



The Antifragile Academy

The Antifragility Almanac

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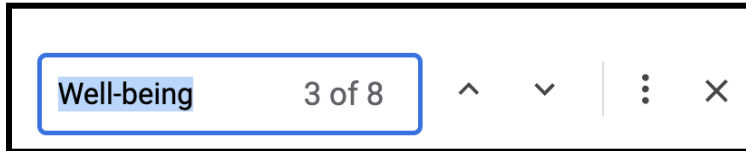
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Instructions for this document

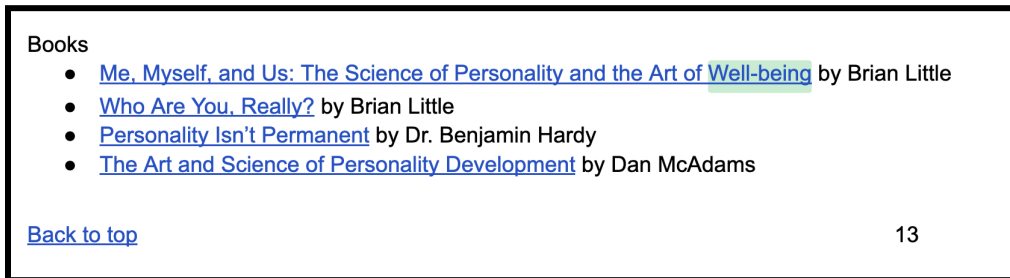
The Antifragility Almanac can serve as one-stop shopping for any concepts, resources or references you need as you work through your antifragility training. To best leverage this almanac, consider navigating it by using the following methods.

(1) Command F

The “command F” function will open up a search bar for this document.

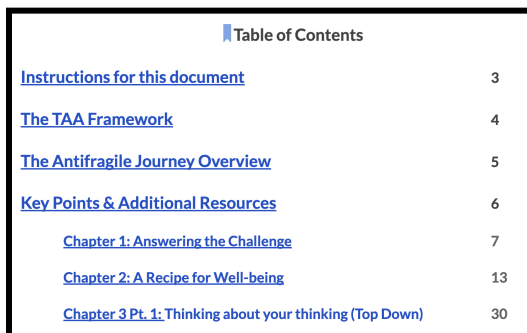


Enter the concept or lesson of interest to highlight every instance of it in the almanac.



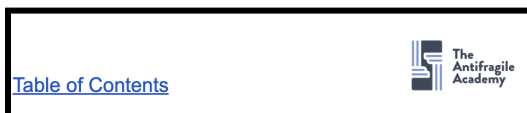
(2) Bookmarks and Links

Make use of the navigation links provided in the table of contents.

A screenshot of a "Table of Contents" page. At the top center is the heading "Table of Contents" with a small icon to its left. Below the heading is a list of links and their corresponding page numbers:

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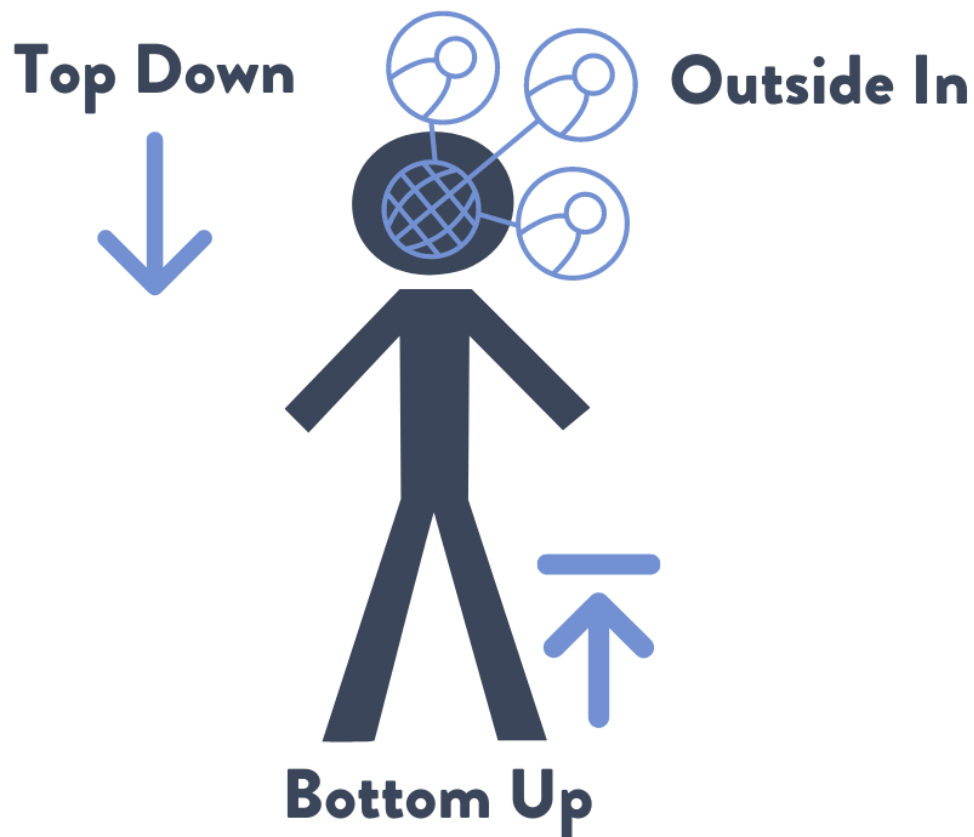


The TAA Framework

Top Down = Thinking about your thinking. Metacognition.

Bottom Up = Leveraging bodily awareness and emotional intelligence.

Outside In = Building an environment for antifragility.



The Antifragile Journey Overview

A Recipe for Antifragility

What's your path to well-being and performance?

Top-Down

Think about your thinking

Bottom-Up

Leveraging bodily awareness

Outside-In

Building an antifragile environment

Easing Your Path to Antifragility

Time, resistance, and distraction

Consistent Optimal Performance

Focus and the flow state

100% Nervous System

Body and mind connection

The Journey AND the Destination?

Motivation, goals, and the antifragile trajectory

Life Editing

Living with intentionality

Key Points & Additional Resources

Chapter 1: Answering the Challenge

Lesson #1: This is Not Therapy (Coaching vs. Counseling)

Key Content Points:

1. Therapy is a form of mental health treatment that aims to help individuals address and manage mental health concerns. It can involve various forms of treatment, such as talk therapy, medication, and lifestyle changes. However, certain activities, such as coaching or training, are not considered therapy.
2. While coaching or training is not a replacement for therapy, it can be a helpful complement to therapy. It can provide individuals with additional skills and tools to manage mental health concerns and improve their overall well-being.
3. It's important to seek professional help when dealing with severe cases of depression or mental illness. If you are experiencing suicidal thoughts or severe depression, please seek immediate professional help. There are many resources available, including therapy and crisis hotlines, that can provide the support and care you need

Additional Resources

Links

- [National Suicide Hotline](#)
- Find a therapist ([Mental Health America](#))
- [Do you need a coach or a therapist?](#)

Lesson #2: The TAA Framework?

See [page 4](#)

Lesson #3: What is Antifragility?

Key Content Points

1. Antifragility refers to the property of systems that allow one to thrive in the face of volatile and uncertain conditions by embracing discomfort, and seeing stress and adversity as opportunities for growth and learning
2. While both resilience and antifragility involve shocks, setbacks and disorder, resilience is concerned with *sustaining* performance by managing obstacles, whereas antifragility views stress as a means for *transformation*
3. One can develop antifragility by reframing mistakes and obstacles as opportunities for learning and development, actively seeking out novelty and embracing experimentation, and challenging oneself to try new things outside their comfort zone

Additional Resources

Podcast

- [Huberman Lab – Dr. Alia Crum: Science of Mindsets for Health & Performance](#)
- [Moonshots Podcast – Nassim Nicholas Taleb: Antifragile](#)
- [The Psychology Podcast – The Latest Science of Growth Mindset with Carol Dweck, Ph.D.](#)

Talks

- [Talks at Google – Antifragile: Things That Gain from Disorder](#)
- [Don't Chase Happiness | Become Antifragile – Dr. Tal Ben-Shahar](#)
- [Antifragility: How to Use Suffering to Get Stronger](#)
- [How to Make Stress Your Friend | Kelly McGonigal, Ph.D.](#)

Books

- [Antifragile: Things That Gain From Disorder](#) by Nassim Nicholas Taleb
- [Mindset](#) by Carol S. Dweck, Ph.D.
- [The Upside of Stress](#) by Kelly McGonigal, Ph.D.

Lesson #4: Some of its under your control

Key Content Points

1. Over the past few decades, there has been a wealth of research on the science of well-being and resilience. Studies have shown that our happiness, success, and overall well-being are not solely determined by genetics or external circumstances, but can be actively cultivated through intentional practices.
2. There are many strategies for cultivating well-being and resilience that have been scientifically proven to be effective.
3. This journey will teach you about those scientifically backed strategies and give you opportunities to practice them.

Additional Resources

Books

- [*The How of Happiness*](#) by Sonja Lyubomirsky

Lesson #5: Personality and disposition

Key Content Points

- Personality refers to the unique set of traits, behaviors, and thought patterns that distinguish individuals from one another, and shape their perceptions of the world around them and interactions with others
- Personality is a dynamic construct and may change throughout one's lifespan (particularly during adolescence and early adulthood), influenced by a variety of factors including genetics, the environment, individual experiences and life events
- The Big Five Inventory, an enhanced version of the Big 5 Personality Traits Model (openness, conscientiousness, extraversion, agreeableness, and neuroticism) is a reliable and valid measure of personality used across multiple cultures to predict various outcomes
- Personality traits, particularly those within the Big 5 Framework, are important predictors in the context of athletic performance and wellbeing; successful athletes often displaying higher levels of conscientiousness, openness, extraversion, grit and self-esteem, and lower levels of neuroticism and low agreeableness – commonly linked with burnout, competitive anxiety, and fear of being judged by others

Additional Resources

Podcasts

- [The Psychology Podcast – The Science of Personality Change | Christian Jarrett](#)
- [Here We Are Podcast – Wellbeing & Personality | Colin DeYoung](#)
- [Hal Elrod Podcast – Why Your Personality Isn't Permanent with Dr. Benjamin Hardy](#)
- [Modern Wisdom Podcast – The Truth About Your Personality | Dr. Benjamin Hardy](#)
- [The Psychology Podcast – Grit: The Power of Passion and Perseverance | Dr. Angela Duckworth](#)

Talks

- [The Psychology of Your Future Self | Dan Gilbert](#)
- [Who are you, really? The puzzle of personality | Brian Little](#)
- [You Can Change Your Personality | Nathan Hudson](#)
- [You Don't Actually Know What Your Future Self Wants | Shankar Vedantam](#)
- [Grit: The Power of Passion and Perseverance | Angela Duckworth](#)

Books

- [Me, Myself, and Us: The Science of Personality and the Art of Well-being](#) by Brian Little
- [Who Are You, Really?](#) by Brian Little
- [Personality Isn't Permanent](#) by Dr. Benjamin Hardy

- [The Art and Science of Personality Development](#) by Dan McAdams

Lesson #6: Learning strengths

Key Content Points

1. Every student athlete or anyone looking to grow has unique learning strengths that can help them develop more efficiently and effectively.
2. Leveraging your unique strengths can help you achieve success both on and off the field. For example, student athletes who excel at problem-solving may be able to think critically and make quick decisions during games, while those with strong visual-spatial skills may excel in sports that require spatial awareness and coordination.
3. It's important for student athletes to access additional support and resources that can help them leverage their unique learning strengths. The Antifragile Academy offers a variety of resources, including materials in different formats and personalized support, to help student athletes with unique learning strengths succeed in their athletic and academic pursuits

Chapter 2: A Recipe for Well-being

Lesson #1: Performance and Well-being Cycles

Key Content Points

- A constant peak performance approach focuses on maximizing performance at all times through specific interventions targeting physical, technical, and tactical factors, while an optimal performance approach aims to achieve a state of flow, focus and motivation by enhancing performance through individualized interventions targeting cognitive, behavioral, and affective factors
- Research shows that constantly striving for peak performance can lead to negative consequences, including burnout, anxiety and decreased motivation, while a focus on optimal performance – characterized by growth, learning, and balance through individualized interventions – can lead to better and more sustainable performance and wellbeing outcomes
- Adopting a balanced and accepting approach to both pleasant and unpleasant experiences through acceptance and commitment therapy (ACT) can lead to greater psychological flexibility and resilience and overall well-being by allowing one to learn to accept unpleasant thoughts, feelings and sensations while still pursuing valued goals
- The "stress + rest = growth" formula emphasizes the importance of balancing periods of stress or challenge with intentional periods of rest and recovery to avoid burnout, support physical and mental recovery, and achieve growth, resilience and peak performance over the long-term

Additional Resources

Podcasts

- [The Psychology Podcast – High Performance Habits with Brendon Burchard](#)
- [The Mark Divine Show – Michael Gervais: Mindfulness & High Performance](#)
- [Real Pod – Michael Gervais: Understanding Our Minds to Unlock Your Full Potential](#)
- [Huberman Lab – Dr. Anna Lembke: Understanding and Treating Addiction](#)

Talks

- [Michael Gervais | How this Sports Psychologist Trains NFL Players' Brains](#)
- [How to Make Stress Your Friend | Kelly McGonigal](#)
- [Living in a Dopamine Nation | Anna Lembke](#)
- [You aren't at the mercy of your emotions – your brain creates them | Lisa Feldman Barrett](#)

Books

- [Peak Performance: Elevate your game, avoid burnout, and thrive with the new science of success](#) by Brad Stulberg and Steve Magness
- [The Mind Gym: An Athlete's Guide to Inner Excellence](#) by Gary Mack & David Casstevens
- [The Mindful Athlete: Secrets to Peak Performance](#) by George Mumford
- [The Brave Athlete](#) by Simon Marshall, Ph.D., and Lesley Paterson
- [The Upside of Your Dark Side: Why Being Your Whole Self - Not Just Your "Good" Self - Drives Success and Fulfillment](#) by Todd Kashdan, Ph.D., and Robert Biswas-Diener
- [Dopamine Nation](#) by Anna Lembke, Ph.D.
- [Master Your Emotions: A Practical Guide to Overcome Negativity and Better Manage Your Feelings](#) by Thibaut Meurisse
- [How Emotions are Made](#) by Lisa Feldman Barrett

Lesson #2: The power of pleasantness

Key Content Points

- The Broaden and Build Theory suggests that positive emotions broaden one's thinking and cognitive flexibility by promoting exploration, creativity and adaptation; as a result building one's physical, social and cognitive resources, and contributing to increased resilience and psychological wellbeing
- "The Happiness Advantage" describes the benefits that come from cultivating a positive outlook on life, including improved health, stronger relationships, increased resilience, and greater ability to cope with challenge; thus, highlighting the importance of intentionally focusing on positive emotions to improve wellbeing
- The three types of passion that an individual can experience, influenced by a range of factors such as personality traits, social context and environment, include:
 1. Harmonious passion which refers to the desire to engage in a freely-chosen activity in alignment with one's *values*;
 2. Role-based passion which refers to the desire to engage in an activity in alignment with one's *social role or identity*; and
 3. Obsessive passion which refers to the desire to engage in an activity driven by an *uncontrollable urge*, rather than by personal choice or values.
- The six happy neurochemicals which contribute to improved mood and wellbeing when balanced in the body, include:
 1. Dopamine, or the "reward chemical," which is involved in the anticipation and experience of pleasure and rewards, plays a key role in motivation and goal-directed behavior, and has been shown to improve performance on cognitive tasks
 2. Serotonin, or the "feel-good chemical," which is involved in the regulation of physiological processes, plays a role in social behaviour, and has been associated with positive emotions and wellbeing when existing in high levels
 3. Anandamide, or the "bliss molecule," which is involved in a variety of physiological processes, such as pain regulation, appetite and mood, and has been shown to produce feelings of happiness, joy and euphoria
 4. Oxytocin, or the "love hormone," which is released during physical touch, is involved in social bonding, trust and empathy, and is associated with improved social interactions and positive emotions
 5. Endorphins, or the "runner's high" group of neurochemicals, that are produced in response to physical exercise, excitement and other stimuli, and can produce feelings of euphoria, pleasure and pain relief
 6. Norepinephrine, a neurotransmitter involved in the body's "fight or flight" response, which is released in response to perceived danger, and thus produces feelings of alertness, arousal and excitement

Additional Resources

Podcasts

- [Making Positive Psychology Work Podcast – Can You Turn On Your Happy Chemicals? With Loretta Breuning](#)
- [Making Positive Psychology Work – What Good are Positive Emotions? With Barbara Fredrickson](#)
- [The Psychology Podcast – The How of Happiness | Sonya Lyubormirsky](#)
- [Inspirational Leadership Podcast – Psychology of Passion with Professor Bob Vallerand](#)
- [The Wellbeing Lab – Bob Vallerand on the Psychology of Passion](#)
- [The Science of Psychotherapy – Loretta Breuning talks about habits of a happy brain](#)

Talks

- [Shawn Achor | "The Happiness Advantage: Linking Positive Brains to Performance"](#)
- [Barbara Fredrickson: Positive Emotions Open Our Mind](#)
- [The How of Happiness | Sonja Lyubomirsky | Talks at Google](#)
- [Harmonious Passion: The Practice That Grows With You | Daniel Lerner](#)
- [Carol Ryff: What is happiness and what does the latest research show about it?](#)

Books

- [The Happiness Advantage](#) by Shawn Achor
- [Positivity](#) by Barbara Fredrickson, PhD
- [The How of Happiness](#) by Sonya Lyubormirsky
- [The Happiness of Pursuit](#) by Chris Guillebeau
- [Habits of a Happy Brain](#) by Loretta Breuning, PhD
- [The Science of Positivity](#) by Loretta Breuning, PhD

Lesson #3: The utility of the unpleasant

Key Content Points

- Positive and negative emotions are more distinct from one another than previously thought, in which unpleasant emotions may actually improve social functioning and pleasant emotions may not always contribute to positive outcomes; thus, taking a balanced approach to emotions may be more optimal for wellbeing
- While unpleasant emotions play a necessary role in survival by allowing one to adapt to their environment and respond to challenges, their chronic or excessive experience can negatively impact psychological health; as such, it is important to find healthy ways to manage them through approaches such as mindfulness
- Anhedonia, or the constant pursuit of pleasure, may lead to negative consequences such as addiction and a sense of emptiness; thus, taking a balanced approach to emotions can help individuals find fulfillment beyond just seeking pleasure
- Emotional agility involves learning to work with emotions in a healthy and productive way rather than suppressing or ignoring them, thus helping one live a more fulfilling and meaningful life by allowing them to align actions to their values and goals, even in the face of difficult emotions or challenging events
- Distress tolerance describes an individual's ability to tolerate emotional distress and discomfort without engaging in harmful or maladaptive behaviors, and can be strengthened through mindfulness-based practices, cognitive restructuring, social support networks, self-care activities, and dialectical behavior therapy (DBT)
- Experiential avoidance describes the tendency to avoid or escape from unpleasant thoughts, feelings and experiences, and is commonly addressed through Acceptance and Commitment Therapy (ACT), which emphasizes acceptance skills and values-based action to increase psychological flexibility to help one improve mental health outcomes

Additional Resources

Podcasts

- [FlourishFM – Todd Kashdan on Navigating Unpleasantness and Creating Change](#)
- [FlourishFM – Addiction and flourishing: why our addiction to pleasure is making us unhappy](#)
- [Addiction & Flourishing: Why Our Addiction to Pleasure is Making Us Unhappy with Anna Lembke](#)
- [Dr. Caroline Leaf – Going from Emotional Fragility to Emotional Agility with Psychologist Dr. Susan David](#)

- [The Psychology Podcast – Paul Bloom | The Pleasures of Suffering](#)

Talks

- [The Dark Side of Happiness: June Gruber at TEDxCambridge 2011](#)
- [Redefine Happiness: The Brain Bases of Eudaimonia | Robert Bilder](#)
- [The gift and power of emotional courage | Susan David](#)
- [Susan David on Emotional Agility](#)
- [Paul Bloom: The origins of pleasure](#)
- [Todd Kashdan: The Upside of Your Dark Side](#)
- [How to make stress your friend | Kelly McGonigal](#)

Books

- [Dopamine Nation](#) by Anna Lembke, MD
- [Emotional Agility](#) by Susan David, PhD
- [The Upside of Your Dark Side](#) by Todd Kashdan and Robert Biswas-Diener
- [The Sweet Spot](#) by Paul Bloom
- [Grit](#) by Angela Duckworth

Lesson #4: Myths about happiness

Key Content Points

- Three key myths of happiness include the following:
 1. Money can be a pathway to security, but it does not itself lead to happiness
 2. Goal achievement does not guarantee happiness; and
 3. Marriage, as a legal status, does not guarantee lasting happiness.
- Other common myths of happiness include ideas that happiness is a permanent state, that it is the absence of negative emotions, that it is the result of external factors, that it should be one's primary goal, and that it looks the same for everyone
- Happiness is a dynamic and complex process influenced by internal and external factors and individual choices and actions, and can be strengthened by practicing mindfulness, expressing gratitude, cultivating social connections, embracing challenges, and investing in ongoing personal growth and development

Additional Resources

Podcasts

- [Optimize – The Scientific Hows and Myths of Happiness with Sonya Lyubormirsky](#)
- [Here We Are Podcast – Myths of Happiness with Sonya Lyubormirsky](#)

Talks

- [Sonja Lyubomirsky on the Myths of Happiness](#)
- [Prof. Dan Gilbert -The Science of Happiness: What Your Mother Didn't Tell You](#)
- [Sonja Lyubomirsky: Happiness for a Lifetime](#)

Books

- [The Myths of Happiness](#) by Sonya Lyubormirsky
- [Happiness](#) by Ed Diener and Robert Biswas-Diener

Lesson #5: Process and the paradox of pursuing happiness

Key Content Points

- While individuals tend to experience greater levels of self-efficacy, autonomy and meaning from the journey (the process of reaching a goal), especially when it involves fulfilling experiences, growth and learning, reaching a destination (achieving the goal) can enhance self-esteem and happiness and contribute to a sense of accomplishment; thus finding a balance between the two poses the key to maximizing overall wellbeing
- Hedonic adaptation refers to the tendency for individuals to return to their baseline level of happiness after experiencing positive or negative events, which may contribute to a phenomenon known as the “hedonic treadmill” or the never-ending pursuit of more; thus, integrating adaptive strategies, such as gratitude, play a key role in maintaining long-term wellbeing
- Focusing on small wins activates the brain’s reward system and increases dopamine levels, creating a positive feedback loop that has been shown to boost motivation, improve team performance, build positive relationships, decrease stress levels, and elevate wellbeing
- Taking the time to appreciate and savor the wins along the journey, through techniques such as the HEAL Method, journaling, and mindfulness-based practices, has been shown to improve mood, increase resilience to stress, and enhance motivation and engagement, thus presenting many benefits for wellbeing

Additional Resources

Podcasts

- [Growth Mindset Podcast – Journey vs. Destination: Optimizing the Right Things](#)
- [Being Well Podcast – Hedonic Adaptation: How To Stay Happy](#)
- [The Greg McKeown Podcast – The Power of Small Wins](#)
- [The Human Upgrade – The Simplicity of Tiny Habits with BJ Fogg, PhD](#)
- [How to Build a Happy Life Podcast – Why Happiness is a Journey, Not the Destination](#)

Talks

- [The surprising science of happiness | Dan Gilbert](#)
- [How Does Hedonic Adaptation Affect the Pursuit of Happiness? | Joe Gladstone](#)
- [Hardwiring happiness: Dr. Rick Hanson at TEDxMarin 2013](#)

Books

- [The ONE Thing](#) by Gary Keller and Jay Papasan
- [The Alchemist](#) by Paulo Coelho

- [Stumbling on Happiness](#) by Daniel Gilbert
- [The Happiness Trap](#) by Russ Harris
- [Atomic Habits](#) by James Clear
- [The Progress Principle](#) by Teresa Amabile and Steven Kramer
- [Hardwiring Happiness](#) by Rick Hanson, PhD

Lesson #6: Values, motivation & goals

Key Content Points

- Values are individual beliefs and principles that guide behavior towards meaningful choices and purposeful action even in the face of difficult emotions and challenges, and are commonly emphasized in Acceptance and Commitment Therapy (ACT) as an important component to promoting psychological wellbeing
- Motivation refers to the driving force that moves individuals towards a particular goal or objective, and can be further broken down into intrinsic motivation (engagement for its own sake) and extrinsic motivation (engagement for external rewards); thus, having an understanding of the two types can inform the strategies used to create more fulfilling and effective environments that support wellbeing
- Closely linked to values and motivation as they serve as a means for expressing one's values and can act as a source of intrinsic motivation, goals refer to one's sought-out desired future outcomes, and can be further broken down into the following:
 1. Mastery goals, focused on skill improvement;
 2. Performance goals, focused on demonstrating competence or outperforming others;
 3. Approach goals, focused on achieving a positive outcome;
 4. Avoidance goals, focused on avoiding a negative outcome; and
 5. Social goals, focused on relationships and social comparison.
- The connection between values, goals and motivation is commonly observed in the context of sports, with athletes who set goals aligned with their values more likely to experience autonomous motivation and achieve positive outcomes, such as greater satisfaction, enjoyment and wellbeing. Furthermore, by identifying and aligning one's goals with one's values, individuals can enhance their sense of self-concordance and cultivate greater psychological wellbeing
- One can identify their values through self-reflection and exploration of personal experiences, or through the use of formal assessments such as the Values in Action Inventory (VIA), which identifies one's signature strengths and corresponding values, or the Valued Living Questionnaire (VLQ), which helps one clarify their values and assess their level of value-consistent behavior

Additional Resources

Podcasts

- [The Psychology Podcast – How to Be an Optimal Human by Kennon Sheldon](#)
- [Why Do We Do That Podcast – Goals, Motivation, and Wellbeing with Dr. Kennon Sheldon](#)
- [The Wellbeing Lab – Are You Setting Effective Goals? With Professor Edwin Locke](#)
- [The Psychology Podcast – Richard Ryan | Self-Determination Theory & Human Motivation](#)

- [Bad At Keeping Secrets – Alfie Kohn on fostering intrinsic motivation](#)
- [Inside Quest with Tom Bilyeau – Generate Intrinsic Motivation with Edward Deci](#)
- [The Art of Charm Podcast – The Art of Defined Values and Happiness | Russ Harris](#)

Talks

- ["The implicit self in SDT" Dr. Kennon Sheldon keynote @ 2019 SDT Conference](#)
- [The puzzle of motivation | Dan Pink](#)
- [Self Concordance: Grit Lab Mini Lecture](#)
- [Promoting Motivation, Health, and Excellence: Ed Deci at TEDxFlourCity](#)

Books

- [Values First](#) by Laura Eigel, PhD
- [Drive](#) by Daniel Pink
- [Punished by Rewards](#) by Alfie Kohn
- [Rewire Your Brain](#) by John Arden, PhD
- [Your Best Year Ever](#) by Michael Hyatt
- [The Happiness Trap](#) by Russ Harris

Lesson #7: Visualization for well-being

Key Content Points

- While mental imagery describes mental representations of sensory experiences, visualization is more focused and goal-oriented, leveraging mental imagery to create a mental scenario in order to achieve a particular goal
- Visualization can be a powerful tool for promoting resilience, coping with adversity and enhancing overall wellbeing, contributing to positive outcomes such as helping to: increase the immune response to stress, improve self-esteem and confidence, enhance motivation and optimism, and cultivate a sense of meaning and purpose
- To improve mental health outcomes, some common visualization best practices include: using it at any time as one finds necessary, focusing on cultivating positive emotions or managing symptoms, and picturing the content of of a visualized scene, such as a happy memory
- Positive affirmations – or the repetition of positive statements about oneself – have been shown to contribute to wellbeing outcomes, including increased self-esteem and positive emotions, improved physical health, and decreased stress levels

Additional Resources

Podcasts

- [The School of Greatness – The Science Behind the Law of Attraction](#)
- [The Mindbodygreen Podcast – How to Change Your Brain to Get What You Want](#)
- [The Coping Toolbox Podcast – Mental Vacation Visualization](#)
- [Optimize Interview – The Science of Making Your Dreams Come True](#)

Talks

- [The Neuroscience of Visualization | Dr. Andrew Huberman](#)
- [Ellen Langer | Mindfulness over Matter](#)
- [Dr. Emily Holmes – Mental Imagery and Emotion](#)
- [Mindfulness and The Psychology of Possibility – Dr. Ellen Langer](#)

Books

- [Visualization Power](#) by Bill Bodri
- [Be Your Future Self Now](#) by Benjamin Hardy, PhD
- [The Source](#) by Tara Swart, PhD

Lesson #8: Visualization for performance

Key Content Points

- Mental imagery has been shown to have a significant positive impact on sport performance in skill execution and physical performance, as well as on psychological outcomes, such as confidence, motivation and anxiety reduction
- Mental imagery activates similar regions in the brain to actual physical performance (including the visual, motor and sensory systems), thus leading to changes in one's affect and behavior
- To improve performance outcomes, some common visualization best practices include: using it as a pre-performance routine or supplement to physical practice, imagining oneself performing a skill or task successfully, and focusing on specific sensory details
- Mental contrasting – the process of visualizing a desired future outcome while also considering the obstacles that stand in the way of it – can help one avoid the downside of visualization, which occurs when one relies solely on mental imagery to achieve their goals without taking action
- The WOOP (Wish, Outcome, Obstacle, Plan) Framework is an effective tool for enhancing motivation, goal attainment and behavior change, having one identify the specific goal they would like to achieve, visualize the desired outcome, consider potential obstacles, and develop a concrete plan of action to overcome them and achieve their desired outcome
- In combination with visualization practices, positive affirmations can help athletes improve performance by promoting recovery, reducing stress and anxiety, and increasing self-efficacy

Additional Resources

Podcasts

- [Huberman Lab – The Science of Setting and Achieving Goals](#)
- [Huberman Lab – Tools for Setting & Achieving Goals | Dr. Emily Balcetis](#)

Talks

- [The Secret Imagination of Elite Performers | Charlie Unwin](#)
- [Inside the Mind of Champion Athletes | Martin Hagger](#)

Books

- [The Champion's Mind](#) by Jim Afremow

- [The Mindful Athlete](#) by George Mumford
- [Mental Training for Peak Performance](#) by Steve Ungerleider
- [Sport Visualization for the Elite Athlete](#) by Bill Bodri
- [The Brave Athlete](#) by Simon Marshall, PhD and Lesley Paterson

Lesson #9: The CRIME framework to behavior change

CRIME is an origins concept from TAA and thus, has no additional resources, podcasts or talks outside of your TAA curriculum.

