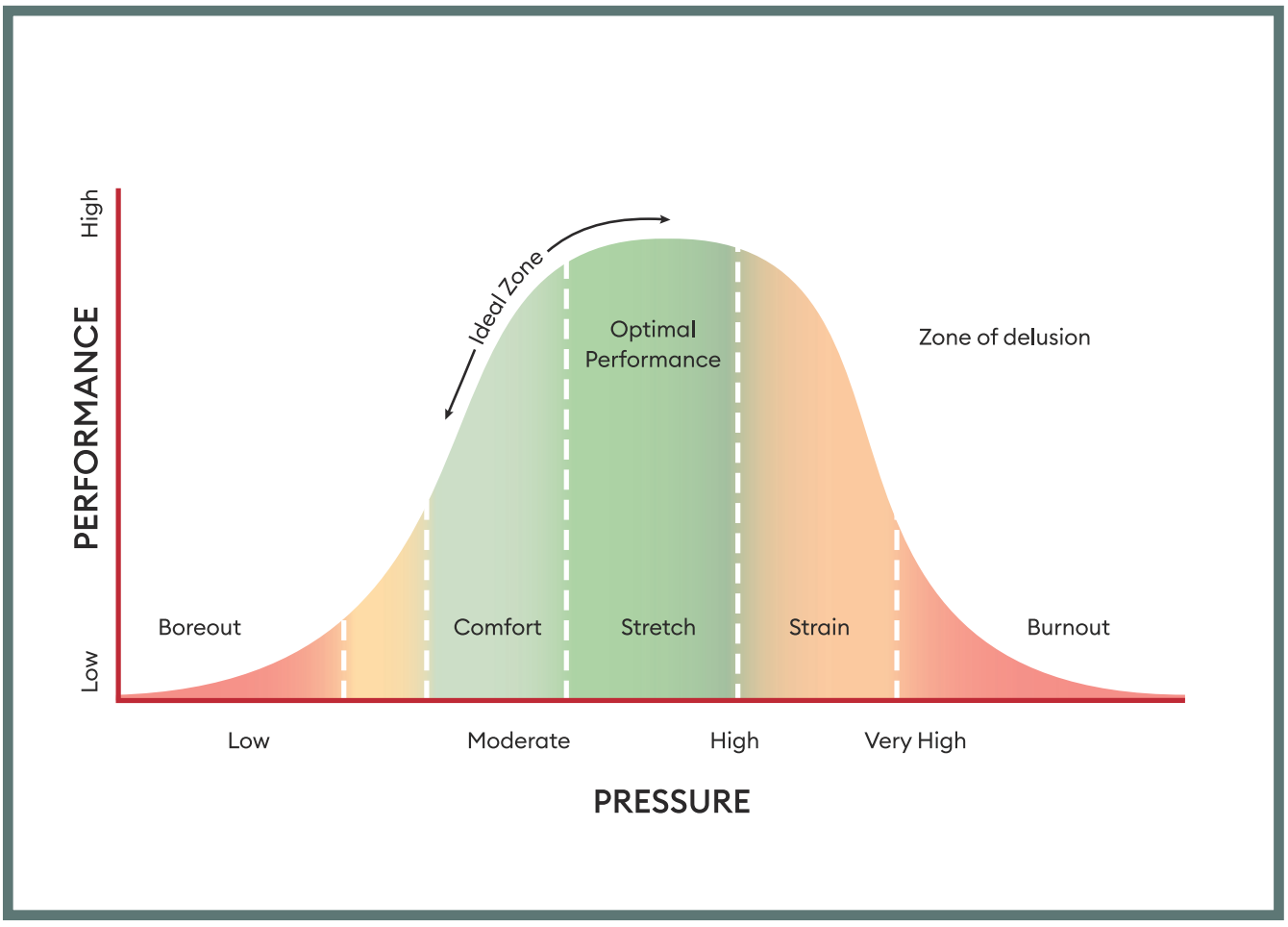
Burnout Resilience Program

Tiffany Cruikshank, L.Ac., MAOM & Diane Malaspina, Ph.D.



Yoga Medicine®
EDUCATION
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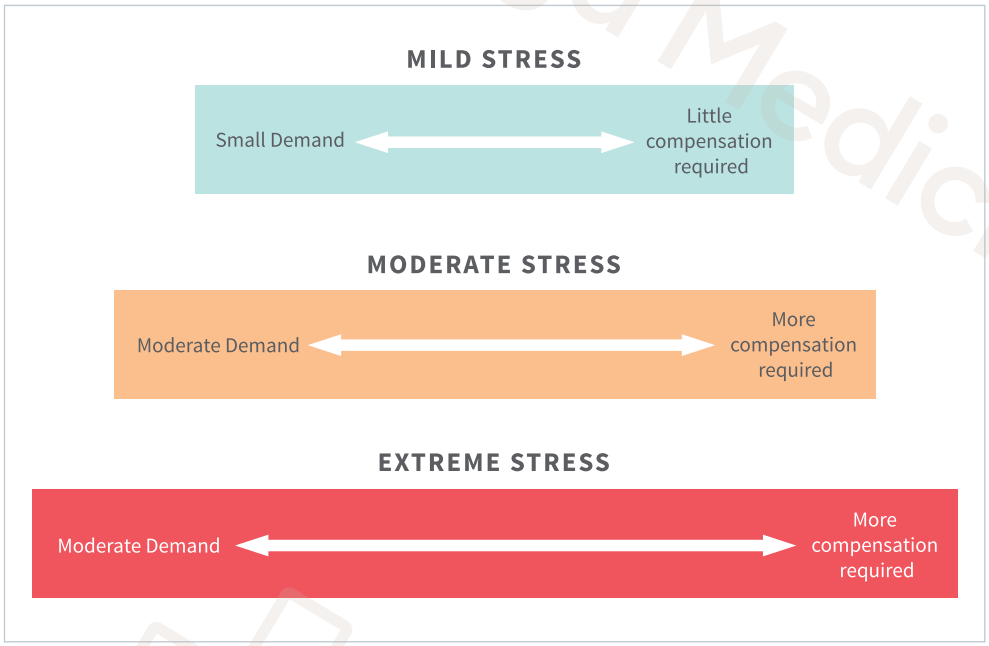
Stress: Too Much, Too Little, Just Right

