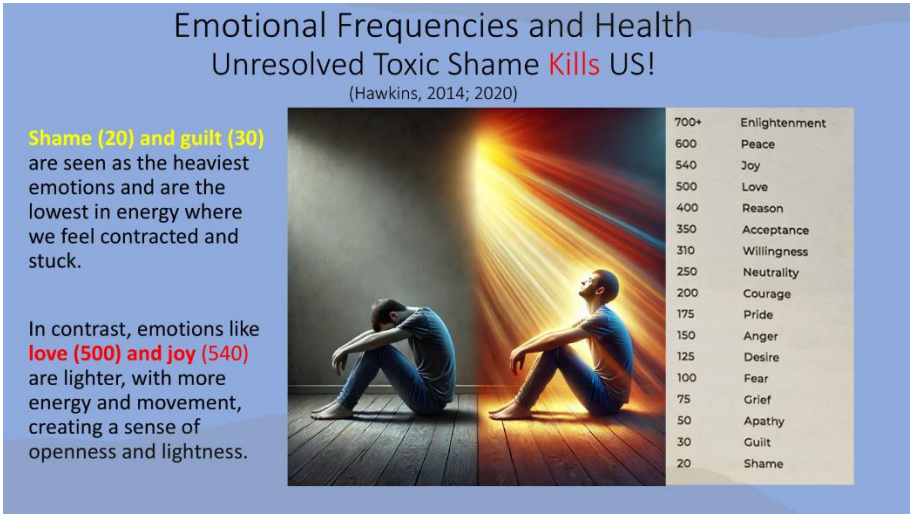
Transformational Change

Healing Shame through Christ Alone

Shame is a profound and often hidden wound that impacts the soul at its deepest level. Unlike guilt, which focuses on what we've done, shame targets who we believe we are, fostering feelings of unworthiness and self-rejection. Dr. David Hawkins' groundbreaking yet controversial research highlights that shame resonates at one of the lowest energies measurable by kinesiology (muscle testing) in the human experience, which he reports is a 20 on a 0 – 1,000 scale (no unit of measurement was specified). This low energy indicates the heavy, debilitating nature of shame, which can manifest physically, psychologically, and spiritually. Over time, the oppressive weight of shame affects not only our mental health but also our physical well-being, contributing to chronic stress, immune system suppression, and even an increased risk of illness.

While psychology can do much to help heal and manage the impact of shame, it is only through Christ that the deepest wounds of the soul can be fully healed. The transformative power of Jesus brings hope and renewal, reaching into the innermost parts of our being to replace shame with grace, love, and a restored sense of worth. Christ's redemptive work offers the wholeness and peace that psychology

alone cannot fully provide, lifting the burden of shame and allowing for true freedom and spiritual healing.



Hawkins (2014, 2020) argues that such low-energy emotions, like shame, essentially "kill the body and soul" by eroding one's sense of vitality, worth, and connection to others. Those trapped in shame often find it difficult to receive love, forgiveness, and grace, creating a barrier that isolates them from relationships and, ultimately, from God. However, through Christ alone, there is hope for transformational change that lifts us out of shame's grip and restores our souls.

Note: In fairness to the scientific method, we acknowledge that Hawkins' research has been criticized in the scientific community; mainly for its reliance on subjective muscle testing without rigorous scientific validation. Nonetheless, we appreciate that many people

have found value in this framework for understanding consciousness and personal growth.

In this chapter, we will explore how the healing power of Christ reaches into the depths of our shame, replacing it with a new identity grounded in grace and love. Only through the restorative work of Jesus can the wounds of shame be fully healed, allowing us to embrace the wholeness, freedom, and peace that He promises.

Step 6 of the Twelve Steps identifies the lynchpin of breaking free from addiction and its consequences: *We are entirely ready to have God remove all these defects in our character and replace them with righteousness.*

The further we dive into this step; we discover its success is dependent on two things: 1. God's ability and desire to 'remove these defects in our character and replace them with righteousness' and 2. our willingness to let Him do so.

Much has been written about this process that seemingly reduces it to a matter of faith (in God to do the work). While faith in Him to do this on our part is key, there is precious little written explaining what exactly transpires. This chapter examines the process that will help anyone going through it understand and embrace it for themselves and others.

Our primary Biblical passage describing this process is also found in Step 6:

"Do not conform any longer to the pattern of this world but be transformed by the renewing of your mind. Then you will be able to test and approve what God's will is—His good, pleasing and perfect will" (Romans 12:2. NIV).

The Apostle Paul is instructing us to no longer live our lives in conformity to the patterns, the norms and behaviors, of this worldly system, the culture that determines what is right and wrong, what is acceptable and what isn't. Our culture today embraces an 'anything

goes as long as it doesn't harm anyone else' standard of behavior and decision making and has removed many of the consequences that have been the moral guard rails for the American experiment the last 250 years.

The results have been devastating—rampant drug use, overdoses, and death, increased crime, record suicides, abortion and euthanasia of unwanted members of society, and a coarsening of the American conversation, all of it glossed over by a media that promotes the value of 'feeling good' above all else. The error of this view is the consequences aren't removed and cannot be removed, since it is God who set them in place for our own good.

"For no one can ever be made right with God by doing what the law commands. The law simply shows us how sinful we are" (Romans 3:20, NLT).

Those of us who have been trapped in addiction know all too well the reality of these consequences and our inability to break free from all this on our own. While it was God who put these guard rails in place to protect us, it was also God, by His grace, who gave His Son, Jesus Christ, in our place to suffer the consequences we deserved.

"Christ suffered for our sins once for all time. He never sinned, but he <u>died</u> for sinners to bring you safely home to God. He suffered physical death, but He was raised to life in the Spirit" (1 Peter 3:18, NLT).

"The <u>law</u> was our guardian until Christ came; it <u>protected</u> us until we could be made right with God through faith" (Galatians 3:24, NLT).

Not only are addictions in view—but every life-controlling issue that is contrary to God's desire and design for us—sin—is covered by the incredible gift of Jesus' death on the cross in our place.

"He saved us, not because of the righteous things we had done, but because of His mercy. He washed away our sins, giving us a new birth and new life through the Holy Spirit" (Titus 3:5, NLT).

When we confess our sins to God and accept Jesus' work on the cross for ourselves, we open the door to transformation by God Himself, Who does the work inside us!

"And Christ lives within you, so even though your body will die because of sin, the Spirit gives you life because you have been made right with God" (Romans 8:10, NLT).

This life within us is a brand new spirit being that lives for eternity. Our old spirit life is dead because of our sin, and this new life takes its place.

