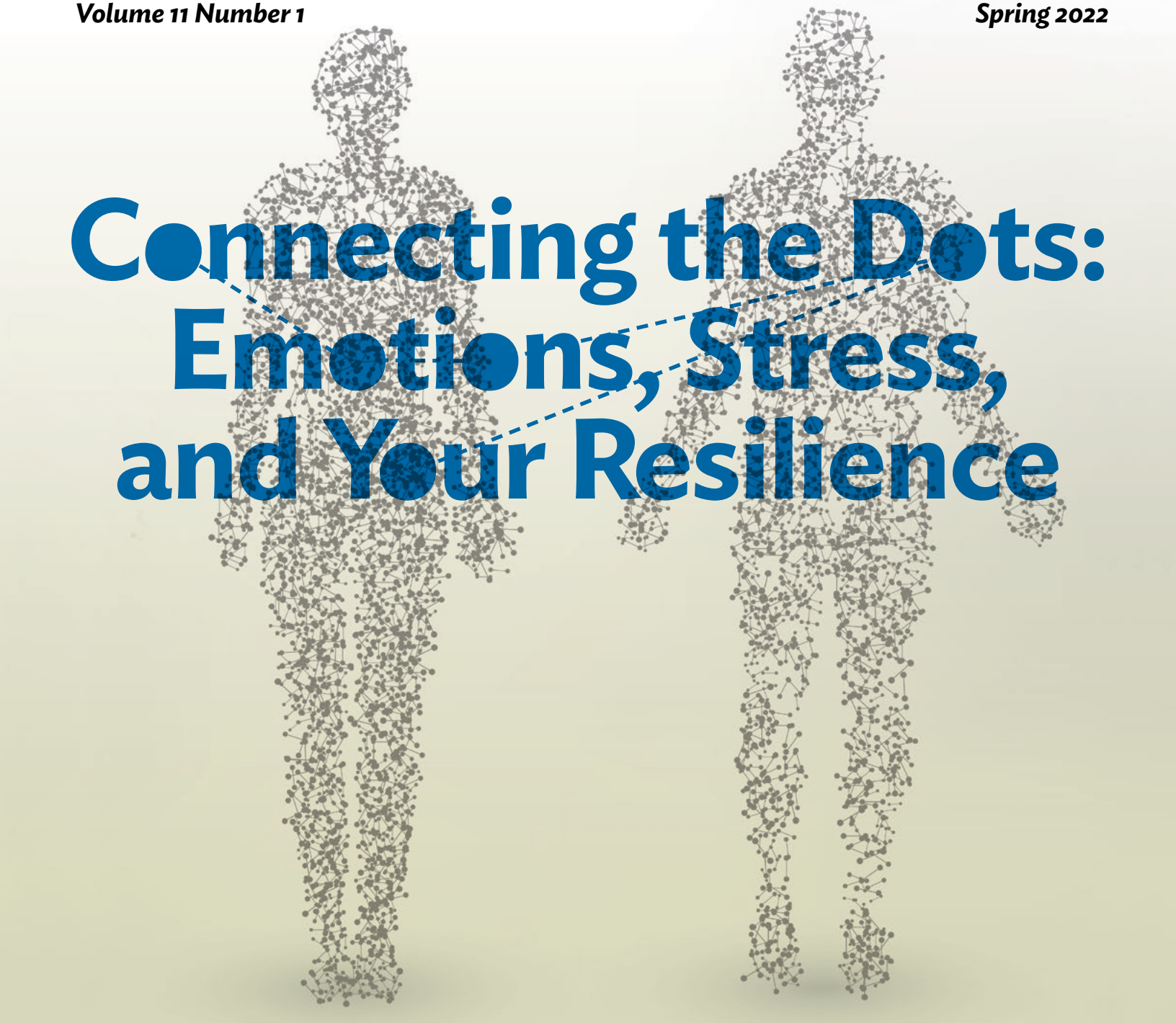
The American Institute of Stress

CONTENTMENT

Your source for science-based stress management information

Volume 11 Number 1 ***Spring 2022***



Connecting the Dots: Emotions, Stress, and Your Resilience

Inside: **The Mammalian Stress Mechanism,** *By Lewis S. Coleman* • **Stop Stress "In The Moment,"** *By Evian Gordon, & Donna Palmer* • **An excerpt from Beware False Tigers,** *By Frank Forencich* • **Anger Can Be Our Friend,** *By Jeff Jernigan* • **Let Go and Get Control,** *By Josh Briley* • **Trust in Yourself for Less Stress,** *By Jen Butler*

The mission of AIS is to improve the health of the community and the world by setting the standard of excellence of stress management in education, research, clinical care and the workplace. Diverse and inclusive, The American Institute of Stress educates medical practitioners, scientists, health care professionals and the public; conducts research; and provides information, training and techniques to prevent human illness related to stress.

AIS provides a diverse and inclusive environment that fosters intellectual discovery, creates and transmits innovative knowledge, improves human health, and provides leadership to the world on stress related topics.

Your source for science-based stress management information

CONTENTMENT

We value opinions of our readers.

Contentment is a quarterly magazine published in Spring, Summer, Fall and Winter with news and advertising designed with the general public in mind. It appeals to all those interested in the myriad and complex interrelationships between stress and health because technical jargon is avoided and it is easy to understand. *Contentment magazine is indexed by EBSCO and archived online at stress.org.* Information in this publication is carefully compiled to ensure accuracy.

Please feel free to contact us with any comments, suggestions or inquiries. Email: editor@stress.org

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Heather Smith, MD

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The American Institute of Stress is a 501c3 non-profit organization, headquartered in Weatherford, Texas. We serve the global community through both online and in-person programs and classes. The Institute is dedicated to advancing understanding of the role of stress in health and illness, the nature and importance of mind/body relationships and how to use our vast innate potential for self-healing. Our paramount goal at the AIS is to provide a clearinghouse of stress related information to the general public, physicians, health professionals and lay individuals interested in exploring the multitudinous and varied effects of stress on our health and quality of life.

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The American Institute of Stress is an executive producer of Body Electric: Electroceuticals and the Future of Medicine, a documentary film aimed to revolutionize the way we think about health and the human body. This 68 minute movie, by British producer/director/writer Justin Smith, is available online and on DVD for purchase through AIS.

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For so many Americans, "mysterious" problems ranging from mild to severe are caused by that scourge of modern life – stress. That realization is the first step toward healing, but it often raises many more questions that must be addressed. How is stress affecting my life? My relationships? My work? My happiness? What can I do to reduce or better cope with it? Our Stress Mastery Questionnaire – an easy and confidential online self-assessment that comes with our Stress Mastery Guide and Workbook – can help you find answers. And life-changing solutions.

SMQ™ STRESS MASTERY QUESTIONNAIRE

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Editor's Message

Cynthia Ackrill, MD, PCC, FAIS
Editor

Life is getting more and more exciting in the world of stress and brain research! And thanks to the failed global stress test of a pandemic, more and more people are getting curious about how we can use this data and science to support healthier, happier, fully human lives. Fear of vulnerability or classic denial of the need to address stress has been part of our "success" culture for too long. How encouraging it is to see the growing interest in how we can thrive in a complex world working with our human wiring. It's a privilege to bring you the wisdom of these impressive contributors.

The first article by **Lewis Coleman, MD, FAIS,** our new Chair of Science and Education, is a follow up to the presentation of his landmark work on the Mammalian Stress Repair Mechanism in the last issue. He eloquently explains the three pathways that make up the stress repair mechanism and how well they are designed to protect and heal our human minds and bodies. He teases out the chemical communications and how disease occurs when these pathways are not in balance. Understanding this interplay opens so many possibilities for better ways to address our stress, prevent and treat disease.

Evian Gordon MD, PhD, FAIS, and **Donna Palmer, PhD** explain the benefits of practices to unwind the stress reaction in the moment. Your brain is responding to a "threat" within a fifth of a second — long before you are aware. Their Total Brain database is revealing that the sooner and more often you practice a technique to induce the relaxation response, as first described by Hebert Benson, MD, the more you reduce the toxicity of chronic stress overload and raise your Heart Rate Variability, a key indicator of health and resilience. This is putting the science to work for us!

The next four articles dig deeply into the interconnections between our narratives around stress and emotions and our desire to feel in control and happy. There is so much out there about ways to address the symptoms of stress, but how much more empowering it is to look for the sources and change the results.

Frank Forencich, DAIS shares a chapter of his book, Beware False Tigers, in which he puts our common narrative about stress in historical perspective in a way that shows why we feel unprepared for the complexities of real life. Our thinking of stress as something external, to be eliminated, is not helpful in the long run. He points out our lack of stress education, especially for handling the bigger challenges of life, and how that has set us up to be reacting to the wrong tigers. Fascinating discussion!