Physiological Arousal

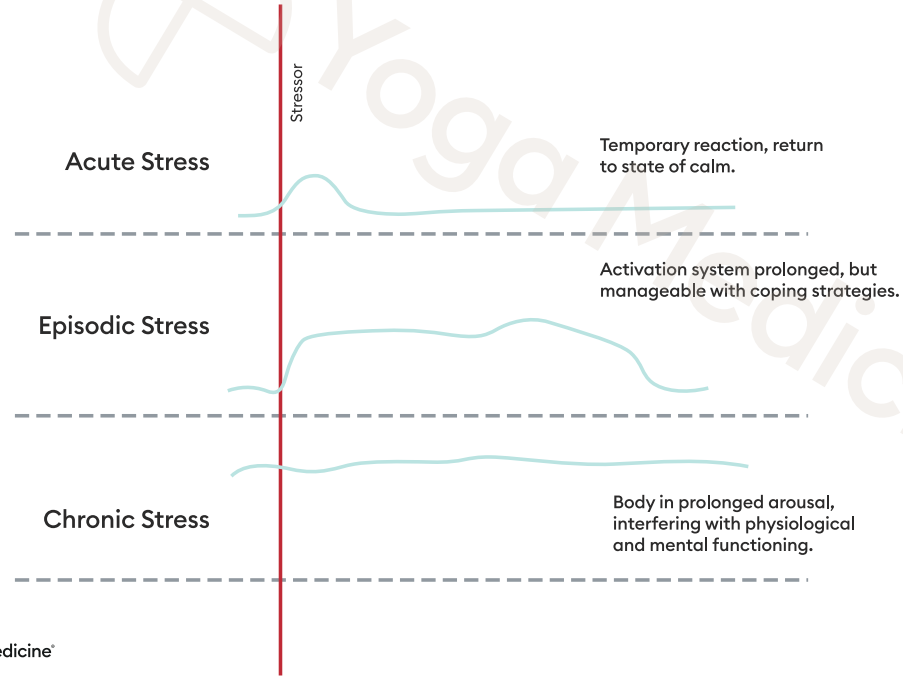
Demand x Compensation

- **Great oxygenation event:** explosion of life

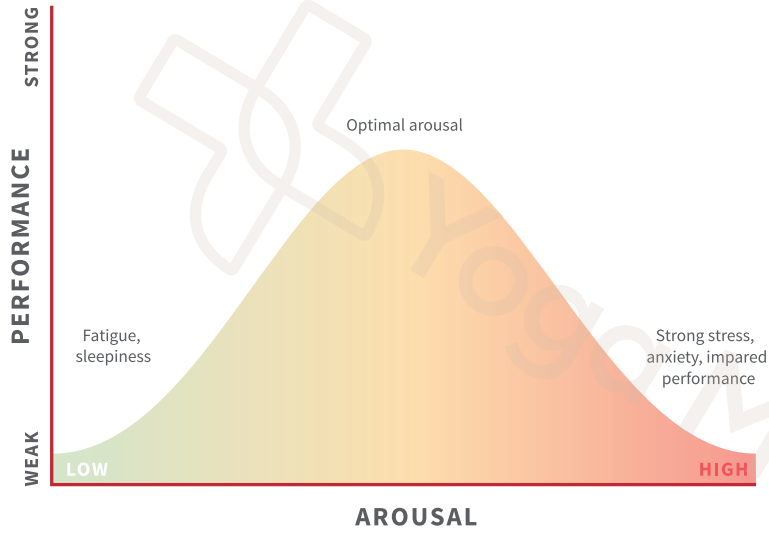


State of stress as a function of demand posed by the environment (stressor) and the amount of compensation required to keep the system in homeostatic limits.

Stress x Time



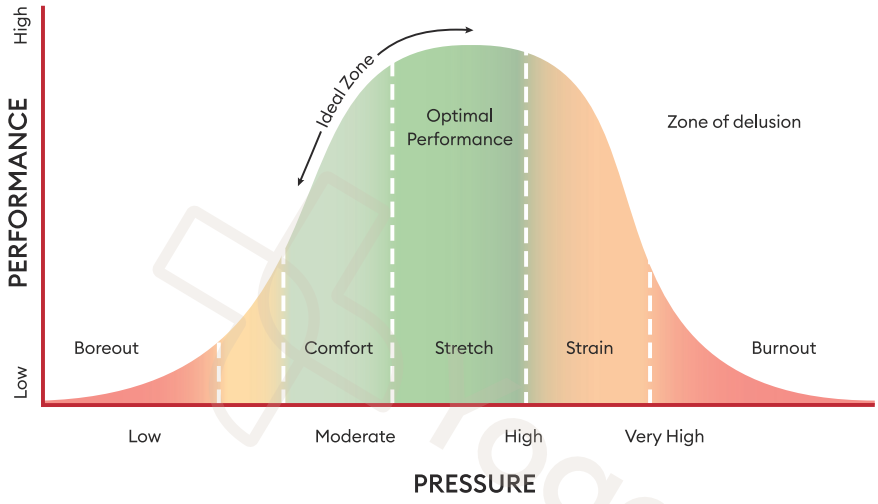
Yerkes-Dodson Law



Arousal x Performance:

Relative to Individual: arousal varies by energy needed for performance, task ease or difficulty, individual capabilities, experience, and interpretation.

Stress & Pressure Performance Curve



Pressure & Performance

- "Backfire" effect of stress: the point where excessive hard work, anxiety, or insomnia cuts significantly into the potential for optimal performance.
- Successfully navigating stress/pressure:
  - » Protects against deleterious effects of prolonged strain and potential burnout (maladaptive health effects).
  - » Allows for intentional use of stress/pressure to access 'ideal zone' – for motivation and performance (adaptive health effects).

Burnout

Burn-out is a syndrome resulting from chronic (workplace) stress that has not been successfully managed.