"And I will give you a new heart, and I will put a new spirit in you. I will take out your stony, stubborn heart and give you a tender, responsive heart" (Ezekiel 36:26, NLT)

The result of this exchange is the ability to no longer be governed by the power of sin but to be controlled by the power of God's Spirit

"But now, by dying to what once bound us, we have been released from the law so that we serve in the new way of the Spirit, and not in the old way of the written code" (Romans 7:6, NIV).

Transformation begins when we choose to see ourselves as dead to our old way of living and alive in Christ through our new nature.

"In the same way, count yourselves dead to sin but alive to God in Christ Jesus" (Romans 6:11, NIV).

"Put on your new nature, created to be like God—truly righteous and holy." Ephesians 4:24, NLT).

Since we have been given a new spirit that lives for eternity, what then, is being transformed? It is our inner self, what the Bible calls our soul.

Theologically, our soul is comprised of three parts: intellect, will, emotions. We tend to lump these together into our mind and heart, but in truth they work together in forming and delivering our thoughts, speech and actions through our physical self—our body.

God designed our spirit to be closely aligned and connected with Him. Our spirit is to guide and guard our soul, which in turn gives expression to our body. We interact with our world and other people primarily through our body, but we should interact with God primarily through our spirit.

Romans 12:2 says transformation is the complete change of one life form into another. The Greek word for transformation is METAMORPHOO, the basis for our English word metamorphosis, describes the biological process of a tadpole becoming a frog, or a caterpillar becoming a butterfly. The latter life form is nothing like

the former. Our new life in Christ will be equally distinct and separate from our old.

It also describes the transformation of Jesus' physical body in Matthew 17:2. As the disciples watched, His appearance was transformed so that His face shone like the sun, and His clothes became as white as light. Our physical bodies will also be transformed when Jesus returns, and we are changed into His likeness in our entirety (see also 1 Corinthians 15:53).

Finally, Paul writes that the renewing of our mind results in our inner man(soul) being transformed: our intellect, will, and emotions, one aspect at a time, as long as we're living on this planet, making us more like Jesus.

"Instead, we will speak the truth in love, growing in every way more and more <u>like</u> <u>Christ</u>, who is the head of His body, the church" (Ephesians 4:15, NLT).

Remember, transformation is not just about changing our behaviors; it's about renewing our very essence. It is about becoming more like Christ, day by day, choice by choice, as our intellect, will, and emotions align with His divine will. And as we embrace this process, we fulfill the beautiful truth that, through Him, we can truly become new creations.

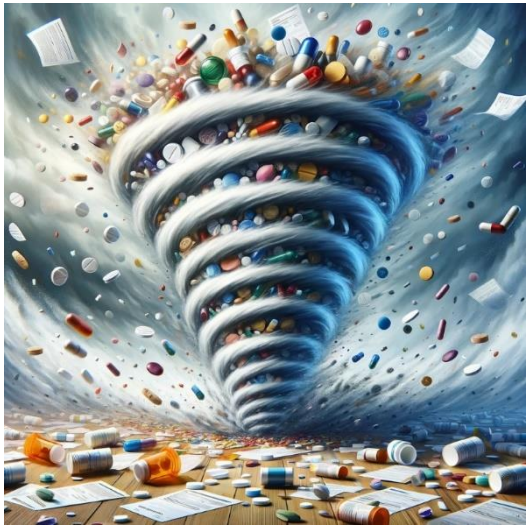
Let this chapter be a reminder that transformation is possible, promised, and powerful. Keep moving forward in faith, knowing that God's work in you is not finished—it is only just beginning. May you

find strength, courage, and the profound joy that comes from walking in His light and love.

"And I am certain that God, who began the good work within you, will continue his work until it is finally finished on the day when Christ Jesus returns" (Philippians 1:6, NLT).

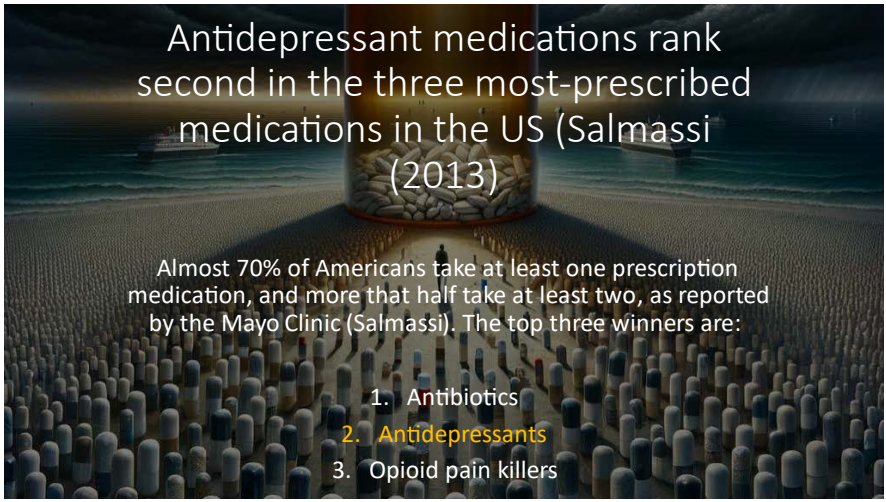
Medication Pitfalls:

Is Our Trust In Meds Misplaced?



Allow us to begin this chapter by saying that we are not advising you to take or avoid any psychotropic medication. Rather, we recommend that you familiarize yourself with the outcome research as thoroughly as possible before taking any psychotropic medication. We have chosen to discuss only antidepressant medications, as they are the most-prescribed of the psychotropics and, sadly, are the second most-prescribed medication in the United States – in rank order of number of prescriptions according to the May Clinic and cited by Salmassi (2013):

1. Antibiotics
2. Antidepressants
3. Opioid pain killers

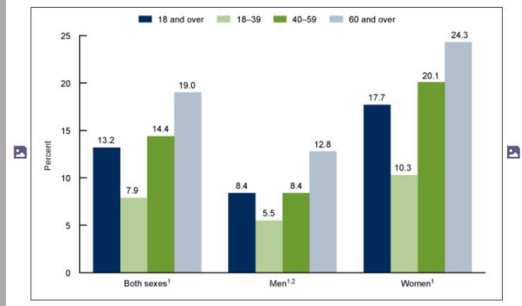


Empower yourself to ask your prescriber about any concerns you might have, including the content of this discussion. It has been said that we, as a culture, are too quick to run from pain, and part of that process involves an overreliance on psychotropic medications. Robert Whitaker (2023) notes that in 1987, we spent about 80 million dollars on psychotropics, and in 2007, that figure rose to 40 billion dollars – an astounding 50 fold increase in just 20 years.