Lesson #10: Your recipe for well-being

Key Content Points

- In the context of flourishing, one's "recipe" refers to the set of ingredients or components that, when combined in the right way, can result in the desired outcome of a life characterized by wellbeing, happiness and a sense of purpose and fulfillment
- In the same way that a chef can become so focused on the final meal that they forget to enjoy the process of cooking, one can become so focused on achieving happiness that they forget to enjoy the process of living; thus, it is important to find a balance that allows one to pursue happiness while savoring small moments along the journey
- While there are common ingredients to flourishing, such as positive emotions, positive relationships, a sense of meaning and purpose, and accomplishment, the nature of flourishing is multifaceted and must consider various factors towards the journey of wellbeing and fulfillment
- Positive relationships play a critical role in living a life of fulfillment, helping individuals cope with life's challenges by acting as a buffer against stress and adversity, and contributing to one's longevity through elevated physical health and subjective wellbeing
- As a fundamental human need grounded in the desire of living a significant, fulfilling and worthwhile life, it is important to actively cultivate meaning in one's life to create a sense of purpose, fulfillment and connection that sustains one through the ups and downs of life
- The ingredients included in most scientific models are:
 - Positive social connection (family, friends, intimacy, community)
 - Meaning (purpose, mattering, impact, transcending the self)
 - Positive emotion (anything that creates pleasant feeling)
 - Distress tolerance (the ability to engage with unpleasant experiences in ways that lead to growth)
 - Character or virtue (behave in ways that are aligned with values)
 - Vitality (physical health and vibrancy)
 - Engagement (deeply engaging activities)

Additional Resources

Podcasts

- [The Psychology Podcast – Transcend with Scott Barry Kaufman](#)
- [TED Interviews – The Secret to a Happy Life | Robert Waldinger](#)
- [Curious Minds at Work – Emily Esfahani Smith on Creating a Meaningful Life](#)
- [FlourishFM – Pathways to Global Flourishing](#)
- [FlourishFM – Meaning, Happiness, Morality, and Flourishing](#)

Talks

- [Happiness as Realization of Human Potential: Core Obstacles | Carol Ryff](#)
- [Maslow's hierarchy of needs: Updated for the 21st century | Scott Barry Kaufman](#)
- [Martin Seligman | 'Flourishing - a new understanding of wellbeing' at Happiness & Its Causes](#)
- [Martin Seligman | PERMA](#)
- [Robert Waldinger | What makes a good life? Lessons from the longest study on happiness](#)
- [Emily Esfahani Smith | There's more to life than being happy](#)
- [Emily Esfahani Smith | The Power of Meaning: Crafting a Life that Matters](#)

Books

- [Transcend](#) by Scott Barry Kaufman, PhD
- [Flourish](#) by Martin Seligman
- [The Art of Impossible](#) by Steven Kotler
- [The Upside of Your Dark Side](#) by Todd Kashdan and Robert Biswas-Diener

Chapter 3 Pt. 1: Thinking about your thinking (Top Down)

Lesson #1: The negativity bias

Key Content Points

- Negativity bias is a psychological phenomenon describing peoples' tendencies to remember and give more weight to negative experiences over positive ones, to be more influenced by negative feedback as opposed to positive feedback, and to exhibit greater sensitivity to negative emotions such as fear, anxiety and anger
- Negativity bias may have evolved as a survival mechanism to avoid negative stimuli through better detection, further contributing to the development of negative emotions, such as fear, anxiety and anger as adaptive responses to threats and challenges
- While negative experiences tend to “stick” to one’s brain more easily than positive experiences as a result of evolutionary adaptation, the brain is malleable and can be trained to cultivate more positivity and resilience through various techniques, including: focusing on positive experiences for longer periods of time, intentionally savoring positive experiences, cultivating gratitude, practicing self-compassion, reframing negative experiences, connecting with others, finding joy in everyday moments, and engaging in random acts of kindness.

Additional Resources

Podcasts

- [The Weekend University – Overcoming Negativity | Professor Roy Baumeister](#)
- [The Psychology Podcast – Overcoming the Power of Bad with Roy Baumeister](#)
- [The Jordan Harbinger Show – Avoid Letting Your Emotions Be Hijacked | Dr. Rick Hanson](#)
- [Inspire Nation – How to Hardwire Your Brain for Happiness | Dr. Rick Hanson](#)

Talks

- [Getting stuck in the negatives \(and how to get unstuck\) | Alison Ledgerwood](#)
- [Hardwiring happiness: Dr. Rick Hanson at TEDxMarin 2013](#)

Books

- [The Power of Bad](#) by John Tierney and Roy Baumeister
- [Hardwiring Happiness](#) by Rick Hanson, PhD
- [How to Eliminate Negative Thinking](#) by Derek Borthwick
- [Master Your Emotions](#) by Thibaut Meuriss

Lesson #2: Focus & expectancy theory

Key Content Points

- Expectancy theory suggests that individuals are more likely to engage in behaviors that will lead to desired outcomes or rewards – both of which can be impacted by one’s expectations
- Participants in the Counterclockwise study demonstrated significant improvements in mental and physical health, including increased flexibility, energy and positivity, suggesting that by being mindful and adopting a present mindset, one may potentially reverse the effects of aging and improve their overall wellbeing
- The Hotel Maid study highlights the power of mindset and mental framing in shaping one’s experiences and contributing to positive health outcomes
- The Milkshake study highlights the power of mindset and one’s beliefs about food in influencing the body’s physiological response to food
- Commonly referred to as the placebo effect, the idea behind “the effect you expect is often the effect you get” describes the role of belief and expectations in shaping one’s experiences and outcomes, thus highlighting the value of becoming more aware of one’s beliefs and biases to change them toward more positive outcomes
- The Monkey Business Illusion highlights the importance of attention and illustrates how one’s perception of reality may not always be accurate, by emphasizing inattentional blindness, or the failure to notice an unexpected event due to focus elsewhere, and selective perception, or the tendency to perceive and attend to information consistent with one’s beliefs and expectations, while filtering out the rest
- With significant impact on one’s perceptions, emotions, behaviors and decision-making processes in either a positive (through gratitude) or negative (through blame or regret) way, counterfactual thinking is a cognitive process that involves the generation of alternative scenarios – or counterfactuals – to past events, as a way to imagine different outcomes from a “what if” perspective

Additional Resources

Podcasts

- [USIA Podcast – Ellen Langer: Mindfulness & Intelligence](#)
- [Optimize Interview – The Psychology of Possibility with Ellen Langer](#)
- [Huberman Lab – Dr. Alia Crum: Science of Mindsets for Health & Performance](#)

Talks

- [Ellen Langer 'Counterclockwise: the power of possibility' at Happiness & Its Causes 2012](#)
- [Ellen Langer: Mindfulness over matter](#)

- [A Milkshake Experiment](#)
- [Change your mindset, change the game | Dr. Alia Crum | TEDxTraverseCity](#)
- [The science of how mindset transforms the human experience | Alia Crum](#)
- [Harnessing the power of placebos](#)
- [The Monkey Business Illusion](#)

Books

- [Counterclockwise](#) by Dr. Ellen Langer
- [Handbook of Wise Interventions](#) by Gregory Walton & Alia Crum
- [The Expectation Effect](#) by David Robson
- [The Psychology of Counterfactual Thinking](#) by David Mandel, Denis Hilton & Patrizia Catellani
- [Focus](#) by Heidi Grant Halvorson, PhD & Tory Higgins, PhD

Lesson #3: Gratitude and focus

Key Content Points

- Research shows that individuals who regularly practice gratitude experience various benefits, including improved physical health, stronger relationships, increased life satisfaction and greater ability to cope with stress and adversity
- Mixed Emotions Gratitude is a process in which one recognizes and acknowledges both positive and negative aspects of an experience by expressing gratitude for the positive aspects while accepting and processing the negative emotions, thus helping one cultivate resilience, find meaning and purpose in the face of adversity, and enhance emotional wellbeing
- Gratitude journaling is an intervention shown to contribute to positive outcomes, including decreased levels of anxiety, higher levels of life satisfaction and positive affect, stronger relationships with others, and improved psychological well-being
- Gratitude letters, which involve the writing and delivery of a letter to someone who has had a positive influence on one's life, are a powerful tool for promoting individual wellbeing and strengthening relationships
- Research suggests that gratitude visits can positively impact one's well-being by increasing positive emotions, improving social relationships and reducing cortisol levels

Additional Resources

Podcasts

- [Spark Conversations – Empowering Through Gratitude | Kellee Marlow & Robert Emmons](#)
- [Huberman Lab – The Science of Gratitude](#)

Talks

- [The Power of Gratitude – Robert Emmons](#)
- [The Gratitude Visit](#)
- [The Science of Gratitude – Robert Emmons](#)

Books

- [Thanks!](#) by Robert Emmons
- [The Little Book of Gratitude](#) by Robert Emmons

Lesson #4: Optimism, pessimism and explanatory style

Key Content Points

- Optimism is a cognitive and emotional orientation towards positive outcomes characterized by an expectation that good things will happen, in which one explains positive events as a result of internal, stable and global factors, and negative events as a result of external, temporary and specific factors; in contrast, pessimism is a cognitive and emotional orientation towards negative outcomes characterized by an expectation that bad things will happen, in which one explains positive events as a result of external, temporary and specific factors, and negative events as a result of internal, stable and global factors
- While optimism is a cognitive and emotional orientation towards positive outcomes characterized by an expectation that good things will happen, hope involves more than just a positive expectation for the future by considering proactive elements such as goal-setting and action-taking, thus allowing one to identify pathways to achieving goals even in the face of adversity
- Pollyannaish thinking – or extreme optimism – involves one’s denial or minimization of negative information or experiences, and can lead to poor decision making, unrealistic expectations, and a lack of preparation for potential obstacles
- Learned helplessness – or the extreme end of pessimism – occurs when one believes they are unable to control or influence their environment and can lead to feelings of hopelessness and depression, and contribute to negative outcomes, including reduced motivation, impaired learning and increased susceptibility to stress and illness
- Explanatory style is a learned behavior referring to one’s explanation of events in their life through either an optimistic or pessimistic lens; the former being linked to greater resilience, better coping skills and improved physical health outcomes, and the latter being linked to increased risk of depression, anxiety and other mental health disorders

Additional Resources

Podcasts

- [The Psychology Podcast – From Learned Helplessness to Learned Hopefulness](#)
- [Heart Initiative – The Resilience Factor with Dr. Karen Reivich](#)
- [Being Well Podcast – Optimism & Influence with Dr. Tali Sharot](#)

Talks

- [Introduction to Optimism & Optimism Definitions](#)
- [What Optimists Do Differently](#)
- [Learned Helplessness vs. Learned Optimism](#)
- [The Optimism Bias – Dr. Tali Sharot](#)

- [The New Era of Positive Psychology – Martin Seligman](#)

Books

- [Learned Optimism](#) by Martin Seligman
- [Relentless Optimism](#) by Darrin Donnelly
- [The Glass Half Full](#) by Suzanne Segerstrom, PhD
- [The Resilience Factor](#) by Karen Reivich, PhD & Andrew Shatte, PhD
- [The Optimistic Child](#) by Martin Seligman
- [The Optimism Bias](#) by Tali Sharot

Lesson #5: Mindsets 101

Key Content Points

- A mindset – which can be influenced by one’s personal experiences, social interactions and their cultural context – is a mental filter of the cognitive frameworks that one has about themselves, others, and the world around them, and the way in which those beliefs shape their perceptions, behaviors and outcomes
- Research shows that mindset plays an important role across a variety of domains, including goal-setting, motivation, wellbeing and decision-making, with growth mindset playing an important role in helping one persist in the face of setback, be more ‘gritty,’ be less likely to exhibit implicit biases, and be more likely to achieve their objectives
- In the context of sports performance, research showed that athletes with a growth mindset were more likely to set challenging goals, practice harder, recover from injuries, and achieve better performance outcomes than those with a fixed mindset
- Grounded in mindfulness and shaped by one’s social and cultural context, a mindful mindset refers to one’s ability to challenge assumptions, break free from limiting beliefs and be more open to new possibilities, thus, contributing to positive outcomes such as improved cognitive function and physical health, enhanced creativity, and stronger interpersonal relationships
- One’s mindset towards stress can have a profound effect on their physical and psychological well-being, with research showing that an affirmative view of stress can contribute to positive outcomes such as improved performance, greater resilience and reduced risk of mortality
- The latest research on mindset by Kelly McGonigal reveals the following:
 - Mindset can shape one’s experiences and responses to different situations;
 - Mindset can influence behavior change;
 - Mindset can be changed through intentional practice;
 - Mindset can impact both mental and physical health, and influence academic performance;
 - Mindset can be contagious; and
 - Mindset is not a one-size-fits-all solution, thus highlighting the importance of personalized interventions.

Additional Resources

Podcasts

- [Huberman Lab – Dr. Alia Crum](#)
- [The School of Greatness – The Science of a Success Mindset](#)
- [The Knowledge Project Podcast – Dr. Angela Duckworth](#)
- [Optimize Interview – The Science of Success](#)

- [Optimistic Outlook – Growth Mindset with Eduardo Briceno](#)

Talks

- [Change Your Mindset, Change the Game | Dr. Alia Crum](#)
- [The Growth Mindset | Carol Dweck | Talks at Google](#)
- [Grit | Angela Duckworth | Talks at Google](#)
- [Developing a Growth Mindset with Carol Dweck](#)
- [Grit: The Power of Passion & Perseverance](#)
- [The Incredible Benefits of a Get Better Mindset](#)
- [Eduardo Briceño: How to get better at the things you care about | TED](#)

Books

- [Mindset](#) by Carol Dweck
- [Grit](#) by Angela Duckworth
- [Succeed](#) by Heidi Grant Halvorson, PhD
- [Nine Things Successful People Do Differently](#) by Heidi Grant Halvorson, PhD
- [The Performance Paradox](#) by Eduardo Briceno

Lesson #6: Perfectionism

Key Content Points

- Perfectionism is a personality style characterized by one's striving for flawlessness, setting of excessively high personal and performance standards followed by overly critical self-evaluations, and a persistent and often unattainable pursuit of excellence
- The pursuit of perfection is a double-edged sword as it can help one achieve high levels of success while they also experience high levels of stress and anxiety
- The three dimensions of perfectionism are:
 - Self-oriented, which involves setting high standards for oneself and being self-critical when they are not met;
 - Other-oriented, which involves setting high standards for others and being critical of others when they are not met; and
 - Socially prescribed, which involves believing others have high expectations of oneself and thus the desire to meet those expectations, even if they are unrealistic or harmful, and has been found to be a risk factor for mental health problems, such as anxiety and depression
- The two types of perfectionism are:
 - Adaptive perfectionism, which involves setting high standards and striving for excellence without being self-critical or demanding perfection; and
 - Maladaptive perfectionism, which involves setting unattainable standards, being overly self-critical and experiencing high levels of anxiety, and has been shown to be a risk factor for burnout
- Perfectionism is often driven by a fear of failure, a need for control and a desire for external validation and can lead to negative outcomes, such as anxiety, depression, procrastination and burnout
- Perfectionistic striving and concerns are two aspects of perfectionism; while striving involve setting high standards and can be associated with positive outcomes such as increased motivation and achievements, concerns involve excessive worry and self-criticism and are associated with negative outcomes, such as anxiety and depression
- One can overcome perfectionism by:
 - Accepting and embracing imperfection;
 - Recognizing the value of failure and mistakes;
 - Developing resilience;
 - Practicing mindfulness;
 - Practicing self-compassion to reduce one's need for external validation and promote self-care;
 - Pursuing happiness instead as a more meaningful and fulfilling goal; and
 - Cultivating positive emotions, relationships and experiences to promote happiness and wellbeing

Additional Resources

Podcasts

- [Optimize Interview: Positive Psychology 101 with Tal Ben-Shahar](#)
- [Perfectionism: When good is never good enough, with Gordon Flett, PhD, and Bonnie Zucker, PsyD](#)
- [Braincare Podcast – Dr. Thomas Curran](#)
- [Believe Move Grow Podcast – Dr. Thomas Curran](#)
- [FlourishFM – The implications of perfectionism and confidence on the good life, with Homaira Kabir](#)

Talks

- [Thomas Curran – Our dangerous obsession with perfectionism is getting worse](#)
- [Perfectionism: The hidden epidemic? - Thomas Curran](#)

Books

- [The Pursuit of Perfect – Dr. Tal Ben-Shahar](#)
- [When Perfect Isn't Good Enough by Martin Antony, PhD & Richard Swinson, PhD](#)
- [The Perfection Trap by Thomas Curran](#)
- [Goodbye Perfect by Homaira Kabir](#)

Lesson #7: Growth and fixed mindsets

Key Content Points

- While a fixed mindset refers to one's beliefs that their personal qualities (such as talent and intelligence) are set in stone and cannot be changed, a growth mindset adopts the perspective that these qualities can be developed and improved through hard work, dedication and learning, thus allowing one to embrace challenge, persevere and persist in the face of setback and view failure as an opportunity for growth and learning
- Cultivating a growth mindset can help one unlock their potential and achieve greater wellbeing by contributing to positive outcomes including increased likelihood to work harder, greater resilience, increased desire to cooperate, better relationships, and improved motivation and academic performance
- "Yet" acts as a powerful word in the context of a growth mindset, allowing one to acknowledge that although they may not have mastered a skill or achieved a goal yet, they have the ability to continue to work at it and improve
- Limitations to the research on growth mindsets include the limited empirical evidence available, the lack of acknowledgement of the complexity and variability of one's approach to challenges, and the oversimplification of the interplay of individual, social and environmental factors that affect learning outcomes

Additional Resources

Podcasts

- [The Psychology Podcast – The Latest Science of Growth Mindset with Carol Dweck](#)
- [Moonshots Podcast – Mindset: The New Psychology of Success | Carol Dweck](#)

Talks

- [The power of believing that you can improve | Carol Dweck](#)
- [Developing a Growth Mindset with Carol Dweck](#)
- [The Growth Mindset | Carol Dweck | Talks at Google](#)

Books

- [Mindset](#) by Carol Dweck
- [Hardwiring Happiness](#) by Rick Hanson, PhD

Lesson #8: Challenge and threat mindsets

Key Content Points

- The latest research in mindset by Dr. Alia Crum reveals the following:
 - Mindsets can be changed through intentional effort and deliberate practice;
 - The language one uses when referring to themselves can either reinforce a fixed or growth mindset;
 - The placebo effect can be used to one's advantage by cultivating positive beliefs and expectations about one's desired outcomes; and
 - Mindset can be applied to all aspects of one's life including work, relationships and personal hobbies;
- "Fight, flight or freeze" is a classic stress response in which the body – when facing a perceived threat – prepares to either fight it, flee from it, or freeze in place
- The "excite and delight" stress response occurs when one feels energized and focused (as opposed to overwhelmed and threatened) by a challenging situation such as a competition or public speaking opportunity, and thus can help one perform at their best ability
- The "tend and befriend" stress response occurs when one seeks social support in response to stress, turning towards others for comfort rather than fighting or fleeing from the stressor
- Viewing stress as a challenge rather than a threat can motivate one to take action and view challenging situations as opportunities for growth and learning
- Associated with positive outcomes, such as improved performance and resilience, a challenge mindset involves perceiving situations as opportunities for growth and development, while a threat mindset involves perceiving situations as potential sources of harm or loss and is often associated with negative outcomes, such as increased anxiety and impaired decision-making
- One can shift from a threat to a challenge mindset by engaging in the following interventions:
 - Cognitive reappraisal, or the ability to reframe a situation in a more positive light by focusing on the potential benefits at hand;
 - Refocused attention, or the ability to direct one's attention away from negative thoughts and towards task-relevant cues to maintain a positive focus and avoid ruminating on potential threats;
 - Relaxation techniques, such as deep breathing, progressive muscle relaxation and meditation to help reduce physiological arousal and promote a more positive mindset;
 - Self-efficacy, or the ability to develop a sense of confidence and belief in one's ability to meet challenges successfully; and
 - Social support, or the conscious effort to surround oneself with supportive individuals who can help them maintain a positive attitude and provide encouragement during challenging situations.