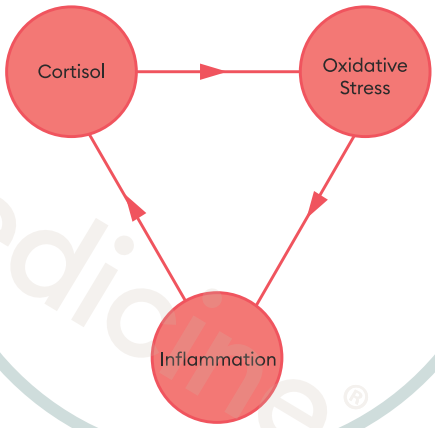
- Feelings of energy depletion or **exhaustion.**
- Increased mental distance (from one's job), or feelings of negativism or **cynicism** (related to one's job).
- Reduced (professional) **efficacy.**

Burnout Symptoms

Physical	Mental/Emotional	Behavioral
Exhaustion and fatigue	Anger/irritability	Decreased productivity
Gastrointestinal distress	Anxiety/worry	Aversion towards circumstance
Headaches	Cynicism	Lack of motivation
Increased illness/lower immunity	Depersonalization	Increased isolation
Insomnia	Depression/low mood	Reduced efficacy
Muscle pain	Apathy/hopelessness	Conflict with others
Heart disease/high BP	Anhedonia	No work-life balance
Type 2 diabetes	Difficulty focusing	Addictive/dissociative habits
	Lack of clarity	Inability to cope

Chronic Stress Gets Into Our Cells

- Damages mitochondria (gives us energy & keeps cells healthy).
- Ushers us into 'disease-span': period in life when we start to develop the illnesses of aging.
- Body 'tricked' into survival: metabolism slows, fat stores in abdominal area, appetite increases for sugar and fat -> insulin resistance.
- Impairs sleep.
- Drives addiction: turns on brain pathways that crave pleasure and relief.



Breathwork & Acupressure to Hack Your Nervous System

Breathwork as a resilience tool

Hyperventilation

- Rapid deep breathing
- Effects: increase HR, BP, CO, SNS, enhance cognitive function, offload CO2 (prep for breath holds)
- Contraindicated for seizures/epilepsy (regularly not for: high BP, stroke, heart disease, pregnant, elevated intraocular pressure)

Kapalabhati (form of hyperventilation)

- Exhale focus
- Traditionally: stimulate, heat, invigorate, detox/purify, stimulate digestion & elimination, clear nasal passages/ mucus
- TCM: move qi/blood & warm, not for exhaustion
- **Not with epilepsy/seizures**
- Go slow &/or do less with exhaustion

Hypoventilation

- Practices that decrease volume of air moved
- Why:
  - » CO2 tolerance allows for higher CO2= release O2 to tissues
  - » Increased hemoglobin concentration (hemoglobin taxis)
  - » Vasodilation

Slow deep breathing

- Shift to PNS (BP, HR, HRV effects)
- No adverse effects reported yet
- Micro-dosing of 5mins can decrease anxiety

Wood Element

GENERAL

RULES

- Stress regulation system
- In a healthy state able to be decisive and easily navigate challenges
- Supported with a balance of movement and introspective practices
- Vulnerable to stagnation, stress, overworking

CHARACTERISTICS OF HEALTHY WOOD

CHARACTER-ISTICS

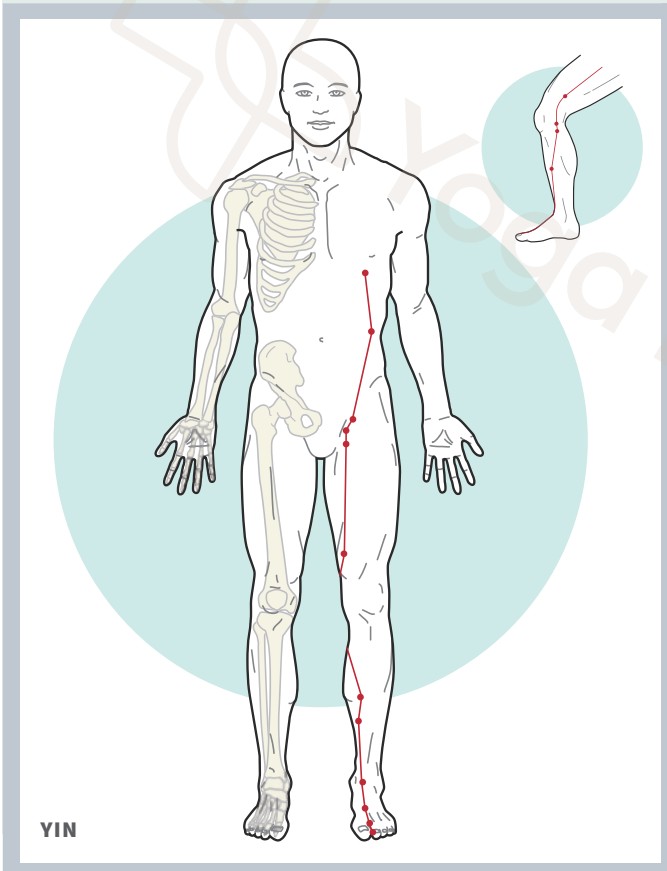
- Clarity, Decision, Foresight
- Purpose, Goals, Vision
- Assertiveness
- Confident, ambitious
- Powerful, competitive
- Committed