The data from the CDC indicates that an alarming percentage of people in the US are taking antidepressant medication.

SOURCE: National Center for Health Statistics, National Health and Nutrition Examination Survey, 2015–2018. (CDC, 2020)

Figure 1. Percentage of adults aged 18 and over who used antidepressant medication over past 30 days, by age and sex: United States, 2015–2018



Robert Whitaker Speaks Out:

One of my literary heroes, Robert Whitaker, is an American journalist and author. He has been a prominent critic of the psychiatric medication paradigm, including antidepressants. Through his investigative work, Fobert has raised significant concerns about the efficacy, safety, and long-term impacts of antidepressants, drawing attention to what he perceives, and I agree, as the over-medication of society and the influence of the pharmaceutical industry on psychiatric treatment.

Criticism of Efficacy and Long-term Outcomes

One of Whitaker's main criticisms regarding antidepressants is their efficacy and the quality of the evidence supporting their use. In his ground-breaking book, *Anatomy of an Epidemic* (2010), he examines the scientific literature and argues that while antidepressants may offer short-term relief, their long-term efficacy is questionable. He

cites studies that suggest the possibility of antidepressants worsening long-term outcomes for many patients. Whitaker addresses the issue of publication bias, where studies showing positive outcomes are more likely to be published than those showing negative or inconclusive results, potentially skewing the perceived effectiveness of these medications.

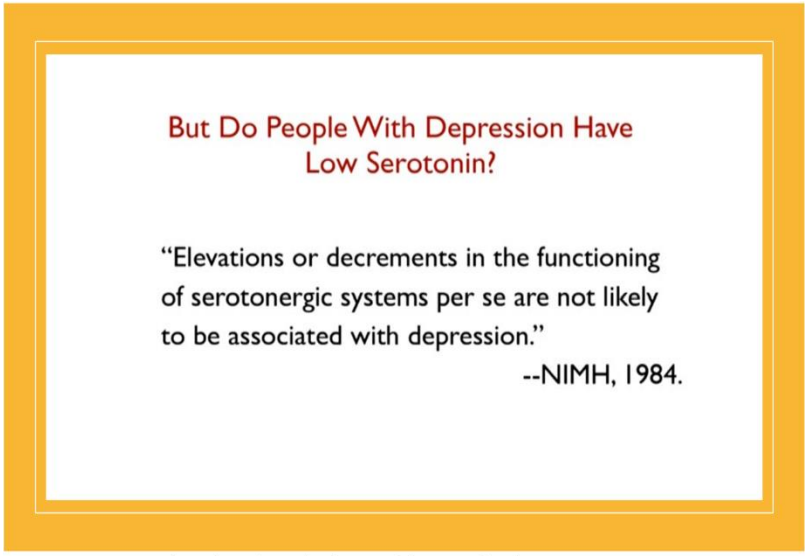
Dependence and Withdrawal

Whitaker also addresses the issue of dependence and withdrawal from antidepressants. He argues that the long-term use of antidepressants can lead to a physical dependence, making it difficult for patients to stop taking them due to severe withdrawal symptoms. This dependence is often not adequately discussed with patients prior to starting medication, according to Whitaker's findings. I am amazed that many of my patients have not been sufficiently counseled about the side effects of psychotropics such as Post SSRI Sexual Dysfunction (PSSD).

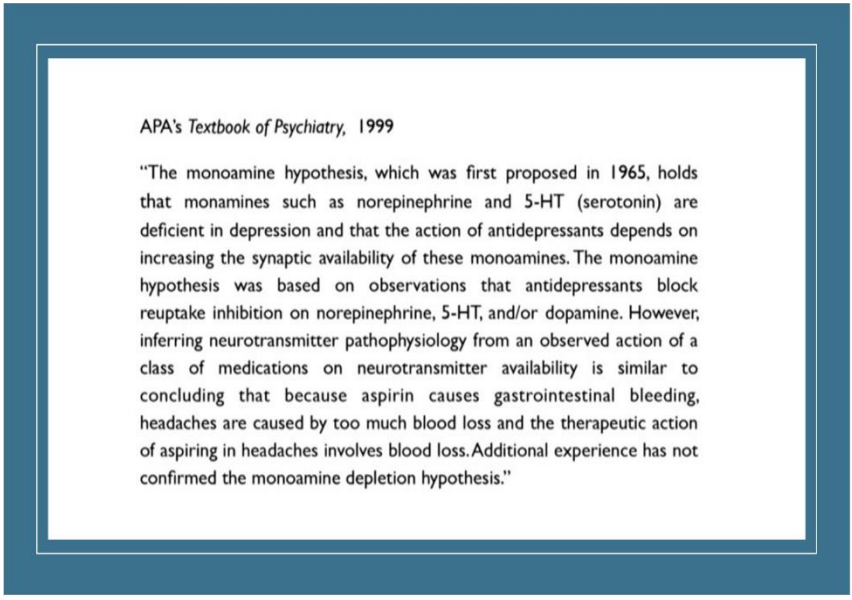
The Role of the Pharmaceutical Industry:

A significant part of Whitaker's critique focuses on the role of the pharmaceutical industry in promoting the use of antidepressants. He accuses the industry of exaggerating the benefits and underplaying the risks of antidepressants and intentionally misrepresenting and influencing both prescribers and patients. Whitaker's investigative work argues that marketing strategies and financial incentives have contributed to the widespread use of these medications, often at the expense of more comprehensive approaches to mental health care.

The pharmaceutical industry knew early-on that the low serotonin model of depression was not valid, yet they propagated the myth, along with either mis-informed, naïve, or patently unethical and/or incompetent prescribers, that SSRIs corrected an imbalance.



Whitaker (2018): https://youtu.be/FY-5npruTGc



Whitaker (2018): https://youtu.be/FY-5npruTGc

Moreover, in an extensive metanalytic study, psychiatrists Joanna Moncrieff and Mark Horowitz (3023) critically examined and challenged the serotonin hypothesis of depression. The serotonin hypothesis posits that depression is caused by an imbalance of serotonin levels in the brain and that increasing serotonin activity through antidepressants can correct this imbalance. However, Moncrieff, Horowitz, and other researchers have presented unquestionable evidence that the low serotonin hypothesis is dead (Moncrieff & Horowitz, 2023).