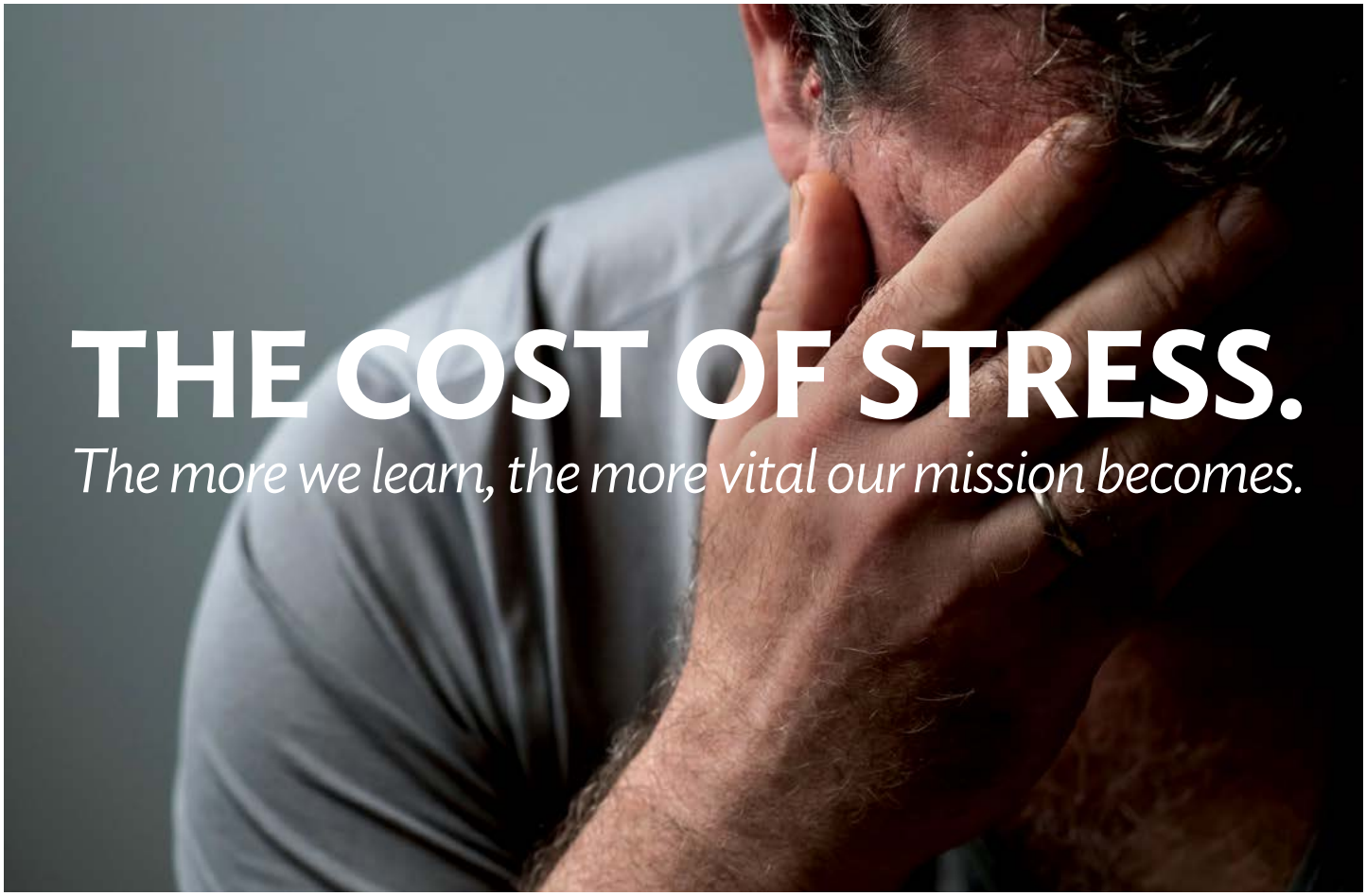
Jeff Jernigan, PhD, BCCPC, FAIS delivers another thoughtful article on a topic that makes many feel uncomfortable — anger. He discusses the meanings of this typically maligned emotion, what might be triggering it, what it may be signaling, and how a healthier perspective will benefit your well-being and your relationships. I know I have coached many high achievers who figured out that poor boundaries can set them up for frustration and anger. This is an article to ponder and share.

Josh Briley, PhD, FAIS addresses another factor intimately entwined with our perception of stress — our desire for control. This is particularly relevant after these past few years of uncertainty. He offers practical advice on shifting your focus from people, places, and things (what you can't control) and onto actions, attitudes, and faith (that you can control). This article stimulates some powerful reflection and offers real-world adjustments that will bring you more ease.

And finally, **Jen Butler, MEd, MCC, DAIS** takes an in-depth look at how trusting yourself plays into making life choices that result in less stress. She offers a methodical process for making decisions using a series of decision gates based on your priorities and needs. And she even gives you strategies for saying, "No," with respect for all. As a fellow coach, I also see how often learning to say no with integrity can save future stress. This article helps you connect the dots between decisions, responses, and living the life you want with less stress.

May this shared wisdom inspire you to make your 2022 and beyond more joyful than stressful!

Cindi



THE COST OF STRESS.

The more we learn, the more vital our mission becomes.

The American Institute of Stress is the only organization in the world solely created and dedicated to study the science of stress and the advancement of innovative and scientifically based stress management techniques. AIS provides the latest evidence-based knowledge, research and management techniques for stress and stress-related disorders.

Groundbreaking insights and approaches. World-changing mission.

Hans Selye, MD, PhD (1907-1982), is known as the father of stress research. In the 1920s, Selye coined the term "stress" in the context of explaining his pioneering research into the signs and symptoms of disease curiously common in the majority of people who were ill, regardless of the diagnoses. Selye's concept of stress was revolutionary then, and it has only grown in significance in the century since he began his work. Founded in 1978 at Dr. Selye's request, the American Institute of Stress (AIS) continues his legacy of advancing the understanding of stress and its enormous impacts on health and well-being worldwide, both on an individual and societal level.

A forthcoming AIS initiative – called **Engage. Empower. Educate.** – will leverage the latest research, tools and best practices for managing stress to make a difference in a world increasingly impacted by the effects of stress out of control. We hope you will consider supporting this critical outreach campaign.

Click to view The American Institute of Stress Case Statement

A campaign to Engage. Empower. Educate.

The AIS campaign will support three key initiatives:

Engage *communities through public outreach*

Improve the health and well-being of our communities and the world by serving as a nonprofit clearinghouse for information on all stress-related subjects.

The American Institute of Stress produces and disseminates a significant amount of evidence-based information, but there is a need to share this material with a wider audience in the U.S. and around the world.

Support for this initiative will provide funding to expand the organization's public outreach for its website and social media, documentary films, magazines, podcasts, blogs and courses.

Empower *professionals through best practices*

Establish credentials, best practices, and standards of excellence for stress management and fostering intellectual discovery among scientists, healthcare professionals, medical practitioners and others in related fields.

AIS provides DAIS (Diplomate, AIS) and FAIS (Fellow, AIS) credentials for qualified healthcare professionals.

The AIS seal means a practitioner has training and experience in stress management and access to the latest stress research and techniques. It designates their practices as advanced treatment centers for stress-related illnesses.

Support for this initiative will provide funding to continually update best practices in the field.

Educate *all through the development and dissemination of evidence-based information*

Develop and provide information, training and techniques for use in education, research, clinical care and the workplace. Some of the research-based information AIS develops and disseminates includes:

- Productions – Mismatched: Your Brain Under Stress, a six-part documentary featuring some of the world's leading experts on stress. Released in March 2021.
- Publications – *Contentment* magazine and *Combat Stress* magazine for service members, veterans and first responders.
- Podcasts, webinars and website resources – The free podcast series Finding Contentment

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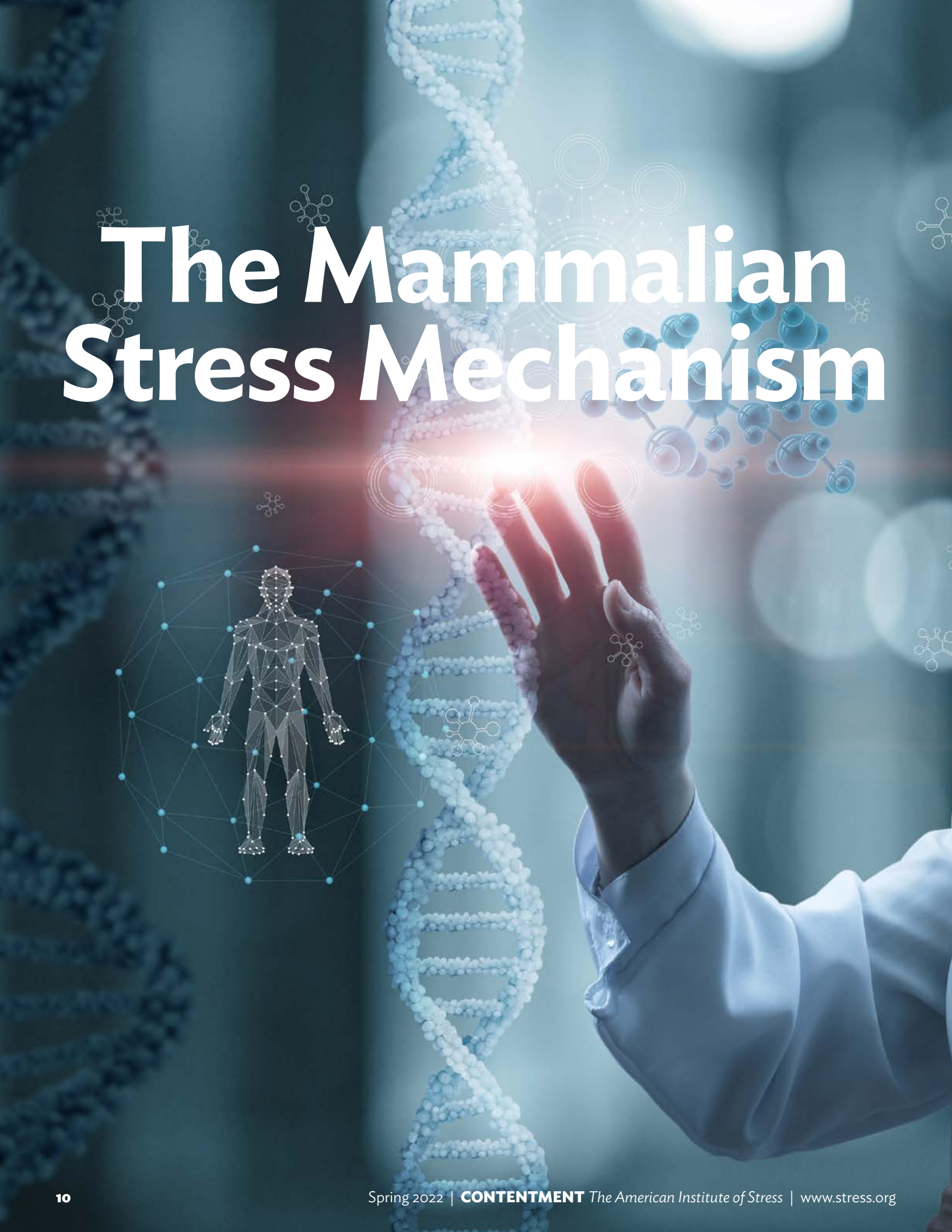
The Mammalian Stress Mechanism



No great discovery was ever made without a bold guess.

– Isaac Newton

By Lewis S. Coleman, MD, FAIS

Introduction

For thousands of years, physicians focused their efforts on facilitating the mysterious healing property present in humans and animals. This changed during the past 200 years after germ theory and cell theory introduced the notion that diseases are distinctly different from one another, so that individual diseases must be diagnosed and cured using specialized treatments. This seems reasonable in the case of infectious diseases, which often produce distinctive symptoms and can be prevented with specific vaccines and cured with specialized treatments. However, modern medical theory is plagued by numerous shortcomings. It cannot explain the nature of disease, or why seemingly disparate diseases occur in concert. For example, diabetes, hypertension, obesity, and cancer are closely related. Nor can conventional theory explain why most diseases manifest fluctuating common symptoms such as fever, fatigue, malaise, cachexia, inflammation, exudates, and rashes. Furthermore, it cannot adequately explain embryological development or the everyday manifestations and relationships of hemodynamic physiology, tissue repair and stress, such as blood pressure, pulse rate, cardiac output, and so forth.