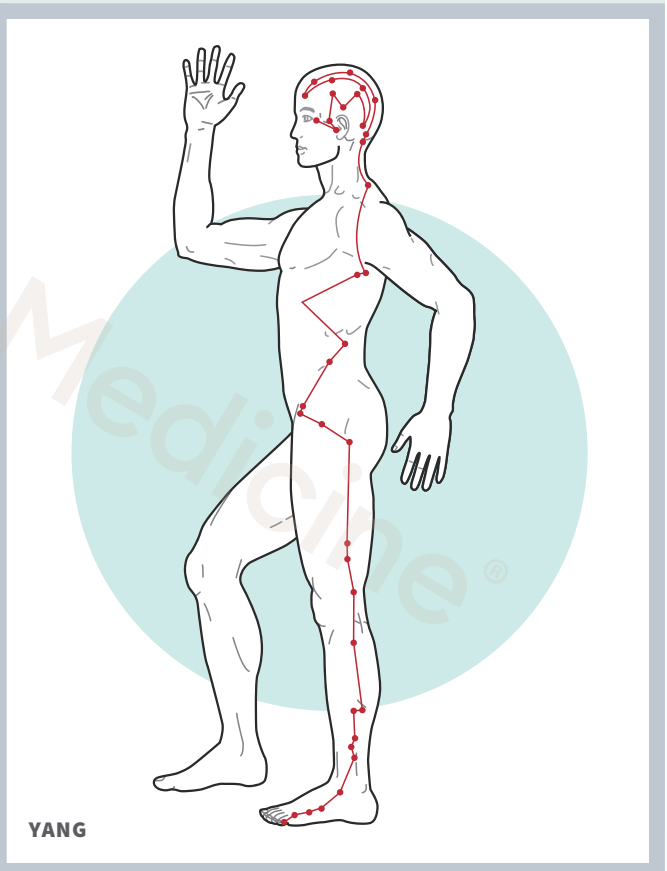
WOOD OUT OF BALANCE

CHARACTER-ISTICS

- **Excess:** arrogant, aggressive, confrontational, impulsive, anger, irritation, frustration, bitterness, resentment, fury, outrage, rigid
- **Xu:** lost, unsure, ambivalent, timid, hesitant, unassertive, resignation, apathy, indecisive
- **Difficulty with:**
  - » Intensity, restraint, sharing, cooperation, obstacles, anger
  - » Headaches, TMJ, hypertension, PMS,

Wood Element





LIVER
MERIDIAN

GALL BLADDER
MERIDIAN

Stress Exploration

Record your daily stressors in each category, ranking degree of stress + reaction to stress 1 (low) – 5 (high).

- Daily hassles: common annoyances/strains of daily life (traffic, chores, minor problems, lack of sleep, homework, limited free time, disagreement with other).
- Major life changes: important events, both positive and negative, that require significant adjustment (birth of a child, separation/divorce, new job, moving, loss of a loved one, major illness/injury).
- Life circumstances: long-term circumstances that make life more difficult (poverty/financial duress, disability, chronic illness, ongoing conflict, values that conflict with culture, discrimination, lack of safety).

Risk Factors

Causes of Workplace Burnout

Maslach's 6 Burnout Triggers (Work-Life Survey)

- Unmanageable workload
- Lack of control
- Insufficient reward
- Breakdown in community
- Unfairness
- Values conflict

Big 5 and Burnout Dimensions

Big 5	Traits	Overall Burnout	Exhaustion	Cynicism Depersonalization	Reduced Efficacy
Openness to experience (vs. cautious)	Intellectual curiosity, creative imagination	Inverse	Correlation	Correlation	Correlation
Conscientiousness (vs. careless)	Organization, productiveness, responsibility	Inverse	Correlation	Correlation	Correlation
Extroversion (vs. introversion)	Sociability, assertiveness	Inverse	**Strong Correlation**	Correlation	**Strong Correlation**
Agreeableness (vs. challenging)	Compassion, respectfulness, trust in others	Inverse	Correlation	**Strong Correlation**	**Strong Correlation**
Neuroticism (vs. confident)	Tendencies toward anxiety & depression	Direct	**Strong Correlation**	**Strong Correlation**	Correlation

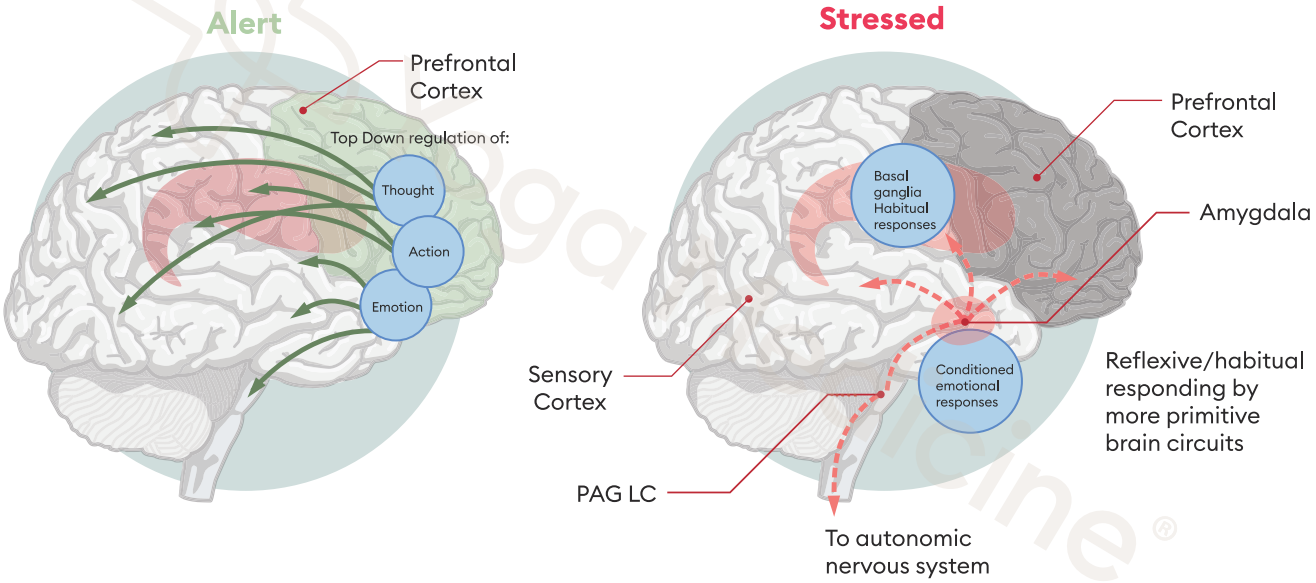
REDUCING NEUROTICISM AND ENHANCING CONSCIENTIOUSNESS MAY ADDRESS MEDICAL STAFF BURNOUT (WANG, ET. AL., 2024).