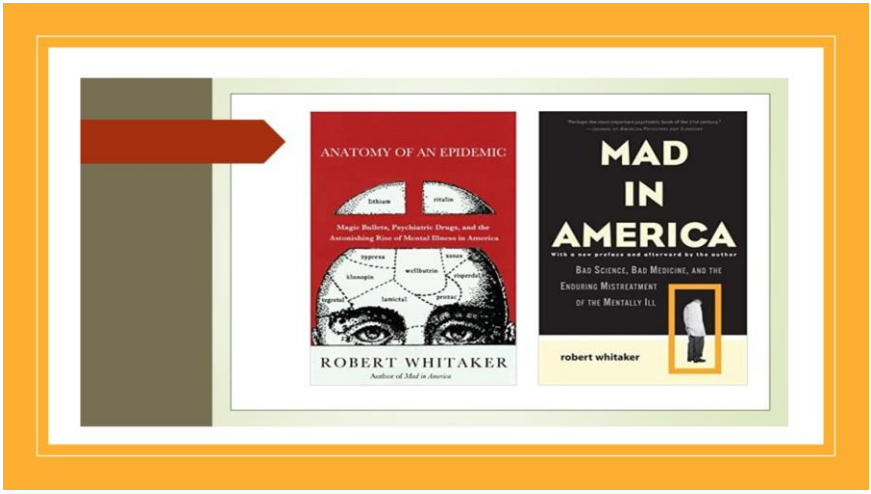
The deception that depression is an imbalance in serotonin promotes a disease model of depression and can lead one down the wrong path of healing. Moncrieff (2023), in a brilliant podcast interview, notes that Horowitz's research, along with her own, alternatively revealed that most depression stems from past trauma and/or difficult life circumstances and, moreover, that negative feelings serve as signals that something is wrong and needs to be addressed. While antidepressants might offer some initial relief, namely, "If I just fix my brain with this medicine, my depression will remit," this reasoning comes at a steep price in that it takes away any sense of agency and reduces the likelihood that we can take responsibility for our lives and heal the pain rather than masking that pain.

Alternatives to Medication

Whitaker advocates, and we fully agree, for a broader approach to treating depression and other mental health issues, beyond the pharmacological/medical model. He highlights the importance of psychotherapy, lifestyle changes, social support, and addressing the underlying causes of mental health conditions as critical components

of treatment that are often overshadowed by the focus on medication.

Robert Whitaker's criticism of antidepressant medications is part of a broader challenge to the conventional psychiatric treatment model. His work encourages a more nuanced conversation about mental health care, urging a reevaluation of the reliance on medication as the primary form of treatment. Whitaker's contributions have spurred an important and essential debate within the medical community and among the public, highlighting the dire need for a more holistic and informed approach to mental health treatment (Whitaker, 2010; Whitaker & Cosgrove, 2015).



Antidepressant Side Effects:

Although many good prescribers competently review side effects with their patients, far too many do not. Dr. Mark Horowitz is a psychiatrist, clinical researcher, and one of my heroes, and is known for his critical examination of antidepressant medications,

particularly focusing on their efficacy, side effects, and the challenges associated with discontinuing their use. He has a background in psychiatry and neuroscience and has been involved in research and advocacy related to the careful use of psychiatric drugs, the importance of evidence-based approaches to medication tapering, and the reconsideration of how mental health conditions are understood and treated. Mark Horowitz has openly discussed his personal struggles with antidepressants, providing a unique perspective that blends professional expertise with personal experience. His journey with antidepressant withdrawal has informed his research interests and advocacy for better understanding and management of antidepressant discontinuation syndrome.

Horowitz has shared how his own attempt to taper off antidepressants led to severe withdrawal symptoms, underscoring the lack of guidance and support available for individuals trying to reduce or stop their medication. This experience highlighted the gap between clinical practice and the real-world challenges patients face when discontinuing antidepressants. It spurred him to focus on researching the mechanisms of withdrawal and advocate for the development of evidence-based tapering protocols to help patients safely discontinue these medications.

His personal encounter with the difficulties of antidepressant withdrawal has made him a vocal advocate for greater awareness of these issues within the medical community. He emphasizes the importance of prescribing clinicians being well-informed about the potential for withdrawal symptoms and developing personalized tapering schedules that account for each patient's response to

medication reduction. Horowitz's work aims to bridge the gap between clinical research and practice, ensuring that patients receive care that supports both the initiation and discontinuation of antidepressant therapy in a way that minimizes harm and maximizes well-being. In his excellent and just published book, *Deprescribing Guidelines for Psychiatric Medications*, he details, along with his co-author, Dr. David Taylor, the all-too-frequent mismanagement of these medications and how to safely taper off them. Specific to this discussion, he does a superlative job of bringing together the most recent research on antidepressant side effects, many of which are not shared with patients before they take them.

Emotional Numbing and Other Effects:

- Emotional numbness – 71%
- Feeling foggy or detached – 70%
- Feeling not like me – 66%
- Drowsiness – 63%
- Reduction in positive feelings – 60%

Horowitz and Taylor (2024) note that emotional blunting appears to be a rather common and dependent consequence of antidepressant use. This is to say that you may feel the lows less, but you also feel the highs less.

Weight Gain:

It appears that long-term use of antidepressant use may result in more weight gain than suggested in short-term trials. Specifically, studies suggest that there is a 30% risk of normal weight people becoming

obese after 10 years of common antidepressant use than those not taking antidepressants.

Cognitive Effects:

Metanalytic Studies have found that some antidepressants can produce cognitive impairment in otherwise healthy controls – specifically on tests of information processing, memory, eye-hand coordination, and concentration. This finding might be particularly troubling for children and teens who may be struggling with academics.

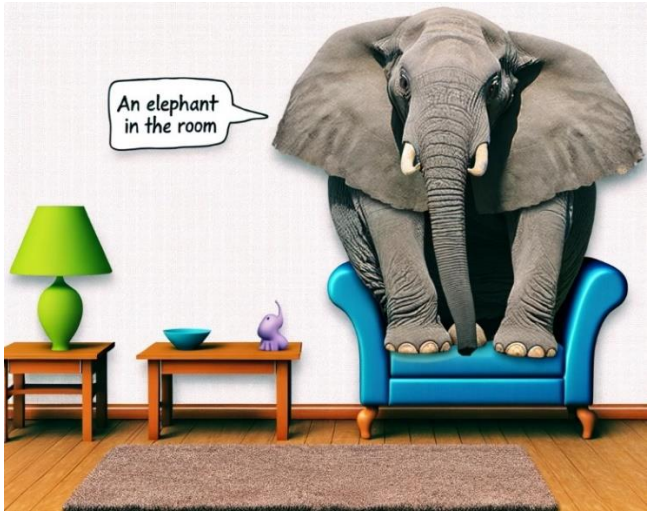
Potential Increase in Dementia:

Horowitz and Taylor (2024) report that the research suggests that there is a dose-dependent relationship between total exposure to antidepressants and risk for eventual diagnosis of dementia. Quite alarmingly, patients with the highest exposure to more antidepressants – more than three years of daily use of standard antidepressants – had a 34% chance of dementia than patients who had no exposure to antidepressants at all.