During WWII Dr. Hans Selye postulated that an undiscovered "stress mechanism" explains the nature of disease.[1-4] This offered the simplest, and therefore the most scientifically promising prospect for an effective theory of medicine, as science seeks the simplest explanation of disparate phenomena, and it represented a reversion to the traditional medical viewpoint, which acknowledges the ability of the body to heal itself without medical help.

The discovery of DNA focused attention on Selye's ideas, because although DNA explains the retention and replication of genetic characteristics, it cannot by itself explain the nature and relationships of physiology, disease, and stress. Medical researchers therefore hypothesized that Selye's stress mechanism works closely with DNA during embryological development (i.e., pregnancy) to convert the genetic blueprint into multicellular structures. They further hypothesized that the stress mechanism remains active for the duration of life to repair tissues and regulate organ function, while DNA itself resumes quiescence. These powerful ideas inspired an intense international search for the stress mechanism that lasted 30 years and consumed the careers of hundreds of researchers, the lives of thousands of tortured test animals, and millions (today billions) of dollars. However, even during the heyday of stress research, most researchers doubted that a single mechanism could explain both tissue repair and organ regulation. Therefore, some presumed that the stress mechanism governs the orderly sequence of tissue repair,[5] while

The discovery of DNA focused attention on Dr. Hans Selye's ideas, because although DNA explains the retention and replication of genetic characteristics, it cannot by itself explain the nature and relationships of physiology, disease, and stress.

others embraced capillary gate theory, which presumed that a submicroscopic molecular mechanism governs capillary flow and organ function.[6] Unfortunately, neither approach was able to identify any testable mechanism that might explain any aspect of Selye's concept, and his ideas were relegated to the realm of the Unicorn.

Most powerful theories arrive many years before accumulating evidence from unrelated research provides the evidence necessary to test and confirm them, and that was the fate of stress theory. Even now, 50 years after Selye's ideas were abandoned, it seems astonishing that the newly discovered stress mechanism can explain embryology, physiology, pathology, stress, and their relationships. Furthermore, it exceeds the bounds of medicine and confers a unified theory of biology, with implications that reside in the realm of science fiction. However, this essay will confine itself to a simplified presentation of the stress mechanism that is intended to facilitate future essays that will explore its operation and implications in greater detail.

Even now, 50 years after Selye's ideas were abandoned, it seems astonishing that the newly discovered stress mechanism can explain embryology, physiology, pathology, stress, and their relationships.

Cell Biology

There are three known domains of independent, free-living cells: bacteria, Archaea, and Eukarya, but complex multicellular animals and plants are composed exclusively of eukaryotic cells. The reason is that Bacteria and Archaea respire (generate energy) via their cell walls, which limits them to small size, limited shapes, and solitary existence. They thrive in vast multitudes in the intense heat far below the earth's surface. They have evolved numerous metabolic pathways that enable them to thrive on toxic chemicals, sewage, and even pure electricity, and their combined activities produce water, oil, and atmospheric gases. However, their cell walls must be exposed to the environment to enable them to respire, so that they are incapable of forming complex multicellular plants and animals.

In contrast, Eukaryotic cells generate their energy from within via a metabolic pathway called the "Krebs cycle" that consumes glucose and oxygen, and produces water and carbon dioxide in the process of generating an energetic chemical called adenosine tri-phosphate, or ATP, that energizes all their cell functions. The Krebs cycle exists only within "organelles" called mitochondria that are contained in the cytoplasm of eukaryotic cells. Their DNA is isolated from the chromosomal DNA that determines genetic inheritance by the thick walls of the cell nucleus. The mitochondria are believed to be the remnants of previously free-living bacteria that were ingested by eukaryotic cells in the distant past, and somehow became incorporated into the eukaryotic cell.

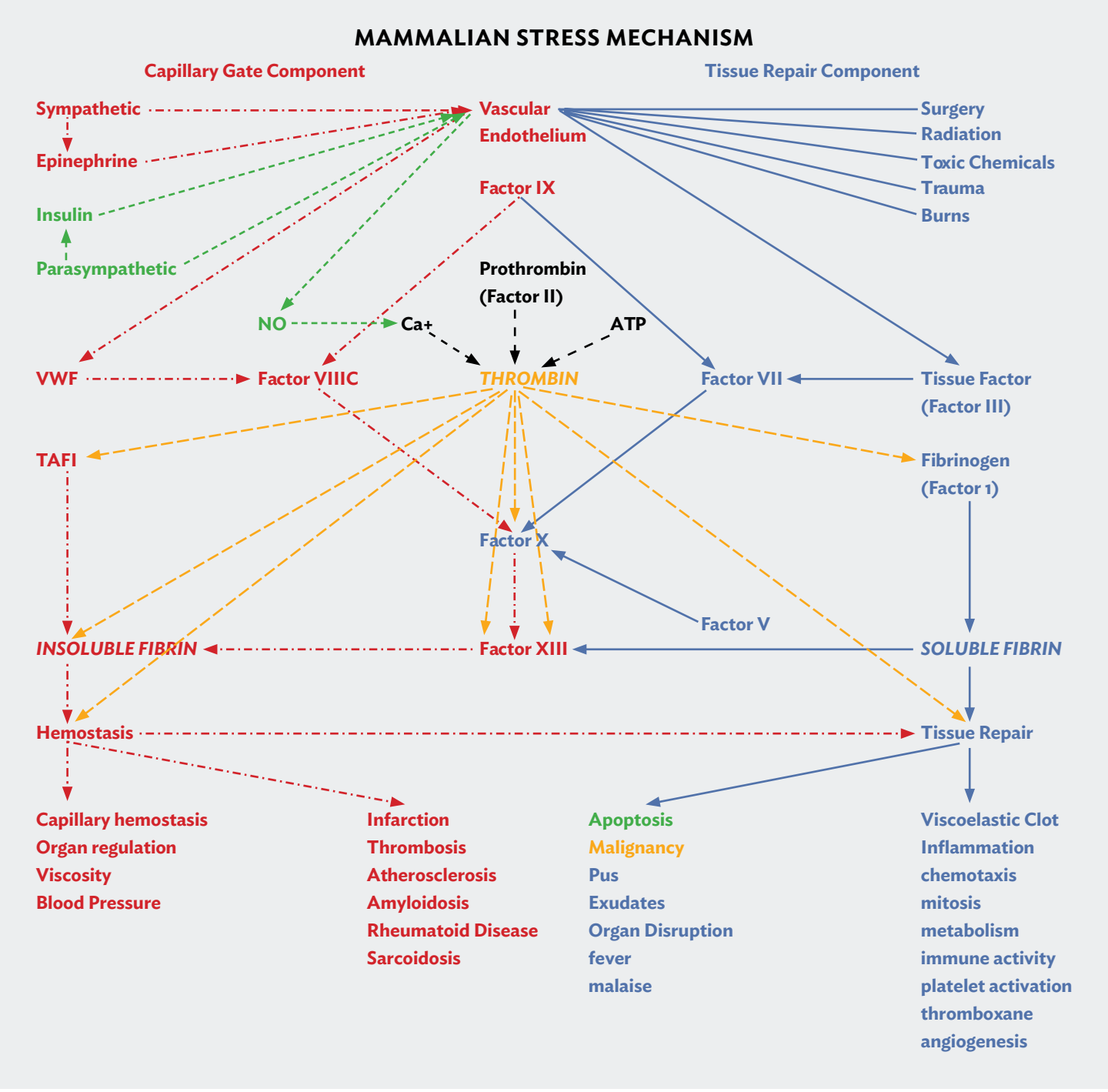
Because eukaryotic cells generate ATP energy from within, they are far more capable and complex than bacteria and Archaea. They can differentiate, de-differentiate, and re-differentiate into specialized cells to form the tissues and organs of complex multicellular plants and animals. Although the eukaryotic cells of complex multicellular animals and plants generate their ATP energy from within using the Krebs cycle, they must be continuously supplied with glucose and oxygen, and the waste products of food digestion and organ activity must be removed from the body. That is the function of the stress mechanism, which repairs tissues, regulates organ function, and otherwise maintains the "internal milieu" (internal environment) of mammals.

The Stress Mechanism

The stress mechanism appears early during embryological development. It converts the DNA genetic blueprint into complex multicellular structures during pregnancy, and remains active for the duration of life, while chromosomal DNA resumes quiescence once embryological development is complete.[7]

The stress mechanism can best be comprehended as consisting of two sub-mechanisms that share the interaction of blood enzyme factors VII, VIII, IX and X, so that they consume the same substrates and produce the same products (thrombin, soluble fibrin, and insoluble fibrin).

The tissue repair sub-mechanism activates factor VII in accord with tissue



This simplified diagram of the stress mechanism illustrates its capillary gate (in red) and tissue repair sub-mechanisms (in blue).

damage to repair tissues, and the capillary gate mechanism activates factor VIII in accord with nervous activity to regulate cardiac output, blood pressure, pulse rate, tissue perfusion, tissue oxygenation, and organ function. The activity of each sub-mechanism exaggerates that of the other, which focuses the activity of the stress mechanism to repair tissues and regulate organ function. The independently fluctuating activities of the two sub-mechanisms produces a baffling blizzard of symptoms and manifestations that obscure the relatively simple function of the mechanism.

Stress mechanism hyperactivity induced by excessive and unremitting combinations of environmental stresses causes the stress mechanism to consume and waste its substrates and produce excessive and defective quantities of its products that disrupt organ function and damage tissues. This manifests as disease.

Stress mechanism hyperactivity induced by excessive and unremitting combinations of environmental stresses causes the stress mechanism to consume and waste its substrates and produce excessive and defective quantities of its products that disrupt organ function and damage tissues.

The Enzymatic Engine of the Stress Mechanism

The liver continuously produces fibrinogen and enzyme factors VII, VIII, IX, and X, and releases them into flowing blood. The enzymatic interaction of factors VII, VIII, IX and X generates thrombin, converts fibrinogen to soluble fibrin, and converts soluble fibrin to insoluble fibrin. These are the three basic products produced by the stress mechanism.

I call thrombin the "*universal enzyme of energy transformation*." It converts ATP energy into the cell and extracellular enzyme activities of the stress mechanism. It is analogous to intracellular ATPase enzyme that converts ATP into intracellular functions. Both require ATP and Ca+. The parathyroid glands maintain blood Ca+ levels within a narrow range to optimize extracellular thrombin activity.