Limiting Beliefs/Patterns and Burnout

- Perfectionist/The Critic
- Imposter Phenomena
- Lone Wolf
- Work-a-holic
- My way is the right/only way
- People Pleaser
- Work is Too Hard

Burnout and The Brain

Connectivity and Emotion Regulation



A Burned-Out Brain

- Much worse at controlling or suppressing negative emotions.
- Enlarged amygdala.
- Weaker connection between amygdala and anterior cingulate cortex (ACC) → emotional distress.
- Weaker connection between amygdala and medial prefrontal cortex (mPFC) → executive fx, impulse control, planning, goals.
- The higher the stress, the weaker the connectivity.

Brain Recovery

- Cognitive Behavioral Therapy (CBT) for burnout can reduce the size of the amygdala and return the prefrontal cortex to pre-stress levels.
- Activities that enhance brain-wide connectivity – yoga, meditation, nature immersion, movement, hands-on activities.
- Nervous system recovery – breath, relaxation, MFR (and more).

Burnout Proofing

Goal: Train to Be Adaptive

- Nervous System -> Meets demand, easily returns to baseline.
- Psychologically -> Manage obstacles, learn from experience.
- Process:
  - » Self-awareness
  - » Self-regulation
  - » Self-adaptation

3 Forms of Stress Management

- Open the boundaries for what is perceived as stress:
  - » Physiological: nervous system downregulation, sleep, mindfulness, gratitude, nutrition, social support.
  - » Psychological: cognitive restructuring, perspective reframing.
- Release stress soon after activation.
- Activate the stress response if under aroused – or – to build capacity.

Restructuring/Reframing

Psychological	Strategies
EITHER/OR → BOTH/AND Seeing one perspective/answer → Recognizing multiple perspectives. My way is the only way	**EMBRACE COMPLEXITY:** hold multiple views; Broaden problem solving by taking in varying perspectives.
THREAT → CHALLENGE MINDSET Danger → Opportunity Imposter	**REFRAME** to challenge vs. threat, inject healthy stress to push boundaries & create comfort w/discomfort.
FIXED → GROWTH Abilities are static → Abilities can be developed Work is too hard	**USE FEEDBACK & LEARN FROM:** to improve capabilities and knowledge.
OUTCOME → PROCESS Emphasis on end result → Emphasis on the steps and effort/training Perfectionist, work is too hard	**SET GOALS & REINFORCE SUCCESS:** break down behavior into steps, reinforce effort & persistence.
LONE WOLF → TEND & BEFRIEND Take it on individually → Seeking support from social network. Lone wolf, people pleaser, work is too hard, work-a-holic	**COLLABORATE & ENGAGE:** quality relationships to buffer stress; engage in teamwork and collective problem-solving.

Releasing Stress

- Coming down from SNS arousal, intentionally letting go/backing off of the challenge, triggered by deep embodiment or physical activity (can be low grade).
- Unconscious processing, attention disengages (alpha brainwaves) – Default Mode Network is active.
- Release of nitric oxide (NO) throughout the body:
  - » Counters negative effects of stress hormones: reduces blood pressure, lowers heart rate, lowers metabolism, eases anger, anxiety, and vulnerability to pain.

Ways to Release

- Exercise
- Mindful movement
- Myofascial release
- Breathwork
- Nature immersion
- Shower
- Meditation
- Journal/writing

Value of Yin/Yang & Parasympathetic

Yin / Yang

Preciousness of Yin & Yang

- Yin: still, quiet, introspective, associated with longevity & vitality
- Everything can be further broken down
- Yin/yang theory: mutually support, transform, & control
- Dose & mindset is key

Yin & Restorative Yoga

- Important for parasympathetic tone & recovery
- Acute & long-term effects
- Yin: Decreased arterial stiffness associated with regular stretching (KATO ET ALL., 2020)
- Yin: Positive effects on inflammation, fibrosis, and hydration of connective tissues (LANGEVIN 2007 & 2015)

Breathing for PNS

Valving

- Adds resistance to slow breath
- Hands or throat
- On exhale sedates or calms
-

Prolonged Exhale

- Increase parasympathetic activation, lower BP
- Yin, calming
- Can be with ratio, valving, bhramari, etc

Retention (kumbhaka)

- Increase CO2 tolerance & O2 to tissues
- Exhale suspension (bahya kumbhaka)
  - » Increase parasympathetic activation, traditionally for nervous tension, muscular tension, high BP
  - » Increase cerebral blood flow

Key Points

- Nervous system must be trained, like a muscle
- Repetition is key
- Yin/restorative yoga can be helpful & accomplish several goals
- MFR, slow/deep breathing & exhale focused practices can be quick & potent tools
- Prioritize recovery for best outcomes
- Find a time/day that works best
- To feel & perform better you must prioritize recovery!

Risk Factor Reflections

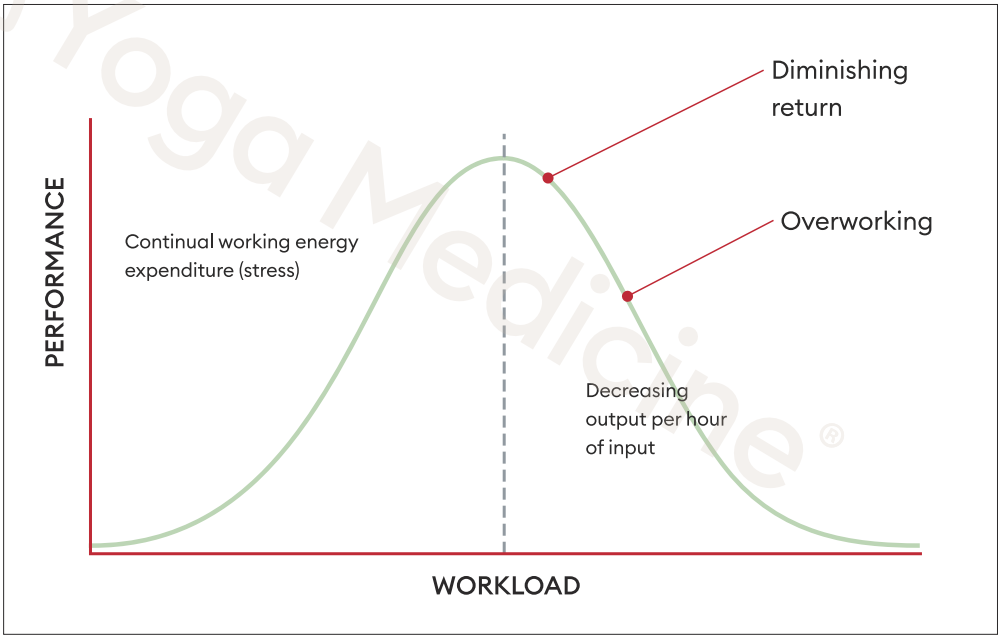
How we think about stress influences the nervous system and determines the way we respond to it.