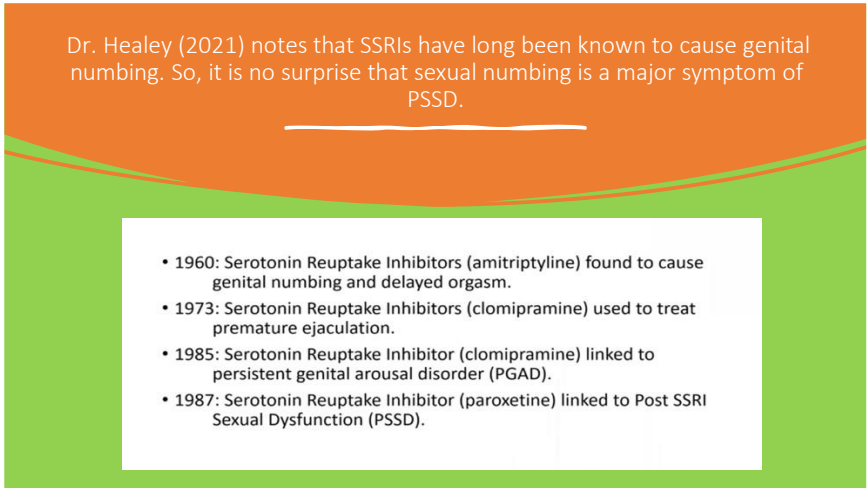
Bleeding:

Horowitz and Taylor (2024) note that SSRIs and SNRIs inhibit the uptake of serotonin into platelets. Depletion of platelet serotonin reduces the body's ability to form clots and hence increases the risk of bleeding. This can, of course, have very serious consequences. For example, in coronary bypass procedures, they note research, which indicates a 50% increased risk of mortality in serotonergic antidepressants than non-users.

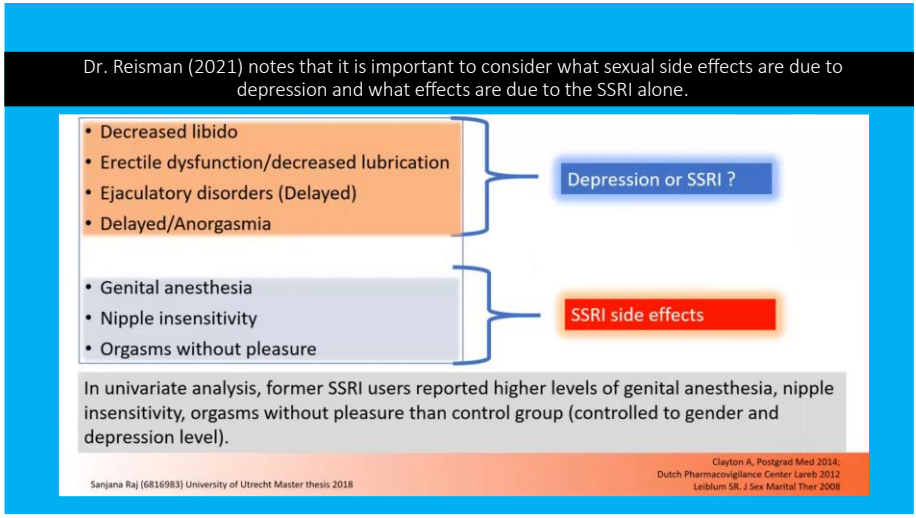
Sexual Effects:



And the elephant in the room that far too many do not want to talk about. Horowitz and Taylor report that sexual adverse effects include a lack of desire, as well as reduced sexual sensation, and failure to reach orgasm in both sexes and, very concerning, this occurs in 25% to 80% of patients, depending on the study. Moreover, and even more alarming, is that these sexual effects can persist even after cessation of antidepressants in a minority of patients. This condition is now called Post-SSRI Sexual Dysfunction (PSSD) and has been formally recognized by the European Medicines Agency. This is a devastating condition, and patients deserve to be warned about it, especially adolescents who are just beginning to explore their sexuality.



Healey (2021)
https://www.youtube.com/watch?v=yFxMeoaIc3c&ab_channel=ISSMInternationalSocietyforSexualMedicine



Reisman (2021)
https://www.youtube.com/watch?v=yFxMeoaIc3c&ab_channel=ISSMInternationalSocietyforSexualMedicine

Black Box Warning – Increased Suicide Risk:

Surprisingly not summarized by Horowitz and Taylor (2024), suicide risk needs to be mentioned. Black Box Warnings are the most stringent labeling requirements that the U.S. Food and Drug Administration (FDA) can mandate for prescription drugs. They signify that medical studies have shown that the drug carries a significant risk of serious or even life-threatening adverse effects.

The warning about Selective Serotonin Reuptake Inhibitors (SSRIs), a class of drugs commonly prescribed for depression and anxiety disorders, is a notable example. In 2004, the FDA issued a Black Box Warning for all antidepressants, including SSRIs, highlighting the increased risk of suicidal thinking and behavior in children, adolescents, and young adults up to the age of 24, especially during the initial treatment phases (FDA, 2004). This decision was based on a comprehensive review of clinical trials that showed a higher rate of suicidal ideation and behavior in individuals within these age groups when taking antidepressants than those receiving a placebo. It is crucial for healthcare providers to closely monitor patients for worsening depression or emergent suicidality, especially during the first few months of treatment or when changing doses. The FDA's action underscores the importance of cautious use and vigilant monitoring of these medications in vulnerable populations (U.S. Food and Drug Administration, 2004).

Listed below are several of my distinguished and favorite medication critics who offer brilliant and well-researched perspectives on the topic of psychotropic mismanagement. Some have taken a radical approach that no psychotropics are warranted, and others argue that

there are times when psychotropics makes sense, but only in more severe cases, when alternatives have been exhausted and when side effects are fully and completely disclosed. Personally, I subscribe to the latter camp. Judicious and well-thought-out medication can indeed save lives, but outcomes can be disastrous when incompetently administered.