Thrombin energizes the conversion of fibrinogen to soluble fibrin, and the conversion of soluble fibrin to insoluble fibrin. It energizes gelsolin, which digests actin that escapes into blood, and TAFI (thrombin-activated fibrinolysis inhibitor), which stabilizes blood clots. It energizes cellular mitosis, platelet activation, and cellular metabolism, specialization, hypertrophy, chemotaxis, hormone release, immune activity, and angiogenesis to enable tissue repair. Abnormal thrombin elevations cause systemic inflammation that disrupts organ function and exaggerates cell proliferation, causing repair cells to invade and disrupt adjacent tissues, stimulate nervous activity, and release tissue factor. Such abnormal activity causes tumor formation that sometimes becomes malignant (i.e., self-sustaining).

I call soluble fibrin the "*universal substrate of tissue protein and tissue repair*." Its fundamental significance is overlooked in medical literature. It is a fibrillar (string-like) protein that infiltrates inflamed tissues and forms a protein matrix in damaged tissues that facilitates the formation of granulation (repair) tissue that fills empty spaces and binds damaged tissues together. It is also a substrate of collagen, elastin, insoluble fibrin, pus, exudates, mucus, saliva, lipoproteins, and milk. When produced in excess, it causes tissue edema, disrupts organ function, and promotes sclerosis that threatens permanent tissue and organ damage.

I call insoluble fibrin is the "*universal polymer of hemostasis*." It is generated within capillaries in accord with sympathetic nervous activity to "close" the capillary gate mechanism by increasing capillary flow

resistance. In the event of tissue damage, insoluble fibrin entangles blood cells and platelets to enable capillary hemostasis and clot formation that stems blood loss. Excessive insoluble fibrin generation threatens hypercoagulability and tissue ischemia that manifests as myocardial infarction, strokes, and pulmonary embolus.

The Vascular Endothelium

The vascular endothelium mediates the activities of both the capillary gate mechanism and the tissue repair mechanism. It is a delicate layer of highly specialized cells, one cell thick, that lines the inner surface of all blood vessels and is the sole constituent of capillaries, which are the smallest blood vessels in the body. Thus, it is ubiquitous throughout the body. Its cells react to local circumstances and communicate with one another via electrical signals. It produces the glycocalyx, a diaphanous molecular matrix that lines the inner surface of blood vessels and regulates fluid absorption.

The vascular endothelium isolates blood enzymes from tissue factor in extravascular tissues, but it is "selectively permeable." For example, it allows tissue factor to escape from extravascular tissues into flowing blood, and it allows factor VII to penetrate slowly from blood into extravascular tissues, but is impermeable to Factors VIII, IX, and X. It is specialized to facilitate the function of organs and tissues. For example, its cells are tightly joined in the brain, which explains why medications and toxic substances do not readily penetrate brain tissue. This is called the "blood-brain barrier." In contrast, it is relatively permeable in the kidney and liver to facilitate urine production and neutralize toxic substances in the digestive system.

Tissue damage disrupts the vascular endothelium and directly exposes blood enzymes to tissue factor in the damaged tissues and activates the tissue repair mechanism. Inflammation increases the permeability of the vascular endothelium and invites harmful exposure of tissue factor to blood enzymes.

The autonomic (automatic) nervous system innervates the vascular endothelium and causes it to release hormones (nitric oxide and von Willebrand Factor) that govern the capillary gate mechanism.

The Tissue Repair Sub-Mechanism

The tissue repair sub-mechanism repairs tissues in accord with tissue disruption. It consists of tissue factor that is produced by extravascular cells, the interaction of enzymatic factors VII, VIII, IX, and X, and the vascular endothelium that isolates blood enzymes from tissue factor.

Tissue factor stabilizes and thereby activates blood enzyme factor VII, which by itself is so labile that it cannot express its enzymatic activities. Factor VII activity is essential to enable the function of factors VIII, IX, and X, so that factor VII functions as a "trigger" that determines the location and magnitude of coagulation, capillary hemostasis, and tissue repair. The selectively permeable vascular endothelium normally allows slow "leakage" of tissue factor into flowing blood to enable continuous low-level activity of the enzymatic interaction. It simultaneously allows slow "penetration" of factor VII into extravascular tissues, where tissue factor activates it to generate small amounts of thrombin that energize tissue maintenance.

Damage and disruption of the vascular endothelium increases the exposure of tissue factor to factor VII and

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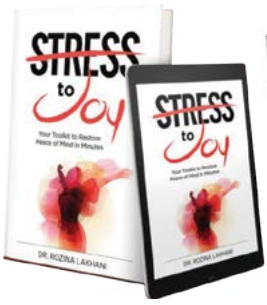

activates the enzymatic interaction, which generates thrombin, soluble fibrin, and insoluble fibrin in the immediate vicinity of tissue damage. Thrombin activates platelets, causing them to become "sticky" so that they bind together to form a "white clot" that prevents blood loss. Factor VIII generates insoluble fibrin that binds red cells together into a more permanent viscoelastic "red clot" that substitutes for the vascular endothelium. Like the vascular endothelium, the red clot is "selectively permeable." It allows the passage of factors VII and X from blood into the damaged tissues beneath its protective surface, but it remains impermeable to factor VIII due to its gigantic molecular size.

The viscoelastic clot then regulates the exposure of factors VII and X to tissue factor to generate thrombin to energize tissue repair but limit thrombin generation within safe levels to prevent malignancy (self-sustaining tissue repair activity that invades and disrupts adjacent tissues and forms tumors). Tissue repair then proceeds in an orderly and predictable sequence, beginning with inflammation that loosens cell connections to enable fibroblast repair cells to migrate from adjacent undamaged tissues into the injured tissues via chemotaxis to begin cellular tissue repair activities. Thrombin elevations energize fibroblast mitosis, multiplication, and collagen production to form granulation tissue that fills empty spaces and binds damaged tissues together. Angiogenesis provides perfusion to proliferating repair cells. Thrombin energizes immune cell activity that inhibits infection and removes debris from the damaged tissues.

Repair cells communicate with one another by subtle electromagnetic signals and by releasing chemokines, cytokines, prostaglandins, and other cell hormones to differentiate, specialize, and replace damaged tissues. As the tissue repair activity restores the integrity of the vascular endothelium, thrombin generation declines, which causes apoptosis (programmed cell death) that draws wound edges together to complete the repair process.

The Capillary Gate Sub-Mechanism

The capillary gate mechanism consists of the vascular endothelium, the autonomic nervous system, and the enzymatic interaction of factors VII, VIII, IX, and X.

Carbon dioxide is the primary regulator of the capillary gate. It directly releases nitric oxide (NO) from the vascular endothelium. NO binds to Ca+ to inhibit thrombin activity, which undermines the stabilization of insoluble fibrin by TAFI (thrombin-activated fibrinolysis inhibitor). This accelerates the disintegration of insoluble fibrin to promote capillary perfusion and improve oxygen delivery. For example, exercising muscle increases CO_2 production, opens the capillary gate, and increases oxygen delivery to the exercising muscle. CO_2 also releases oxygen from the hemoglobin molecule via the Bohr effect to enable cellular oxygen uptake.

Sympathetic nervous activity closes the capillary gate. It releases von Willebrand Factor (VWF) from the vascular endothelium into blood, which activates factor VIII that accelerates thrombin generation to energize its conversion of soluble fibrin to insoluble fibrin that increases flow resistance in capillaries. The increased microvascular flow resistance reduces organ perfusion and oxygenation, which inhibits organ

Critical brain perfusion is sustained by astrocytes that release TPA (tissue plasminogen activator) that disintegrates insoluble fibrin generation to prevent capillary gate closure that threatens brain ischemia.

function. It also reduces cardiac output and venous return to the heart.

Parasympathetic nervous activity releases NO from the vascular endothelium to promote organ perfusion and increase organ activity. This explains how autonomic balance governs organ activity.

Insulin and epinephrine are opposing hormones that govern the capillary gate in peripheral tissues where direct autonomic innervation is lacking. Sympathetic nervous activity releases epinephrine from the adrenal gland, which releases VWF from the vascular endothelium to activate factor VIII, generate insoluble fibrin, and close the capillary gate. Parasympathetic nervous activity releases insulin from the pancreas, which releases NO from the vascular endothelium to open the capillary gate.

Critical brain perfusion is sustained by astrocytes that release TPA (tissue plasminogen activator) that disintegrates insoluble fibrin generation to prevent capillary gate closure that threatens brain ischemia. This explains why massive doses of epinephrine during cardio-pulmonary resuscitation does not halt oxygen delivery to the brain.

The Mechanism of Oxygen Transport and Delivery

Carbon dioxide is vilified as the cause of climate change and routinely regarded as "toxic waste, like urine," but the truth is ignored. Carbon dioxide it is as essential for animal life as oxygen, and it has powerful therapeutic properties, because it optimizes the mechanism of oxygen transport and delivery that delivers oxygen to cells located deep within the body. Breathing air enriched with carbon dioxide increases tissue oxygenation. Carbogen (generally 5% oxygen mixed with 95% oxygen in a pressurized tank) is perhaps the most potent, powerful, practical, and affordable medical treatment ever discovered. It is an ideal emergency treatment for heart attacks, strokes, smoke inhalation, carbon monoxide poisoning, asthma, atelectasis, pneumonia drowning, and newborn babies with breathing problems. It was widely accepted, installed on fire trucks, and saved numerous lives in the 1930s, but was forgotten courtesy of perverse medical politics.[8-11]

Eukaryotic cells continuously produce carbon dioxide as a by-product of cellular respiration. It is as benign, inert, and as free of toxicity as water, but like water it can cause lethal asphyxiation or drowning,[16] even though it causes a warning sense of suffocation when it is inhaled in dangerous concentrations.[12,13] It readily dissolves in body fluids and tissues, so that the adult human body contains about 20 liters of CO2. By comparison, the body contains only 1 liter of oxygen and 1 liter of nitrogen. The oxygen is mostly bound to hemoglobin and continuously consumed by cells, so that disruption of the mechanism of oxygen transport and delivery causes critical oxygen starvation within minutes. The CO2 continuously escapes through the skin and equilibrates with atmospheric CO2, which slowly fluctuates over eons. Respiratory drive mechanisms adapt to this equilibrium and seek to sustain it.[17]

Unique among atmospheric gases, carbon dioxide inhibits the binding of oxygen to the hemoglobin molecule. This explains its pivotal role in oxygen transport and delivery. Carbon dioxide stimulates breathing, which simulta-neously reduces the concentration of carbon dioxide to 5% and replenishes

oxygen in the lung. This optimizes the binding of hemoglobin to oxygen as blood passes through the lung, so that all four hemoglobin binding sites are normally 100% saturated with oxygen as blood transits the lung. Thus, breathing 100% oxygen confers negligible benefit, because hemoglobin transports almost all oxygen in blood. The heart propels oxygenated blood to organs and peripheral tissues, where higher CO_2 concentrations release oxygen from the hemoglobin molecule via the Bohr effect into surrounding tissues, where cells consume it.