- Am I approaching stress as a threat or challenge? What will help me shift the everyday stressors from 'threat' to 'challenge accepted!'?
- Which limiting beliefs can I ease up on? What is one reframe I can use to support this (consistently)?
- Explore integrating a stress release strategy within moments after experiencing a stressor. Record insights.

The Art of Recovery

Time, Energy, and Performance

- **Time** in a day is ***fixed***, quantity and quality of **energy** available is ***variable***.
- Linearity: failure to oscillate between energy expenditure and recovery.
- Energy is a lever for performance!



Oscillation Between Stress & Recovery

- Move between stress and recovery (stress + recovery = adaptation).
- Allows for 'super compensation' – rejuvenation and expanded capacity to maintain (and expand) baseline performance.
  - » Muscle analogy: stress muscle, breaks down, becomes stronger.
  - » Overtraining a muscle plateaus or decreases performance; overworking (too much energy expenditure without recovery) disrupts wellbeing and performance.

Binary Approach: On or Off

- Stress: Full engagement in the moment on whatever is in front of you.
- Recovery: Unplugged – lower arousal, minimal stimulation, NS down regulation.
- Avoid the "Gray Zone" - not fully on or off.
  - » Multi-tasking.
  - » Maintaining mental connection to work.
  - » States of distraction.
- Mindfulness practices support this skill.
- Menu of recovery practices that are accessible and turn "off" stress.

The Power of Full Engagement

Manage Time	Manage Energy
Avoid stress	Seek stress
Life is a marathon	Life is a series of sprints
Downtime is wasted time	Downtime is productive time
Rewards fuel performance	Purpose fuels performance
Self-discipline emphasis	Rituals emphasis
Power of positive thinking	Power of full engagement

Types of Recovery

- Sleep – the ultimate recovery.
- Inactive/Passive Recovery – doing nothing but allowing the system to recover.
  - » 'Vegging out' in front of screen, drinking alcohol, eating unhealthy food, etc. (less likely to make you feel good).
- Active Recovery – promotes healing & rejuvenation while consciously aware.
  - » Brings us back to physiological baseline & allows for supercompensation providing more energy. (more likely to make you feel good).

Active vs Inactive Recovery

Active Recovery: good breaks, (+) energy	Inactive Recovery: less ideal breaks, (-) energy
Low prefrontal cortex engagement, low cognitive stimulation, low sensory stimulation, induce quiet mind.	High stimulation, capture attention, drive dopamine, induce the desire for more.
Keeps cognitive load low.	Raises cognitive load.
Wall staring Napping Closing eyes Walking Stretching Mindfulness Breathwork Drinking/eating (nothing else) Myofascial release Light exercise (yoga) Nature Sensory deprivation Massage/pressure	Texting Social media Video TV Too much talking Reading News Gaming Other device use Eating/drinking and multitasking or looking at device Bingeing behaviors Some checking out behaviors (less healthy)

Prioritize Sleep

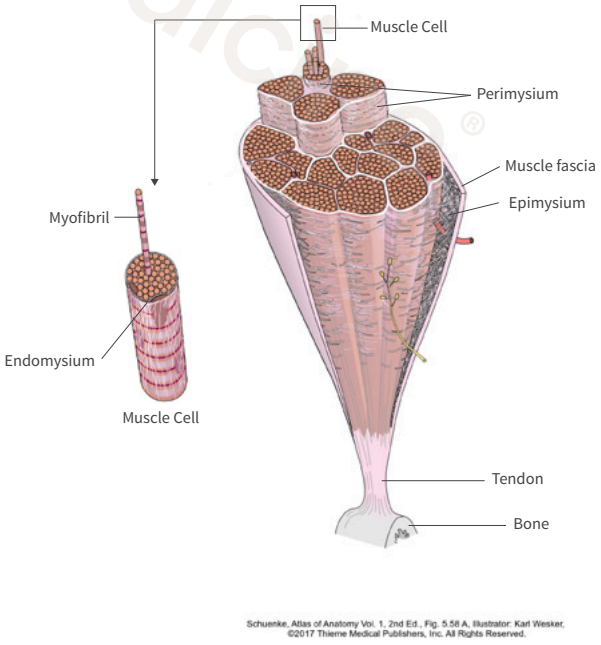
- Low quality sleep is correlated with Burnout, Anxiety, and Low Mood.
- Poor sleep quality & insomnia assoc. with 2.5 x greater chance of experiencing depersonalization/cynicism and exhaustion.
- Time containers/management: tendency to reduce margins of sleep (late & early) and fallacy of creating more time by decreasing time sleeping.
- Yoga Nidra or NSDR improves sleep, cognition and mental health, and overall well-being.

Nervous System Regulation & Myofascial Release (MFR)

Fascia

- Connective tissue
- One continuous interconnected system that exists from head to toe without interruption

Fascia – encasing layers



Schuenke, Atlas of Anatomy Vol. 1, 2nd Ed., Fig. 5.58 A, Illustrator: Karl Wesker. ©2017 Thieme Medical Publishers, Inc. All Rights Reserved.