To be clear, we are not saying that antidepressants have no place. It is clear that in cases of severe depression, antidepressants can save lives. On the other hand, there is consensus amongst many professionals that there is little convincing evidence in cases of mild to moderate depression. Additionally, the potential side effects should make us cautious about starting these medications too quickly, especially given their significant side effects. We encourage you to talk with your prescriber about your concerns, and if that prescriber is indifferent to them or is not on top of the literature, consider moving on.

Criticism for the DSM:

This chapter would not be complete without a few comments on the DSM-5-TR, as it is the basis on which diagnoses are made that pave the path to medication and/or psychotherapy. Additionally, it allows providers to bill insurances for reimbursement. The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, Text Revision (DSM-5-TR), despite being a crucial tool in psychiatry and clinical psychology, has faced several criticisms since its publication. Key concerns include its categorization of mental disorders, the validity and reliability of some diagnostic criteria, and its influence on clinical practice and insurance reimbursement.

Below are some of the more significant criticisms highlighted in the literature:

Before we address the DSM-5-TR, we will need to take a look at the DSM III, as it is this revision that the DSM took a wrong turn. The time was 1980 when psychiatry was struggling to maintain its legitimacy and joined forces with the pharmaceutical industry. The decision was made to broadly expand pretty much everything to be a **"disorder"** because, in doing so, the disorders could be considered a **"medical problem"** that requires medication and, therefore, a billable event (Davies, 2013).

Dr. James Davies, a medical anthropologist, psychotherapist, and one of my favorite critics, questioned the utility of the Diagnostic and Statistical Manual of Mental Disorders, Third Edition (DSM-III) and its subsequent editions for several key reasons. His criticisms focused on the DSM's conceptualization, development, and impact on mental health practice. Here is a brief summary of his main points:

1. **Pathologization of Normal Behavior**: Davies argues that the DSM-III and its successors have increasingly pathologized normal variations in human behavior, leading to a massive inflation of mental disorder diagnoses. This expansion of diagnostic categories can turn what is really everyday challenges and emotions into unwarranted medical conditions, potentially leading to unnecessary medicalization and treatment (Davies, 2016).

2. **Lack of Empirical Basis**: Davies critiques the DSM-III for its lack of solid empirical foundations for many of its diagnostic categories. According to Davies, the criteria for numerous disorders are not based on rigorous scientific research but on committee consensus, which can be influenced by various non-scientific factors, including industry interests.

3. **Pharmaceutical Industry Influence**: Davies has raised concerns about the potential influence of the pharmaceutical industry on the development of the DSM. He argues that the expansion of diagnostic categories can serve the interests of pharmaceutical companies by enlarging the market for psychiatric medications. This relationship between the DSM committees and the industry may bias the manual toward pharmacological treatments.

4. **Reductionist Approach**: He criticizes the DSM's reductionist approach to mental illness, which focuses on symptoms rather than the underlying causes of distress. This approach, according to Davies, overlooks the complexity of mental

health issues, including the socio-cultural and psychological factors that contribute to mental illness.

5. **Impact on Clinical Practice**: Davies is concerned about the impact of the DSM on clinical practice, suggesting that it encourages a checklist approach to diagnosis. This can lead to oversimplification of complex human experiences and may neglect the individual's unique context and story.

6. **Global Influence**: Finally, Davies critiques the global influence of the DSM, arguing that it exports a Western model of mental illness to non-Western cultures. This can lead to cultural insensitivity and the inappropriate application of Western diagnostic categories in diverse cultural contexts.

Current concerns about the DSM-5-TR, which is the version now in use, repeats and expands on Davies (2013) points and include:

1. **Overpathologization and Expansion of Diagnostic Criteria**: Critics argue that the DSM-5-TR has expanded diagnostic criteria for many disorders, potentially leading to the overdiagnosis of normal behavior as pathological. This expansion no doubt increases the prevalence rates of certain disorders without sufficient empirical evidence (Frances, A., 2013). For example, the broadening of criteria for disorders like Attention Deficit Hyperactivity Disorder (ADHD) and Generalized Anxiety Disorder (GAD) raises significant concerns about overpathologizing normal variations in behavior and mood.

2. **Lack of Empirical Support**: Previous revisions and new additions in the DSM-5-TR lack robust empirical support. Certain diagnostic categories were included based on limited research, potentially leading to misdiagnosis and inappropriate treatment (Paris, J., & Phillips, J., 2013).

3. **Reliance on a Categorical Model**: The DSM-5-TR continues to use a categorical approach to diagnose mental disorders, which fails to capture the complexity and full spectrum of mental health issues (Kendell, R., & Jablensky, A., 2003). I would argue that a dimensional or spectrum-based approach could more accurately reflect the nuances of mental health conditions.

4. **Financial Conflicts of Interest**: Concerning questions have been raised about the potential conflicts of interest among the DSM-5-TR's authors and the insidious influence of the pharmaceutical industry. It is probable that decisions may have been driven by interests that could benefit from expanded diagnostic criteria and increased medication prescriptions (Cosgrove, L., & Krimsky, S., 2012).

Summary: While we are not against the use of medication, we believe that it should be approached with more thoughtfulness and caution. Psychotropic medications, including antidepressants, certainly have their place, especially in severe cases where other interventions may fall short. However, there is a growing body of research indicating that their efficacy in mild to moderate cases may not be as robust as once thought, and the potential side effects—both immediate and

long-term—must be carefully weighed. As the Bible reminds us, *"The prudent see danger and take refuge, but the simple keep going and pay the penalty"* (Proverbs 27:12, NIV). In the same way, it is prudent to fully understand both the benefits and pitfalls of these medications before deciding to use them.

The DSM-5-TR, which guides diagnoses and treatment plans, also has significant limitations. It has been criticized for overpathologizing normal human behaviors, possibly driven by financial incentives rather than a holistic understanding of mental health. In our practice, we aim to look beyond this medicalized framework to see the person as a whole, considering their unique experiences and underlying traumas, not just their symptoms. *"For the LORD gives wisdom; from his mouth come knowledge and understanding"* (Proverbs 2:6, NIV). It is through this broader, more thoughtful approach that we can truly promote healing and well-being.

As we move forward, let us seek a balance—using medication judiciously when needed, but always with an eye toward holistic healing that addresses the root causes of emotional pain. Through therapy, community, spiritual practices, and self-awareness, we can work toward true transformation.

Conclusion

A Journey Of Hope And Healing

As we conclude *NeuroFaith: The Intersection of Science and Faith in the Healing of Trauma and Addiction*, we want to leave you with a message of deep encouragement and hope. Healing is not only possible—it is within reach. Whether you or someone you love is facing the challenges of addiction or trauma, know that there is a path forward—a path that heals the mind, restores the body, and renews the soul through the powerful combination of science and faith, particularly Christian faith.