Additional Resources

Podcasts

- [Huberman Lab – Dr. Alia Crum](#)
- [Psychologist Explains The SECRET To Making STRESS YOUR FRIEND | Kelly McGonigal & Lewis Howes](#)
- [Optimize Interview: The Upside of Stress with Kelly McGonigal, PhD](#)
- [Being with Purpose – Stress Optimization, Resilience & Mindset Shifts](#)
- [Health Psychology & Human Nature – Stress Appraisals](#)

Talks

- [How to make stress your friend | Kelly McGonigal](#)
- [Two Ways Your Brain Responds to Stress | Rick Hanson](#)
- [Buddha’s Brain | Rick Hanson | Talks at Google](#)

Books

- [Resilient](#) by Rick Hanson, PhD & Forrest Hanson
- [The Stress Prescription](#) by Elissa Epel, PhD
- [The Upside of Stress](#) by Kelly McGonigal, PhD
- [Hardwiring Happiness](#) by Rick Hanson, PhD

Chapter 3 Pt. 2: Thinking about your thinking (Top Down)

Lesson #1: The ABCDEs of thinking about your thinking

Key Content Points

- The ABC model is a useful tool for understanding how thoughts and beliefs may influence resilience and is comprised of the following components:
 - Activating Event, or the external situation that triggers one's thoughts or emotions;
 - Beliefs, or one's thoughts and interpretations about the activating event; and
 - Consequences, or one's emotional and behavioral responses as a result of the beliefs held about the activating event.
- By identifying and challenging unhelpful beliefs, the ABC tool can help one change their responses to activating events, develop strategies to cultivate more helpful beliefs, and ultimately build resilience
- Rational Emotive Behaviour Therapy (REBT) emphasizes the importance of challenging and changing unhelpful beliefs through techniques such as cognitive restructuring and imagery to help one develop new ways of thinking to build resilience and improve mental health
- To help one build resilience, some common techniques used in REBT include:
 - Shame-attacking exercises that intentionally place one in situations that trigger feelings in order to build tolerance and reduce intensity of the emotion
 - Disputing, which involves challenging irrational beliefs directly through logical analysis
 - Cognitive restructuring, which involves replacing irrational beliefs with more rational ones

Additional Resources

Podcasts

- [Rational Emotive Behavioural Therapy Podcast – Shouldhood leads to shithood](#)
- [Owen Fitzpatrick Podcast – CBT](#)
- [Albert Ellis Live: Clearly Explains Rational Emotive Behavior Therapy in BBC Interview](#)
- [Live Happy Now – Building Resilience and Wellbeing with Karen Reivich](#)

Books

- [The Resilience Factor](#) by Karen Reivich and Andrew Shatte
- [Overcoming Destructive Beliefs, Feelings, and Behaviors](#) by Albert Ellis
- [How to Stubbornly Refuse to Make Yourself Miserable About Anything](#) by Albert Ellis
- [How To Control Your Anxiety Before It Controls You](#) by Albert Ellis

Lesson #2: Detecting thinking errors

Key Content Points

- Cognitive distortions are negative thinking patterns that are not based on reality that can lead to emotional distress and behavior problems, and contribute to anxiety, depression and other mental health issues
- Cognitive distortions can form as result of various factors, including past experiences, cultural beliefs and values, observation and learned behavior
- Examples of cognitive distortions include black-or-white thinking, overgeneralization and jumping to conclusions
- One can combat cognitive distortions by:
 - Recognizing and identifying them through strategies such as self-reflection or journaling;
 - Challenging them through techniques such as cognitive restructuring;
 - Developing a growth mindset which emphasizes learning and improvement; and
 - Practicing mindfulness using techniques such as meditation and deep breathing to become more aware of one's thoughts and develop a more balanced perspective.
- By identifying and challenging cognitive distortions, one can improve their emotional wellbeing, reduce symptoms of depression and anxiety, and develop greater resilience in the face of adversity
- Cognitive biases are mental shortcuts that can lead to errors in judgment and decision-making, such as anchoring which emphasizes one's tendency to rely too heavily on the first piece of information received when making decisions
- By becoming aware of one's cognitive biases and applying critical thinking skills, one can improve their decision-making and avoid making common errors in judgment

Additional Resources

Podcasts

- [Change Your Thoughts, Change Your Life – Cognitive Distortions with Dr. David Burns](#)
- [The Psychology Podcast – Daniel Kahneman | A Remarkable Life, Fast and Slow](#)
- [The Knowledge Podcast – Daniel Kahneman](#)

Talks

- [Cognitive Restructuring in CBT](#)
- [The Power of Realistic Thinking in CBT](#)
- [David Burns TED Talk](#)
- [Thinking, Fast and Slow | Daniel Kahneman | Talks at Google](#)
- [Daniel Kahneman – Two Systems in the Mind](#)

Books

- [Overcoming Anticipatory Anxiety](#) by Sally Winston
- [Thinking Fast and Slow](#) by Daniel Kahneman

Lesson #3: Disputing initial beliefs

Key Content Points

- Counterfactual thinking refers to the mental process of imagining alternative realities to a past event and how different outcomes may have led to different consequences, and can be influenced by several factors, including one's goals and motivations, cultural differences, and the salience of an outcome
- The two main types of counterfactuals are:
 - Upward, which involve imagining a better outcome than what actually occurred and elicit negative emotions such as regret and disappointment
 - Downward, which involve imagining a worse outcome than what actually occurred and elicit positive emotions such as relief and satisfaction
- Counterfactual thinking serves a variety of functions, including helping to facilitate learning and problem-solving, regulate emotions and impact judgements and decisions, and has been shown to influence mental health outcomes
- Strategies for managing negative counterfactuals include identifying and challenging unhelpful thoughts, focusing on the present moment and taking action to improve the situation, and practicing gratitude and positive self-talk
- Cognitive reframing is the process of identifying and challenging negative or maladaptive thoughts and replacing them with more positive and constructive ones, and is an important skill for promoting resilience and wellbeing
- Cognitive reframing can be enhanced through a range of practices that promote awareness, self-reflection and positive thinking or have one challenge maladaptive thoughts, such as gratitude journaling, positive visualization, and exposure therapy
- Related to positive outcomes such as academic achievement and problem-solving ability, cognitive flexibility refers to one's ability to see things from multiple perspectives, adapt to new situations and adjust one's thinking as needed, and is an important skill to help one adapt to the changing demands of modern society
- Engaging in activities that challenge and help one expand cognitive abilities while also promoting adaptive thinking can help one enhance cognitive flexibility, and include: learning a new instrument or language, engaging in physical exercise, and exposing oneself to diverse perspectives
- Psychological flexibility refers to one's ability to adapt their behavior and thinking in response to changing circumstances while still maintaining a sense of core goals and values, and has been shown to be associated with positive outcomes, such as better mental health, greater wellbeing and improved relationships
- Psychological flexibility can be developed using strategies such as mindfulness meditation, cognitive-behavioral therapy and values clarification exercises
- Psychological flexibility involves six core processes:
 - Acceptance, or acknowledging and making room for difficult emotions
 - Cognitive defusion, or recognizing and distancing oneself from negative thoughts

- Present moment awareness, or being fully engaged in the current moment
- Self-as-context, or recognizing that emotions are temporary experiences that do not define the self
- Values, or pursuing goals that are consistent with one's beliefs
- Commuted action, or taking intentional steps to pursue meaningful goals even in the face of challenge
- Emotional agility refers to one's ability to navigate thoughts and emotions in a flexible and adaptive way, using them as a source of information and motivation for action, rather than suppressing or controlling them
- Emotional agility can help one manage stress and cope with difficult situations by enabling them to take effective action in response to emotional experiences, thus helping to promote resilience and wellbeing

Additional Resources

Podcasts

- [Art of Manliness Podcast – Dealing with Life's Regrets](#)
- [The Weekend University – Developing Psychological Flexibility](#)
- [Impact Theory – Susan David](#)
- [Yale – Emotional Intelligence with Peter Salovey](#)

Talks

- [Psychological flexibility: How love turns pain into purpose | Steven Hayes](#)
- [Susan David on Emotional Agility](#)
- [4 practical strategies to become emotionally agile | Susan David](#)
- [You aren't at the mercy of your emotions – your brain creates them | Lisa Feldman Barrett](#)

Books

- [Get Out of Your Mind and Into Your Life](#) by Steven Hayes
- [The Resilience Factor](#) by Karen Reivich and Andrew Shatte
- [Elastic](#) by Leonard Mlodinow
- [Emotional Agility](#) by Susan David
- [How Emotions are Made](#) by Lisa Feldman Barrett
- [The Emotionally Intelligent Manager](#) by Peter Salovey and David Caruso

Lesson #4: De-catastrophize

Key Content Points

- Catastrophizing is an irrational thinking pattern in which one exaggerates the negative consequences of an event, and is associated with a range of negative outcomes, including increased pain perception, impaired sleep quality, impaired cognitive functioning, increased risk of depression and anxiety, and reduced quality of life
- Catastrophizing can trigger one's sympathetic nervous system (fight or flight response), and lead to physiological changes that increase stress and negative health outcomes
- Rational emotive behavior therapy offers an approach to de-catastrophizing and includes:
 - Identifying catastrophic thinking patterns to become more aware of irrational thoughts
 - Challenging catastrophic thinking patterns by questioning their logic
 - Developing coping statements that counteract the negative thoughts
 - Practicing exposure therapy by exposing oneself to situations that cause anxiety to build resilience
 - Using humor or distraction techniques to shift focus away from negativity
- Perspective taking involves viewing a situation from a different perspective, including those of other people, and can help one gain a more balanced view of a situation and challenge catastrophic thinking patterns by reducing negative thoughts, emotions and behaviors
- Perspective taking has been associated with a range of positive mental health outcomes, including lower levels of depression and anxiety, higher levels of self-esteem and life satisfaction, and increased positive emotions, and can be practiced through strategies such as role playing, active listening, writing exercises and mindfulness
- Benefit finding – a strategy used to combat catastrophizing – involves actively seeking out positive aspects of a challenging situation and focusing on opportunities for growth and learning, and is associated with many benefits, including reduced negative emotions, enhanced resilience, and better life satisfaction
- Some evidence suggests that resonance breathing may be an effective intervention for reducing catastrophizing and promoting parasympathetic nervous system activation, by having one inhale and exhale at a specific rate (typically 6 breaths per minute) to create a state of resonance between heart rate variability and breathing frequency

Additional Resources

Podcasts

- [Defeating Depression Podcast – Dr. Graham Davey](#)
- [Book Conversations – Overcoming Unwanted Intrusive Thoughts \(Part 1\)](#)
- [Let's Talk About OCD & Intrusive Thoughts with Dr. Sally Winston](#)

- [How to cultivate resilience and get through tough times \(with Lucy Hone\) | How to Be a Better Human](#)

Talks

- [Perspective Taking](#)
- [The three secrets of resilient people | Lucy Hone | TEDxChristchurch](#)
- [3.1 Introduction: Catastrophizing and the Relationship of Anxiety to Resilience](#)

Books

- [The Catastrophic Warrior](#) by Graham Davey
- [Overcoming Anticipatory Anxiety](#) by Sally Winston
- [Resilient Grieving](#) by Lucy Hone
- [The Resilience Factor](#) by Karen Reivich and Andrew Shatte

Lesson #5: In-the-moment flexible thinking

Key Content Points

- In general, we breathe to bring in oxygen and remove carbon dioxide, however, both play an important role as we need correct ratios of both for bodily function
- In the body, air comes in through the nose and mouth, which is then transferred to the lungs through the larynx (a rigid tube), which then expand or contract to bring in or expel air using a muscle known as the diaphragm
- One can leverage breathing to reduce or increase heart rate for a situation; to increase heart rate one should inhale longer and more deeply than they exhale, and to reduce heart rate, one should exhale longer and more vigorously than they inhale
- Mouth breathing can lead to a host of health problems including poor sleep, poor athletic performance and chronic disease, whereas nasal breathing is essential for optimal health and can improve athletic performance and reduce fatigue during exercise
- In the context of athletics, breathwork interventions including nasal nitric oxide-enhanced slow breathing and the Wim Hof Iceman technique have been shown to have positive effects on sports performance and resilience
- Box breathing is a breathwork practice for relaxation and stress reduction and involves equal-length inhales, exhales and breath holds – the counts of which can be adjusted based on individual preference or comfort
- Resonance breathing is a type of breathwork that focuses on synchronizing the breath with the body's natural rhythms to enhance relaxation, increase heart rate variability, and improve mental and physical performance, and can be performed by breathing in slowly through the nose for a count of 5, holding the breath for a count of 2, and then exhaling through the mouth for a count of 5 – repeating this cycle for several minutes
- Resonance breathing interventions have been associated with various positive outcomes, including improved cognitive performance, reduced symptoms of anxiety and depression, and improved stress resilience
- Physiological sighs can be performed to enhance mood and relaxation and alleviate exercise cramps, and involve taking 2 inhales through the nose followed by one longer exhale through the mouth until the lungs are empty, repeated several times depending on the context
- Labeling feelings is an effective tool in building resilience and helping one manage and cope with difficult emotions and situations, by helping one increase their emotional awareness and regulation
- Strategies for labeling emotions include paying attention to bodily sensations, and using a “feeling wheel” or emotion chart to identify feelings that one may have difficulty expressing
- Positive distraction is an effective tool for building real-time resilience and involves engaging in enjoyable or absorbing activities (e.g. listening to music or spending time with loved ones) to shift one's focus away from negative thoughts and emotions

- By intentionally choosing to act in a way that is opposite to their current emotions, opposite action can help one regulate their emotions and manage stress in healthy ways, and build resilience

Additional Resources

Podcasts

- [Impact Theory – James Nestor](#)
- [Huberman Lab – Dr. Jack Feldman: Breathing for Mental & Physical Health & Performance](#)
- [Huberman Lab – How to Breathe Correctly for Optimal Health, Mood, Learning & Performance](#)
- [Hanu Health Podcast – Resonance Frequency](#)
- [Elite HRV Podcast – Leah Lagos](#)

Talks

- [Breathing Exercises + James Nestor](#)
- [Breathing Techniques to Reduce Stress and Anxiety | Dr. Andrew Huberman on the Physiological Sigh](#)
- [Shut your Mouth and Change your Life | Patrick McKeown | TEDxGalway](#)
- [Patrick McKeown – Why We Breathe: How to Improve Your Sleep, Concentration, Focus & Performance](#)

Books

- [The Resilience Factor](#) by Karen Reivich and Andrew Shatte
- [Breath](#) by James Nestor
- [The Oxygen Advantage](#) by Patrick McKeown
- [The Breathing Cure](#) by Patrick McKeown
- [Heart Breath Mind](#) by Leah Lagos

Acceptance Commitment Technique

Key Content Points

- Building on both behavioral and cognitive approaches, Acceptance and Commitment Therapy (ACT) emphasizes mindfulness and acceptance-based strategies and seeks to develop physiological flexibility by teaching one to observe and accept their thoughts and emotions and become more present in the moment, while taking committed action towards their values
- Unlike Cognitive Behavioural Therapy, ACT emphasizes the importance of accepting difficult emotions as a natural part of the human experience, places greater emphasis on mindfulness and experiential exercises such as metaphors, views the therapist as more of a collaborator rather than expert, and sees mental health as the ability to adaptive LT respond to internal and external experiences
- ACT uses a diagnostic tool known as the Hexaflex for classifying and treating client problems holistically, and its points represent the six aspects of psychological flexibility (i.e correspond to the 6 core components of ACT)
- The 6 core components of ACT are:
 - Mindfulness, or developing greater present moment awareness and non-judgemental observation of one's thoughts, feelings and experiences, thus allowing one to learn to develop a more accepting and compassionate attitude towards themselves and their experiences
 - Cognitive defusion, or learning to observe thoughts and beliefs from a more objective perspective rather than getting caught up in them, thus allowing one to notice their thoughts and feelings without necessarily believing or acting on them, which can help them respond more effectively to their experiences
 - Acceptance, or developing the ability to allow difficult thoughts and emotions to be present without trying to change or eliminate them, helping one to learn to stop struggling against them and start focusing their energy on taking meaningful action in line with their values
 - Self-as-context, or developing a sense of self as an observer rather than identifying too closely with one's thoughts or feelings, allowing one to recognize that their thoughts and emotions are not necessarily a reflection of their true self
 - Values, or exploring what is truly important and meaningful to one and using this awareness to guide oneself
 - Committed action, or taking steps towards one's values even in the face of difficult thoughts and emotions
- Present Moment
 - The purpose of ACT's present moment focus is to restore a sense of control lost in many clients by helping one understand that while they cannot control how they think or feel, they can control how they act

- While past and future thoughts have a purpose (such as learning from mistakes or looking forward to something), ruminating and planning can become the default mode of thinking causing real problems for individuals
- There is no time to control behavior than in the present moment, and ACT helps one build presence through mindfulness exercises to help them shift from dwelling and planning to focusing on what they can control
- Acceptance
 - All individuals have parts of themselves that are less desirable or attractive and a common mindset is to want to cure or eliminate those unwanted pieces rather than accept who you are and what you do
 - ACT helps individuals embrace their demons, or unwanted private experiences, and follow their hearts, helping one make changes in the present moment without using up their limited supply of energy on continually struggling to suppress one's dark parts
- Values
 - Values can be thought of as directional arrows on a compass, and while there are always obstacles, having a compass allows one to reset or change direction when they've lost their way
 - It is important to differentiate between values and goals; while goals are finite with an end, values are ongoing and infinite – they are chosen qualities of action that are acted on moment by moment
 - Values tell you what direction to go, while goals are the steps that help you get closer to living a meaningful life
- Cognitive defusion
 - ACT gives a lot of weight to language, which is an intuitive approach since humans rely on language to communicate, express themselves, and understand the world around them, and ACT helps individuals alter how they use language internally
 - We often pay little attention to how we talk to ourselves and can suffer from a lack of self-kindness
 - When we repeatedly use negative labels for ourselves, we can become fused with that language, identifying ourselves with it; thus, cognitive defusion helps loosen the grip that one has on their negative self labels and see their thoughts as thoughts, rather than accurate representations of reality
- Self-as-context
 - It is common for individuals to identify themselves by what they do (e.g. one's profession), and while there is nothing wrong with this in principle, it illustrates the brain's tendency to identify itself with experience
 - ACT helps one move from thinking of themselves based on the content of their thoughts, helping them see that they are not the content of their thoughts but the context in which they occur, thus creating substantial distance from painful thoughts and allowing one to detach from the inevitable highs and lows of human

existence (e.g. shifting from “I’m unloveable” to “I’m having the thought that I’m unloveable”)

- Committed action
 - Committed action encapsulates the second half of the mantra – embrace your demons, follow your heart – as individuals first commit to know their hearts by identifying their values and then following their hearts by committing to act with their values at the forefront of their minds
 - In this part of the ACT process, goals come into play as the therapist helps identify goals that will help get the client to where they want to go
 - This collaborative goal setting makes therapy function like a creative workshop, in which the two parties set goals for the client, who tries them out in real life, then reports on the progress in the next session where tweaks are made as necessary – again in alignment with the client’s underlying values
- In ACT, the use of experiential exercises, such as metaphors, help individuals develop greater self awareness and acceptance of their internal experiences, thus promoting behavior change
- The River Metaphor is used to help athletes understand the concept of present moment awareness by having them imagine oneself in a river, with the current representing the present moment. By staying focused on the current and not getting caught up in the past or future, athletes can stay present and perform at their best.

Additional Resources

Podcasts

- [Mentally Flexible Podcast – Dr. Russ Harris](#)
- [The Wellbeing Lab – Practicing ACT with Russ Harris](#)
- [The OCD Stories – Dr. Russ Harris](#)

Talks

- [The Art and Science of Self-Compassion](#)

Books

- [ACT Made Simple](#) by Dr. Russ Harris
- [The Happiness Trap](#) by Dr. Russ Harris
- [Trauma-Focused ACT](#) by Dr. Russ Harris
- [ACT with Love](#) by Dr. Russ Harris
- [Getting Unstuck in ACT](#) by Dr. Russ Harris

Chapter 4 Pt. 1: Leveraging bodily awareness (Bottom Up)

Lesson #1: Body scanning 101

Key Content Points

- While somatic awareness refers to the conscious recognition of and response to bodily sensations, such as touch and pressure, interoception refers to the sensing and perception of internal bodily sensations, such as hunger, heart rate, breathing, and emotional and cognitive processes
- Interoceptive awareness refers to the degree to which one is aware and able to attend to their internal bodily sensations and has been associated with a range of mental and physical outcomes, including emotional regulation, stress management, and pain perception; while poor interoceptive awareness has been linked to a range of mental health disorders, including anxiety, depression and eating disorders
- Interventions that have been shown to improve interoceptive awareness include mindfulness practices such as body scans and mindful movement, body awareness training, biofeedback training, and yoga
- Body scanning involves systematically bringing attention to different parts of one's body and observing physical sensations without judgment, and is used as an approach to increase awareness of bodily experiences and promote greater wellbeing by recognizing the interdependence of the body and mind

Additional Resources

Podcasts

- [The Dissenter – Sarah Garfinkel: Interoception, Emotion, And Mental Health](#)
- [Changing Minds – Why Listening To Your Gut Feeling Works](#)
- [Good Life Project – The Body Keeps the Score](#)

Talks

- [The science inside our hearts and minds | Dr Sarah Garfinkel | TEDxBrighton](#)

Books

- [Mindful Somatic Awareness for Anxiety Relief by Michele L. Blume, PsyD](#)
- [Somatic Internal Family Systems Therapy by Susan McConnell](#)
- [The Body Keeps the Score by Bessel van der Kolk](#)

- [Unstressed by Alane K. Daugherty, PhD](#)

Lesson #2: Noticing feelings

Key Content Points

- RULER is an evidence-based approach to social and emotional learning designed to help one recognize, understand, label, express and regulate emotions, and has been shown to have positive effects on student and teacher wellbeing, academic performance and classroom climate
- The five components of RULER are:
 - Recognizing emotions, or developing a vocabulary of emotion words and learning to identify and label emotions appropriately;
 - Understanding emotions, or developing an understanding of the ways in which emotions are triggered and how they influence behaviour, thoughts, and relationships;
 - Labeling emotions, or developing the skills to communicate emotions clearly and assertively and to express them in appropriate ways in different contexts;
 - Expressing emotions, or developing the skills to communicate emotions in a way that is respectful and emphatic and to respond to others' emotions with sensitivity and understanding; and
 - Regulating emotions, or developing the skills to manage emotions in a way that promotes wellbeing, such as through relaxation techniques, positive self talk and mindfulness practices
- Recognize
 - The recognizing aspect of emotional intelligence involves developing the ability to accurately perceive and label emotions, as well as distinguish between the different types of emotions and understand the complex interplay between them
 - One can learn to better understand their emotional responses and work to regulate them more effectively by distinguishing between primary emotions (initial, instinctive reactions to a situation) and secondary emotions (emotions experienced in response to primary emotions)
 - The Mood Meter tool encourages individuals to identify and label their emotions according to four broad categories:
 - Pleasantness;
 - Energy;
 - Arousal; and
 - Positivity

Additional Resources

Podcasts

- [The Mindful Educators Podcast – Understanding Our Emotions](#)

- [Unlocking Us Podcast – Dr. Marc Brackett](#)
- [The Psychology Podcast – Dr. Marc Brackett](#)

Talks

- [Emotional Intelligence Superpowers | Marc Brackett | Talks at Google](#)
- [Emotional Intelligence in Children and Adults | Expert Videos](#)
- [TEDxGoldenGateED - Marc Brackett](#)
- [Marc Brackett on Emotional Intelligence and the Mood Meter, Part 1](#)
- [Marc Brackett on Emotional Intelligence and the Mood Meter, Part 2](#)

Books

- [Permission to Feel by Dr. Marc Brackett](#)
- [Emotional Intelligence by Daniel Goleman](#)
- [Emotional Intelligence 2.0 by Travis Bradberry & Jean Greaves](#)

Lesson #3: Analyzing feelings

Key Content Points

- Understanding “why am I feeling what I am feeling” involves developing emotional awareness, empathy and problem-solving skills and can be explored through the following strategies:
 - Mood meter, by encouraging one to not only identify and label their emotions, but to also reflect on why they might be feeling a certain way, thus helping them understand specific triggers of their emotions;
 - Empathy training, by teaching one to consider the perspectives and experiences of others to not only understand the causes of their own emotions, but also consider how different situations might affect different people;
 - Meta-moment, but encouraging one to pause and reflect before responding to a situation to consider what specific factors may be contributing to one’s emotions, thus allowing them to identify specific triggers and causes of their emotions and lead to more effective problem-solving and communications
- According to positive psychology, understanding why you are feeling what you are feeling can have several benefits, including:
 - Increased self-awareness, by helping one identify patterns and triggers related to their emotions, thoughts and behaviours;
 - Better coping strategies, by allowing one to step back and respond in a thoughtful way to situations rather than in an impulsive way;
 - Improved relationships, by allowing one to communicate their feelings in a clear and respectful; and
 - Increased resilience, by allowing one to develop strategies to manage emotions in difficult situations

Additional Resources

Podcasts

- [The Mindful Educators Podcast – Understanding Our Emotions](#)
- [Unlocking Us Podcast – Dr. Marc Brackett](#)
- [The Psychology Podcast – Dr. Marc Brackett](#)

Talks

- [Emotional Intelligence Superpowers | Marc Brackett | Talks at Google](#)
- [Emotional Intelligence in Children and Adults | Expert Videos](#)
- [TEDxGoldenGateED - Marc Brackett](#)
- [Marc Brackett on Emotional Intelligence and the Mood Meter, Part 1](#)

- [Marc Brackett on Emotional Intelligence and the Mood Meter, Part 2](#)

Books

- [Permission to Feel by Dr. Marc Brackett](#)
- [Emotional Intelligence by Daniel Goleman](#)
- [Emotional Intelligence 2.0 by Travis Bradberry & Jean Greaves](#)

Lesson #4: Naming feelings

Key Content Points

- Naming emotions is a crucial step in the emotional regulation process as it enables one to recognize and understand their emotions more effectively, which can be complex and multi-dimensional
- Naming emotions can help one develop greater emotional awareness and resilience, and thus can have a positive impact on one's mental health and wellbeing
- Strategies that can help one improve their ability to name emotions include:
 - Increasing awareness, by paying attention to one's emotions and bodily sensations;
 - Practicing mindfulness, such as meditation or deep breathing;
 - Using emotion recognition apps, such as Mood Meter;
 - Participating in emotional intelligence workshops, to learn about emotions and develop emotional intelligence skills;
 - Increasing emotional vocabulary, by learning new feeling words and understanding their nuances;
 - Using visual aids, such as charts or diagrams to label emotions more easily;
 - Role-playing scenarios, to practice labeling emotions in various situations; and
 - Seeking feedback, to improve one's skills
- Feeling words can also help individuals label and name their emotions more accurately by recognizing the subtle differences between primary emotions (e.g. happiness, sadness, anger) and secondary emotions (e.g. jealousy, guilt, shame)

Additional Resources

Podcasts

- [The Mindful Educators Podcast - Understanding Our Emotions](#)
- [Unlocking Us Podcast - Dr. Marc Brackett](#)
- [The Psychology Podcast - Dr. Marc Brackett](#)

Talks

- [Emotional Intelligence Superpowers | Marc Brackett | Talks at Google](#)
- [Emotional Intelligence in Children and Adults | Expert Videos](#)
- [TEDxGoldenGateED - Marc Brackett](#)
- [Marc Brackett on Emotional Intelligence and the Mood Meter, Part 1](#)
- [Marc Brackett on Emotional Intelligence and the Mood Meter, Part 2](#)

Books

- [Permission to Feel by Dr. Marc Brackett](#)
- [Emotional Intelligence by Daniel Goleman](#)
- [Emotional Intelligence 2.0 by Travis Bradberry & Jean Greaves](#)

Lesson #5: Expressing feelings

Key Content Points

- Expressing oneself is a valuable tool for enhancing mental and emotional wellbeing with benefits including:
 - Improved emotional regulation, by gaining perspective and clarity through writing, talking and other means of communication;
 - Increased self-awareness, by reflecting on experiences to gain insights into behaviours, triggers and values;
 - Strengthened relationships, by deepening connections by sharing experiences;
 - Enhanced creativity, by tapping into one's inner resources to generate new ideas; and
 - Improved performance, by reflecting on experiences to gain insights into one's strengths and weaknesses and develop strategies for self-improvement
- Expressive writing involves writing about one's thoughts and feelings in a structured and reflective manner and is an effective tool for (1) reducing psychological distress by allowing one to gain insight into their inner world, identify patterns and triggers and underlying beliefs, and (2) regulating emotions and reducing rumination by allowing one to create distance from their emotions and gain perspective
- Expressive writing has been found to be associated with significant improvements in psychological wellbeing including reductions in depression, anxiety and PTSD, and has also been found to have physical health benefits such as improved immune function
- In RULER, expressing refers to the ability to communicate emotions effectively and appropriately and is a crucial component of emotional intelligence as it allows one to share their feelings with others and build positive relationships
- Positive psychology suggests the best way to express oneself is through assertive communication, which involves:
 - Using "I" statements which focus on one's thoughts and feelings, rather than placing blame on others;
 - Being clear and specific to avoid misunderstanding; and
 - Active listening, by paying attention to the other person's perspective and responding in a supportive and empathetic manner

Additional Resources

Podcasts

- [The Mindful Educators Podcast – Understanding Our Emotions](#)
- [Unlocking Us Podcast – Dr. Marc Brackett](#)
- [The Psychology Podcast – Dr. Marc Brackett](#)

Talks

- [Emotional Intelligence Superpowers | Marc Brackett | Talks at Google](#)
- [Emotional Intelligence in Children and Adults | Expert Videos](#)
- [TEDxGoldenGateED - Marc Brackett](#)
- [Marc Brackett on Emotional Intelligence and the Mood Meter. Part 1](#)
- [Marc Brackett on Emotional Intelligence and the Mood Meter. Part 2](#)

Books

- [Permission to Feel by Dr. Marc Brackett](#)
- [Emotional Intelligence by Daniel Goleman](#)
- [Emotional Intelligence 2.0 by Travis Bradberry & Jean Greaves](#)

Lesson #6: Regulating feelings

Key Content Points

- Healthy strategies for emotion regulation include deep breathing, positive self-talk, mindfulness, self-care, and setting realistic goals
- Positive distraction:
 - Positive distraction can be an effective tool for building resilience in real-time and involves engaging in engaging or absorbing activities to shift one's focus away from negative thoughts and emotions
 - Positive distraction can take many forms, including listening to music, engaging in hobbies, spending time with loved ones or going on a walk
 - Positive distraction has been shown to reduce the impact of stress on psychological and physical wellbeing, and reduce symptoms of anxiety and depression
 - One can reap the benefits of positive distraction by engaging in a regular practice of enjoyable activities to cultivate a consistent source of positive emotions and stress relief
 - It is important to remain mindful of potential downsides of distraction which include it being used as a form of avoidance, suppression, temporary relief, or an overly relied on coping mechanism
- Breathwork:
 - Box breathing is a breathwork practice for relaxation and stress reduction and involves equal-length inhales, exhales and breath holds — the counts of which can be adjusted based on individual preference or comfort
 - Resonance breathing is a type of breathwork that focuses on synchronizing the breath with the body's natural rhythms to enhance relaxation, increase heart rate variability, and improve mental and physical performance, and can be performed by breathing in slowly through the nose for a count of 5, holding the breath for a count of 2, and then exhaling through the mouth for a count of 5 — repeating this cycle for several minutes
 - Resonance breathing interventions have been associated with various positive outcomes, including improved cognitive performance, reduced symptoms of anxiety and depression, and improved stress resilience
 - Physiological sighs can be performed to enhance mood and relaxation and alleviate exercise cramps, and involve taking 2 inhales through the nose followed by one longer exhale through the mouth until the lungs are empty, repeated several times depending on the context
- Opposite emotion:
 - The opposite emotion strategy involves intentionally choosing to experience and express an emotion that is opposite to the one you are currently feeling and can be a helpful tool for regulating emotions by helping to reduce the intensity of negative emotions and increase positive ones