Fascia Functions

2 Main Functions

1. **Connection**

Attach, separate, enclose, support organs, scaffolding/ framework for body structure, fill space, store fat, insulate

2. **Adapatation**

Communication, body sense, transmit & accommodate force, strain distributing, store elastic energy, immune function, repair tissues, lubrication/hydration, adapting to demands

Fascia

Composed of

- **Cells** - mainly fibroblasts, myofibroblasts & immune cells
- **Fibers** - mainly collagen & elastin
- **Ground substance** - viscous fluid or gel that surrounds the fibers & cells

MFR Effects

MFR 2 Main Acute Effects:

1. **Nervous System (pain, ROM, stress)**
   - » Slow/static MFR impacts ruffini receptors→PNS
   - » Sympathetic innervation in fascia can impact blood flow & have potential implications on fascia & stress
   - » CNS involved in ROM changes related to MFR
   - » Global effects of MFR from CNS
2. **Hydration (ROM, tissue function, anti-aging)**
   - » Breakup self-aggregation of hyaluronan→ decrease densification & viscosity
   - » Thixotropic effects allow for better gliding
   - » Sponge effect pulls more fluids in

Myofascial Release

Key Principles

Avoid:

- **Top 3: Nerves, bones, visible swelling**
- Hypersensitivity of the skin, rolling an area that is still sore
- Bruises, broken skin/open wounds, sutures, varicose veins, fractures, trachea, carpel tunnel
- Osteoporosis- avoid anything near or on bones or awkward positions
- Joint replacements- do not roll on or position weight over the artificial joint, careful with awkward positions
- Pregnancy- abdominal points, late second & third trimester avoid prone and supine positions (prop upright if possible, roll on side or lean against a wall)
- Deep vein thrombosis avoid areas of known blood clots or skip
- Go gentle with bleeding disorders or blood thinners to avoid bleeding/bruising
- Fibromyalgia - be very gentle and be cautious of soreness after as well, use a rolled sock or other gentle tool

Always consult healthcare provider first.

This is not meant to replace medical care.

Contraindications

Any serious medical condition should be cleared by a doctor, including but not limited to:

- Circulatory issues
- Fever
- Systemic or localized infections- including osteomyelitis (bone) & cellulitis (skin & superficial fascia)
- Advanced diabetes
- Unmanaged hypertension
- Lymphedema or cancer (do not roll directly on or near)
- Heart disease
- Aneurysm
- Any other serious illness or condition, if unsure talk to their doctor

Myofascial Release

Goals

- Enhance ROM (without impacting performance)
- Optimize hydration of tissues to enhance tissue function & resilience
- Regulate nervous system activity (local & systemic)
- Regulate pain & pressure sensitivity
- Re-establish neural & myofascial glide

Key Points

- LESS IS MORE!
- No pain (move ball or use props)
- Use this as an opportunity to get to know your body
- Make it meaningful & purposeful (stay, soften, soothe)
- Everything you notice is just one piece of information (context is key)
- Don't do anything you aren't comfortable with (move, prop, modify, back off, do something else)

Create an Oscillation Plan

- Over the next week, create a plan for oscillating recovery throughout the day.
- Choose easy to implement, accessible practices.
- Implement your plan and journal/track overall energy, mood, and feelings of effectiveness.
- Also take note of passive recovery and how it makes you feel.

Leveraging Stress to Build Strength

Inject Healthy Stress to Train the System

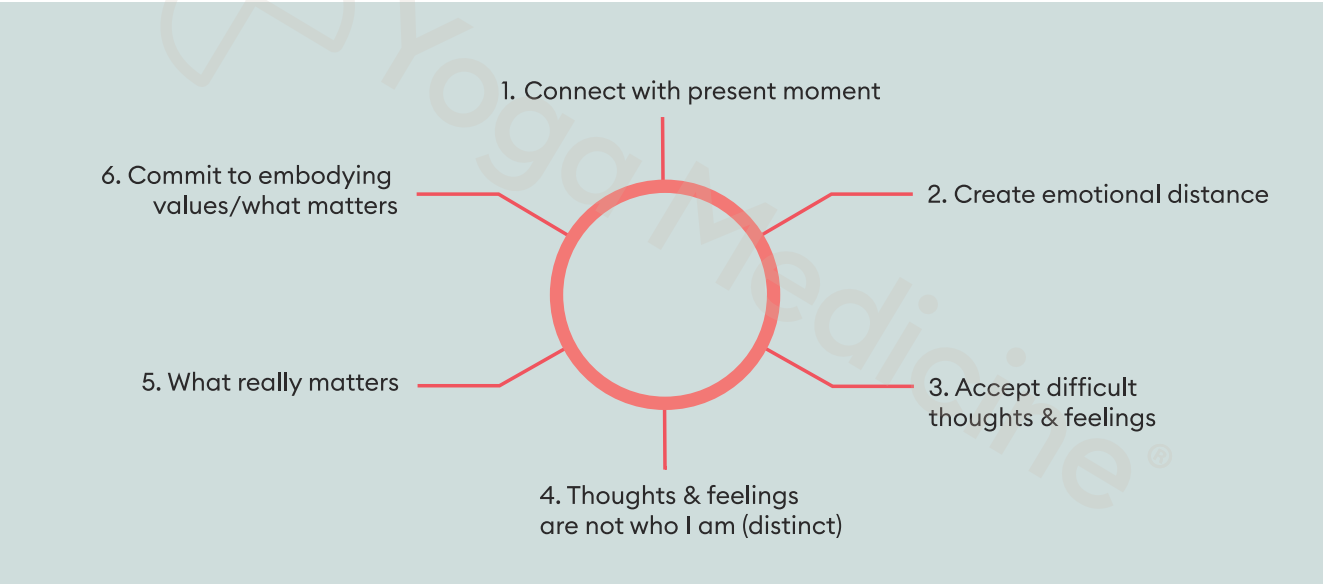
- Hormetic Stress – exposure to short-term, manageable stressors (to improve adaptation).
  - » Trains a sharp on-off switch for our stress response (vagal rebound).
  - » Triggers autophagy – process where cells activate a 'clean up crew' – cleaning waste and recycling it.
  - » Microdose of stress inoculates body/mind to metabolize stress better.
- Sedentary or high burnout: start slowly with walking or gentle yoga & gradually increase intensity.

Antifragility

Thriving in the face of stressors.