Throughout this book, we have explored the complexities of addiction and trauma, but more importantly, we've highlighted the incredible capacity of the brain to heal and the soul to find peace. Faith provides the strength and resilience needed when life feels overwhelming, and together with science, it offers a foundation for recovery, showing us that no one has to face this journey alone.

The Bible reminds us of this truth: "I can do all things through Christ who strengthens me" (Philippians 4:13, NKJV). These words underscore the heart of our message—healing is possible, but it requires faith and the strength that comes from Christ. We believe deeply in the brain's ability to change and heal through the science of

neuroplasticity, and even more so in the spiritual renewal that comes from trusting in God's grace and power.

If you ever feel lost, afraid, or uncertain about your ability to overcome addiction or trauma, let us reassure you: healing is not only real but available to you. The brain's power to repair itself, coupled with the healing presence of Christ, offers a hope beyond measure. "For I know the plans I have for you," declares the Lord, "plans to prosper you and not to harm you, plans to give you hope and a future" (Jeremiah 29:11, NIV). These promises remind us that no matter how difficult the road may seem, God's plans for us are for healing and restoration.

We wrote this book not only to inform but to invite you to believe in the possibility of transformation—through both the science of the brain and the faith that renews the heart. *"Do not be anxious about anything, but in every situation, by prayer and petition, with thanksgiving, present your requests to God. And the peace of God, which transcends all understanding, will guard your hearts and your minds in Christ Jesus"* (Philippians 4:6-7, NIV). Whether you're on this journey yourself, supporting a loved one, or guiding others professionally, know that every step forward, no matter how small, is a step toward renewal, hope, and restoration.

For those of you who feel overwhelmed by your addiction and trauma we encourage you to seek help from faith-based, neuroscience-informed professional treatment. To that end, we are available to

support you in finding resources and guiding you toward healing, with God's love and scientific understanding at the core of every step.

Remember, you are more than your addiction or trauma. You are a child of God, fearfully and wonderfully made, capable of healing and worthy of a life filled with peace, purpose, and connection. Through the power of Christ and the insights of neuroscience, healing is not just possible—it's promised. With faith and science, there is hope. There is healing. And we walk this path alongside you, together, every step of the way.

Blessings, Jeff, Tim, and Earl

For guidance. assistance, or feedback, you may reach us at:
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Addendum

The Heart of Holdfast:

Our Mission & Team

Holdfast Recovery's mission is to save lives. We do this by restoring individuals physically, mentally, and spiritually. We fulfill this mission by loving God and serving people with compassion. Holdfast takes a unique approach by offering truly

transformational therapy, integrating evidence-based, neuroscience-backed approaches with the profound, healing power of God's love.

This integrated approach fosters a nurturing and faith-driven environment, empowering individuals to break free from struggles with mental health and addiction, reconnect with their faith, and build a foundation for a healthy, purpose-driven life. Through compassion, guidance, and a commitment to holistic healing, Holdfast Recovery offers clients the tools to embrace lasting recovery, resilience, and spiritual renewal.

Brendan McDonough

Co-Founder

Brendan McDonough's journey has been marked by profound trials, both before and after the tragic loss of his 19 fellow Granite Mountain Hotshots. The devastating incident left him grappling with survivor's guilt, PTSD, and bouts of depression, intensifying his struggles with substance abuse. Yet, through resilience and determination, McDonough found a path to healing. He transformed his pain into purpose, becoming a motivational speaker and a vocal advocate for mental health. Co-founding an addiction recovery center, he now dedicates himself to helping others navigate trauma, sharing his story as a beacon of hope and a testament to the power of recovery. He currently leads groups at Holdfast Recovery pouring his heart and soul into others to help them in their personal journey.

Tim Hayden

Co-Founder

Tim is passionate about serving others, leading people to Christ, and more specifically breaking the stigma of addiction and mental health in the Church and across the world. Tim merges his desire to further the Kingdom with 18 years of experience in the Corporate IT world where his background has ranged from working for small startups to leading national teams at global software companies. Tim graduated from Mount Vernon Nazarene University with a bachelor's degree in Business Administration, Marketing, and Communications. Tim and his wife are active in their church community serving in the youth department, marriage mentoring, and life group mentoring. In his spare time, Tim enjoys spending time with his family in the great outdoors camping, mountain biking, and snowboarding.

"Do all the good you can, by all the means you can, in all the ways you can, in all the places you can, at all the times you can, to all the people you can, as long as ever you can." – John Wesley

Dr. Jeffrey E. Hansen

Clinical Director

Dr. Jeffrey Hansen is a clinical psychologist with over 40 years of expertise in trauma, addiction, and pediatric mental health. His career spans a decade as an Army Major and pediatric psychologist, including work at Madigan Army Medical Center, where he supported trauma recovery for military families and children. Dr. Hansen also founded Pediatric Psychology Associates in Olympia, WA, and The Center for Connecting Living, providing care across Washington.

Dr. Hansen's work is deeply informed by personal experiences, including childhood trauma and the loss of his twin brother, Gregg, which strengthened his resolve to support others in healing. Guided by Christian faith, he advocates for protective, thoughtful approaches in youth mental health, addressing critical issues like early gender affirmation and the impact of pornography on young people. Through his writing, speaking, and clinical practice, Dr. Hansen's work reflects resilience, compassion, and faith-centered care.

Jason White

Board of Directors

Jason has 10 years of sobriety and gives all the glory to God. He is actively involved in a 12-step program in his community. Jason was in and out of institutions/jails the majority of his youth and adulthood until getting clean in 2010. Jason found Christ when he was locked up in a maximum-security prison. Through the grace of God, he never returned to that lifestyle. Today Jason is dedicated to carrying the message of hope and faith that God changes lives and is willing to help anyone because he believes everybody deserves a chance like he had. Today Jason is a successful businessman who specializes in business development. Jason has a deep dedication to serving others who are still struggling with addiction and his continued involvement in the client's lives is driven by his love of God and his belief in the Holdfast program.

Mallory Mikel, M.S.

Lead Therapist

Born and raised in Fort Wayne, Indiana, Mallory began abusing substances as an adolescent. In her early twenties, Mallory faced significant obstacles, including an overdose and multiple arrests. Her last arrest was a pivotal moment, leading her to confront the consequences of her actions and reflect on the path she was taking. During her time in custody, Mallory developed a relationship with God enabling her, by His grace, to focus on self-improvement. Eventually, Mallory pursued her education in an effort to help others who have endured similar struggles. She earned a master's degree in addiction counseling from Grand Canyon University. In addition to her personal experience, this academic foundation equipped her with the knowledge and skills to make a meaningful impact in the lives of those struggling with addiction.