- This strategy is best used in conjunction with others and is important to choose an emotion that feels authentic and genuine to oneself, rather than forced and unnatural
- If one is feeling depressed and may feel like isolating or withdrawing themselves, an opposite emotion action would be to engage in activities that made them happy in the past even if they don't feel like it in the moment
- Cognitive reframing:
 - Cognitive reframing involves identifying negative thoughts and beliefs and challenging them by replacing them with more positive and realistic ones
 - Cognitive reframing has been associated with positive benefits including, reduced symptoms of anxiety and depression, increased ability to cope with stress, and improved performance under pressure
 - One example of cognitive reframing is the threat vs. challenge mindset in which threat mindsets involve perceiving situations as potential sources of harm or loss, whereas challenge mindsets perceive situations as opportunities for growth and development
 - An effective intervention for developing a challenge mindset is cognitive reappraisal which, instead of automatically reacting to a situation, involves intentionally interpreting it in a more positive light
 - Other strategies to shift from a threat to a challenge mindset include: refocusing attention to maintain a positive focus, using relaxation techniques such as deep breathing to reduce physiological arousal, building self-efficacy by developing a sense of confidence, and seeking social support by surrounding oneself with supportive individuals to help maintain a positive attitude

Additional Resources

Podcasts

- [Unlocking Us Podcast – Dr. Marc Brackett](#)
- [The Psychology Podcast – Dr. Marc Brackett](#)
- [Hanu Health Podcast – Resonance Frequency](#)

Talks

- [Emotional Intelligence Superpowers | Marc Brackett | Talks at Google](#)
- [Emotional Intelligence in Children and Adults | Expert Videos](#)
- [TEDxGoldenGateED - Marc Brackett](#)
- [Marc Brackett on Emotional Intelligence and the Mood Meter, Part 1](#)
- [Marc Brackett on Emotional Intelligence and the Mood Meter, Part 2](#)
- [Breathing Techniques to Reduce Stress and Anxiety | Dr. Andrew Huberman on the Physiological Sigh](#)
- [Two Ways Your Brain Responds to Stress | Rick Hanson](#)

- [Marsha Linehan – Strategies for Emotion Regulation](#)

Books

- [Permission to Feel by Dr. Marc Brackett](#)
- [Emotional Intelligence by Daniel Goleman](#)
- [Emotional Intelligence 2.0 by Travis Bradberry & Jean Greaves](#)
- [Breath](#) by James Nestor
- [The Oxygen Advantage](#) by Patrick McKeown
- [The Breathing Cure](#) by Patrick McKeown
- [Heart Breath Mind](#) by Leah Lagos

Chapter 4 Pt. 2: Leveraging bodily awareness (Bottom Up)

Lesson #1: The gut-brain connection & well-being

Key Content Points

- The gut microbiome refers to the collection of microorganisms such as bacteria and fungi that inhabit the human gastrointestinal tract and play a crucial role in the digestion of food, absorption of nutrients, regulation of the immune system and production of hormones and other signaling molecules
- Unique to each individual and influenced by a variety of factors such as diet and lifestyle, a healthy and diverse gut microbiome is important for overall health and wellbeing, as disruptions to it (such as dysbiosis or an imbalance in the gut microbiota) have been linked to a range of health issues including digestive disorders, obesity and mental health conditions such as depression and anxiety
- The gut and brain are interconnected (i.e gut-brain axis) and thus communication between the two is bidirectional; as such, the health of one's gut microbiota can impact one's mood, behavior and cognitive function, and by understanding the connection between the two, one can take steps – such as engaging in mind-body practices – to improve their overall health and wellbeing
- Ways to improve one's gut microbiome include:
 - Eating a diverse, fiber-rich diet, including fruits, vegetables, legumes and whole grains to promote the growth of beneficial gut bacteria and increase microbial diversity;
 - Reducing intake of processed foods and sugar;
 - Taking probiotics, which are live microorganisms that can be taken in supplement form to help replenish beneficial gut bacteria and/or prebiotics which are non-digestible fibers that promote the growth of beneficial gut bacteria;
 - Managing stress, through mind-body practices such as meditation and yoga; and
 - Avoiding unnecessary use of antibiotics, as they can disrupt the balance of the gut microbiome by killing off beneficial bacteria
- It's important to note that each person's gut microbiome is unique and thus working with a healthcare provider or registered dietician can be helpful in developing a personalized approach to improving gut health

Additional Resources

Podcasts

- [Mind Gut Conversation Podcast – How Food Impacts Our Mental Health](#)
- [Beyond the Balance Sheet Podcast – The Mind-Gut Connection With Emeran Mayer](#)

Talks

- [The Mind-Gut Connection: Conversation Within Our Bodies | Emeran Mayer, MD, PhD | UCLAMDChat](#)
- [The Mind-Gut Connection | Dr. Emeran Mayer | Talks at Google](#)
- [Your Gut Microbiome: The Most Important Organ You've Never Heard Of | Erika Ebbel Angle | TEDxFargo](#)

Lesson #2: Sleep 101

Key Content Points

- One's quality of sleep is just as important as the quantity, and poor sleep quality, such as due to exposure to electronic devices before bed, can have negative effects on one's health and wellbeing
- The main purposes of sleep include:
 - Memory consolidation, so the brain may process and consolidate newly acquired information for easier retrieval later;
 - Synaptic pruning, to prune unnecessary connections between neurons to allow the brain to operate more efficiently;
 - Hormonal regulation, including regulation hormones that control appetite, metabolism, stress and immune function;
 - Restoration, so the body may rest and repair; and
 - Emotional regulation, to help one regulate emotions and improve emotional stability
- Sleep deprivation has been linked to an increased risk of accidents and injuries, impaired immune function making people susceptible to illness and disease, and mental health conditions such as depression and anxiety
- Sleep is important for overall wellbeing and resilience and getting enough sleep can help one better cope with stress and adversity, improve cognitive function and academic performance, and contribute to athletic performance by helping to improve reaction time, speed and accuracy
- The sleep cycles involves multiple stages of non-rapid eye movement (NREM) sleep and rapid eye movement (REM) sleep which occur in roughly 90-minute cycles throughout the night; while during NREM sleep, the brain consolidates memories and learning, REM sleep is important for emotional regulation and creativity, and altogether sleep plays a critical role in regulating hormones, including those that control appetite, metabolism and stress
- Evidence-based ways for improving sleep include:
 - Sticking to a regular sleep schedule;
 - Creating a relaxing sleep environment;
 - Limiting exposure to electronic devices before bedtime;
 - Practicing relaxation techniques such as deep breathing;
 - Avoiding large meals before bedtime; and
 - Engaging in regular exercise
- It is recommended that athletes prioritize sleep as a crucial component of their training and recovery, with most needing between 7-9 hours of sleep per night or up to 10 hours per night during periods of intense training or competition
- Napping is a powerful tool and has been associated with the following benefits:
 - Improved cognitive function, such as memory consolidation, learning and problem-solving abilities;

- Improved mood, enhanced emotional regulation and reduced stress; and
 - Reduced risk of cardiovascular disease
- Short naps between 20-30 minutes can help improve alertness and performance, while longer naps between 60-90 minutes can promote memory consolidation and improve cognitive function; however, timing also matters as a nap too late in the day may interfere with nighttime sleep and a nap too early may not be effective due to a natural dip in alertness in early afternoon

Additional Resources

Podcasts

- [The Diary of a CEO Podcast - Dr. Matthew Walker](#)
- [Huberman Lab - Dr. Matthew Walker](#)
- [Huberman Lab - Master Your Sleep & Be More Alert When Awake](#)
- [Huberman Lab - Sleep Toolkit: Tools for Optimizing Sleep & Sleep-Wake Timing](#)
- [Forbes - Arianna Huffington On The Power Of Unplugging](#)
- [Arianna Huffington: The Sleep Revolution](#)

Talks

- [Sleep is your superpower | Matt Walker](#)
- [Why We Sleep: Science of Sleep & Dreams | Matthew Walker | Talks at Google](#)
- [Why Sleep Matters | Matthew Walker | Talks at Google](#)
- [The Sleep Revolution | Arianna Huffington | Talks at Google](#)

Books

- [Why We Sleep by Matthew Walker, PhD](#)
- [The Sleep Revolution by Arianna Huffington](#)

Lesson #3: Biorhythms

Key Content Points

- Circadian rhythms are 24-hour biological rhythms that are driven by a “master clock” and regulate a wide range of physiological processes in the body including sleep, hormone production and metabolism, by receiving input from light-sensitive cells in the eyes and coordinating the timing of various physiological processes throughout the body
- Circadian rhythms are important for overall health and wellbeing as disruptions to them have been linked to a wide range of health issues such as sleep and metabolic disorders, cardiovascular disease and certain types of cancer
- Circadian rhythms can be optimized through practices including regular sleep-wake schedules, exposure to natural light during the day and avoiding bright light at night
- Ultradian rhythms refer to biological rhythms that occur more frequently than once per 24 hours and typically have a period of less than 20 hours, and are observed in a wide range of physiological processes including hormone secretion, metabolism and brain activity
- Ultradian rhythms play an important role in regulating the secretion of hormones such as cortisol, growth hormone and melatonin, and disruptions to these rhythms have been linked to various health issues, including sleep and mood disorders
- Research has shown that optimizing ultradian rhythms through practices such as taking regular breaks throughout the day and engaging in regular physical activity may have beneficial effects on cognitive function, productivity and overall health and wellbeing
- Optimizing circadian rhythms through practices like regular sleep-wake cycles and exposure to natural light during the day may help regulate the release of these neurotransmitters and improve overall mental health and wellbeing

Additional Resources

Podcasts

- [Huberman Lab – Dr. Samer Hattar: Timing Light, Food, & Exercise for Better Sleep, Energy & Mood](#)
- [Huberman Lab – Sleep Toolkit: Tools for Optimizing Sleep & Sleep-Wake Timing](#)

Talks

- [Health lies in healthy circadian habits | Satchin Panda | TEDxBeaconStreet](#)
- [How optimizing circadian rhythms can increase healthy years | Satchin Panda | TEDxBoston](#)

Books

- [Change Your Schedule, Change Your Life by Dr. Suhas Kshirsagar and Michelle D. Seaton](#)

Lesson #4: Nutrition & hydration

Key Content Points

- Nutrition and hydration play a critical role in helping one fuel their mind and body, however, it is important to note that it is a personal experience and as such, knowing one's goals, habits and physiology can help one develop a nutritional game plan that best supports their needs
- General dietary guidelines recommend following a healthy eating pattern over time to support a healthy body weight and decrease risk of chronic conditions, which includes fruits, vegetables, grains, healthy oils, protein and dairy, and limits added sugars, saturated fats and sodium
- Macronutrients can be broken down into carbohydrates, proteins and fats
 - Carbohydrates play an important role in supplying the brain and working muscles with energy, preventing muscle-breakdown after exercise and helping support digestion by providing fiber. While one's goals and duration and intensity of physical activity will influence how many carbohydrates to consume, it is recommended to choose minimally processed foods and whole grains
 - Protein plays an important role in optimizing metabolic adaptation, helping build muscle tissue and supporting one's immune system. Recommended general intake for athletes is 1.2-2.0 grams per kg of body weight
 - Fats play an important role in protecting the mind and body as they contain powerful nutrients for cellular repair of skin, joints, hair and organs. Since they release slowly, they keep one satiated over time by regulating blood sugar and keeping energy levels stable
 - Intake of Omega-3 fatty acids is recommended to help boost brain power, cognitive function, focus and memory, lower inflammation and support recovery
- Hydration provides many benefits for performance, including increasing energy, improving agility, movement and recovery, and supporting mental clarity. Recommended daily intake (starting with water first, then sports drinks) is 1/2-1 ounces per pound of total body weight
- Micronutrients, such as those found in fruits and vegetables, play an important role in disease presentation and provide the body with natural vitamins, minerals and antioxidants for support. Overall, it is recommended to eat a diverse diet consisting of a variety of colourful foods, which can be done by having 3+ colours on each plate! This includes herbs and spices!
- One can increase their colour quotient by eating the following foods for optimal brain and body benefits:
 - Yellow foods to optimize brain function, such as yellow pears, squash and yellow peppers;
 - Green to rejuvenate bones and muscles, such as avocados, broccoli, and kiwi;
 - Orange to support skin and muscle tissues, such as apricots, nectarines and carrots;

- White to enhance one's immune system, such as garlic, ginger and onions;
- Red to support heart health, such as cherries, beets and tomatoes; and
- Purple to promote microcirculation, such as blackberries, cabbage and eggplant
- While there exist general nutrition and hydration recommendations, it is important to remember that food is more than nutrients for the body and finding a healthy balance with food in which one eats healthy 80% of the time can contribute to wellbeing over the long term

Additional Resources

Podcasts

- [MindPump Podcast – Jason Phillips](#)
- [Huberman Lab – Nutrients for Brain Health & Performance](#)
- [Huberman Lab – Dr. Andy Galpin](#)

Talks

- [Practical Nutrition Application | Jason Phillips | Talks at Google](#)
- [All In Nutrition | Jason Phillips | Talks at Google](#)

Books

- [Genius Foods by Max Lugavere](#)
- [Food by Mark Hyman, MD](#)

Lesson #5: Movement

Key Content Points

- The benefits of exercise extend beyond improving one's physical health, since by evolution, human brains are hardwired to derive happiness, meaning, and a sense of belonging from physical activity – especially if that physical activity takes place to music, in nature, or alongside others
- Exercise has many positive impacts on the brain, including:
 - It boosts brain function, such as enhancing cognitive function;
 - It promotes neuroplasticity;
 - It reduces stress and anxiety;
 - It improves mood and helps fight depression;
 - It enhances creativity and improves problem-solving abilities;
 - It improves attention and focus; and
 - It enhances learning and academic performance.
- At the neurochemical level, the impacts of exercise on the brain include:
 - The release of endorphins which contribute to improved mood and overall wellbeing;
 - Increased dopamine levels which can enhance motivation and reward sensitivity;
 - Increased serotonin levels which can alleviate symptoms of depression and anxiety;
 - Production of brain-derived neurotrophic factor, a protein involved in neuroplasticity, learning, and memory; and
 - Reduced levels of stress hormones, such as cortisol
- Different types of exercise include:
 - Aerobic exercise of moderate-to-vigorous intensity, such as brisk walking, jogging, cycling, or swimming, recommended for around 30 minutes per session, for a total of 150 minutes per week;
 - High-intensity interval training (HIIT) or short bursts of intense exercise followed by brief recovery periods, recommended for 10 to 30 minutes, including warm-up and cool-down periods;
 - Resistance training or using weights or resistance bands, recommended for two to three sessions per week, targeting major muscle groups;
 - Mind-body exercises such as yoga, tai chi, and pilates, recommended for two to three times per week; and
 - Outdoor and nature-based exercise such as exercising in natural environments
- Benefits of yoga on health and well-being include:
 - Reduced stress levels and a promoted a sense of relaxation and calmness;
 - Improved flexibility and strength, and enhanced balance, posture, and muscular endurance;

- Enhanced mental well-being, such as improved mood and increased feelings of self-compassion;
- Better sleep quality; and
- Enhanced body awareness, mind-body connection, self-reflection, and overall mindfulness
- Walking is a simple yet effective form of physical activity that can have various positive impacts on health and well-being, including:
 - Improved cardiovascular fitness by increasing heart rate, improving blood circulation, and lowering the risk of cardiovascular diseases;
 - Weight management by helping burn calories, increase metabolism, and reduce body fat;
 - Reduce symptoms of depression, anxiety, and stress, while promoting feelings of relaxation, improved mood, and overall psychological well-being;
 - Improved bone health; and
 - Improved longevity and reduced mortality rates

Additional Resources

Podcasts:

- [Rich Roll Podcast – Movement Makes Us Human: Kelly McGonigal, PhD](#)
- [Impact Theory – Stanford Psychologist Reveals One Change That Will Dramatically Improve Your Life](#)

Talks:

- [Why Does Exercise Make Us Happy?](#)

Books:

- [The Joy of Movement by Kelly McGonigal, PhD](#)

Lesson #6: Active vs. passive recovery

Key Content Points

- While active recovery involves performing low-intensity exercise such as jogging to help flush out metabolic waste products and promote blood flow to the muscles, passive recovery involves resting completely or engaging in low-intensity activities such as stretching
- Active recovery can be more effective than passive recovery for reducing muscle soreness, have greater benefits for cognitive function and mood, and help clear lactate more effectively after high-intensity exercise
- Passive recovery may be more effective than active recovery for reducing inflammation and markers of muscle damage after exercise, reducing subjective feelings of fatigue after exercise and lead to faster heart rate recovery after high-intensity exercise
- Non-Directed Sleep-Related (NSDR) Imagery is the kind of rest one gets when their body is in a completely relaxed state (I.e similar to slow-wave sleep where rejuvenation occurs as growth hormone repairs muscle, initiates new tissue growth and bolsters cognitive performance) while their mind is still active and aims to help one achieve the recuperative level of deep rest they may have missed from the previous night's sleep
- One can enter NSDR in the following ways:
 - Yoga Nidra, a form of guided meditation that yields a state of deep relaxation between sleep and wakefulness; and
 - Hypnosis, where one engages in a deeper, detached state of consciousness
- Reported health benefits of NSDR include memory retention, stress relief, improved sleep quality, and increased focus and clarity, and can be practiced before bedtime to promote relaxation and sleep
- Other examples of active recovery include:
 - Yoga, recommended to be practiced in a quiet, calm and distraction-free environment and at the style or sequence that is appropriate for one's fitness and skill level and focuses on relaxation and stress relief;
 - Meditation, which involves training the mind to focus on the present moment without judgment or distraction to help improve mental clarity, reduce stress and anxiety, and promote relaxation;
 - Cold exposure, which can be started with brief exposure such as in a cold shower and gradually increasing duration and intensity of exposure as your body becomes more accustomed to it;
 - Breath, which is a powerful tool for managing stress and improving overall health and wellbeing by practicing various breathwork techniques to help one regulate their nervous system and promote relaxation, focus and mental clarity; and
 - Sauna
- A regular meditation practice has been shown to have a range of benefits including improved attention and focus, increased emotional regulation, reduced inflammation,

improved immune function, and reduced symptoms of anxiety and depression, and is a simple yet powerful tool to help one cultivate greater awareness enhance their overall wellbeing

- A minimum effective dose of meditation is 5-10 minutes per day, which can be gradually increased over time as one becomes more comfortable with the practice
- Resonance breathing is a breathing technique that involves breathing at a specific rate of around 6 breaths per minute to stimulate the parasympathetic nervous system and promote relaxation, with research showing that athletes who practiced this technique for 10-20 minutes per day could improve their heart rate variability and recover more quickly from intense training or competition

Additional Resources

Podcasts

- [Hanu Health Podcast – Dr. Leah Lagos](#)
- [Huberman Lab – Sam Harris](#)
- [Huberman Lab – Dr. Andy Galpin: Maximize Recovery to Achieve Fitness & Performance Goals](#)
- [Huberman Lab – Supercharge Exercise Performance & Recovery with Cooling](#)
- [Huberman Lab – How Meditation Works & Science-Based Effective Meditations](#)

Talks

- [The Practice of Yoga Nidra to Improve Your Sleep and Stress | Dr. Andrew Huberman](#)
- [How to Know If You Need a Rest Day | Dr. Andy Galpin & Dr. Andrew Huberman](#)
- [Sam Harris: Mindfulness is Powerful, But Keep Religion Out of It | Big Think](#)

Books

- [Heart Brain Mind by Leah Lagos](#)
- [Waking Up by Sam Harris](#)

Lesson #7: Cold and heat exposure

Key Content Points

- Cold exposure has the following impact on wellbeing:
 - Reduced inflammation, which can help with recovery after exercise or injury;
 - Improved circulation, as blood vessels constrict which can promote healing;
 - Enhanced immune function, due to increased production of white blood cells;
 - Improved mental performance; and
 - Mental health benefits such as improvements in mood, reduced stress levels and increased resilience
- Deliberate cold exposure has a very powerful effect on the release of dopamine in one's body and can continue to make one feel good after they leave the cold environment and contribute to mood, focus and mental clarity, as the quality of stress caused by deliberate cold exposure is one of "eustress" – which is a deliberate stress that has a positive effect on the body and leads to minimum increases in cortisol
- As a rule of thumb, one's cold exposure depends on their cold tolerance and core metabolism among other features, and the environment should be uncomfortably cold, but such that one can stay in it safely, either via cold shower or cold-water immersion
- A total of 11 minutes a week of brief (1-3 minute) cold exposure at very cold temperatures (35-45F) or long (30-60 minutes) cold exposure at more moderate temperatures (55-60F) is enough to reap benefits
- Cold exposure should be performed during the following:
 - Early in the day as the body's baseline temperature is lowest about 2 hours before wake up and naturally increases in the morning and throughout the day, and such doing it early will further increase one's core body temperature which is associated with wakefulness and the ability to be alert throughout the day;
 - In shorter durations after training to improve outcomes in terms of reducing soreness and improving training efficacy; and
 - Avoided 4-6 hours after strength training
- Heat exposure has the following impacts on wellbeing:
 - Improved cardiovascular health, such as improvements in blood pressure and heart rate;
 - Reduced risk of chronic disease, such as dementia;
 - Enhanced exercise performance, such as reduced fatigue;
 - Improved immune function, such as reduced risk of infection; and
 - Mental health benefits, such as improvements in mood and improved sleep quality
- It is recommended to use sauna that is appropriate for one's fitness level and health status, to start with short sessions to allow the body to adapt to the heat, hydrating before and after sauna use, and avoiding vigorous activities or exercise immediately after

- It is recommended to perform sauna use between 80-100C or 176-212F for 5-20 minutes per session, 2-7 times per week either via wet or dry sauna, or via a hot water bath up to the neck if one does not have access to a sauna
- Sauna use can be used to increase growth hormone (which starts to diminish in early 30s) which impacts metabolism and the growth of cells and tissues in the body, responsible for tissue repair and growth spurt during puberty, and should be limited to performance 1x/week in a state without food for 2-3 hours prior for maximum growth hormone benefits
- Benefits of sauna use include:
 - Reduced risk of cardiovascular disease;
 - Reduced risk of all-cause mortality and increased longevity;
 - Lowered risk of Alzheimer's disease;
 - Improved depressive symptoms; and
 - Reduced inflammation and increased anti-inflammatory biomarkers

Additional Resources

Podcasts

- [Huberman Lab – The Science & Health Benefits of Deliberate Heat Exposure](#)
- [Huberman Lab – Using Deliberate Cold Exposure for Health and Performance](#)
- [MedCram – Sauna Benefits Deep Dive and Optimal Use with Dr. Rhonda Patrick](#)

Talks

- [The benefits of sauna | Andrew Huberman and Lex Fridman](#)
- [Deliberate Cold Exposure – How to Do it RIGHT with Dr. Andrew Huberman](#)
- [Health Benefits of Sauna Therapy & Cold Exposure with Dr. Rhonda Patrick](#)

Lesson #8: Breath

Key Content Points

- Breath is a powerful tool for managing stress across all areas of life and improving overall health and wellbeing and can be practiced using various techniques to regulate one's nervous system, promote relaxation, focus and mental clarity, and improve physical and mental resilience and performance
- Nose breathing is the most efficient and beneficial way to breathe as it filters and humidifies the air and produces nitric oxide which helps dilate blood vessels
- Helpful breathing techniques for managing stress and improving performance include:
 - Box breathing, which involves inhaling for a count of 4, holding the breath for a count of 4, exhaling for a count of 4, holding the breath for a count of 4, and repeating this for several rounds;
 - Physiological sigh, which involves taking a deep breath, holding for a few seconds, exhaling with a long, slow sigh, and repeating for several rounds; and
 - Diaphragmatic breathing, which involves breathing deeply into the belly, allowing it to expand as you inhale and contract as you exhale
- Resonance breathing involves breathing at a specific rate of breaths per minute (such as inhaling for a count of 5, exhaling for a count of 5, and repeating this for several minutes in a quiet and calm environment) and has been shown to stimulate the parasympathetic nervous system, promote relaxation and help one regulate mood and stress levels throughout the day
- Resonance breathing has been shown to increase heart rate variability, an indicator of the body's ability to adapt to stress and recover from exertion, with research showing that athletes who practiced it for 10-20 minutes per day improved their HRV and recovered more quickly from intense training or competition
- While deep breathing can downregulate arousal by activating the parasympathetic nervous system, leading to a decrease in heart rate and blood pressure and an increase in feelings of relaxation and calm, fast-paced or breath retention exercises can up regulate arousal by activating the sympathetic nervous system, leading to an increase in heart rate, blood pressure and feelings of alertness and focus
- The effects of breathwork can vary depending on the individual and the specific technique used and it is important to practice breathwork safely and under the guidance of a qualified practitioner, especially for those with respiratory or cardiovascular conditions

Additional Resources

Podcasts

- [Huberman Lab – Dr. Jack Feldman: Breathing for Mental & Physical Health & Performance](#)
- [Huberman Lab – How to Breathe Correctly for Optimal Health, Mood, Learning & Performance](#)

- [Hanu Health Podcast – Resonance Frequency](#)
- [Elite HRV Podcast – Leah Lagos](#)
- [Impact Theory – James Nestor](#)

Talks

- [Breathing Techniques to Reduce Stress and Anxiety | Dr. Andrew Huberman on the Physiological Sigh](#)
- [Shut your Mouth and Change your Life | Patrick McKeown | TEDxGalway](#)
- [Patrick McKeown – Why We Breathe: How to Improve Your Sleep, Concentration, Focus & Performance](#)
- [Breathing Exercises + James Nestor](#)

Books

- [The Oxygen Advantage](#) by Patrick McKeown
- [The Breathing Cure](#) by Patrick McKeown
- [Heart Breath Mind](#) by Leah Lagos
- [Breath](#) by James Nestor