As noted above, CO_2 is the primary regulator of the capillary gate, so that rising tissue levels of CO_2 in muscle tissues during exercise has the immediate effect of reducing microvascular flow resistance, which speeds oxygen transport and increases oxygen delivery to satisfy the oxygen requirements of the exercising cells.

Exercise training induces angiogenesis (capillary proliferation) in the affected muscles. This lowers flow resistance so that trained athletes exhibit abnormally low blood pressure at rest, and normal blood pressure during exercise. In contrast, accelerated capillary senescence due to obesity, smoking and toxic substances causes both essential hypertension and diabetes because it simultaneously increases microvascular flow resistance and undermines glucose uptake by cells. Thus, exercise conditioning is the most effective treatment for diabetes and hypertension.

The Three Pathways of Stress Mechanism Activation

Three synergistic pathways activate the stress mechanism and induce stress mechanism hyperactivity in accord with combinations of nervous activity and tissue disruption:

The ***nociception Pathway*** consists of peripheral nervous tissue disruption sensors called "nociceptors" that are in the skin and internal organs. These generate nervous activity called "nociception." The nociception is conveyed via peripheral sensory nerves to specialized nociception pathways in the spinal cord. The spinal cord nociception pathways simultaneously transmit nociception to the brain and to sympathetic ganglia in the chest and abdomen. The brain interprets nociception as pain. The sympathetic ganglia generate sympathetic nervous activity that releases von Willebrand Factor from the vascular endothelium to close the capillary gate and inhibit organ function. Analgesia (narcotics and nerve blocks) inhibits the nociception pathway.

The ***cognitive pathway*** consists of consciousness and emotional mechanisms that assess sensory information (sight, sound, smell, touch, taste, nociception, etc.) for evidence of environmental danger and generates fear and anxiety that activates sympathetic nervous activity to facilitate "fight or flight." Consciousness interprets nociception as pain, and it regulates nociception via inhibitory descending nervous pathways from the brain to the spinal cord. General anesthesia and sedatives inhibit the cognitive pathway. Its operation was discussed in greater detail in the previous issue of "Contentment" magazine.[15]

The ***tissue disruption pathway*** exposes tissue factor in extravascular tissues to blood enzymes in accord with tissue damage that disrupts the vascular endothelium. Tissue factor activates the enzymatic interaction to initiate tissue repair. Excessive tissue disruption releases tissue factor into systemic circulation,

Exercise training induces angiogenesis (capillary proliferation) in the affected muscles. This lowers flow resistance so that trained athletes exhibit abnormally low blood pressure at rest, and normal blood pressure during exercise.

harmfully elevates thrombin generation, and causes systemic inflammation that disrupts organ function. Intravenous magnesium sulphate, EDTA, or trisodium citrate can inhibit thrombin activity, but stress theory suggests that a better treatment would be a drug that neutralizes tissue factor in systemic circulation.[14]

The Nature of Disease

Normally the stress mechanism functions quietly and efficiently, but like any mechanism, it has its limits. Excessive and unremitting combinations of tissue damage, pain, fear, anxiety, toxic substances, burns, surgery, microbial infestation, parasitism, excessive radiation, and other environmental stresses can induce harmful stress mechanism hyperactivity that consumes, wastes, and depletes stress mechanism substrates and enzymes, and produces excessive and defective quantities of soluble fibrin, insoluble fibrin, and thrombin, causing fever, fatigue, cachexia, malaise, inflammation, rashes, pustules, exudates, sclerosis, scars, and other disease manifestations. Such stress mechanism hyperactivity disrupts organ function and undermines its ability to resist environmental stress. Therefore, measures that alleviate stress mechanism hyperactivity and restore organ function can enhance antibiotic potency and penetration, optimize tissue repair, rid the body of infectious agents and toxic substances, halt destructive disease effects, and restore health.

Controlling Disease

Ideally all three stress mechanism activation pathways must be normalized simultaneously to optimize organ function and cure disease, but this

is easier said than done, because each of the three pathways requires a separate treatment, and all medical treatments threaten toxicity, side effects, and risk. Furthermore, stress mechanism function is essential for life, so that excessive treatment is life-threatening.

Conclusion

This essay has provided a brief introduction to the stress mechanism that will serve as background information for subsequent essays that explain the unified theory of medicine postulated by Dr. Hans Selye, how it confers a unified theory of biology, and how its extended ramifications reside in the realm of science fiction. Those who seek greater detail may download copies of my published papers from my website[18] or purchase my recently published book on Amazon.[19]

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Lewis Coleman, MD, FAIS *is a board-certified anesthesiologist who completed his BS degree in biology at Ohio State University, earned his MD degree from New York Medical College, and completed his surgical internship and anesthesiology residency at UCLA, followed by 40 years in private practice. Coleman's basic sciences instruction at NYMC miraculously coincided with the two-year sojourn of Dr. Johannes Rhodin, a famous Swedish pioneer of electron microscopy who was retained by the school to upgrade its curriculum. Dr. Rhodin was an expert on the stress theory of Hans Selye. His stress theory lectures devastated the dogma of classical physiology and convinced Coleman that stress theory represented the future of medicine. Many years later, these lectures miraculously enabled Coleman to identify Selye's long-sought stress mechanism. Thus identified, the stress mechanism enables Selye's "Unified Theory of Medicine" that promises a new era of health, longevity, and freedom from the eternal curse of disease. Its implications exceed the bounds of medicine and confer a "unified theory of biology" that explains embryology, extinction, evolution, ethology, intelligence, anatomy, taxonomy, the Cambrian explosion, and dinosaurs, and resolves the disparities of Darwin, Lamarck, Baldwin, and saltation. Its distant implications reside in the realm of science fiction. His website http://www.stressmechanism.com is dedicated to stress theory and offers relevant materials free of charge. His book, 50 Years Lost in Medical Advance: The Discovery of Hans Selye's Stress Mechanism, is available on Amazon.*

Stop Stress "In The Moment"

By Evian Gordon, MD, PhD, FAIS, Founder and Chief Medical Officer, Total Brain and Donna Palmer, PhD, Chief Scientific Officer, Total Brain

In this article we would like share with you the importance of stopping stress "in the moment" and the top evidence-based 5 ways to do so.

A Brain-Based View of Stress "In the Moment"

At its core, your brain is wired to automatically identify cues to avoid threats to keep you safe and identify possible rewards. This ongoing process is unconscious and occurs within a fifth of a second.[1] It is the basis of your emotions, intuition, and negative/positive biases that shape many of the approximately 50,000 thoughts you have every day.

From your brain's point of view, stress occurs when negative demands are greater than your capacity to consciously cope effectively. The gap between demand and capacity can be "acute" in the moment or can become "chronic" over time. This is considered an acute-chronic continuum. It is very well established that chronic stress is toxic to your body health, mental health, and performance.

It is now becoming increasingly evident, that the sooner stress is stopped "in the moment," the more effectively you will control the overall cascade of stress effects. Two lines of research that shed light on the importance of reducing stress in the moment, concern emotions and homeostasis.

Firstly, any threatening cue, physical or social, can activate your safety-first stress response within a fifth of a second. The second concerns disruption of your core stress response process. Dr Lewis Coleman has recently elucidated the mechanism underlying the stress response. He highlights the importance of stopping any "over-reaction" to stress.[2] Disruption of the micro-physiological details underlying any over-reaction to stress induces a cascade of negative impacts of stress and a loss of the fine tuning of the ongoing brain-body "homeostasis" (the brain-body's healthy equilibrium).

"The stress mechanism operates continuously, efficiently, and unobtrusively to repair tissues and regulate physiology, but like any mechanism, it has limitations. When its limits are exceeded, it wastes and depletes its substrates, generates harmful or defective excesses of its products, and produces a bewildering blizzard of destructive disease effects that disrupt physiology and damage organs and tissues."[3]

The opposite end of the spectrum to The Stress Response is "The Relaxation Response," which induces a calm, more flexible brain and associated body state. The Relaxation Response helps you to cope effectively with the demands of your life.

Daily life is an ongoing fluctuation and balance between your stress and relaxation responses. Your effectiveness at managing stress is increased by understanding what emotion triggers your stress and how effectively you put a brake on your stress response and boost your relaxation response.

It is now becoming increasingly evident, that the sooner stress is stopped "in the moment," the more effectively you will control the overall cascade of stress effects.

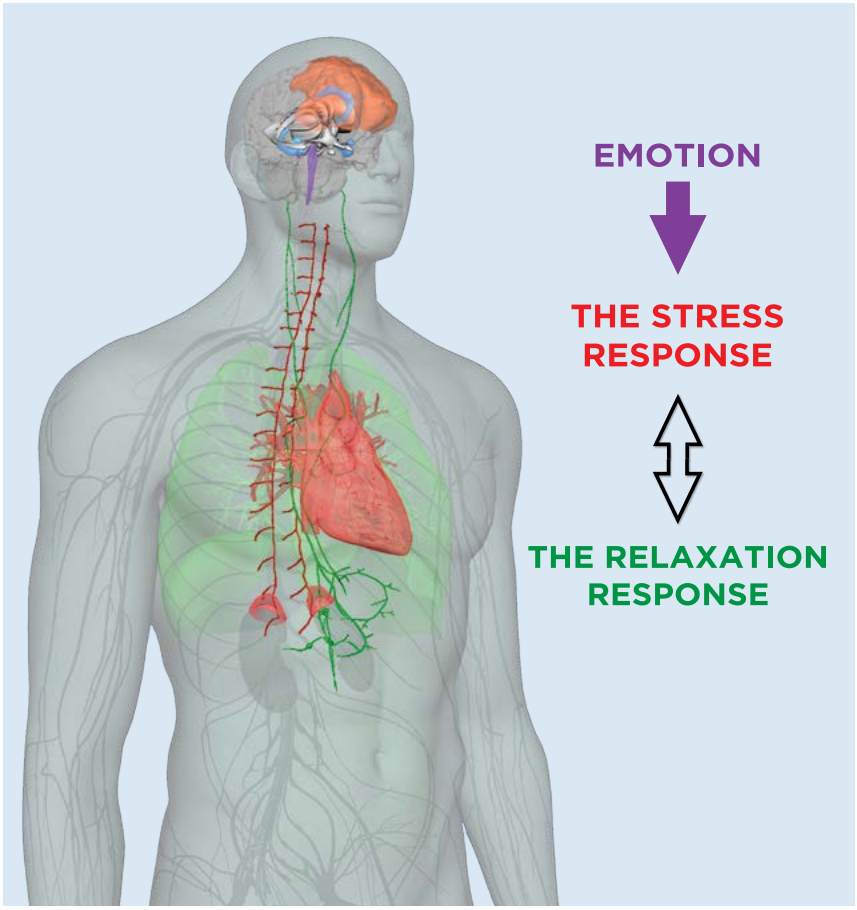

Figure 1. Emotional threats to our safety trigger the fight-flight stress response within a fifth of a second. Specific techniques in the moment can help activate the relaxation response and reduce the harmful effects of the stress toxicity cascade of microcellular processes.