Her career in addiction recovery began as an Intervention Specialist, where she gained firsthand experience in supporting clients through their recovery journeys. She advanced to roles such as Group Facilitator and Program Supervisor, where she honed her leadership and therapeutic skills.

In 2024, at God's request, Mallory uprooted her life from Fort Wayne, Indiana, to Prescott, Arizona, where she now serves as a therapist at Holdfast Recovery, providing compassionate care and guidance to individuals seeking a new path.

Libby Smith, Ed.D., Ph.D.

Therapist Emeritus

Libby Smith or "Dr. Libby" as many of her friends, students, and clients affectionately call her is a Christian, educator, counselor,

business owner, and Equine-Assisted Therapeutic Practitioner. She holds several master's degrees; one in "Addictions Counseling" from Grand Canyon University. In addition, she has earned an Ed.D and a Ph.D. She has been teaching at colleges and universities for over twenty-five years and has over twelve years of experience in the Behavioral Health and Substance Use Recovery arenas. She homes 18 rescue animals and has a heart for service for both humans and animals. Guided by her faith and passion Dr. Libby pursue mental and addiction to its core to help those suffering overcome their struggles in life.

Lance Haney

Director of Clinical Outreach

Lance Haney began using heroin at the age of 12, which led him into a life marked by addiction, trauma, and gang affiliation. This lifestyle resulted in him cycling through nine different treatment centers, only to find himself back on the streets. When he reached another point of desperation and sought help again, every treatment center turned him away—except Holdfast Recovery. Entering Holdfast, Lance was initially determined to disprove the faith-based aspect of the program, but this journey ultimately led him to accept Christ as his Savior. Since then, he has devoted his life to helping others who face similar struggles with addiction. After completing the program, Lance advanced through various roles at Holdfast Recovery and now serves as the Director of Community Outreach, where he is dedicated to saving lives and serving those who walk the path he once did.

Kevin Padden

Nurse & Medical Services Manager

Kevin Padden, our dedicated staff nurse at Holdfast, joined our team in August 2023. Kevin's journey in nursing began in 1973 when he enlisted in the U.S. Army at the close of the Vietnam War. He enrolled in the Army's clinical specialist course, launching his career in emergency room and trauma nursing. After three years of active service, Kevin received an honorable discharge and transitioned to work as a scrub nurse in the operating room at the Milwaukee VA Medical Center. During this time, he also pursued pre-med studies at the University of Wisconsin but decided to change paths after two years.

Kevin then spent the next 31 years in the tile and natural stone industry, while staying engaged in medicine by enlisting in the 84th Division of the U.S. Army Reserve. Over 12 years, he rose to the rank of First Sergeant. He also served for a decade as an Alpine ski patroller with the National Ski Patrol. In 2012, Kevin returned to nursing, focusing again on emergency and trauma care at the Phoenix VA Medical Center. After retiring from the VA in 2021, Kevin felt a renewed calling to serve those in need, bringing his wealth of experience to Hold Fast Recovery in 2023.

Drew Steele

Director of Client Services

Drew Steele is a recovering alcoholic who has dedicated his life to helping others find freedom from addiction. Growing up in a family affected by alcoholism, with both his father and brother struggling, Drew faced the realities of addiction from an early age. Traumatic events throughout his life propelled him into alcoholism, beginning in

his youth. He wrestled with recovery through his teenage years and early twenties before achieving long-term sobriety. It was only after confronting his trauma and finding healing through therapy, the 12 steps, and his faith in God that Drew experienced the profound relief that sobriety can offer.

Since then, he believes that God has placed him in a position at Holdfast Recovery to support others, particularly men, in their spiritual growth. For Drew, few things are more rewarding than watching people transition from fear to faith and build a life grounded in purpose. He knows that healing is neither linear nor easy, but he believes that with the willingness to endure short-term pain, long-term recovery is possible for everyone.

Dawson Ingerto

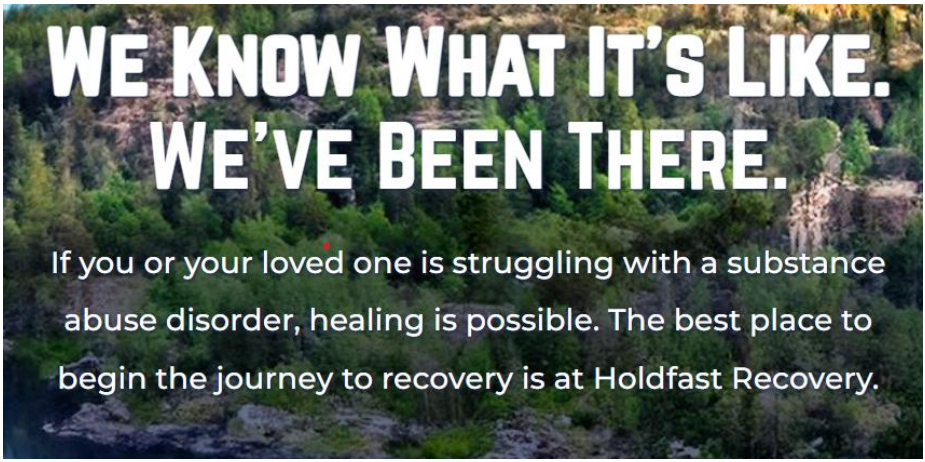
Case Manager

At just fourteen, Dawson Ingerto turned to opiates, seeking an escape from a world that offered him little self-worth and no vision of a brighter future. By sixteen, Dawson was trapped in a cycle of psychiatric hospitals and juvenile institutions, locked in a downward spiral with no hope for a better life.

Homeless and panhandling on the streets, Dawson's life was a series of broken moments. After multiple arrests, he finally surrendered and admitted himself to Holdfast Recovery, albeit with little faith that any program could turn his life around. Initially, he went through the motions, doubtful of lasting change. But along the way, something transformative happened. Dawson was baptized in the name of Jesus

and found rebirth through Christianity, an awakening that would mark the beginning of a profound transformation.

After completing the Holdfast program, Dawson accepted an opportunity to work at Holdfast, determined to save lives just as Holdfast had saved his. Today, Dawson lives a life he once believed was beyond his reach—a life made possible through Holdfast Recovery and his faith in Jesus Christ.



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