Lesson #9: Meditation and mindfulness

Key Content Points

- Mindfulness refers to a state of being present in the moment and paying attention to one's surroundings and experiences, whereas meditation involves following a specific technique or practice such as focusing on the breath to achieve a state of relaxation, mental clarity and emotional balance
- Benefits of mindfulness include helping one become more aware of their thoughts, feelings and physical sensations in the present moment and increase self-awareness, reduce stress and anxiety by promoting non-judgemental acceptance of one's experiences, improving one's attention and focus, enhancing creativity and problem-solving, improving relationships by promoting empathy and compassion, and improving the mind-body connection by increasing awareness of bodily sensations and reducing disassociation from the body to lead to a greater sense of embodiment and improved physical performance
- Mindfulness can be practiced through mindful breathing, mindful movement and mindful eating, and can also be applied to one's relationships, work and social systems by cultivating a mindful perspective to create more positive and inclusive environments
- Benefits of meditation include helping one achieve a state of deep relaxation and reduced stress, reduced symptoms of depression and anxiety, enhanced sense of inner peace and wellbeing, enhanced emotional regulation, and improved cognitive function and performance
- From a neuroscience perspective, research has shown that meditation can increase the thickness of certain regions of the brain's cortex involved in attention, emotion regulation and decision-making, and has been found to reduce activity in the amygdala, a region of the brain involved in fear and stress response
- Practicing mindfulness involves the following:
 - Be present, by paying attention to one's environment without judgement;
 - Be curious, by approaching one's experience with a sense of openness and exploring new perspectives;
 - Challenge assumptions, by questioning preconceptions,
 - Engage with the environment, by participating fully in one's experience and exploring new possibilities;
 - Practice self-reflection, by being honest with oneself; and
 - Be mindful in daily life, by paying attention to each present moment
- One can practice meditation by finding a quiet and comfortable place to sit or lie down where they won't be disturbed, choosing a specific object of meditation, such as the breath or a mantra, and focusing one's attention on it, gently redirecting attention back to it whenever the mind wanders, and practicing regularly to develop one's practice and reap its benefits
- Common types of meditation include:

- Mindfulness meditation, which involves cultivating a non-judgemental awareness of one's thoughts and experiences in the present moment;
- Loving-Kindness meditation, which involves cultivating feelings of love, compassion, and kindness towards oneself and others; and
- Transcendental meditation, which involves the use of a mantra to achieve a state of deep relaxation and transcendence

Additional Resources

Podcasts

- [Talking About Transforming Mindlessness to Mindfulness with Harvard's Ellen Langer](#)
- [How to Live in the Moment—How to Build a Happy Life, Ep. 4, with Dr. Ellen Langer](#)
- [Huberman Lab – Sam Harris](#)
- [Huberman Lab – How Meditation Works](#)
- [MindfulNEWS – Daniel Goleman](#)

Talks

- [Ellen Langer: Mindfulness over matter](#)
- [Sam Harris: Mindfulness is Powerful, But Keep Religion Out of It | Big Think](#)
- [Altered Traits | Dr. Daniel Goleman + More | Talks at Google](#)

Books

- [Power of Mindful Learning by Ellen Langer](#)
- [Mindfulness by Ellen Langer](#)
- [The Mindful Body by Ellen Langer](#)
- [Waking Up by Sam Harris](#)
- [Altered Traits by Daniel Goleman & Richard Davidson](#)

Lesson #10: Tools for measuring

Key Content Points

- The Quantified Self refers to self-tracking, such as through the use of wearables, as a powerful tool for receiving personalized feedback, promoting behavior change and ultimately improving one's health and wellbeing through enhances self-awareness and self-efficacy
- Research shows that self-tracking contributed to benefits, including increased physical activity, improved sleep quality, better management of chronic conditions such as diabetes and hypertension, increased motivation, and greater likelihood to achieve one's goals
- Biofeedback refers to a wide range of methods used to monitor and measure what is happening in one's body (such as breathing, heart rate, brain waves, etc.) to gain insights about how one's body responds to different stressors and challenges, and use this feedback to learn how to develop greater self-control over those reactions
- Biofeedback modalities include:
 - Cardiovascular or heart rate feedback, which measure heart activity using beats per minute;
 - Muscle or surface electromyographic feedback, which measures muscle activity in microvolts;
 - Temperature or thermal feedback, which measures skin temperature as an indication of peripheral blood flow;
 - Blood pressure, which measures the force exerted by circulating blood on the walls of blood vessels; and
 - Respiration feedback, which measures the number of breaths taken within a set amount of time
- Biofeedback devices can provide amazing benefits to individuals struggling with stress, anxiety, depression and other ailments, and some examples of devices currently on the market include:
 - HeartMath Inner Balance Trainer, to help one restore their emotional wellbeing in the moment by learning how to synchronize their heart, mind and body through HRV coherence feedback, guided meditations and real-time coaching tips;
 - Apollo Wearable (for the ankle or wrist) which uses touch therapy to improve one's resilience to stress and transition into a calmer and more balanced state by signaling safety to the body through the use of gentle vibrations; and
 - WHOOP Band, a 24/7 hour wearable which tracks body metrics from sleep to stress to daily strain to help one optimize their day in a personalized matter that meets their individual needs
 - Oura Ring
- Heart Rate Variability (HRV) is an indicator of the body's ability to regulate its autonomic nervous system (ANS), which controls many of the body's automatic functions such as heart rate, breathing, digestion, and stress response and HRV trackers provide real-time

feedback on one's HRV, allowing them to learn how to regulate their ANS and improve their overall health and wellbeing

- Benefits of using HRV trackers include:
 - Stress management, to help one manage stress by providing feedback on their ANS responses to stressors so they can reduce stress levels and improve their resilience to future stressors;
 - Improved physical performance, to help athletes optimize their physical performance by providing feedback on their ANS responses during exercise, so they can improve their endurance, accuracy, and overall performance;
 - Better sleep, to help one improve their sleep quality by providing feedback on their ANS responses during sleep, so they can reduce sleep disturbances and improve the duration and quality of their sleep;
 - Enhanced mental focus, to help one improve their mental focus by providing feedback on their ANS responses during cognitive tasks, so they can improve their attention, memory, and decision-making abilities; and
 - Improved overall health, to help one improve their overall health by providing feedback on their ANS responses to various stimuli, so they can improve their cardiovascular health, immune function, and other aspects of their health
- While the effectiveness of HRV biofeedback interventions for enhancing athletic performance have been inconsistent, several studies have shown for it to have positive impacts on psychological measures such as self-esteem and self-efficacy and be a valuable tool for reducing anxiety

Additional Resources

Podcasts

- [Physique Development Podcast – Biofeedback](#)
- [Performance Nutrition Podcast – Biofeedback, Mindfulness & How Emotions Drive Behaviour](#)
- [Dr. Inna Khazan Talks HRV & Biofeedback](#)

Talks

- [How HRV Training Can Boost Your Performance and Well-being – Recommended Resources – Tim Ferriss](#)
- [Heart Rate Variability: Harnessing Your Own Personal Superpower | Inna Khazan | TEDxBostonCollege](#)

Books

- [Biofeedback and Mindfulness in Everyday Life by Inna Khazan, PhD](#)

Chapter 5: Building an antifragile environment (Outside In)

Lesson #1: Fireflies & network effects

Key Content Points

- The phenomenon of fireflies glowing in sync with one another provides a good metaphor of the network effect in action; in synchronizing their flashes by responding to the flashes of their neighbors, fireflies create a coordinated display of flashing which has been found to impact the behavior of other animals in the ecosystem, such as bats, who have a harder time locating the fireflies amidst the synchronized flashing, thus providing a survival advantage to the fireflies
- In psychology, the network effect is related to the concept of social networks which has been shown to impact one's behavior, emotional state and wellbeing; when one person engages in a positive behavior, it can influence others to engage in the same behavior, creating a chain of positive actions and attitudes (e.g. one's social network engages in healthy behaviors such as eating well and exercising, an individual is likely to adopt those behaviors as well)
- The firefly effect is based on the concept of entrainment, in which the rhythmic activity of one system synchronizes with the rhythmic activity of another system; in humans, entrainment is believed to play a role in social bonding by contributing to a sense of social connectedness and cooperations when individuals engage in activities together, such as singing and dancing
- Research has shown that positive social interactions can activate regions of the brain associated with reward and motivation, thus leading to increased feelings of wellbeing and social bonding

Additional Resources

Podcasts

- [The Jordan Harbinger Show – Nicholas Christakis](#)
- [Policy Punchline Podcast – Nicholas Christakis](#)
- [NPR – Exploring how we connect and what it means](#)

Talks

- [The hidden influence of social networks – Nicholas Christakis](#)

- [Power of networks – James Fowler](#)
- [Connected: The Surprising Power of Our Social Networks and How They Shape Our Lives](#)

Books

- [Connected](#) by Nicholas Christakis & James Fowler
- [Big Potential](#) by Shawn Achor

Lesson #2: Relationships 101

Key Content Points

- Positive social connections are vital to one's well-being and contribute to one's physical, mental and emotional health
- Positive social connections provide many benefits to individuals, including: helping to cope with stress and adversity, increase one's positive emotions, enhance one's ability to problem-solve and engage in productive behaviors, promote optimism, reduce stress, promote a sense of purpose and meaning in life, and promote personal growth and development by providing opportunities for feedback and support
- Different categories of relationships can have unique effects on wellbeing, resilience, and performance:
 - Family relationships, categorized by warmth, support and responsiveness, contribute to better mental health outcomes;
 - Positive friendships can provide social support, encouragement and positive feedback, thus enhancing one's sense of belonging;
 - Positive relationships with teams and colleagues provide collaborative and supportive work environments and can promote creativity, innovation and job satisfaction;
 - Positive communities can help promote a sense of purpose and provide opportunities for personal development; and
 - Positive intimate relationships contribute to better mental health outcomes, higher levels of life satisfaction and better physical health
- Social support and encouragement can promote self-efficacy, one's belief in their ability to successfully perform a specific task or achieve a particular goal, higher levels of which as associated with better performance outcomes and greater resilience in the face of challenges
 - Modeling, or observing others successfully perform a task or achieve a goal, can also increase self-efficacy by providing one with opportunities to observe and learn from others
- Social learning theory emphasizes the role of social support and relationships in shaping behavior and promoting learning; through observation, modeling, feedback and reinforcement, one can learn new skills and behaviors that lead to improved performance and wellbeing
- The Four Horsemen, or negative communication patterns, predictive of relationship problems are:
 - Criticism, which involves attacking one's character or personality instead of addressing specific behaviors or actions;
 - Contempt, which involves communicating disrespect and disdain;
 - Defensiveness, which involves reacting to feedback or criticism by making excuses, placing blame, or denying responsibility; and

- Stonewalling, which involves withdrawing from a conversation and refusing to engage

Additional Resources

Podcasts

- [Ten Percent Happier – Barbara Fredrickson](#)
- [John Gottman - How to Build Trust and Positive Energy in Your Relationship](#)
- [Rethinking Podcast – The science of healthy relationships with John and Julie Gottman](#)
- [The Talent Grow Show – Shelly Gable](#)

Talks

- [Barbara Fredrickson: How Love and Connection Exist in Micro-Moments](#)
- [The science of love | John Gottman](#)
- [Four Horseman of the Apocalypse](#)
- [Making marriage work | John Gottman](#)

Books

- [Love 2.0 by Barbara Fredrickson](#)
- [The Seven Principles for Making Marriage Work by John Gottman and Nan Silver](#)
- [Eight Dates by John Gottman, Julie Gottman, Doug Abrams & Rachel Abrams](#)
- [What Makes Love Last by John Gottman and Nan Silver](#)
- [Attachment Theory in Practice by Susan M. Johnson](#)
- [The Practice of Emotionally Focused Couples Therapy by Susan M. Johnson](#)

Lesson #3: Loneliness & belonging

Key Content Points

- Loneliness is a subjective experience in which one lacks meaningful social relationships and connections and feels like being stranded, abandoned or cut off from the people with whom they belong, whereas social isolation refers to the objective absence of social connections
- Symptoms of chronic loneliness include:
 - Difficulty connecting with others in a deep and authentic way;
 - Knowing many people, but not having a close or best friend;
 - Feeling as though no one “gets” you;
 - Feeling lonely even in the presence of others;
 - Self-doubt and a lack of self-worth; and
 - A sense of fatigue and languishing
- Strong social support networks and positive relationships contribute to a sense of belonging, wellbeing and resilience
- Strategies for overcoming loneliness include:
 - Fostering social connections by actively seeking opportunities to connect with others;
 - Strengthening existing relationships by investing time and effort in nurturing them;
 - Practicing effective communication to express oneself clearly with others;
 - Seeking support from peer groups;
 - Joining social or interest groups such as engaging in extracurricular activities;
 - Contributing to the community by volunteering or engaging in acts of kindness;
 - Engaging in movement with others such as taking a dance class or going on a walk;
 - Participating in collaborative projects that encourage teamwork and cooperation;
 - Using technology purposefully; and
 - Seeking professional support

Additional Resources

Podcasts:

- [House Calls with Dr. Vivek Murthy | Episode 15 \(Part 1\): Why Do Friendships Matter?](#)
- [The Aspen Institute – The Healing Power of Human Connection in a Sometimes Lonely World](#)

Talks:

- [House Calls with Dr. Vivek Murthy | You’re Not Alone in Feeling Lonely](#)
- [RSA Short | Vivek Murthy on Loneliness and the Power of Connection](#)

- [The lethality of loneliness: John Cacioppo at TEDxDesMoines](#)
- [John Cacioppo on How to Cope with Loneliness | Big Think](#)

Books:

- [Together: The Healing Power of Human Connection in a Sometimes Lonely World by Vivek H. Murthy, MD](#)
- [Loneliness: Human Nature and the Need for Social Connection by John Cacioppo & William Patrick](#)

Other:

- [Our Epidemic of Loneliness and Isolation 2023 | The U.S. Surgeon General's Advisory on the Healing Effects of Social Connection and Community](#)

Lesson #4: Pygmalion effect & self-efficacy

Key Content Points

- The Pygmalion Effect is based on the idea that expectations can influence one's performance, in which higher expectations of an individual lead to an increase in their performance, whereas if they are expected to perform poorly, they are more likely to do so
- It is important to stay mindful of the following as it relates to the Pygmalion Effect:
 - It is based on perception – if a teacher believes their student has the potential to perform well, they are more likely to give them opportunities to do so, which in turn can improve performance;
 - It can be self-fulfilling – if one believes they can perform well, they are more likely to put in effort and perform well;
 - It can occur unconsciously – one can have higher expectations of others without realizing it, which can lead to a difference in performance; and
 - It can have long-term consequences – if one is constantly given opportunities to perform well and is praised for their achievements, they are more likely to develop a positive self-image and a sense of self-efficacy
- It is important to acknowledge that the original study finding evidence of the Pygmalion Effect in the classroom has been subject to the replication crisis, in which subsequent attempts to replicate the student yielded mixed results; nevertheless, it also provides an opportunity for researchers to conduct more rigorous studies to explore the phenomenon
- Self-efficacy is one's belief in their ability to perform a specific task or achieve a particular goal.
- Self-efficacy is shaped by four sources of information:
 - Previous accomplishments, or past experiences of successful task performance;
 - Vicarious experiences, or observing others similar to oneself perform a task successfully;
 - Verbal persuasion, or encouragement and support from others; and
 - Physiological and emotional states, or the physical and emotional experiences associated with performing a task
- Self-efficacy is task-specific, and while higher levels are associated with greater persistence, effort and resilience in the face of challenges, lower levels are associated with decreased motivation and performance
- Research supports the idea that physiological and emotional states can impact one's self-efficacy beliefs; while anxiety and negative emotions can decrease self-efficacy, positive emotions can enhance self-efficacy, thus suggesting that managing one's emotional and physiological responses can play an important role in building and maintaining one's self-efficacy beliefs
- Research has shown that feedback can have a significant impact on one's self-efficacy beliefs and physiological responses; in one study, positive feedback led to greater HRV

recovery and higher self-efficacy beliefs compared to those who received negative feedback, suggesting that positive feedback may also have broader implications for health and wellbeing

Additional Resources

Podcasts

- [Finding Mastery Podcast – Dr. Albert Bandura](#)
- [The Strength Running Podcast – Dr. Amber Shipherd](#)

Talks

- [Albert Bandura – Self Efficacy](#)
- [Why self-efficacy matters | Mamie Morrow](#)
- [Inside the Psychologist's Studio with Albert Bandura](#)

Lesson #5: Emotional contagion

Key Content Points

- Network effects can influence behavior and decision making by shaping one's attitudes and beliefs and leading to either the adoption or rejection of particular behaviors or products, and have either positive or negative consequences on one's well-being, by either providing emotional support and a sense of belonging or contributing to stress and anxiety
- Within social networks, social contagion can lead to the spread of emotions, attitudes and behaviors and can have either positive or negative consequences such as the spread of helpful health behaviors or harmful misinformation
- Social contagion can be moderated by individual and network-level factors, such as social identity, network structure and communication channels, and can have implications for individual and collective decision-making, such as the formation of group norms or the emergence of group polarization
- Emotional contagion refers to the automatic transfer of emotions from one person to another through nonverbal connection such as facial expressions and tone of voice and can have both positive and negative effects on individuals and groups, such as increased empathy and social bonding, or the spread of negative emotions and stress; thus, it can have implications for organizational behavior such as the emotional climate of a workplace
- Behavioral contagion, or the spread of behaviors within social networks such as the adoption of new behaviors, can be influenced by a range of individual and social factors such as social identity, norms and support, and can have both positive or negative consequences, such as the spread of healthy behaviors or harmful behaviors including substance abuse
- Happiness contagion refers to the spread of positive emotions within social networks and can have both short-term and long-term effects on individual and group wellbeing, such as improved mood, increased social support and better health outcomes — research suggesting that happiness can spread up to three degrees of separation and even across geographic distance

Additional Resources

Podcasts

- [The Jordan Harbinger Show – Nicholas Christakis](#)
- [NPR – Exploring how we connect and what it means](#)
- [Wharton Ready Livecast Series Emotional Contagion with Sigal Barsade](#)
- [How Contagious Is Behavior? With Laurie Santos of "The Happiness Lab" | No Stupid Questions](#)

Talks

- [The hidden influence of social networks – Nicholas Christakis](#)
- [Power of networks – James Fowler](#)
- [Damon Centola - How Behavior Spreads: The Science of Complex Contagions](#)
- [Are Emotions Contagious in the Workplace? | Brandon Smith](#)
- [All You Need is Love ... At Work? | Sigal Barsade | Freedom at Work Talks](#)

Books

- [Connected](#) by Nicholas Christakis & James Fowler
- [How Behaviour Spreads](#) by Damon Centola
- [Change](#) by Damon Centola
- [Under the Influence](#) by Robert Frank

Key Content Points

- Behavioral contagion refers to the process by which behaviors, emotions and ideas spread through social networks, and has been shown to be linked to the spread of unhealthy habits, one study even finding that individuals were more likely to become obese if their friends or family members were obese
- Studies have shown that individuals are more likely to adopt unhealthy behaviors if their social network engages in those behaviors, if it is amplified in social media or glamorized by their peers online, or if they perceive that such behaviors are normative within their social context
- Harm reduction theory, originally emphasizing the importance of working within the social networks of drug users to promote safer behaviors and reduce harm, suggests that while social networks can facilitate the spread of unhealthy habits, they can also be leveraged for positive behavior change
- The “you are who you surround yourself with” idea suggests that one’s social connections have a profound influence on their behavior, emotions and attitudes, and thus, choosing to surround oneself with positive influences can be a powerful tool for promoting positive behavior change (e.g. one study found that individuals were more likely to engage in physical activity if their social network members were supportive of exercise)
- Social context can play an important role in habit formation and breaking, with research finding:
 - Social support – individuals who received social support from family and friends were more likely to maintain a new health behavior over a 12-week period, suggesting that social support can help one establish new habits and sustain them over time;
 - Social norms – one is more likely to adopt and maintain habits that are perceived as socially acceptable and more likely to break habits perceived as socially undesirable;
 - Social identity – individuals who identified strongly with a particular social group were more likely to adopt behaviors that were consistent with the group’s norms and values, suggesting that individuals may be more likely to maintain habits that align with their social identity;
 - Social comparison – individuals were more likely to engage in pro-environmental behaviors when told that other members of their

community were also engaging in these behaviors, suggesting that social comparison can motivate individuals to adopt and maintain habits that are consistent with the behaviors of those around them; and

- Social context – individuals were more likely to successfully break a habit when they changed their social context, suggesting that it can both facilitate and hinder habit breaking and that changing social context may be a useful strategy for breaking difficult habits
- Within office environments, studies have shown that the following contribute to distractibility:
 - Open office layouts characterized by low or no barriers between workspaces, with one study finding that open offices reported significantly lower job satisfaction and increased distractions compared to workers in private offices;
 - Noise, with one study finding that high levels of background noise in open office environments was associated with decreased task performance and increased stress levels; and
 - Social cues, with one study finding that the mere presence of other people in a workspace could increase distractibility even without direct interaction
- Ways to reduce distractibility include:
 - Personal control, with research showing that individuals who had more control over their workspace (e.g. ability to adjust the lighting or temperature) were less likely to be distracted; and
 - Breaks and socializing, with one study finding that workers who took regular breaks and engaged in socializing activities reported higher levels of job satisfaction and lower levels of stress and distractibility

Additional Resources

Podcasts

- [The Jordan Harbinger Show – Nicholas Christakis](#)
- [NPR – Exploring how we connect and what it means](#)

Talks

- [The hidden influence of social networks – Nicholas Christakis](#)
- [Power of networks – James Fowler](#)
- [Damon Centola - How Behavior Spreads: The Science of Complex Contagions](#)
- [Social Networks & Health – Thomas Valente](#)

Books

- [What Anyone Can Do](#) by Leo Bottary
- [The Power of Peers](#) by Leon Shapiro & Leo Bottary

Lesson #7: Meaning & spirituality

Key Content Points

- Meaning, which often comes from serving something larger than oneself, is a critical element of human flourishing, and allows one to experience greater levels of happiness, fulfillment, wellbeing and life satisfaction
- Meaning comprises of the following:
 - It is a personal experience and unique to each individual, therefore it is important for one to identify their own sources of meaning through self-reflection and introspection;
 - It can be found across various domains of life, such as career, relationships and spirituality;
 - It is a life-long pursuit that is dynamic and can evolve over time, and can contribute to ongoing personal growth and development through reflection and self-exploration
- While meaning refers to the subjective experience of finding significance in one's life, purpose refers to having a clear sense of direction and goals that provide motivation and direction for one's actions and decisions
- Meaning and purpose are closely related constructs, both essential for human wellbeing and flourishing, with individuals with a strong sense of purpose being more likely to experience greater levels of meaning in life and vice versa
- Meaning and purpose can be cultivated through positive experiences, such as acts of kindness, and enhanced through mindfulness practices, such as yoga, and has been shown to be associated with better mental health outcomes, such as lower levels of anxiety and depression, and greater resilience in the face of adversity
- Transcendence refers to the experiences of awe, inspiration and connectedness to something greater than one's self, and is a powerful source of meaning and purpose
- Transcendence can contribute to the following benefits:
 - Greater wellbeing, including greater levels of life satisfaction and positive emotions;
 - Greater resilience, including enhanced ability to cope with adversity;
 - Enhanced meaning and purpose;
 - Enhanced social connections, including greater social connectedness and a sense of shared identity; and
 - Greater creativity and problem-solving

- Engaging in activities that promote personal growth and exploration, such as creative expression, mindfulness and engagement with nature, can help one cultivate experiences of transcendence and develop a greater sense of self-awareness and a deeper understanding of themselves and the world around them
- Meaning and transcendence are closely related constructs, both essential for human wellbeing and flourishing, with individuals with a strong sense of meaning being more likely to experience greater levels of transcendence in life and vice versa
- Spirituality is an innate aspect of human nature and essential for optimal development and wellbeing, and is closely related to meaning, with individuals experiencing a greater sense of spirituality being more likely to experience greater levels of meaning and purpose
- Spirituality can contribute to the following benefits:
 - Enhanced mental health;
 - Greater pro social behaviour, such as acts of kindness and compassion;
 - Enhanced coping abilities, in the face of stress and adversity;
 - Greater personal growth, including greater self-awareness;
 - Greater sense of purpose;
 - Enhanced creativity, and ability to think outside the box; and
 - Enhanced cognitive abilities, including problem-solving skills and cognitive flexibility
- While spirituality is a personal and subjective experience often characterized by a focus on personal growth and development, religion involves adherence to institutionalize religious beliefs and practices and may involve a greater emphasis on tradition, ritual and community involvement
- Key differences between spirituality and religion include the following:
 - Spirituality is more inclusive;
 - Spirituality is more adaptable, often based on personal beliefs that can evolve over time;
 - Spirituality emphasizes personal exploration and internal sources of guidance and wisdom;
 - Spirituality can exist outside of religious institutions;
 - Spirituality is often characterized by a more individualistic and subjective approach;
 - Spirituality can be more spontaneous and free-flowing; and
 - Spirituality can involve a greater emphasis on universal values and principles

Additional Resources

Podcasts

- [The Psychology Podcast – Paul Wong](#)
- [The Psychology Podcast – Transcend with Scott Barry Kaufman](#)
- [Rich Roll Podcast – The Psychology of Transcendence](#)
- [Rich Roll Podcast – Lisa Miller](#)
- [The Story Box – Lisa Miller](#)

Talks

- [Flourish with Martin Seligman](#)
- [Martin Seligman – Human Flourishing](#)
- [Maslow’s hierarchy of needs: Updated for the 21st century | Scott Barry Kaufman | Big Think](#)
- [Depression and spiritual awakening – two sides of one door | Lisa Miller](#)
- [The Awakened Brain: The Neuroscience of Health, Healing, and Resilience](#)

Books

- [Flourish](#) by Martin Seligman
- [Authentic Happiness](#) by Martin Seligman
- [Transcend](#) by Scott Barry Kaufman
- [The Awakened Brain](#) by Lisa Miller

Lesson #8: Giving, altruism and purpose

Key Content Points

- Research has shown that having a sense of purpose is an important ingredient for promoting flourishing in life and can lead to positive outcomes, including: greater wellbeing and higher levels of happiness and life satisfaction, greater resilience or ability to bounce back from negative life events, and better physical health such as lower rates of chronic disease and better immune function
- Whole purpose refers to having a sense of direction and intentionality in life and tends to focus more on the future and goal-setting, meaning refers to the significance and value that individuals ascribe to their lives and tends to focus more on the present moment and subjective experiences of fulfillment
- Key differences between purpose and meaning include:
 - Purpose is more action-oriented, striving towards objectives, while meaning is more reflective, involving introspection about the larger significance of one's life experiences;
 - Purpose is more individually focused, while meaning can be influenced by social and cultural factors that shape how individuals understand the value and significance of their lives
 - Purpose tends to be more malleable and responsive to changing circumstances, while meaning tends to be more stable and enduring
- People in the workplace can be categorized into three groups with research showing that workplaces that prioritize giving tend to have higher levels of employee engagement, productivity and overall success:
 - Givers – those who prioritize the needs of others and are willing to help others without expecting anything in return, and often create a culture of generosity and collaboration;
 - Takers – those who prioritize their own needs over the needs of others and are often willing to take advantage of others to achieve their own goals; and
 - Matchers – those who strive to maintain a balance between giving and taking and seek to create an equal exchange of favours and resources with others
- Stephen Post's 10 ways of giving can help one experience greater happiness, meaning and purpose in life and include:
 - Giving money
 - Giving time

- Giving attention
- Giving appreciation
- Giving encouragement
- Giving expertise
- Giving information
- Giving forgiveness
- Giving love
- Giving prayer
- 4 types of people to give to include (1) family and friends, (2) strangers, (3) those who have helped us, and (4) those who have hurt us, with research showing that giving has the power to promote positive outcomes for both the giver and the receiver, such as deepening relationships and increasing feelings of belonging
- Altruism is a multidimensional construct that involves various motives, emotions and behaviours, and can generally be defined as a selfless concern for the wellbeing of others
- Research shows that altruism is associated with positive outcomes, including: greater wellbeing and life satisfaction, improved physical health and reduced levels of stress, increased social connectedness and sense of purpose, greater sense of meaning, and positive relationships
- Prosocial behaviour encompasses a range of behaviours aimed at benefiting others or society as a whole, such as acts of kindness, volunteering and activism, and is primarily driven by empathy and compassion, as they enable individuals to identify with the others' emotions and respond in caring and supportive ways
- Pro social behaviour is associated with a range of positive outcomes for both the giver and the receiver, including improved mental and physical health, increased happiness and life satisfaction and stronger social connections, and can be enhanced through interventions that promote empathy, compassion and pro social values, such as community programs and media campaigns