The impact that a high stress state has on you can be measured via your heartbeat patterns. When you are in a high stress state you have a faster heart rate and lower variability between the heartbeats, than when you are in a calm relaxation response state (with lower rate and increased variability between beats). A relaxation response with high variability in consecutive heartbeats is the key to a healthy adaptive effectiveness, wellbeing, improved performance and a more resilient state of being.

Figure 2 shows an example of the extent to which stress impacts your core heartbeat activity.

A range of techniques have been shown to stop activation of the stress response and activate the relaxation response, in the moment. For the purposes of this article, in the moment is considered to be within 1 minute.

5 Top Ways To Stop Stress In The Moment.

1 Resonant Breathing at 6 breaths a minute.

The relaxation response is switched on in-the-moment by breathing at 6 breaths per minute. This is known as "Resonant Breathing." Most people breath at around 12 breaths a minute. The benefits of slow breathing have been known for thousands of years thanks to eastern spiritual practices.

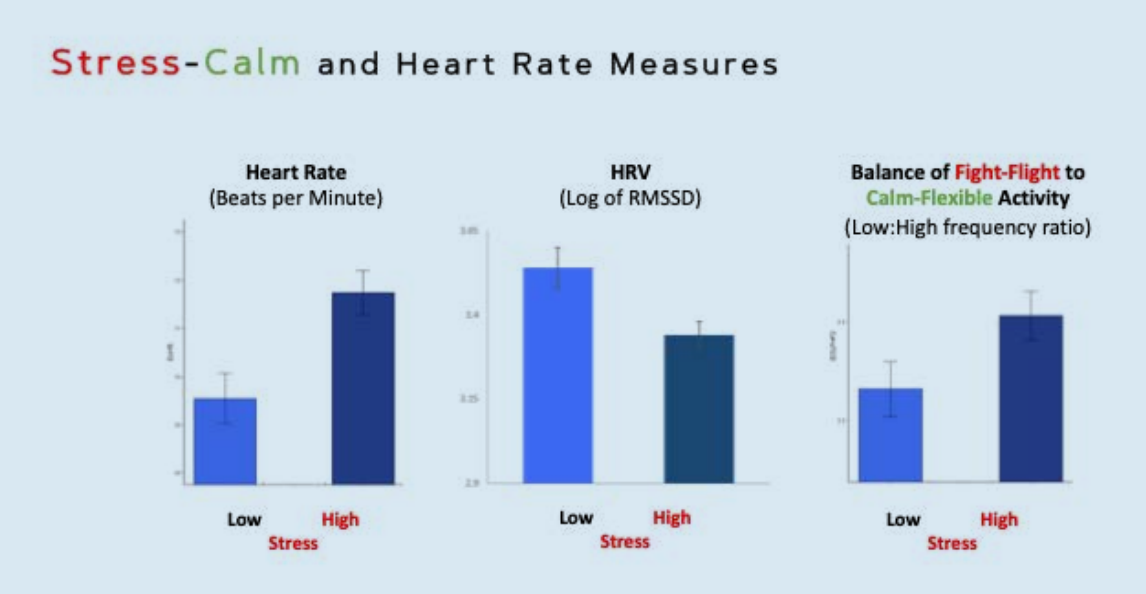

Figure 2. People with high stress showed higher heart rate and lower heart rate variability (HRV) indicating increased activation of the fight-flght reflex. This was further evident in an imbalance of the fight-flight to calm-flexible ratio. Data from the Total Brain International Database in a study of 1,772 people.[4]

Resonant breathing adds insights from modern day science to an ancient practice.

The science shows that at a resonant breath rate, the relaxation response puts a brake on the stress response fight-flight stress system and increases activity of the Calm-Flexible Vagus system.[5]

This works to immediately reduce stress in-the-moment and create a noticeably calmer mental state for several hours, enabling you to adapt effectively to any task or situation. Resonant breathing pacing tools are available in the Total Brain platform[6] or you can self-pace by counting to 4 as you breath in and count to 6 as you breath out for six breaths in the moment. The objective impact of resonant breathing to induce calm can be readily seen using heart rate variability measures via a mobile phone camera or continuously via a digital watch wrist band or watch.

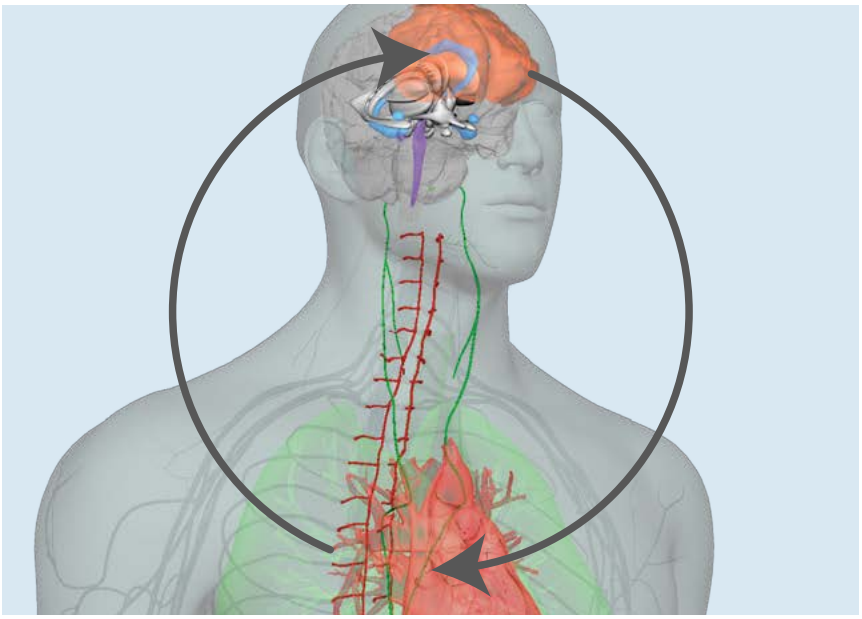

Figure 3. Resonant breathing activates the relaxation response and increases heartbeat variability in the moment.

2 Repetition of ANY Stimulus. Dr. Herbert Benson, a Harvard cardiologist, studied the significant body and brain changes of meditators and discovered something groundbreaking. Simply put: "any repetition technique will break the train of everyday thought." For example, a repetition of slow breaths and saying a meaningful word to yourself as you exhale, or a repeating musical sound or a repeating movement, will all generate a calming relaxation response.[7]

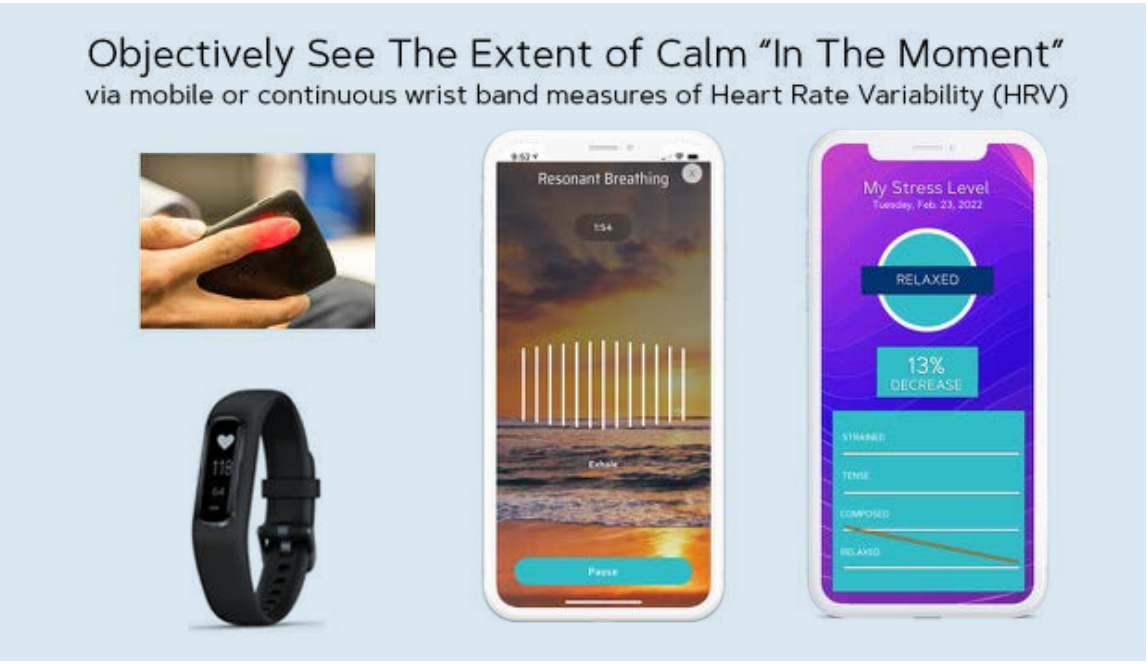

Figure 4. Objective evaluation of what's working best for you in the moment, can be determined from heart rate variability (HRV) measures of seeing what techniques, such as resonant breathing, maximally reduce your stress level. This figure shows an example from Total Brain.com using the camera on a mobile phone to measure HRV in 40 seconds and a wrist band to measure continuous HRV updated every 6 seconds (images on the left) before and after resonant breathing (central image) to reduce stress in the moment (percentage improvement shown in image on the right).