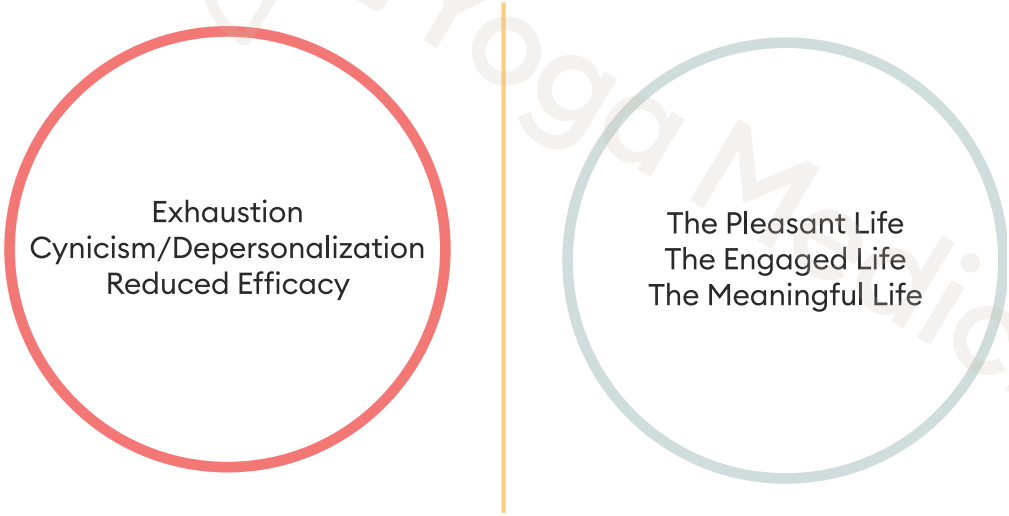
- Physiology: increasing baseline nervous system activation and broadening window of tolerance.
  - » Movement (duration, intensity, load).
  - » Breathwork (retention and hyper and hypo ventilation).
- Psychological: improving from and transcending obstacles.
  - » Meditation (duration, type).
  - » Acceptance and Commitment.

Acceptance & Commitment: A Mindfulness Approach



The Other Side of Burnout: Connecting to Vitality

The Antithesis of Burnout



A Strong System: Positive Psychology Levers for Wellbeing

- Sleep
- Nutrition/hydration
- Movement/embodiment
- Nature
- Social Connection
- Gratitude
- Mindfulness

Gratitude Creates Meaning & Purpose

- Regular practice linked to improved physical health, stronger relationships, increased life satisfaction and greater ability to cope with stress and adversity.
- Mixed Emotions Gratitude: acknowledging both positive and negative aspects of an experience.
- Gratitude journaling shown to decrease anxiety, increase life satisfaction and positive affect, stronger relationships with others, and improve psychological well-being.
- Alters negativity bias and feeds pattern recognition system for future positive outlook.

Challenge Your Tissues to Strengthen the System

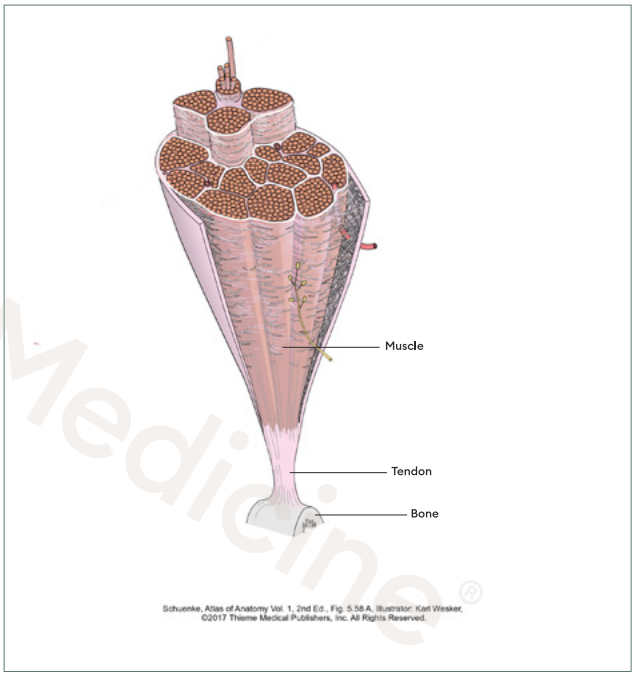
Strength & Resilience

Training Muscle (in yoga):

- Diversity of movement, functional movement, cross training
- Target deep stabilizing muscles and static endurance
- Neurologic control, balance & coordination
- Eccentric loading
- Isometrics to recruit more motor units (functional units of muscle)
- Does not replace weight lifting (increased load)

Training Connective Tissue (in yoga):

- What- CT encases muscles for connection & force transmission
  - » Fibroblasts respond to load→ reorganize & adapt collagen matrix to demands
  - » Slowly remodeling over months
- Why- injury recovery/prevention, performance
- How
  - » Collagen deposition along lines of load (concentric, isometric, or eccentric)



Neurologic Training

Train Neuro control:

- How:
  - » Slower movement with body awareness to capture more neurologic information
  - » Sensory input → regulate motor outputs
  - » Train neurologic control throughout ROM → optimize function & resilience
  - » With: functional movements, diversity of movement, balance, end ROM, & isometrics

Isometric Training

Isometric Training:

- What: Activating a muscle without movement (resist movement)
- Why:
  - » Safe way to strength train without adding weight
  - » To recruit more motor units/muscle fibers
- Options:
  - » Resist in a static pose
  - » Resist through ROM/movement
  - » Control of end ROM

Eccentric Training

Eccentric Training:

- What: actively engage lengthening tissues
- Why:
  - » Lay down new sarcomeres along length of muscle fibers (sarcomerogenesis)
  - » Where injuries happen (go slow, start easy)
  - » For performance, rehab, muscle wasting/ sarcopenia
- Can have DOMS initially so start super easy
- Protective when repeated

Titin

- Protein filament inside muscle fibers that make up the contractile machinery
- One of the filaments next to actin & myosin
- Features:
  - » Activated in isometric long phases of movement or any phase of eccentric movement to stimulate titin signaling
  - » Deposits new sarcomeres (contractile unit of muscle) in series (sarcomerogenesis)
  - » Creates longer, more powerful muscle fibers
- Titin explains part of the reason of why eccentrics loading can be helpful

Explore in Practice

- Neurologic control (body awareness, functional movement, diversity of movement, balance)
- Isometric training (static, in motion, end ROM)- to recruit more motor units
- Eccentric training (go gentle!!)- for muscle & CT resilience
- Increase the challenge by adding speed, load, or complexity!