Additional Resources

Podcasts

- [Moonshots Podcast – Adam Grant](#)
- [Inside Personal Growth – Stephen Post](#)
- [Better Thinking Podcast – Dr. Paul Atkins](#)
- [The Weekend University – David Sloan Wilson](#)

Talks

- [Are you a giver or a taker? | Adam Grant](#)
- [Give and Take | Adam Grant | Talks at Google](#)
- [It's Good to be Good | Stephen Post | TEDxSBU](#)
- [The State of Prosocial World with David Sloan Wilson](#)

Books

- [Give and Take](#) by Adam Grant
- [Why Good Things Happen to Good People](#) by Stephen Post & Jill Neimark
- [Prosocial](#) by Paul Atkins, David Sloan Wilson & Steven C. Hayes

Lesson #9: Facilitative vs. unrelenting environments

Key Content Points

- A facilitative environment is characterized by a supportive and empowering atmosphere, where individuals are encouraged to explore, learn and take risks without fear of failure or punishment, whereas an unrelenting environment is characterized by a highly critical, punitive and demanding atmosphere where individuals are constantly pushed to perform at high levels without much support or guidance
- Facilitative environments are more conducive to learning, creativity and growth as they promote a sense of autonomy, competence and relatedness which are critical for motivation and engagement, whereas unrelenting environments often create a culture of fear, where individuals feel pressured to conform to expectations, and can lead to stress, burnout and lower performance
- Cultivating a facilitative environment can lead to more positive outcomes for both individuals and organizations, such as higher job satisfaction, better performance and improved overall wellbeing
- In the context of sports, facilitative or unrelenting environments can impact athletes' performance, where a facilitative environment can provide athletes with the support, resources and autonomy they need to thrive (e.g. positive feedback, clear communication, opportunities for growth and development), whereas an overly demanding and punitive unrelenting environment provides little or no support for athletes who may be struggling with performance or mental health
- Research shows that athletes who perceive their environment as facilitative are more likely to experience positive emotions, have higher levels of wellbeing and perform better than those who perceive their environment as unrelenting
- The impact of facilitative vs. unrelenting environments on athletes includes:
 - While a facilitative environment fosters a sense of autonomy and relatedness, critical for an athlete's motivation and engagement, an unrelenting environment can lead to feelings of anxiety, fear and burnout
 - While a facilitative environment promotes a growth mindset, where athletes are encouraged to embrace challenges and learn from failures, an unrelenting environment promotes a fixed mindset, where athletes may believe that their abilities are fixed and cannot be improved
 - While a facilitative environment promotes a sense of psychological safety, where athletes feel free to express their concerns and ask for help without

fear of negative consequences, an unrelenting environment can lead to a lack of trust and communication breakdown

Additional Resources

Podcasts

- [The Talent Equation Podcast – Dr. Mustafa Sarkar](#)
- [Working Professionals’ Fitness Radio – Dr. Mustafa Sarkar](#)

Talks

- [Developing Resilience: The Role of the Environment](#)
- [AASP 2018 Panel: Developing Personal and Team Resilience in Elite Sport - Research to Practice](#)

Chapter 6: Time, resistance and distraction

Lesson #1: Goals, traction and distraction

Key Content Points

- A four-step process for becoming indistractable includes:
 - Mastering internal triggers – emotional states that prompt one to take action, such as feeling anxious or bored;
 - Making time for traction – making time for activities that align with one’s values;
 - Hacking back external triggers – including technology and other external triggers that hijack one’s attention; and
 - Preventing distraction with packs – including effort packs which bundle activities together that require different levels of effort and progress packs, which involve breaking down larger tasks into smaller, more manageable steps
- Friction refers to obstacles or challenges that make it difficult for one to start or complete a task, such as inability to find one’s running shoes to exercise, whereas resistance refers to the mental and emotional barriers that prevent one from starting or completing a task, such as feelings of anxiety, fear and boredom
- By reducing friction, such as by simplifying one’s environment or automating routine tasks, and overcoming resistance by changing one’s internal dialogue and cultivating positive self-talk, one can create an environment that supports their goals and makes it easier to stay focused and productive
- The impact of distraction in today’s workplace includes:
 - Decreased productivity;
 - Increased stress and burnout;
 - Reduced creativity and innovation, as distractions can interrupt the flow of thought and make it difficult to engage in deep, focused work;
 - Negative effects on wellbeing, such as increased anxiety, decreased job satisfaction and reduced work-life balance;
 - Increased errors and accidents, as distractions can impair attention and cognitive performance;
 - Decreased work quality, as distractions may cause one to make mistakes or miss important details;
 - Disruption of teamwork and collaboration; and
 - Increased turnover and absenteeism, as workers may become dissatisfied with their jobs or feel unable to cope with the demands of their work

Additional Resources

Podcasts:

- [The Psychology Podcast – Nir Eyal](#)
- [Science of People – Nir Eyal](#)

Talks:

- [How to Become Indistractable with Nir Eyal](#)
- [Indistractable with Nir Eyal](#)
- [Surfing the Urge: How to Manage Distractions with the 10-Minute Rule | Nir Eyal, Indistractable](#)

Books:

- [Indistractable by Nir Eyal](#)

Lesson #2: Hope

Key Content Points

- Hope is a positive motivational state that involves both agency, or the belief that one can take action to achieve their goals, and pathways, or the ability to identify and pursue different strategies to achieve those goals
- Hope is related to positive outcomes, including: increased academic achievement, better physical health, greater happiness and acting as a protective factor against negative outcomes such as depression and anxiety, and can be strengthened through interventions such as goal-setting and problem-solving
- Hope involves the following components:
 - Pathways thinking – grounded in creativity, flexibility and adaptability, the process of generating multiple potential routes towards achieving a goal, with individuals high in pathways thinking more likely to persevere in the face of setback and find alternative ways to reach their goals; and
 - Agency thinking – grounded in self-motivation, self-regulation and a sense of control over one’s environment, the process of setting goals and taking action towards them, with individuals high in agency thinking more likely to take proactive steps towards their goals and persist in the face of challenge
- Key differences between hope and optimism include:
 - Hope is more goal-directed and focused, while optimism is more general;
 - Hope involves both cognitive and behavioral processes such as setting goals, creating plans to achieve them and taking action towards those goals, Hope is more flexible than optimism as it involves identifying multiple pathways to achieving goals; and
 - Hope is more strongly related to resilience, with research suggesting it may be a more powerful resource for coping with stress and adversity

Additional Resources

Podcasts:

- [The Psychology Podcast – Shane Lopez](#)
- [Live Happy Now – Shane Lopez](#)

Talks:

- [Shane Lopez | Hope | Gallup](#)
- [The Importance of Hope with Shane Lopez](#)

Books:

- [Making Hope Happen by Shane Lopez](#)

Lesson #3: Discipline (self-control)

Key Content Points

- Willpower is a form of energy and finite resource that can be depleted by overuse, impaired by sleep deprivation, stress and anxiety, and undermined by feelings of guilt and shame
- Willpower can be replenished through the following ways:
 - Positive emotions such as awe and compassion which can help one make better decisions;
 - Rest, nutrition, exercise, and mindfulness meditation;
 - Social support and connection;
 - Goal-setting to help one stay focused and motivated;
 - Habits to conserve willpower; and
 - Cultivating a growth mindset that views setbacks and failures as opportunities to learn and grow
- Self-regulation is a lifelong journey that can lead to greater wellbeing, resilience and success across all areas of life and can be developed in the following ways:
 - Grit, or perseverance and passion for long-term goals;
 - Self-compassion and mindfulness;
 - Adopting a growth mindset;
 - Cognitive behavioral therapy; and
 - Physical exercise
- Ego-depletion, the idea that willpower is a limited resource that can be depleted over time, has been called into question by recent research after many studies on willpower and self-control fell under the replication crisis and were not replicable to real-world situations
- Instead, it may be one's beliefs about willpower that influence their ability to resist temptation and an alternative theory of self-control based on emotion regulation has been proposed by Nir Eyal which suggests that one can use strategies such as cognitive reappraisal, acceptance and mindfulness to manage emotions and avoid getting distracted
- Techniques for developing self-regulation in the sports context include:
 - Goal-setting, by helping athletes focus their attention, regulate their effort and energy, and maintain motivation and commitment over time;
 - Self-talk, by helping athletes regulate their emotions, boost their confidence and self-efficiency, and enhance their performance under pressure;
 - Imagery, by creating vivid mental representations of desired outcomes to enhance focus and reduce anxiety;
 - Relaxation techniques, to manage stress, reduce muscle tension, and improve ability to focus;
 - Mindfulness meditation, to improve attention, emotional regulation and overall well-being;
 - Biofeedback training, to help athletes monitor and regulate physiological responses to stress and anxiety;
 - Attentional focus, such as narrowing one's focus on a specific target to regulate attention and improve performance under pressure; and
 - Sleep hygiene, to help regulate emotions, reduce stress and improve cognitive and physical performance

Additional Resources

Podcasts:

- [Kelly McGonigal: The Willpower Instinct](#)
- [The Psychology Podcast – Roy Baumeister, PhD](#)
- [The Wellbeing Lab – Roy Baumeister](#)
- [Take the Lead Radio – Nir Eyal](#)

Talks:

- [The Willpower Instinct | Kelly McGonigal | Talks at Google](#)
- [The Science of Willpower: Kelly McGonigal at TEDxBayArea](#)
- [Willpower: Rediscovering the Greatest Human Strength](#)
- [Is Willpower a Finite Resource? The Truth About Ego Depletion Theory](#)

Books:

- [Indistractable by Nir Eyal](#)
- [The Willpower Instinct by Kelly McGonigal](#)
- [Willpower by Roy Baumeister & John Tierney](#)
- [Mindset by Carol Dweck](#)

Lesson #4: Resistance

Key Content Points

- Distractions can significantly disrupt productivity and thus, it is important for one to develop strategies to manage and reduce them to improve productivity and wellbeing
- Major sources of distractions include:
 - Technology, such as digital devices and communication tools;
 - Social media, such as notifications and updates;
 - Context-switching and multi-tasking, such as switching between tasks;
 - Interruptions, which can impact cognitive performance and lead to a longer recovery time
- Newport's 5 keys to dealing with distraction include:
 - Identifying the root cause of distraction, such as boredom, anxiety, or a lack of clear priorities;
 - Eliminating digital clutter, such as reducing the number of apps and notifications one uses;
 - Practicing deep work, which refers to focusing intensely on a single task or project for an extended period of time, free from distraction;
 - Scheduling time for shallow work, or tasks that require less cognitive effort, such as answering emails or attending meetings; and
 - Embracing boredom, by understanding it is a natural part of the creative process
- Our brains are wired to conserve energy and prioritize efficiency in order to ensure survival, and as a result, we are more likely to resist activities that require a significant amount of cognitive or physical effort, even if we value them or believe they are important
- Strategies for overcoming the evolutionary tendency to conserve energy and achieve one's goals, include:
 - Reducing cognitive and physical barriers, such as breaking tasks down into smaller steps or reducing the time or effort required to complete a task;
 - Using implementation intentions, or creating specific plans for when and where to engage in a task;
 - Making changes in perceived effort, such as reducing the number of steps required to complete a task;
 - Finding a sense of meaning and purpose in a task;
 - Monitoring and tracking progress, to increase motivation and provide feedback on one's efforts; and
 - Practicing self-compassion, or recognizing and accepting one's limitations to reduce negative self-talk and increase motivation

Additional Resources

Podcasts:

- [Modern Wisdom Podcast – Dr. Gloria Mark](#)
- [Flow Research Collective Radio – Adam Gazzaley](#)
- [Kwik Brain Podcast – Adam Gazzaley](#)
- [NPR – The Myth of Multitasking](#)
- [Lex Fridman Podcast – Cal Newport](#)

Talks:

- [Gloria Mark | Attention Span | Talks at Google](#)
- [The Distracted Mind: Ancient Brains in a High Tech World](#)
- [Are You Multitasking Your Life Away? Cliff Nass at TEDxStanford](#)
- [Cal Newport – Deep Work](#)
- [Quit social media | Dr. Cal Newport | TEDxTysons](#)

Books:

- [Attention Span by Gloria Mark](#)
- [The Distracted Mind by Adam Gazzaley & Larry Rosen](#)
- [The Myth of Multitasking by Dave Crenshaw](#)
- [Deep Work by Cal Newport](#)
- [Alone Together by Sherry Turkle](#)

Lesson #5: Cognitive load and decision fatigue

Key Content Points

- Cognitive load refers to the amount of mental effort required to process information and perform a task and can be influenced by a variety of factors, such as the complexity of the task, the amount of information being presented, and the learner’s prior knowledge and working memory capacity, and in the case of high cognitive load can lead to cognitive overload and impair learning and performance, while in the case of low cognitive load, may not provide sufficient challenge to promote learning
- High cognitive load requires mental effort and attention and can contribute to (1) decision fatigue which reduces self control and may lead to impulsive behaviors, procrastination and reduced quality of decision-making, and (2) cognitive overload, which can result in diminished performance in complex tasks, leading to errors, reduced efficiency and decreased learning outcomes
- Strategies for reducing cognitive load include:
 - Practicing self-care;
 - Taking breaks to replenish self-control resources; and
 - Practicing mindfulness meditation to improve cognitive function and wellbeing
- Decision fatigue refers to the deterioration in decision-making quality and self-control that occurs after a period of decision-making and can be influenced by factors, including the complexity of the decisions being made, the context in which decisions are made and the presence of other cognitive demands, and be exasperated by external factors such as stress and distractions
- High levels of decision fatigue can lead to decreased ability to make rational decisions, increased susceptibility to biases and a higher likelihood of making impulsive or emotionally-driven decisions as decision-making and self-control are interconnected
- Strategies for reducing decision fatigue include:
 - Self-care activities, such as adequate sleep, healthy eating and exercise;
 - External decision supports, such as calendars and reminders;
 - Managing cognitive load, such as by prioritizing tasks or breaking down tasks into smaller components;
 - Taking breaks;
 - Planning ahead;
 - Using heuristics;
 - Delegating decisions to others;
 - Relaxation techniques; and
 - Practicing mindfulness

Additional Resources

Podcasts:

- [Why Self-Control is Important for Success](#)
- [Dan Ariely On The Science Of Motivation](#)
- [The Arena – Baba Shiv](#)

Talks:

- [John Sweller - ACE Conference/researchED Melbourne](#)
- [Dan Ariely – Are we in control of our own decisions?](#)
- [Before You Know It: The Unconscious Reasons We Do What We Do | John Bargh | Talks at Google](#)
- [Baba Shiv: How to Make Better Decisions](#)

Books:

- [Predictably Irrational by Dan Ariely](#)
- [Before You Know It by John Bargh](#)

Lesson #6: Burnout

Key Content Points

- Burnout is an individual response to chronic work stress that develops over time and can eventually become chronic, causing health alterations, and is typically composed of three dimensions:
 - Exhaustion, or feeling emotionally drained, depleted and lacking energy;
 - Depersonalization, or developing negative, cynical or detached attitudes towards work, colleagues or clients; and
 - Reduced personal accomplishment, or experiencing a decreased sense of competence and productivity
- Negative job related outcomes of burnout include:
 - Decreased job satisfaction;
 - Higher turnover intentions;
 - Reduced work performance; and
 - Increased absenteeism
- Negative physical health outcomes of burnout include:
 - Increased risk of cardiovascular disease;
 - Higher prevalence of musculoskeletal pain; and
 - Weakened immune system
- Negative mental health outcomes of burnout include:
 - Increased risk of developing health disorders such as depression and anxiety;
 - Increased levels of emotional distress; and
 - Impaired cognitive function
- Negative social and interpersonal outcomes of burnout include:
 - Strained relationships with colleagues, friends and family members;
 - Decreased empathy and compassion towards others;
 - Increased conflict and negative interactions
- General causes of burnout in the workplace include:
 - High job demands and excessive workload;
 - Limited autonomy and decision-making authority;
 - A negative work environment;
 - A work-life imbalance;
 - Misalignment between personal values and values promoted in the work setting;
 - Conflicting roles and unclear expectations; and
 - Perceived inequity, injustice and unfair treatment
- General causes of burnout in college-aged students include:
 - Intensive coursework and the pressure for excel academically;
 - Unrealistic expectations and a fear of failure;
 - Limited social connections and feeling isolated;

- Financial pressures such as tuition fees;
- Difficulties managing academic responsibilities with extracurricular activities and other commitments;
- Irregular sleep patterns and poor self-care habits; and
- Challenges associated with transitioning to college life and adapting to a new environment
- The Maslach Burnout Inventory is a widely-used tool for assessing burnout and consists of three subscales of multiple statements to which individuals respond to:
 - Emotional Exhaustion, which assesses feelings of being emotional overextended and depleted;
 - Depersonalization, which captures one's negative and detached response towards others; and
 - Personal Accomplishment, which evaluates one's perceived competence and successful achievement in their work or studies
- Six early predictors of burnout in the workplace include:
 - Workload, when one's job demands exceed their human limits;
 - Control, when does not have autonomy over their work and feels micromanaged;
 - Reward, when there is insufficient reward such as lack of recognition;
 - Community, when there in a lack of support from one's supervisor;
 - Fairness, when there is a lack of reciprocity or imbalanced social exchange processes; and
 - Values, when there is a conflict between personal and organizational values
- Questions one can ask to assess if they are on a trajectory toward burnout include:
 - Have you become cynical or critical at work?
 - Do you drag yourself to work and have trouble getting started?
 - Have you become irritable or impatient with co-workers, customers or clients?
 - Do you lack the energy to be consistently productive?
 - Do you find it hard to concentrate?
 - Do you lack satisfaction from your achievements?
 - Are you using food, drugs or alcohol to feel better or to simply not feel?
 - Have your sleep habits changed?
- Strategies for addressing burnout include:
 - Prioritizing self-care activities such as excessive and adequate sleep;
 - Establishing clear boundaries between work and personal life;
 - Engaging in mindfulness or meditation practices;
 - Connecting with colleagues, friends and family members for emotional support;
 - Engaging in hobbies and leisure activities;
 - Taking regular breaks and utilizing vacation time to rest and recharge;
 - Reflecting on personal values and aligning life and work goals accordingly; and
 - Advocating for a positive work environment
- Strategies for addressing burnout in college-aged students include:
 - Developing effective time-management skills;

- Cultivating a strong support network through friendships, peer groups and seeking mentorship;
- Promoting self-care strategies;
- Emphasizing good sleep hygiene habits to restore energy;
- Promoting a supportive campus culture;
- Offering wellness initiatives, such as mental health workshops;
- Promoting involvement in extracurricular activities and clubs; and
- Providing guidance and support through academic advisors

Additional Resources

Podcasts:

- [BulletProof – Preventing Burnout & Recharging Your Batteries with Arianna Huffington](#)
- [Dr. Caroline Leaf Podcast – 5 steps to heal burnout from always being “on”](#)
- [The Catch Group – Leveraging Behavioral Science to Address Burnout with Dr. Jacqueline Kerr](#)
- [Aligning our Values and our Drive to Prevent Burnout \(feat. Dr. Jacqueline Kerr\)](#)

Talks:

- [How To Stop Burnout Before It Starts | Jacqueline Kerr](#)
- [Eliminate Burnout Syndrome | Tulku Lobsang | Talks at Google](#)

Books:

- [Can't Even: How Millennials Became the Burnout Generation by Anne Helen Petersen](#)
- [The Burnout Fix: Overcome Overwhelm, Beat Busy, and Sustain Success in the New World of Work by Dr. Jacinda M. Jiménez](#)
- [Do Nothing: How to Break Away from Overworking, Overdoing, and Underliving by Celeste Headlee](#)

Lesson #7: Habits and rituals

Key Content Points

- Habits are automatic, context-triggered behaviors that are performed with little conscious awareness or effort, and are formed through reinforcement learning, where the repeated pairing of a behavior with a specific context or cue leads to the development of a habit automatically triggered by that cue
- Habits can be helpful for wellbeing, resilience and performance for the following reasons:
 - They can promote consistency and stability in behavior, which can be important for building routines and achieving long-term goals;
 - They can help conserve mental energy and reduce decision fatigue, which can enhance performance in complex tasks;
 - They can provide a sense of control and predictability, which can be beneficial for coping with stress and adversity;
 - They can free up cognitive resources for other tasks, which can improve productivity and creativity; and
 - They can serve as a foundation for developing other positive habits
- It is important to note that not all habits are beneficial and can have negative effects on wellbeing, resilience and performance, such as smoking, overeating or excessive social media use, and understanding the psychology of habits or the “habit loop” – cue, routine, reward – can help one identify and change unhealthy or unproductive habits that may be hindering their wellbeing or performance
- Rituals are a set of actions or behaviors that are performed in a specific order or sequence and are often associated with cultural, religious or personal significance, and may involve specific movements, words or objects and be performed alone or in groups
- While habits are automatic behaviors that are triggered by cues in the environment and often performed without conscious awareness, rituals are intentional and purposeful behaviors performed with awareness and often have symbolic or emotional significance
- Benefits of rituals on wellbeing, resilience and performance include:
 - They provide a sense of structure, stability and control, which can be important for resilience in the face of stress and uncertainty;
 - They can promote empathy and understanding, which can enhance communication and reduce conflicts in relationships;
 - They can increase feelings of connection, belonging and social support;
 - They can help one transition between different contexts or roles, which can enhance performance in specific domains;
 - They can provide a sense of accomplishment or satisfaction, which can increase confidence and self-esteem;
 - They can help one regulate emotions and reduce stress, which can be beneficial for mental health; and
 - They can enhance motivation and goal attainment by creating a sense of meaning and purpose
- General steps of crafting habits include:
 - Identifying a specific behavior or action you want to turn into a habit;
 - Choosing a specific context or cue that will trigger the behavior, such as a specific time of day, location or event;

- Repeating the behavior consistently in response to the chosen context or cue until it becomes automatic; and
- Using positive reinforcement, such as recognizing process, to reinforce the behavior and maintain motivation
- General steps for crafting rituals include:
 - Identifying the purpose or goal of the ritual, such as enhancing social connection;
 - Choosing specific actions or behaviors that align with the purpose of the ritual, such as sharing stories;
 - Establishing a specific sequence or order for the actions, and repeating the sequence consistently to create a sense of structure and familiarity; and
 - Using symbolism or personal meaning to enhance the emotional significance of the ritual and reinforce its value and purpose

Additional Resources

Podcasts:

- [The Psychology Podcast – Wendy Wood](#)
- [Next Big Idea Club – Wendy Wood](#)
- [Jay Shetty Podcast – Charles Duhigg](#)
- [Tim Ferriss Podcast – James Clear](#)

Talks:

- [The Power of Habit: Charles Duhigg at TEDxTeachersCollege](#)
- [Forget big change, start with a tiny habit: BJ Fogg at TEDxFremont](#)
- [1% Better Every Day - James Clear at ConvertKit Craft + Commerce 2017](#)
- [Why rituals matter](#)

Books:

- [Good Habits, Bad Habits by Wendy Wood](#)
- [The Power of Habit by Charles Duhigg](#)
- [Tiny Habits by BJ Fogg](#)
- [Atomic Habits by James Clear](#)
- [The Power of Ritual by Casper ter Kuile](#)

Lesson #8: Time-boxing and pre-commitments

Key Content Points

- Time-boxing is a time management technique used for its effectiveness in increasing productivity, managing distractions, reducing procrastination and improving focus, and involves scheduling specific blocks of time for focused work on a particular task or project after setting clear goals and priorities
- The benefits of time-boxing include:
 - Increased productivity by creating a sense of urgency;
 - Reduced procrastination by breaking down large tasks into smaller chunks;
 - Improved focus by forcing one to concentrate on one task at a time;
 - Increased motivation by providing a clear deadline for completing a task;
 - Improved time management by making one more aware of how they spend their time; and
 - Reduced stress and anxiety by making tasks less overwhelming
- Pre-commitment is a strategy in which one voluntarily takes action to limit their future options or behaviors by making a decision in advance and creating a binding agreement to align their current behavior with future goals
- Benefits of pre-commitment include:
 - Overcoming procrastination and promoting self-control, for example by setting a specific time and place to exercise;
 - Reducing impulsive behaviors, for example by planning meals in advance; and
 - Promoting positive habits and routines, such as setting a regular schedule for meditation or journaling
- Pre-commitment can be facilitated through external tools and prompts, such as reminders, notifications or commitment devices, and creating deadlines
- General steps for time-boxing include:
 - Identifying the tasks that require your time and attention;
 - Estimating the amount of time each task will take;
 - Scheduling specific blocks of time for each task, while prioritising important tasks first;
 - Setting a time or using a time tracking app to stay on track during each time block; and
 - Avoiding distractions by turning off notifications, closing unnecessary apps and limiting access to social media
- General steps for pre-commitments include:
 - Identifying the behaviours or habits that you want to change or improve;
 - Setting specific goals or intentions for those behaviours and habits;
 - Creating a binding commitment to follow through on those goals, such as making a public statement;
 - Using external cues, such as reminders, to help you stay on track and follow through on your commitment; and
 - Rewarding yourself for following through on your commitment, such as by taking a break

Additional Resources

Podcasts:

- [How to schedule deep work: Time blocking | Cal Newport and Lex Fridman](#)
- [Timeboxing: The Most Powerful Time Management Technique You're Probably Not Using](#)
- [The Minimalists - Cal Newport](#)

Talks:

- [The Time-Block Academy with Cal Newport: Zoom Webinar Recording](#)
- [Dan Ariely - Are we in control of our own decisions?](#)
- [Self control: Dan Ariely at TEDxDuke](#)
- [TEDxWoodsHole - Dan Ariely - Temptations and Self-Control](#)

Books:

- [Digital Minimalism by Cal Newport](#)
- [A World Without Email by Cal Newport](#)
- [Deep Work by Cal Newport](#)
- [Indistractable by Nir Eyal](#)
- [Hooked by Nir Eyal](#)
- [The Pomodoro Technique by Francesco Cirillo](#)

Chapter 7: Consistent, optimal performance

Lesson #1: Attention networks

Key Content Points

- The three major brain networks are the executive attention network, salience network and default mode network
- Executive attention network
 - This network is involved in goal-directed behavior and cognitive control and is activated when one needs to focus their attention and ignore distractions in order to complete a task or achieve a goal
 - Strategies for enhancing the efficiency of the executive attention network and improving cognitive control include:
 - Cognitive training exercises, such as working memory training;
 - Mindfulness meditation;
 - Regular aerobic exercise; and
 - Dual N-Back training, which involves simultaneously remembering visual and auditory stimuli to improve memory capacity
- Salience network
 - This network is involved in the detection and processing of salient or important stimuli and is activated in response to both positive and negative stimuli, including reward, pain and emotional cues
 - Dysfunction of this network has been linked to various disorders, including depression, anxiety and addiction
 - Strategies for improving the salience network function include:
 - Practices that cultivate positive emotions, such as gratitude journaling;
 - Mind-body interventions, such as yoga;
 - Exposure therapy, the gradual exposure to feared or anxiety-provoking stimuli;
 - Mindfulness meditation; and
 - Social support
- Default mode network
 - This network is involved in self-referential thought, mind-wandering and introspection and is activated during rest and periods of task-free introspection and deactivated during attention-demanding tasks
 - Dysfunction of this network has been linked to various disorders, including depression, anxiety and Alzheimer's disease
 - Strategies for decreasing activity in the default mode network and improving emotional regulation include:
 - Practices that cultivate present-moment awareness, such as mindfulness meditation or breathwork;
 - Creative activities, such as drawing;
 - Exposure to nature; and
 - Exposure to novel or unfamiliar stimuli to enhance curiosity and learning