Benson also points to a way for each person to find what works best for them. Choosing a word or mental association can create a deeper personal experience and induce authentic calm. Breath repetition in mindfulness techniques, slow resonant breathing at 6 breaths a minute, a positive affirmation, repetitive calm sounds, movement or entrainment music for 1 minute – all induce the relaxation response via the same repetition process.

3 Practicing Presence. Begin by focusing on the present moment. Notice your breath and senses. Use your surroundings to bring your awareness to this moment. What do you see, what do you hear? Ask yourself a simple question, "Am I fully present?" Your brain can primarily focus on one thought at a time. By switching your focus to your physical surrounding, you can induce calm in your body. You can practice during a range of daily routines - while you are walking in nature or along the street, making coffee, or just while sitting at your desk.

For a short time pay heightened attention to all sounds that you can hear around you. Welcome all sounds without judgement and be open to exploring them with a child's curiosity. You can do the same thing with what you can feel or what you can smell. This simple practice induces your calm in the moment response and allows your brain to stop being caught up in the typical flow of overwhelming thoughts, worries and to-do lists. Focusing on your senses is a quick and simple way to become present.

4 Visualization and Positive Affirmations. "Nudge" your brain into a calmer and more positive state of being by visualizing a symbol or scene that has high emotional meaning to you. Or repeat a word that inspires and motivates you into a positive state. Because your brain's stress and relaxation responses are triggered in a second, by purposely noticing positive things even for a moment, you are consciously nudging your core brain networks responsible for calmness and positivity to become more active.

5 Any Physical Change Activity. A brisk walk, any movement activity or moving to a different space can break negative stress thoughts and feelings and allows you to induce a more positive brain state.

Activate Your Relaxation Response

"In The Moment"

- **Breath Awareness** - 6 bpm "Resonant Breathing"
- **Mindfulness Meditation**
- **Visualization of a Symbol or Vision Board**
- **Positive Affirmations**
- **Nature sounds & relaxing brain music entrainment**
- **Tactile animal petting**
- **Smell Aromatherapy**
- **Body posture (shoulders back) and exercise**
- **Curiosity, humor, and 1 daily creative act**
- **Put your attention on someone else who needs a lift**
- **Gratitude Journal**

Figure 5. List of established techniques to reduce stress in the moment and into a habit in the long run.[9]

In The Moment – Chronic Stress Continuum

When practiced regularly, the 5 techniques above will not only reduce stress in the moment, but they will also help to lower underlying chronic stress levels.

Other techniques have been shown to reduce chronic stress "in the long run," including meditation, cognitive behavior therapy reframing, gratitude, curiosity, humor, music, aromatherapy, natural optimal sleep, exercise and brain healthy nutrition.

Rewire your brain-body calm though repetition. Working these techniques into your daily routine is key. Just 5-10 minutes per day as a regular practice quickly becomes a daily built-in stress coping practice. Try out different types of the options described and then continue with the ones that work best for you, and most importantly, that you will continue to include as a daily practice.

The best stress reduction techniques are the ones that you are most likely to continue practicing on a regular basis. Any progress is impactful.[8] ANY practice is success. It is helpful to reduce toxic stress in any way. But it will be most transformative to your health and performance to stop stress in the moment!

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An excerpt from *Beware False Tigers*

By Frank Forencich, DAIS

Living here in the modern world, you're no doubt familiar with stress and all the frustrations that go with it. You're comfortable with the word itself, and you might even suppose that it's a regular feature of human life. Isn't it normal for people to feel chronically pressured, anxious, harried, and overloaded? Isn't this the human condition?

Actually, it's not.

Historically, humans have always experienced adversity. But as for all animals living in a wild habitat, most of that adversity was occasional and episodic. There were hard times and even life-threatening emergencies, but those challenges usually passed and gave way to a more comfortable, familiar pace of life.

In fact, the word stress didn't really enter into popular use until the early twentieth century, beginning with the work of Harvard physiologist Walter Cannon and his description of the "fight-flight" response. Years later, the pioneering endocrinologist Hans Selye, sometimes called "the grandfather of stress," observed that patients with various chronic illnesses appeared to display a common set of symptoms. He also noticed that laboratory animals exposed to cold, drugs, or surgical injury exhibited a typical pattern of responses, a "general adaptation syndrome." Later in the century, books such as Why *Zebras Don't Get Ulcers* by Robert Sapolsky and *Full Catastrophe Living* by Jon Kabat-Zinn brought stress into popular conversation and awareness.

And today, everyone's talking about it. Google's Ngram Viewer, an online tool that tracks the frequency of words that appear in print, shows that the word *stress* barely made an appearance in the nineteenth century, then rose gradually throughout the twentieth. And now it's everywhere. Even before the social justice protests and COVID-19 pandemic of 2000, almost everyone was claiming to be "under stress" in one way or another, and even children were claiming that their schoolwork was "stressing us out."

We all feel it now: this maddening sense of urgency, the impending loss of control, the pervasive cognitive overload, the squeeze of temporal poverty and economic uncertainty. Stress has become a ubiquitous, chronic, and even debilitating feature of the modern world. We often joke about it and sometimes even brag about it, but this is serious, even lethal business on a vast scale. Not only does stress wreck our bodies, it also has extremely negative consequences for cognition and imagination and, in turn, our ability to create a viable future.

Not only does stress wreck our bodies, it also has extremely negative consequences for cognition and imagination and, in turn, our ability to create a viable future.

Planet of Stress

In 1996, the World Health Organization declared stress a "worldwide epidemic," and if it was bad then, it's a thousand times worse now. Global pandemics, widespread economic insecurity, social injustice and racism, political polarization, overwork, lifestyle disease, food and water insecurity,

political corruption, misinformation, health care disparities, and looming above it all, the impending collapse of the biosphere. It's no wonder that the World Health Organization numbers look as bad as they do:

- Close to 1 billion people have a mental disorder.
- Depression is a leading cause of illness and disability;
- A person dies every forty seconds from suicide.
- Every year, 3 million people die due to the harmful use of alcohol.[1]

Stress has become a defining experience of our age, and yet, we mostly ignore it, and sometimes even glorify it, declaring it a badge of honor for entrepreneurs and other go-getters who are willing to push the limits.

In other words, people are suffering on an unprecedented scale. Stress has become a defining experience of our age, and yet, we mostly ignore it, and sometimes even glorify it, declaring it a badge of honor for entrepreneurs and other go-getters who are willing to push the limits.

The problem goes deep, something that psychologist Carl Jung would have recognized immediately. Stress is surging through the collective unconscious of humanity, where it exerts a profound influence on our personal experience and behavior. Our bodies feel the rampant destruction of habitat around the world, the social turmoil, inequality, racism, and injustice. We feel it in the anxiety that courses through our tissue and our lives, but we're mistaken about its source. Trained by culture to view ourselves as individuals, we blame ourselves for our feelings and our experience. We believe that our stress is our fault alone, a personal failing, a shameful inability to deal with challenge. But in fact, stress is a shared human predicament that extends to all people across the planet. Stress isn't just your problem or my problem, it's our problem.

But it's even worse than all that. Stress even afflicts nonhuman animals. For example, a 2021 study published in the journal Scientific Reports found that animals living in fragmented forests have higher levels of stress hormones than those in larger forest patches. A team of scientists collected fur samples from rodents and marsupials in the Atlantic Forest of Paraguay: "We suspected that organisms in deforested areas would show higher levels of stress than animals in more pristine forests, and we found evidence that that's true," reported one of the study's coauthors.[2]

Likewise, biologists in the Pacific Northwest have reported increased levels of stress hormones in the orcas (killer whales) of Puget Sound.[3] Unable to find adequate food because of extensive dam building and destruction of salmon habitat, these creatures are suffering. In fact, it's safe to assume similar stress effects in other mammals in disturbed habitats around the world. In other words, stress is more than a human problem; it's a biological problem that extends beyond our own species to forests, coral reefs, wetlands, and beyond. All of us—humans and nonhuman animals alike—are feeling the effects.

Far from being a mere lifestyle and health annoyance, stress is one of the most pressing problems on our planet. It's a foundational issue that compromises our cognition and our ability to deal with reality: stress contracts our imagination, our intelligence, and, most of all, our sapience. Stress encourages short-term thinking and impairs our judgment at the very time when we need it most. When we're under the influence of cortisol, we lapse into dysfunctional behavior and fail to meet our responsibilities. We ignore evidence, act rashly, focus on trivial matters, and fight one another, all of which compromise our ability to deal with a complex and demanding world.

In short, excessive stress makes everything worse, both individually and collectively. Not only does it ruin or personal health, it also degrades the abilities we so desperately need at this moment in history. To put it another way, we might well rank the stress hormone cortisol as one of the most problematic substances on the planet—along with plastic, endocrine disruptors, excess antibiotics, and carbon. In other words, stress isn't just a health problem—it's an ecological problem, a social problem, a national security problem, a problem of national culture and character, and a problem for the totality of life on Earth. And we ignore it at our peril.

The Standard Narrative

Of course, most of us have heard about stress, and we think we know what it's all about. We've heard the conventional narrative in popular books, magazines, websites, and in casual conversations with friends and coworkers. That is, stress is an individual problem with individual solutions. It's an isolated, personal experience that has nothing to do with history, society, culture, or context. If you're feeling overwhelmed, harried, or exhausted, it's up to you to make an adjustment. And of course, we've all heard the typical prescriptions for stress relief: get plenty of exercise, talk to your friends, write in your journal, practice mindfulness, listen to soothing music, and, of course, take some deep breaths.

The standard narrative does give us some useful ideas to play with, but sadly, it doesn't go far enough. What we see at the supermarket checkout stand is a simplistic story that fails to reflect the complexity, meaning, and potential of stress. Most importantly, the narrative fails because it

puts stress in the wrong category. Most of us have been conditioned to believe that stress belongs in the health-medicine-lifestyle pigeonhole, closely related to themes of fitness, wellness, and well-being. It's a personal issue. If you're feeling stressed, there's something wrong with you, your body, your life, or your attitude.

If this perspective sounds familiar, that's because this individualistic orientation is baked into modern culture at large. In the world of medicine, disease is something that takes place inside our skins; the body is examined and treated as an isolated, stand-alone organism—a medical object. In the world of psychology, mental health is often treated as something that takes place inside the skulls of isolated human beings: depression, anxiety, and mood disorders are individual problems with individual solutions. Even the word health is generally taken to mean personal health, in spite of the fact that modern science now shows that many of our physical ailments are highly contagious and shared across populations. For a hyper-social species such as ourselves, health is always interconnected, and in fact, the very idea of a healthy individual is something of a misnomer. There can be no health in isolation.