Additional Resources

Podcasts

- [Michael Posner on the anatomy of attentional networks](#)
- [The Science of Psychotherapy – What are the neural networks?](#)
- [Huberman Lab – ADHD & How Anyone Can Improve Their Focus](#)
- [Sam Harris & Andrew Huberman – The Default Mode Network](#)

Talks

- [Brain Networks – MIT](#)
- [fMRI Brain Networks in 10 Minutes | Default-Mode Network and Others Explained](#)

Books

- [Incognito by David Eagleman](#)

Lesson #2: Focus, deep engagement and flow

Key Content Points

- Attentional focus refers to the ability to selectively attend to relevant information while ignoring distractions or irrelevant stimuli, and is a critical process for many aspects of cognitive functioning such as decision-making and problem-solving
- Deep engagement refers to a state of intense focus and immersion in a task or activity and requires one to eliminate distractions and cultivate an environment that supports sustained focus and connect with a sense of purpose
 - Benefits of deep engagement include improved performance and productivity, enhanced creativity, and a greater sense of satisfaction, fulfillment and wellbeing
 - Deep work is a state of focused concentration that allows individuals to produce high-quality, valuable output and requires deliberate practice and training to develop the cognitive capacity for sustained concentration
 - Engaging in deep work can lead to a sense of satisfaction and fulfillment in one's work, and improved productivity and performance
- Hyperfocus is a state of deep engagement that allows individuals to achieve high levels of productivity and creativity and can be cultivated through deliberate practice and the development of habits and routines that support deep engagement
 - Engaging in hyperfocus can lead to a sense of accomplishment and fulfillment, and improved performance and productivity
- Flow state, or being "in the zone," refers to a state of optimal experience in which one is fully immersed and focused in a task or activity and is characterized by the following features:
 - A sense of effortless and automatic performance due to intense focus and concentration;
 - Clear goals and feedback;
 - Sense of control, where one feels capable and confident in their abilities;
 - Loss of self-consciousness;
 - Deep enjoyment and satisfaction;
 - Sense of timelessness; and
 - Sense of accomplishment and fulfillment
- Positive impacts on wellbeing, resilience and performance from the aforementioned states include:
 - Enhanced intrinsic motivation and sense of autonomy;
 - Greater productivity, achievement and job satisfaction;
 - Increased creativity and problem-solving ability;
 - More positive emotions;
 - Improved learning and memory retention; and
 - Greater sense of meaning

Additional Resources

Podcasts

- [Hyperfocus: How to Manage Your Attention in a World of Distraction with Chris Bailey](#)

- [How to Calm Your Mind For Hyperfocus | Ft. Chris Bailey, Author of The Productivity Project](#)
- [Moonshots Podcast – Mihaly Csikszentmihalyi](#)
- [Colorado College – Mihaly Csikszentmihalyi](#)
- [Lex Fridman Podcast – Cal Newport](#)

Talks

- [The Productivity Project | Chris Bailey | Talks at Google](#)
- [Flow, the secret to happiness](#)
- [Cal Newport – Deep Work](#)

Books

- [Deep Work by Cal Newport](#)
- [Hyperfocus by Chris Bailey](#)
- [Flow by Mihaly Csikszentmihalyi](#)

Lesson #3: Dopamine drivers

Key Content Points

- Dopamine, often referred to as the “feel good,” chemical is a neurotransmitter that plays a critical role in the regulation of a wide range of cognitive, emotional and behavioural functions, including pleasure and reward, motivation, learning and memory, attention and addiction
- Dopamine drivers include:
 - Novelty – research finding that novel stimuli activate the mesolimbic dopamine system, associated with reward processing and motivation
 - Surprise – research finding that that unexpected rewards elicit a stronger dopamine response in the striatum compared to expected rewards
 - Challenge – research finding that the anticipation and pursuit of rewards may drive dopamine release
 - Curiosity – research finding that curiosity is associated with increased dopamine release in the striatum, suggesting the desire to explore and learn may be a key driver of dopamine release
 - Passion – research finding that romantic love is associated with increased activity in the dopamine-rich ventral tegmental area
 - Patterns/puzzles – research finding that solving puzzles is associated with increased dopamine release in the striatum
 - Creativity – research finding that creativity is associated with increased dopamine release in the prefrontal cortex, suggesting that the process of generating novel ideas may be a key driver of dopamine release
 - Purpose – research finding that having a sense of purpose in life is associated with increased dopamine release in the striatum
 - Risk – research finding that the anticipation of monetary rewards and losses activates the mesolimbic dopamine system
 - Complexity – research finding that the processing of complex sensory stimuli (e.g. music) is associated with increased dopamine release in the striatum
 - Food – research finding that the anticipation and consumption of palatable foods is associated with increased dopamine release in the striatum
 - Sleep – research finding that sleep deprivation is associated with decreased dopamine release in the striatum, suggesting that getting adequate sleep may be important for maintaining healthy dopamine function
 - Humour – research finding that humor is associated with increased dopamine release in the striatum, suggesting that laughter and humor may be a key driver of dopamine release
 - Altruistic Behavior – research finding that altruistic behavior is associated with increased dopamine release in the striatum, suggesting that the social reward of helping others may be a key driver of dopamine release
 - Learning – research finding that learning is associated with increased dopamine release in the striatum, suggesting that the anticipation and pursuit of knowledge may be a key driver of dopamine release
 - Nature – research finding that exposure to nature is associated with increased dopamine release in the striatum, suggesting that the experience of natural environments may be a key driver of dopamine release

- The aforementioned dopamine drivers can be leveraged in the following ways:
 - Seeking out new experiences to help activate the brain's reward system and increase motivation;
 - Setting challenging goals just beyond your current abilities to help you stay focused and engaged;
 - Following your curiosity and exploring new topics or ideas to help keep you engaged and motivated;
 - Pursuing your passions to activate the brain's reward system and increase motivation;
 - Embracing complexity and challenging yourself to understand difficult concepts can help you stay engaged and focused;
 - Mixing up your routine and trying new things to help keep you motivated and engaged;
 - Taking breaks and stepping away from tasks to help reset the reward system and increase motivation;
 - Incorporating mindfulness practices, such as meditation or deep breathing, into your daily routine to help increase focus and promote a sense of calm;
 - Engaging in creative activities (e.g. writing, painting, or playing music) to help promote focus and flow;
 - Enjoying healthy, delicious meals to help promote focus and overall well-being;
 - Laughing and enjoying humor to help promote focus and overall well-being; and
 - Spending time in natural environments (e.g. taking a walk in the park or hiking in the mountains) to help promote focus and overall well-being

Additional Resources

Podcasts

- [The Rational Reminder Podcast – Dr. Anna Lembke](#)
- [Huberman Lab – Dr. Anna Lembke](#)
- [The Knowledge Project Podcast – Dr. Anna Lembke](#)

Talks

- [Dopamine Nation: Finding Balance in the Age of Indulgence with Anna Lembke](#)
- [Anna Lembke | Finding Balance in the Age of Indulgence | Talks at Google](#)
- [How to Find Balance in the Age of Indulgence - Dr. Anna Lembke](#)

Books

- [Dopamine Nation by Dr. Anna Lembke](#)

Lesson #4: Focus and norepinephrine

Key Content Points

- Dopamine and norepinephrine are two important neurotransmitters synthesized from the same precursor molecule, tyrosine, and have complementary roles in regulating attention, motivation and behavior
- Dopamine promotes focuses attention on a task and is closely linked to short-term reward, while norepinephrine promotes arousal and vigilance and is linked to long-term goal-directed behavior; the two interact in a dynamic manner with dopamine regulating the release of norepinephrine and norepinephrine enhancing the activity of dopamine neurons
- Norepinephrine is primarily produced in the locus coeruleus, a group of neurons in the brainstem that modulates a variety of physiological and cognitive processes and is regulated by several neurotransmitters, including dopamine and serotonin
- While there is currently no direct way to enhance the conversion of dopamine to norepinephrine, there are several lifestyle factors that can support the production and activity of both neurotransmitters, including:
 - Exercise, with research showing that exercise can enhance the expression of genes related to dopamine and norepinephrine metabolism in the brain;
 - Nutrition, including nutrients such as tyrosine which is a precursor (found in protein-rich foods) and Vitamin C which is a cofactor in enzyme dopamine beta-hydroxylase
 - Mindfulness meditation, with research showing it to increase dopamine release in the brain region involved in reward processing; and
 - Sleep, with research showing that sleep deprivation can lead to decreased dopamine and norepinephrine activity, which can negatively impact mood, cognition and stress resilience

Additional Resources

Podcasts

- [Huberman Lab – Controlling Your Dopamine For Motivation, Focus & Satisfaction](#)
- [Huberman Lab – Optimize & Control Your Brain Chemistry to Improve Health & Performance](#)
- [The Rational Reminder Podcast – Dr. Anna Lembke](#)

Talks

- [How to Maximize Dopamine & Motivation - Andrew Huberman](#)
- [Dopamine Nation: Finding Balance in the Age of Indulgence with Anna Lembke](#)
- [Anna Lembke | Finding Balance in the Age of Indulgence | Talks at Google](#)

Books

- [Dopamine Nation by Dr. Anna Lembke](#)

Lesson #5: Leaning into difficulty

Key Content Points

- Fear is a basic emotion that arises in response to an immediate threat or danger and is often characterized by a sense of alarm and can result in a “fight or flight” response in the body, including increased heart rate
- Stress is a general response to challenges that are perceived as taxing or overwhelming, whether physical or psychological, and can involve feelings of tension, pressure and strain, as well as physical changes such as increased heart rate
- While anxiety is similar to fear in that it is related to a sense of threat or danger, it involves more anticipation or worry about future events that are perceived as threatening or uncertain
- Stress and anxiety can contribute to the following positive impacts:
 - Motivation, research showing that moderate levels of stress can enhance motivation and improve task performance and anxiety can help athletes perform at their peak;
 - Attentional focus, research showing that moderate levels of stress can improve attention and working memory and anxiety can improve visual search performance in athletes;
 - Creativity, research showing that moderate levels of stress can enhance divergent thinking and problem-solving; and
 - Resilience, research showing that moderate levels of stress can help one cope with future stressors and Ethel eyes able to manage their anxiety effectively may be better able to perform under pressure
- While there is a no “one size fits all” answer to the optimal level of stress or anxiety for promoting wellbeing and resilience, experts agree that individuals need a certain amount to stay motivated and engaged, whereas too much may lead to burnout and exhaustion
- One’s beliefs and mindset about stress and anxiety matter, with research showing that “challenge stress” or a moderate level of stress can be helpful for promoting growth and resilience, as long as one views their experience as an opportunity for growth, whereas viewing stress or anxiety as overwhelming and uncontrollable can be detrimental to one’s health and wellbeing
- The inverted U hypothesis suggests that performance declines as arousal levels become too low or high and that moderate levels of arousal can lead to better performance on tasks that require attention, decision-making and physical skill; however, the optimal level of arousal (I.e when an individual performs at their best) can differ among individuals and be influenced by factors such as personality, anxiety, motivation and task complexity
- The Individual Zones of Optimal Functioning (IZOF) model is a sport psychology framework used to help athletes use emotion regulation strategies to optimize their emotional state and enhance their performance and involves the following stages:

- Assessment – where athletes work with a trained sport psychologist to identify the emotional states and physiological sensations associated with their best and worst performances
- Evaluation – where athletes evaluate the intensity and direction of their emotional states and compare them to their optimal zone
- Intervention – where athletes develop strategies to regulate their emotions and achieve their optimal zone
- Monitoring – where athletes monitor their emotional state during training and competition, and adjust their strategies as needed to maintain their optimal zone
- Emotions can have a significant impact on one’s level of arousal and anxiety, which can in turn impact performance, where positive emotions such as excitement can increase one’s level of arousal and help them reach their optimal zone, whereas negative emotions such as fear and anger can increase one’s level of anxiety and push them out of their optimal zone; as such, coaches and trainers can help individuals identify their emotional triggers and develop strategies to regulate their emotions such as positive self-talk and visualization

Additional Resources

Podcasts

- [Huberman Lab – Alia Crum](#)
- [School of Greatness – Kelly McGonigal](#)
- [Impact Theory – Susan David](#)

Talks

- [Gladstone Rethinks Stress with Mindset Expert Alia Crum](#)
- [Rethinking Stress: The Role of Mindsets in Determining the Stress Response](#)
- [How to make stress your friend | Kelly McGonigal](#)
- [Believe It or Not, Stress Can Be Good For You | Big Think](#)
- [How does emotional agility help with stress? By Dr. Susan David](#)

Books

- [The Upside of Stress by Kelly McGonigal](#)
- [Emotional Agility by Susan David](#)
- [Grit by Angela Duckworth](#)

Lesson #6: Recover and refuel

Key Content Points

- Taking breaks is essential to maintaining hyperfocus and improving productivity in the long term and can contribute to the following benefits:
 - Prevent burnout, by giving one's brain time to rest and recharge;
 - Increase creativity, by allowing one's mind to wander and generate new ideas and come up with new perspectives and insights one may not have considered otherwise;
 - Improve memory consolidation, by allowing one's brain to process and consolidate information which can help one better retain and recall it later; and
 - Enhance focus and concentration, by giving one's brain time to rest and recover to sustain focus for longer periods when one returns to a task at hand
- While shorter breaks (5-10 minutes) can be effective for quick mental and physical rejuvenation, longer breaks (30+ minutes) may be necessary for more significant rest and recovery
- One can enhance integration of the recovery phase of the flow cycle in the following ways:
 - Taking time to rest, such as getting enough sleep, taking a nap or taking a break from mentally taxing activities;
 - Reflecting on one's flow state experience to identify what worked well and what didn't and make plans to improve future performance;
 - Engaging in activities that promote relaxation such as meditation or spending time in nature;
 - Spending time with friends and loved ones to promote feelings of wellbeing and belonging; and
 - Practicing gratitude to cultivate a more positive and growth-oriented mindset
- The integration phase involves the release of the following neurochemicals:
 - Oxytocin (hormone involved in social bonding) which can help one feel more connected to others and build stronger social networks;
 - Dopamine (involved in reward and motivation) which can help one feel a sense of accomplishment and satisfaction;
 - Serotonin (involved in mood regulation and wellbeing) which can help one feel more relaxed and content; and
 - Endorphins (involved in pain relief and feelings of pleasure) which can help one feel more relaxed and energized
- Cognitive recovery can contribute to the following positive outcomes:
 - Maintaining high levels of performance over time, by engaging in proper recovery strategies such as sleep, nutrition, relaxation and taking breaks;
 - Reduced burnout symptoms, by practicing strategies such as relaxation and mindfulness techniques; and

- Improved overall wellbeing including higher levels of life satisfaction and happiness by taking breaks and engaging in leisure activities

Additional Resources

Podcasts

- [Modern Wisdom Podcast – Chris Bailey](#)
- [Burnout to Bliss: How to Calm Your Mind with Chris Bailey](#)
- [How To Get More Flow By Understanding The Four Stage Cycle with Steven Kotler](#)

Talks

- [A More Human Approach to Productivity | Chris Bailey | TEDxLiverpool](#)
- [Hack Your Flow: Understanding Flow Cycles, with Steven Kotler | Big Think](#)

Books

- [Hyperfocus by Chris Bailey](#)
- [How to Calm Your Mind by Chris Bailey](#)
- [The Productivity Project by Chris Bailey](#)
- [GNAR Country by Steven Kotler](#)

Lesson #7: The clutch state

Key Content Points

- A clutch state is a state of heightened performance under pressure where one is able to perform at their best despite the presence of stress or anxiety, experience intense focus, heightened arousal, and a sense of control and determination
- Clutch states are often associated with high-stakes situations where success or failure depends on the outcome of performance with one's ability to enter clutch state dependent on factors such as self-confidence, mental toughness and the ability to manage stress and anxiety
- The differences between flow and clutch state include the following:
 - Flow is a state of optimal experience characterized by a sense of control, enjoyment and immersion in an activity, whereas a clutch state is one of heightened performance under pressure;
 - Flow is typically associated with a loss of self-awareness, time distortion and a sense of effortless action, while clutch is characterized by intense focus, heightened arousal and a sense of control and determination;
 - Flow is often experienced during activities that are challenging yet not overwhelming, while clutch is typically experienced during high-stakes situations;
 - Neurobiologically, flow involves a temporary suppression of self-awareness and a release of inhibitions, whereas clutch involves the ability to maintain a high level of cognitive control and self-regulation despite the presence of stress
- By cultivating the ability to access both flow and clutch states as needed, one can develop the ability to shift between states depending on the demands of the situation and learn how to cultivate one state over the other when appropriate, and thus, maximize performance, wellbeing and personal growth

Additional Resources

Podcasts

- [Oxygen Advantage – Flow Research Collective](#)
- [Young and Foolish Podcast – The concept of clutch](#)

Talks

- [Optimal Experiences: Flow and Clutch States in Runners](#)

Lesson #8: Time-boxing for flow and deliberate practice

Key Content Points

- Deliberate practice is a powerful method for improving performance in a specific domain by providing a structured and systemic approach to skill development that allows one to make steady progress over time by breaking down complex skills into smaller components and working on each one individually
- Deliberate practice consists of the following principles:
 - Identifying specific areas for improvement and setting specific and challenging goals;
 - Focusing one's attention and efforts on the specific task or skill being practices, breaking it down into smaller components and working on each one individually;
 - Receiving feedback on performance from a coach or mentor and using that feedback to improve and adjust;
 - Repeating tasks or skills over time with a focus on making small improvements each time; and
 - Maintaining effort and discipline
- Deliberate practice can be most effective when organized into practice blocks 30-60 minutes in length completed several times per day to allow one to ensure they are dedicating sufficient time and effort to focused and purposeful practice while also allowing for regular breaks to help prevent burnout
- Blocked practice is often used in early stages of learning to allow one to build a solid foundation of knowledge and skills through repetition until the skill or task becomes automatic
- Random practice involves switching between different tasks or skills during their practice which can help improve overall learning and retention, and is typically used in later stages of learning when one has already developed a solid foundation of skills and knowledge and is looking to refine and enhance their performance
- Creating a "rhythm of deep work" involves scheduling deep work sessions in advance to allow one to make it a priority and ensure they have sufficient time and focus to engage in deep work and prevent low-priority take from creeping in

Additional Resources

Podcasts

- [Mind & Machine Podcast – Anders Ericsson](#)
- [Goodlife Podcast – Anders Ericsson](#)
- [Daily Stoic – Cal Newport on Time Blocking](#)

Talks

- [Anders Ericsson on the science of expertise | Larry King Now](#)
- [Anders Ericsson - Deliberate practice makes perfect](#)
- [The Ideal Length of Time for Focused Work | Dr. Andrew Huberman](#)
- [Deep work sessions first thing in the morning | Andrew Huberman and Lex Fridman](#)
- [How to schedule deep work: Time blocking | Cal Newport and Lex Fridman](#)

Books

- [Peak by Anders Ericsson & Robert Pool](#)
- [Deep Work by Cal Newport](#)

Chapter 8: Motivation, goals and an antifragile trajectory

Lesson #1: Values, motivation and goals, your big why

Key Content Points

- Values are individual beliefs and principles that guide behavior towards meaningful choices and purposeful action even in the face of difficult emotions and challenges, and are commonly emphasized in Acceptance and Commitment Therapy (ACT) as an important component to promoting psychological wellbeing
- Motivation refers to the driving force that moves individuals towards a particular goal or objective, and can be further broken down into intrinsic motivation (engagement for its own sake) and extrinsic motivation (engagement for external rewards); thus, having an understanding of the two types can inform the strategies used to create more fulfilling and effective environments that support wellbeing
- Closely linked to values and motivation as they serve as a means for expressing one's values and can act as a source of intrinsic motivation, goals refer to one's sought-out desired future outcomes, and can be further broken down into the following:
 1. Mastery goals, focused on skill improvement;
 2. Performance goals, focused on demonstrating competence or outperforming others;
 3. Approach goals, focused on achieving a positive outcome;
 4. Avoidance goals, focused on avoiding a negative outcome; and
 5. Social goals, focused on relationships and social comparison.
- The connection between values, goals and motivation is commonly observed in the context of sports, with athletes who set goals aligned with their values more likely to experience autonomous motivation and achieve positive outcomes, such as greater satisfaction, enjoyment and wellbeing. Furthermore, by identifying and aligning one's goals with one's values, individuals can enhance their sense of self-concordance and cultivate greater psychological wellbeing
- One can identify their values through self-reflection and exploration of personal experiences, or through the use of formal assessments such as the Values in Action Inventory (VIA), which identifies one's signature strengths and corresponding values, or the Valued Living Questionnaire (VLQ), which helps one clarify their values and assess their level of value-consistent behavior

Additional Resources

Podcasts

- [The Psychology Podcast – How to Be an Optimal Human by Kennon Sheldon](#)

- [Why Do We Do That Podcast – Goals, Motivation, and Wellbeing with Dr. Kennon Sheldon](#)
- [The Wellbeing Lab – Are You Setting Effective Goals? With Professor Edwin Locke](#)
- [The Psychology Podcast – Richard Ryan | Self-Determination Theory & Human Motivation](#)
- [Bad At Keeping Secrets – Alfie Kohn on fostering intrinsic motivation](#)
- [Inside Quest with Tom Bilyeau – Generate Intrinsic Motivation with Edward Deci](#)
- [The Art of Charm Podcast – The Art of Defined Values and Happiness | Russ Harris](#)

Talks

- [Finding meaning in difficult times \(Interview with Dr. Viktor Frankl\)](#)
- ["The implicit self in SDT" Dr. Kennon Sheldon keynote @ 2019 SDT Conference](#)
- [The puzzle of motivation | Dan Pink](#)
- [Self Concordance: Grit Lab Mini Lecture](#)
- [Promoting Motivation, Health, and Excellence: Ed Deci at TEDxFlourCity](#)

Books

- [Values First](#) by Laura Eigel, PhD
- [The Art of Impossible](#) by Steven Kotler
- [Drive](#) by Daniel Pink
- [Rewire Your Brain](#) by John Arden, PhD
- [Your Best Year Ever](#) by Michael Hyatt
- [The Happiness Trap](#) by Russ Harris

Lesson #2: Motivation 101

Key Content Points

- Human beings have three innate psychological needs: autonomy (the need to experience a sense of choice), competence (the need to feel capable and effective), and relatedness (the need to feel connected to and cared for by others) and self-determination theory proposes that motivation exists on a continuum ranging from amotivation (or lack thereof) to intrinsic motivation (engagement for its own sake) and that social and cultural factors can influence the degree in which people's needs for autonomy, competence and relatedness are supported or thwarted
- Intrinsic motivation is the most self-determined motivation, driven by the satisfaction of autonomy, competence and relatedness, and refers to the inherent desire to engage in an activity because it is interesting, enjoying or satisfying in and of itself
- External motivation refers to engagement in an activity to attain an external reward or outcome, such as money, grades or praise and can further be divided into:
 - External regulation, or behaving to receive external awards or avoid punishment;
 - Interjected regulation, or behaving to avoid guilt or shame;
 - Identified regulation, or behaving because the activity is consistent with one's values; and
 - Integrated regulation, or behaving because it is fully assimilated into one's sense of self
- Overall, research shows that it is the quality of the motivation that is more important than the source, and when one feels that their basic psychological needs are being satisfied and they are engaged in activities that are personally meaningful, they are more likely to be motivated
- Once one has identified their purpose or "why," motivation is the process that initiates, guides and maintains the goal-oriented behavior; in other words, it is the inner drive to behave or act in a certain manner
- Within the sports context, research shows that athletes who are more intrinsically motivated are more likely to set challenging goals and engage in deliberate practice, thus leading to higher levels of skill development and performance, however, supportive extrinsic motivation such as positive feedback from coaches can also enhance their sense of competence, as long as the extrinsic rewards are not perceived as controlling or undermining autonomy (such as excessive focus on winning), which may decrease intrinsic motivation and performance
- The impact of intrinsic motivation on wellbeing and resilience includes:
 - Higher levels of self-esteem, self-efficacy and positive affect;
 - Greater sense of autonomy and personal control, which can lead to positive emotions;
 - Greater adaptive coping strategies, such as problem-solving;
 - Greater sense of flow, which can promote feelings of enjoyment; and

- Enhanced growth mindset, which can help individuals view challenges as opportunities for growth and learning
- While extrinsic motivation can promote wellbeing and resilience by providing external resources and support, such as financial rewards, which may help one cope with stress and adversity, it may also decrease resilience by creating a reliance on external outcomes or when it is based on controlled regulation to avoid punishment, which can ultimately undermine one's sense of autonomy and lead to a decrease in intrinsic motivation

Additional Resources

Podcasts

- [The Psychology Podcast – Richard Ryan](#)
- [Huberman Lab – How to Increase Motivation and Drive](#)
- [The Diary of a CEO Podcast – Daniel Pink](#)

Talks

- [Edward Deci – Self Determination Theory](#)
- [Richard Ryan Talk](#)
- [Edward Deci TED Talk](#)
- [The Puzzle of Motivation | Daniel Pink](#)

Books

- [Why We Do What We Do by Edward Deci](#)
- [Drive by Daniel Pink](#)

Lesson #3: Hope pathways

Key Content Points

- Hope theory is an important framework for conceptualizing successful goals pursuits and according to it, individuals with higher hope set goals that are both more ambitious and attainable, energetically pursue them and develop a greater number of workable routes or pathways for achieving them
- People tend to think in terms of goals when they consider their hopes and as such, goals guide intentional behavior and serve three functions in hope theory:
 - They serve as context for specific pathways;
 - They serve as outcome measures; and
 - They provide feedback about goal pursuit abilities
- There is ample evidence supporting the notion that hope is associated with the number of pathways generated in response to standardized goals and successful goal attainment, as high hope individuals, despite their tendency to set lofty goals, also engage in behaviors that make goal success more likely
- As such, hope theory suggests that hope should be associated with the generation of better pathways, including pathways that are more specific to one's goal, able to be enacted by the individual and likely to lead to successful goal attainment
- Hope has been shown to have a positive impact on wellbeing and life satisfaction, act as an important factor in promoting resilience and has been linked to greater performance across a variety of life domains, and can be learned and developed through intentional interventions such as positive thinking, mindfulness meditation, goal setting and social support

Additional Resources

Podcasts:

- [The Psychology Podcast - Shane Lopez](#)
- [Live Happy Now - Shane Lopez](#)

Talks:

- [Shane Lopez | Hope | Gallup](#)
- [The Importance of Hope with Shane Lopez](#)
- [Hope Theory: Rainbows in the Mind | Evidence of Greatness Episode 11](#)

Books:

- [Making Hope Happen by Shane Lopez](#)
- [The Psychology of Hope by CR Snyder](#)

Lesson #4: Goals 101

Key Content Points

- Goal setting is a cognitive process that involves identifying specific, measurable and time bound objectives to achieve a desired outcome
- Goal setting theory suggests that goals can increase motivation and performance by directing attention, mobilizing effort and increasing persistence, and can be enhanced through feedback, monitoring progress and adjusting goals as necessary
- The neural circuits involved in goals assess both the value of the goal and whether it's worth pursuing, and which actions to take towards that goal. While visualization alone may be a helpful strategy to get one started on the pursuit of goals, it is not a good way to maintain pursuit, and instead, thinking about failure or what will happen if you don't achieve a goal may actually be the best way to motivate towards goal pursuit as the brain and body is much better at moving away from fearful things than towards the things one wants
- Effective goal setting involves aligning personal goals with broader life aspirations and values and being flexible and adaptable in pursuit of those aims
- Research suggests that the following goals are most effective in promoting goal attainment:
 - Process goals – which focus on the behaviours and actions required to achieve a goal, such as practicing a skill;
 - Mastery goals – which focus on developing competence and improving one's own performance;
 - Short-term goals – which focus on achieving a result in the near future; and
 - Specific goals – which are clearly defined and provide a clear target to aim for
- Goals can enhance wellbeing by providing a sense of purpose and direction, promote resilience by providing a framework for coping with adversity, and improve performance by providing a target for effort and a source of motivation
- Other benefits of goals for facilitating better outcomes include:
 - Improved decision making and problem solving by providing a clear direction for action;
 - Enhanced creativity and innovation by providing a framework for exploring new ideas;
 - And enhanced cooperation as shared goals and collective action towards a shared vision can foster social cohesion
- It is important to also remain mindful of potential downsides of goal setting, such as too specific goals that can lead to a narrow focus and tunnel vision, goals that overemphasize achievement and external validation, unrealistic goals that may lead to feelings of failure and self-criticism if not achieved, too rigid goals that may blind individuals to new opportunities, and goals that may have unintended consequences or raise ethical concerns

Additional Resources

Podcasts

- [Huberman Lab – The Science of Setting and Achieving Goals](#)
- [Huberman Lab – Tools for Setting and Achieving Goals](#)
- [Knowledge Project Podcast – Emily Balcetis](#)

Talks

- [Emily Balcetis | TED Talk](#)
- [Emily Balcetis – How Successful People See the World](#)

Books

- [Clearer, Closer, Better by Emily Balcetis](#)

Lesson #5: Creating a trajectory toward antifragility

Key Content Points

- Flow state is most likely to occur when the level of challenge matches one's level of skill. If the challenge is too easy, the individual may become bored or disengaged, while if the challenge is too difficult, they may become anxious or frustrated
- Finding the right balance between challenge and skill requires ongoing assessment and adjustment and one should continually evaluate their level of skill and seek out appropriate challenges that push them beyond their comfort zone
- Benefits of adopting a growth mindset to enhance one's challenge-skills ratio include: greater likelihood to persist in the face of difficulty, greater likelihood to seek out feedback and use it constructively, and greater likelihood to be adaptable and flexible in one's approach to goal-setting
- Within the sports context, studies show that athletes who experiences a sense of challenge-skills balance during competition were more likely to report higher levels of flow and enjoyment and achieve their performance goals, thus, coaches and trainers may promote challenge-skills balance by providing appropriate feedback and support, setting challenging but achievable goals, and creating an environment that fosters learning and growth

Additional Resources

Podcasts

- [The Flow Compass: Tap Into Flow Using The Challenge-Skills Ratio](#)
- [The Psychology Podcast – The Latest Science of Growth Mindset with Carol Dweck](#)
- [Moonshots Podcast – Mindset: The New Psychology of Success | Carol Dweck](#)

Talks

- [The power of believing that you can improve | Carol Dweck](#)
- [Developing a Growth Mindset with Carol Dweck](#)
- [The Growth Mindset | Carol Dweck | Talks at Google](#)
- [What is the challenge-skill balance](#)
- [Flow Challenge-Skill Ratio - How to find your sweet spot](#)

Books

- [Mindset](#) by Carol Dweck

Lesson #6: Neuromodulators 201

Key Content Points

- Dopamine is a neurotransmitter that plays a key role in motivation and reward processing; when one pursues a goal, dopamine is released in the brain which can motivate one to continue working towards that goal and reinforce the behavior that led to an accomplishment
- To promote optimal goal pursuit and accomplishment, it is recommended to focus on small and achievable goals that build momentum towards larger goals, while also paying attention to emotional and physical wellbeing and maintain a balance between dopamine and serotonin
- Expectations can have a powerful effect on dopamine release in the brain which can motivate one to pursue rewards, however, exaggerated expectations for reward can also generate too much dopamine too early in the process and lead to negative consequences such as addiction. This is because dopamine signals “wanting” rather than “liking” of rewards, thus promoting a more balanced and realistic view of expectations is an important factor in maintaining wellbeing and avoiding addiction
- Recommendations for maintaining pursuit of goals include:
 - Blunting reward responses for intermediate goals as one moves towards a goal;
 - Celebrating some wins, but not all wins to keep the dopamine system in check and avoid a big crash; and
 - Implementing an intermittent reinforcement schedule, such as rewarding oneself every other time

Additional Resources

Podcasts

- [Kent Berridge | Neuropsychology of Addiction and Emotion](#)
- [Kent Berridge: Neuroscience of Pleasure, Reward, Liking, Wanting, Motivation, Addiction & Emotion](#)
- [Controlling Your Dopamine For Motivation, Focus & Satisfaction | Huberman Lab Podcast](#)
- [Leverage Dopamine to Overcome Procrastination & Optimize Effort | Huberman Lab Podcast](#)

Talks

- [Kent Berridge - Delight, Desire, and Dread: Generators in the Brain](#)

Books

- [Dopamine Nation by Anna Lembke](#)

Lesson #7: Multitasking

Key Content Points

- The brain cannot multitask complex tasks like talking, reading and deep thinking. It can multitask habitual tasks that don't require conscious thought, like walking + breathing + chewing gum. It's important to focus on monotasking complex tasks and strategically leveraging multitasking where possible.
- Friction refers to obstacles or challenges that make it difficult for one to start or complete a task, such as inability to find one's running shoes to exercise, whereas resistance refers to the mental and emotional barriers that prevent one from starting or completing a task, such as feelings of anxiety, fear and boredom
- By reducing friction, such as by simplifying one's environment or automating routine tasks, and overcoming resistance by changing one's internal dialogue and cultivating positive self-talk, one can create an environment that supports their goals and makes it easier to stay focused and productive
- Other considerations for effective goal setting include the following:
 - Recognizing one's emotions that often lead to distraction to consciously align one's actions with long-term goals;
 - Mono-tasking rather than multitasking, which involves focusing on one task at a time;
 - Reflecting on one's values and long-term to gain clarity on what truly matters to you;
 - Practicing self-compassion and being kind to oneself if you slip up;
 - Seeking support from friends or mentors to help one stay on track; and
 - Being flexible and able to recognize when a goal needs to be modified

Additional Resources

Podcasts:

- [The Psychology Podcast – Nir Eyal](#)
- [Science of People – Nir Eyal](#)

Talks:

- [How to Become Indistractable with Nir Eyal](#)
- [Indistractable with Nir Eyal](#)
- [Surfing the Urge: How to Manage Distractions with the 10-Minute Rule | Nir Eyal, Indistractable](#)

Books:

- [Indistractable by Nir Eyal](#)

Lesson #8: SMART goals

Key Content Points

- SMART goals or specific, measurable, achievable, relevant and time-bound goals, provide a powerful framework for clear and concrete goal setting that can increase one's likelihood of success across various domains of life and promote self-efficacy
- SMART goals are a popular framework used in various fields to enhance goal-setting and improve performance and have been extensively researched in their impact on wellbeing, resilience and performance
- Setting and pursuing meaningful SMART goals in line with one's personal values and interests has been associated with higher levels of subjective well-being and life satisfaction as individuals experience a sense of purpose and accomplishment, leading to increased wellbeing
- SMART goals also play a role in enhancing resilience as they create a sense of direction and focus, helping one navigate challenging situations more effectively, and by achieving small milestones along the way, one can build confidence and self-efficacy and thus boost resilience
- SMART goals are widely recognized for their impact on performance improvement as they enable individuals to track progress, identify areas for improvement, adjust strategies accordingly, and provide clarity and focus to enhance motivation, persistence and task engagement
- While SMART goals act as a powerful tool for enhancing motivation and performance, effective goal-setting involves tailoring goals to the individual and context, and is most effective when combined with other strategies such as self-monitoring, feedback and social support
- One can execute on SMART goals by employing the following strategies:
 - Action planning, by breaking down the SMART goal into smaller, actionable steps;
 - Feedback and monitoring, by regularly tracking progress and receiving feedback to receive valuable information for adjusting strategies and staying on track;
 - Accountability, by sharing goals with others or enlisting an accountability partner to enhance commitment and motivation;
 - Adaptability, by being open to readjusting goals in unexpected circumstances; and
 - Self-reflection, by regularly reflecting on progress, identifying strengths and areas for improvement, and learning from setbacks
- While SMART goals provide a specific direction for effort and allow for monitoring of progress, it is important to be mindful of negative SMART goals which may:
 - Over-emphasize quantitative outcomes;
 - Limit creativity and adaptability through lack of flexibility;
 - Have too much of a narrow focus, thus overlooking one's process or context; and
 - Fail to consider the emotional and motivational aspects of goal setting

Additional Resources

Podcasts

- [Why Do We Do That Podcast – Goals, Motivation, and Wellbeing with Dr. Kennon Sheldon](#)
- [The Wellbeing Lab – Are You Setting Effective Goals? With Professor Edwin Locke](#)

Talks

- [A Complete Guide to Goal Setting](#)

Books

- [The Art of Impossible](#) by Steven Kotler

Lesson #9: WOOP goals

Key Content Points

- WOOP goals which stand for Wish, Outcome, Obstacle and Plan, are a specific method designed to help individuals consider potential obstacles or barriers that may hinder goal attainment and develop realistic strategies to overcome challenges and increase the likelihood of goal achievement
- The WOOP method incorporates the concept of mental contrasting which involves contrasting a desired outcome with potential obstacles to help individuals generate positive affect and motivation by envisioning a desired future outcome which can activate their brain's reward system and increase dopamine release
- Affective neuroscience research shows that emotions play a crucial role in goal-directed behavior and WOOP goals can help individuals manage their emotional responses to obstacles by enabling them to regulate their emotions and maintain focus on their goals over time
- Research also suggests that by employing WOOP goals and engaging in focused mental simulations and action planning, one can potentially facilitate neuroplasticity and enhance their brain's capacity for consistent goal-directed behavior
- The WOOP method can be applied across various domains such as education, behavior change and personal goal attainment and has been shown to enhance motivation, goal commitment and goal-directed behavior, leading to improved performance and wellbeing

Additional Resources

Podcasts

- [Gabriele Oettingen Interview with Michael Covell on Trend Following Radio](#)
- [Optimize Interview: The Science of Making Your Dreams Come True with Gabriele Oettingen](#)

Talks

- [Rethinking Positive Thinking \(Gabriele Oettingen, New York University\)](#)
- [WOOP - Wish, Outcome, Obstacle, Plan | An interview with Gabriele Oettingen](#)
- [Interview: Larry King with Gabriele Oettingen](#)

Books

- [Rethinking Positive Thinking by Gabriele Oettingen](#)

Chapter 9: Life editing and living on purpose

Lesson #1: Back to discipline

Key Content Points

- Willpower is a form of energy and finite resource that can be depleted by overuse, impaired by sleep deprivation, stress and anxiety, and undermined by feelings of guilt and shame
- Willpower can be replenished through the following ways:
 - Positive emotions such as awe and compassion which can help one make better decisions;
 - Rest, nutrition, exercise, and mindfulness meditation;
 - Social support and connection;
 - Goal-setting to help one stay focused and motivated;
 - Habits to conserve willpower; and
 - Cultivating a growth mindset that views setbacks and failures as opportunities to learn and grow
- Self-regulation is a lifelong journey that can lead to greater wellbeing, resilience and success across all areas of life and can be developed in the following ways:
 - Grit, or perseverance and passion for long-term goals;
 - Self-compassion and mindfulness;
 - Adopting a growth mindset;
 - Cognitive behavioral therapy; and
 - Physical exercise
- Ego-depletion, the idea that willpower is a limited resource that can be depleted over time, has been called into question by recent research after many studies on willpower and self-control fell under the replication crisis and were not replicable to real-world situations
- Instead, it may be one's beliefs about willpower that influence their ability to resist temptation and an alternative theory of self-control based on emotion regulation has been proposed by Nir Eyal which suggests that one can use strategies such as cognitive reappraisal, acceptance and mindfulness to manage emotions and avoid getting distracted
- Techniques for developing self-regulation in the sports context include:
 - Goal-setting, by helping athletes focus their attention, regulate their effort and energy, and maintain motivation and commitment over time;
 - Self-talk, by helping athletes regulate their emotions, boost their confidence and self-efficiency, and enhance their performance under pressure;
 - Imagery, by creating vivid mental representations of desired outcomes to enhance focus and reduce anxiety;
 - Relaxation techniques, to manage stress, reduce muscle tension, and improve ability to focus;
 - Mindfulness meditation, to improve attention, emotional regulation and overall well-being;
 - Biofeedback training, to help athletes monitor and regulate physiological responses to stress and anxiety;
 - Attentional focus, such as narrowing one's focus on a specific target to regulate attention and improve performance under pressure; and

- Sleep hygiene, to help regulate emotions, reduce stress and improve cognitive and physical performance

Additional Resources

Podcasts:

- [Kelly McGonigal: The Willpower Instinct](#)
- [The Psychology Podcast – Roy Baumeister, PhD](#)
- [The Wellbeing Lab – Roy Baumeister](#)
- [Take the Lead Radio – Nir Eyal](#)

Talks:

- [The Willpower Instinct | Kelly McGonigal | Talks at Google](#)
- [The Science of Willpower: Kelly McGonigal at TEDxBayArea](#)
- [Willpower: Rediscovering the Greatest Human Strength](#)
- [Is Willpower a Finite Resource? The Truth About Ego Depletion Theory](#)

Books:

- [Indistractable by Nir Eyal](#)
- [The Willpower Instinct by Kelly McGonigal](#)
- [Willpower by Roy Baumeister & John Tierney](#)
- [Mindset by Carol Dweck](#)

Lesson #2: Back to intention and pre-commitments

Lesson #8: Time-boxing and pre-commitments

Key Content Points

- Time-boxing is a time management technique used for its effectiveness in increasing productivity, managing distractions, reducing procrastination and improving focus, and involves scheduling specific blocks of time for focused work on a particular task or project after setting clear goals and priorities
- The benefits of time-boxing include:
 - Increased productivity by creating a sense of urgency;
 - Reduced procrastination by breaking down large tasks into smaller chunks;
 - Improved focus by forcing one to concentrate on one task at a time;
 - Increased motivation by providing a clear deadline for completing a task;
 - Improved time management by making one more aware of how they spend their time; and
 - Reduced stress and anxiety by making tasks less overwhelming
- Pre-commitment is a strategy in which one voluntarily takes action to limit their future options or behaviors by making a decision in advance and creating a binding agreement to align their current behavior with future goals
- Benefits of pre-commitment include:
 - Overcoming procrastination and promoting self-control, for example by setting a specific time and place to exercise;
 - Reducing impulsive behaviors, for example by planning meals in advance; and
 - Promoting positive habits and routines, such as setting a regular schedule for meditation or journaling
- Pre-commitment can be facilitated through external tools and prompts, such as reminders, notifications or commitment devices, and creating deadlines
- General steps for time-boxing include:
 - Identifying the tasks that require your time and attention;
 - Estimating the amount of time each task will take;
 - Scheduling specific blocks of time for each task, while prioritising important tasks first;
 - Setting a time or using a time tracking app to stay on track during each time block; and
 - Avoiding distractions by turning off notifications, closing unnecessary apps and limiting access to social media
- General steps for pre-commitments include:
 - Identifying the behaviours or habits that you want to change or improve;
 - Setting specific goals or intentions for those behaviours and habits;
 - Creating a binding commitment to follow through on those goals, such as making a public statement;
 - Using external cues, such as reminders, to help you stay on track and follow through on your commitment; and
 - Rewarding yourself for following through on your commitment, such as by taking a break

Additional Resources

Podcasts:

- [How to schedule deep work: Time blocking | Cal Newport and Lex Fridman](#)
- [Timeboxing: The Most Powerful Time Management Technique You're Probably Not Using](#)
- [The Minimalists – Cal Newport](#)

Talks:

- [The Time-Block Academy with Cal Newport: Zoom Webinar Recording](#)
- [Dan Ariely – Are we in control of our own decisions?](#)
- [Self control: Dan Ariely at TEDxDuke](#)
- [TEDxWoodsHole - Dan Ariely - Temptations and Self-Control](#)

Books:

- [Digital Minimalism by Cal Newport](#)
- [A World Without Email by Cal Newport](#)
- [Deep Work by Cal Newport](#)
- [Indistractable by Nir Eyal](#)
- [Hooked by Nir Eyal](#)
- [The Pomodoro Technique by Francesco Cirillo](#)

Lesson #3: Self-awareness

Key Content Points

- Meditation involves following a specific technique or practice such as focusing on the breath to achieve a state of relaxation, mental clarity and emotional balance
- Benefits of meditation include helping one achieve a state of deep relaxation and reduced stress, reduced symptoms of depression and anxiety, enhanced sense of inner peace and wellbeing, enhanced emotional regulation, and improved cognitive function and performance
- From a neuroscience perspective, research has shown that meditation can increase the thickness of certain regions of the brain's cortex involved in attention, emotion regulation and decision-making, and has been found to reduce activity in the amygdala, a region of the brain involved in fear and stress response
- One can practice meditation by finding a quiet and comfortable place to sit or lie down where they won't be disturbed, choosing a specific object of meditation, such as the breath or a mantra, and focusing one's attention on it, gently redirecting attention back to it whenever the mind wanders, and practicing regularly to develop one's practice and reap its benefits
- Common types of meditation include:
 - Mindfulness meditation, which involves cultivating a non-judgemental awareness of one's thoughts and experiences in the present moment;
 - Loving-Kindness meditation, which involves cultivating feelings of love, compassion, and kindness towards oneself and others; and
 - Transcendental meditation, which involves the use of a mantra to achieve a state of deep relaxation and transcendence
- The default mode network is involved in self-referential thought, mind-wandering and introspection and is activated during rest and periods of task-free introspection and deactivated during attention-demanding tasks
- Strategies for decreasing activity in the default mode network and improving emotional regulation include:
 - Practices that cultivate present-moment awareness, such as mindfulness meditation or breathwork;
 - Creative activities, such as drawing;
 - Exposure to nature; and
 - Exposure to novel or unfamiliar stimuli to enhance curiosity and learning
- Interoceptive awareness refers to the degree to which one is aware and able to attend to their internal bodily sensations and has been associated with a range of mental and physical outcomes, including emotional regulation, stress management, and pain perception; while poor interoceptive awareness has been linked to a range of mental health disorders, including anxiety, depression and eating disorders

- Interventions that have been shown to improve interoceptive awareness include mindfulness practices such as body scans and mindful movement, body awareness training, biofeedback training, and yoga

Additional Resources

Podcasts

- [Huberman Lab – How Meditation Works](#)
- [Huberman Lab – Sam Harris](#)
- [Sam Harris & Andrew Huberman – The Default Mode Network](#)
- [The Dissenter – Sarah Garfinkel: Interoception, Emotion, And Mental Health](#)
- [Good Life Project – The Body Keeps the Score](#)

Talks

- [Ellen Langer: Mindfulness over matter](#)
- [Annie Murphy Paul | The Extended Mind: The Power of Thinking Outside the Brain | Talks at Google](#)
- [The science inside our hearts and minds | Dr Sarah Garfinkel | TEDxBrighton](#)

Books

- [Mindfulness by Ellen Langer](#)
- [The Mindful Body by Ellen Langer](#)
- [Waking Up by Sam Harris](#)
- [The Body Keeps the Score by Bessel van der Kolk](#)
- [The Extended Mind by Annie Murphy Paul](#)

Lesson #4: Procrastination

Key Content Points

- Procrastination can be seen as a form of emotion-focused coping where one delays tasks to avoid or manage the negative emotions associated with the task, such as fear, anxiety or frustration which may act as barriers to task initiation or completion
- Procrastinators often struggle with emotional self-regulation, such as low self-efficacy, and may delay a task to temporarily reduce their exposure to negative emotional experiences, or can be influenced by perfectionistic tendencies and a fear of failure
- Seven triggers identified by Dr. Tim Pychyl which make a task seem more aversive include: boring, frustration, difficult, ambiguous, unstructured, not intrinsically rewarding and lacking in personal meaning
- Since procrastination often involves negative emotions, despite recognizing the importance of a task, one may experience emotional aversion or discomfort, leading to a disconnect between their cognitive understanding and emotional response
- Emotional intelligence involves being aware of one's emotions, recognizing how they influence thoughts and behaviors and developing the ability to regulate and manage emotions effectively. By increasing self-awareness, one can identify the emotions that arise when faced with unpleasant tasks, understand how they may contribute to procrastination, and develop strategies to regulate those negative emotions, such as: deep breathing exercises, positive self-talk, reframing negative thoughts, mindfulness and stress reduction techniques
- Other strategies to overcome procrastination include:
 - Meditating for 5-10 minutes to help get over the hump of procrastination;
 - Engaging in an activity that is harder or more effortful than the state you are currently in;
 - Emphasizing with one's future self, to develop a stronger motivation to take action and prioritize long-term goals over short-term mood regulation; and
 - Finding ways to connect with the intrinsic value or purpose of a task to enhance one's self-motivation and create a sense of reward for completing tasks, thereby reducing the unpleasantness associated with them

Additional Resources

Podcasts:

- [Deep Dive Podcast – Dr. Tim Pychyl on Procrastination](#)
- [Disinformed Podcast – Dr. Joseph Ferrari on Solving Procrastination](#)
- [Huberman Lab – Leverage dopamine to overcome procrastination](#)

Talks:

- [Helping students who procrastinate \(Dr. Tim Pychyl\)](#)
- [An end to procrastination with Dr. Tim Pychyl](#)

Books:

- [Solving the Procrastination Puzzle by Dr. Timothy Pychyl](#)
- [Still Procrastinating by Dr. Joseph Ferrari](#)

Lesson #5: Gamification

Key Content Points

- Gamified living refers to the concept of using game principles to enhance personal wellbeing and resilience by providing a framework for setting goals, overcoming challenges and experiencing a sense of achievement
- Ways to embrace gamified living include:
 - Adopting a gameful mindset to approach life's challenges with a positive and proactive attitude and treat them as opportunities for growth;
 - Identifying personal quests to provide a sense of direction and purpose and fuel motivation;
 - Building a network of allies and seeking social support to provide encouragement, accountability and assistance;
 - Integrating power-ups or boosts, which are small actions used to enhance wellbeing, such as exercise or spending time in nature;
 - Battling “bad guys” by identifying challenges or obstacles in one's life and developing strategies to overcome them;
 - Leveraging personal strengths and skills to navigate challenges more effectively; and
 - Tracking progress and celebrating victories to fuel motivation and wellbeing
- In the context of gamification, incorporating elements such as points, levels, achievements and rewards can activate the brain's dopamine system as they create a sense of anticipation, progress and accomplishment, thus triggering the release of dopamine and increasing focus and motivation
- It is important to balance extrinsic rewards with intrinsic motivation for meaningful and sustainable engagement, as an over-reliance on extrinsic rewards may result in shallow engagement and short-term motivation
- Positive outcomes of gamification on wellbeing, resilience and performance include:
 - Enhanced positive emotions and emotional engagement;
 - Greater resilience by allowing one to overcome challenges and learn from failure;
 - Cultivating flow state by offering a unique combination of challenge, control and meaningful choices;
 - Enhanced cognitive abilities such as attention and memory; and
 - Enhanced motivation and persistence by empowering individuals to achieve goals and experience a sense of competence and accomplishment

Additional Resources

Podcasts:

- [The Jordan Harbinger Show – Jane McGonigal on Gamification](#)

- [The Knowledge Project – Jane McGonigal: The Psychology of Gaming](#)

Talks:

- [Gaming can make a better world | Jane McGonigal](#)
- [The science of how games make us stronger | Jane McGonigal](#)
- [SuperBetter | Jane McGonigal Q&A | Talks at Google](#)

Books:

- [SuperBetter by Jane McGonigal](#)

Lesson #6: Daily and weekly structure

There are no additional resources for this lesson.

Lesson #7: Morning and evening routines

Key Content Points

- Chronotypes refer to individual variations in circadian rhythms, affecting one's sleep-wake patterns and preferences for certain routines and habits and can be grouped into the following types:
 - Larks – or morning types – who tend to have a preference for earlier sleep and wake times and may benefit from scheduling demanding tasks during their peak alertness in the morning;
 - Owls – or evening types – who have a preference for later sleep and wake times and may perform better during later parts of the day or evening;
 - Intermediate types – whose peak alertness times may be during certain times of day
- Chronotypes influence various aspects of daily functioning, including cognitive performance, mood, and physical activity patterns, and thus, adapting routines and habits can help one capitalize on their peak energy and alertness periods, leading to increased productivity and satisfaction, and ultimately, result in improved well-being, better sleep, enhanced cognitive functioning, and optimized performance
- Many individuals experience their peak alertness and cognitive performance in the morning, and research shows that the late morning hours, typically between 10 a.m. and 12 p.m. may be the optimal time for cognitively demanding work
- In the afternoon, there is a natural dip in alertness and cognitive performance, often referred to as the "post-lunch dip" or "afternoon slump," and thus, during the early to mid-afternoon hours, it may be beneficial to schedule less demanding tasks, administrative work, or take short breaks to accommodate the dip in alertness
- Late afternoon and early evening can be a suitable time for recovery, relaxation, and engaging in activities that promote sleep quality and well-being, however, for "owls," this may be when one experiences their peak alertness and cognitive performance
- Some strategies for optimizing one's morning and evening routine, include:
 - In the first part of one's day (0-9 hours after waking), exposing oneself to natural light or using bright lights for maximum alertness;
 - For detailed analytic work (ideally, 0-9 hours after waking), working in a lower ceiling environment or putting on a hoodie or hat to restrict one's visual field;
 - For creative work (9-16 hours after waking), starting to dim overhead lights and working in high ceiling room or outdoors; and
 - Every 45 minutes of focused work, taking a walk or relaxing one's eyes and dilating your gaze for 5 minutes to avoid fatigue

Additional Resources

Podcasts:

- [Huberman Lab – Dr. Samer Hattar: Timing Light, Food, & Exercise for Better Sleep, Energy & Mood](#)
- [Huberman Lab – Sleep Toolkit: Tools for Optimizing Sleep & Sleep-Wake Timing](#)
- [Andrew Huberman Reveals His Entire Morning Routine](#)
- [The Doctor’s Podcast – Hack Your Sleep for Optimal Performance with Dr. Michael Breus](#)

Talks:

- [The Optimal Morning Routine - Andrew Huberman](#)
- [Learn the perfect hormonal time to sleep, eat and have sex | Michael Breus | TEDxManhattanBeach](#)
- [How to Sleep Better by Knowing Your Chronotype](#)
- [The Power of When | Michael Breus | Talks at Google](#)

Books:

- [The Power of When by Dr. Michael Breus](#)
- [Energize by Dr. Michael Breus & Stacey Griffith](#)

Lesson #8: Goals for continued growth toward well-being, resilience and performance

There are no additional resources for this lesson.