To be sure, some physicians and health providers do advise their patients to "get more sleep," "try some meditation," or

"manage your stress." And for the affluent and the "worried well," there are plenty of exotic options, including spas, retreats, and workshops. Some corporate programs attempt to address the issue in-house, but most rely on the standard narrative and the belief that, ultimately, it's up to the individual to adapt.

In short, the standard stress narrative fails to account for the fact that hyper-social human animals are radically connected to one another and that we share in the creation of our experience and the world. To be sure, individuals do experience stress, but it's also true that stress is contagious across families, workplaces, society, and culture. The new sciences of interpersonal neurobiology and social neuroscience vividly demonstrate that thinking, feeling, emotion, and stress are widely shared, distributed across tribes and, now, populations.

Wrong Objective

The standard narrative also gets it wrong by suggesting that stress is nothing more than a problem to be solved. It's an abnormal deviation from our regular lives, something to be eliminated. In other words, if you're feeling distress, anxiety, depression, or fragmented attention, there's something wrong with your life that needs to be fixed, adjusted, medicated, or resolved. You, my friend, are broken. But if you follow the recommendations of the standard narrative, you might be able to get back to equanimity.

But all of this ignores history and context. Today, we live in a historically abnormal world, one that's marked by extraordinarily high levels of ecological stress, social stress, and economic stress, all of which are chronic. Of course, we feel anxious and depressed. This is the normal reaction of animals that are forced to live in an abnormal, alien environment. In other words, we're behaving and responding in a way that's consistent with our ancestry and our circumstances.

But the standard narrative tells us that stress is something that we need to somehow "get over." If we practice the right techniques and use the right products, we can get back to our normal, peaceful lives. On the face of it, this might sound right, but on deeper reflection, we begin to realize that there are actually some stresses that we really don't want to "get over."

Suppose that the people in your life or your community are suffering from illness or injustice. Do you really want to get over this stress and move on to a state of peace and equanimity?

Suppose that the precious natural habitat of your region is bulldozed for yet another shopping mall or chemical plant, while biodiversity is crashing around the world. Do you really want to get over this?

Suppose that giant corporations are using their power to suck the life out of your community and hoard their wealth, leaving your people stranded. Do you really want to get over this fact and just let it go?

In fact, maybe this desire to "get over" our stress is really part of our problem. Maybe what we really need is to feel our stress more acutely and fight back with highly focused action. Maybe some kinds of stress actually shouldn't go away; maybe we should even be more stressed about the conditions we're living in.

Wrong Tigers

The problem with the standard narrative is that it deals mostly with the small tigers in our lives—the typical culprits of modern living. Stress is cast as an annoying but mostly benign inconvenience. It's unpleasant, but

The standard stress narrative fails to account for the fact that hyper-social human animals are radically connected to one another and that we share in the creation of our experience and the world.

thankfully, there's a set of easy "tips" to help us feel better. But this approach ignores the blunt-force reality that stress can crush our spirits and obliterate our ability to function in the world. The focus on easy lifestyle tips obscures the fact that stress goes all the way to the heart of the human experience. It also obscures the fact that if we really want to feel better, we might need to make substantive, even wholesale revisions to our relationship to life and the world at large, none of which is easy in the slightest.

As it stands, the standard narrative has little or nothing to tell us about the truly epic forms of stress that shatter our lives and cause us so much suffering. It tells us little about the life-crushing traumas of death, divorce, grinding poverty, and social injustice and, above all, the precarious state of the biosphere and the looming threat of ecological collapse.

There are a host of challenges facing humanity at this moment, but without question, one of the most pressing is our inability to distinguish between outright lies, illusory dangers (false tigers), and catastrophic threats to the future (real tigers).

There are a host of challenges facing humanity at this moment, but without question, one of the most pressing is our inability to distinguish between outright lies, illusory dangers (false tigers), and catastrophic threats to the future (real tigers). For the massively stressed modern human, living under the constant influence of hyperactive, shock-value media, all threats are presented as equal in their urgency and consequence. We act as if there's no substantive difference between the demise of the last Blockbuster video outlet and the extinction of animals, birds, and insects. We make poor assessments of authentic dangers and overrespond to trivial, even illusory threats. We are stress illiterates, dangers to ourselves and others.

To put it another way, the standard narrative has virtually nothing to say about the really big tigers of our day. It'll tell you how to keep stress from compromising your youthful appearance, but it won't tell you how to stop fossil fuel destruction of the atmosphere. It'll tell you how to live a long life, but it won't tell you how to preserve a functional biosphere. It'll tell you how to feel less harried at work, but it won't tell you how to make your life meaningful in the face of radical social inequality.

Wrong Orientation

Ultimately, the standard narrative fails because it frames stress as an external problem. Stress is something that comes from outside our bodies, as an alien visitor from beyond. We complain about being "under" stress, as if it's an external force bearing down on our heads and shoulders. This externalized orientation is captured in the popular phrase *stress management.* That is, stress is something "out there," and if we could just contain it or manipulate it in the right way, all would be well.

This view reminds us of similar modernisms such as time management, risk management, crisis management, human resource management, and ecosystem management, all of which imply an external world that needs to be controlled. But these dualistic approaches amount to an otherizing of the cosmos, the externalization of the world—yet another expression of alienated consciousness. The locus of our difficulties and our stress lies outside of us. When in doubt, manage something.

To be sure, it's obviously the case that external, objective tigers can and do "attack" us from time to time. And yes, there are external agents, forces, and processes that sometimes need to be controlled and managed. But as you'll see, most of our stressful experiences are matters of perception, interpretation, meaning, and, above all, relationship. In other words, our stress may well be "out there," but it's also "in here."

A New Narrative

The time has come to give stress the respect that it deserves, but sadly, we just don't have much of a curriculum for dealing with stress on any scale, either individually or culturally. The standard narrative is typically offered as a supplemental program, an add-on or enrichment to our regular curriculums. We wait until people are massively overloaded, teetering on burnout and lifestyle disease, then step in with stress-management workshops to help people regain their equanimity. But this is often a downstream act of desperation, an emergency measure that's too little, too late.

Given our lack of substantive stress education, it's no wonder that so many of us get things so wildly wrong. Our behaviors are often out of sync and out of proportion. We respond to stressors with the wrong intensity, at the wrong time, and for the wrong duration. We overreact to minor insults and underreact to genuinely threatening challenges. To put it in physiological terms, we're autonomic slop artists—we freak out about false tigers while we ignore the real ones.

Our problem is compounded by the fact that our brains—primed by evolution for survival in natural, outdoor habitats—are not particularly good at distinguishing real tigers from false ones in a hypercomplex modern world. Uneducated in the arts of threat assessment and proportional response, we overreact to trivial matters, personal dramas, and petty politics. At the same time, we radically underreact to the really big tigers that threaten to bring down our planetary life-support systems: ecological overshoot, the climate crisis, destruction of habitat and biodiversity, social injustice, and other systemic failures that literally threaten our ability to have a functional future.

In short, our failure to recognize the difference between real and false tigers is having radical, cascading consequences, not just for us as individuals but for all of us, humans and nonhumans alike. All of which calls for a new approach. We need a curriculum that's more expansive, richer, and more nuanced. We need something that speaks not just to the plight of the harried individual, but also to the systemic, interconnected nature of our predicament, especially the big historical, social, and ecological tigers of our age. This new narrative will serve as a remedy, not by promising to banish stress from our lives but by giving it meaning and making it relevant to the challenges of our day. The goal is not to make our stress disappear, but to listen and learn what it's teaching us.

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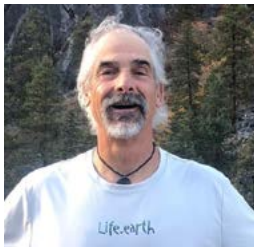


ANGER CAN BE OUR FRIEND

By Jeff Jernigan, PhD, BCPPC, FAIS

They were asking for volunteers to take a later flight for a second time. The waiting area was full and noisy. Children wondering when they were going to get on the airplane, babies crying from little appetites put off in hopes of boarding, parents squabbling in whispers with angry faces. The flight had been delayed twice already due to the weather somewhere, and the weather in the waiting area was getting heated. At last! With a collective sigh of relief, the passengers lined up in anticipation as the doors to the ramp were opened wide and locked in place. But that was just the beginning and not the end of everyone's frustration.

I boarded, found my aisle seat, and sat down. Then, coming down the aisle toward me was a man followed closely by someone who turned out to be his son. The older of the two caught my attention at the entrance to the airplane complaining loudly to the Flight Attendant about not being able to hang his overcoat in the crew closet on the right just as you step into the aircraft from the boarding ramp. The conversation had been moved aside and became especially loud and nasty. We could all hear the altercation 13 rows away. Dad and son lost the argument and huffed and puffed loudly all the way down the aisle and, yes, to my chagrin they sat down in the two seats in front of me. Son took the middle seat, and before taking the aisle seat the dad opened the overhead compartment to put his briefcase and coat in the bin. There was a briefcase already there.

Dad exploded, grabbed the briefcase, and drawing his arms over his head, threw the offending luggage to the floor hitting the passenger's arm on the aisle seat opposite with enough force to break bones. Screaming, Dad shouted, "This is MY SPACE! I paid for this seat, and this is MY SPACE!" Before the passenger could get out of his seat I slipped out of my seat and filled the aisle as the irate dad sat in his seat. Picking up the briefcase, I handed it to the passenger who apologized for putting it in the bin (thank goodness) because his overhead space was full. No bones were broken. Meanwhile, the son was calming the dad and apologizing to the passenger. A few more minutes of de-escalation and everyone sat down. Then the Flight Attendant showed up, held up by everyone stopped in the aisle behind our little circus.

When the Flight Attendant asked the passenger if he wanted to press charges and asked the dad if he wanted to be thrown off the airplane, a picture came immediately to mind of someone standing in front of a fire about to throw gasoline on it. But then, he looked at me and said to everyone if they didn't settle down, he would get the Air Marshal involved. Instead of gas on a fire, it had the effect of oil on water. Everyone went dead silent. The Flight Attendant said

to me, "Thank you, Sir" and returned to the front of the aircraft. I have always wondered if he thought I was an Air Marshal. I have been many things in my career, but that doesn't even come close. However, at the end of the flight Dad apologized to me as we were standing in the aisle ready to walk off the plane. With a suspected Air Marshal sitting directly behind him for the entire flight he was as good as good can be.

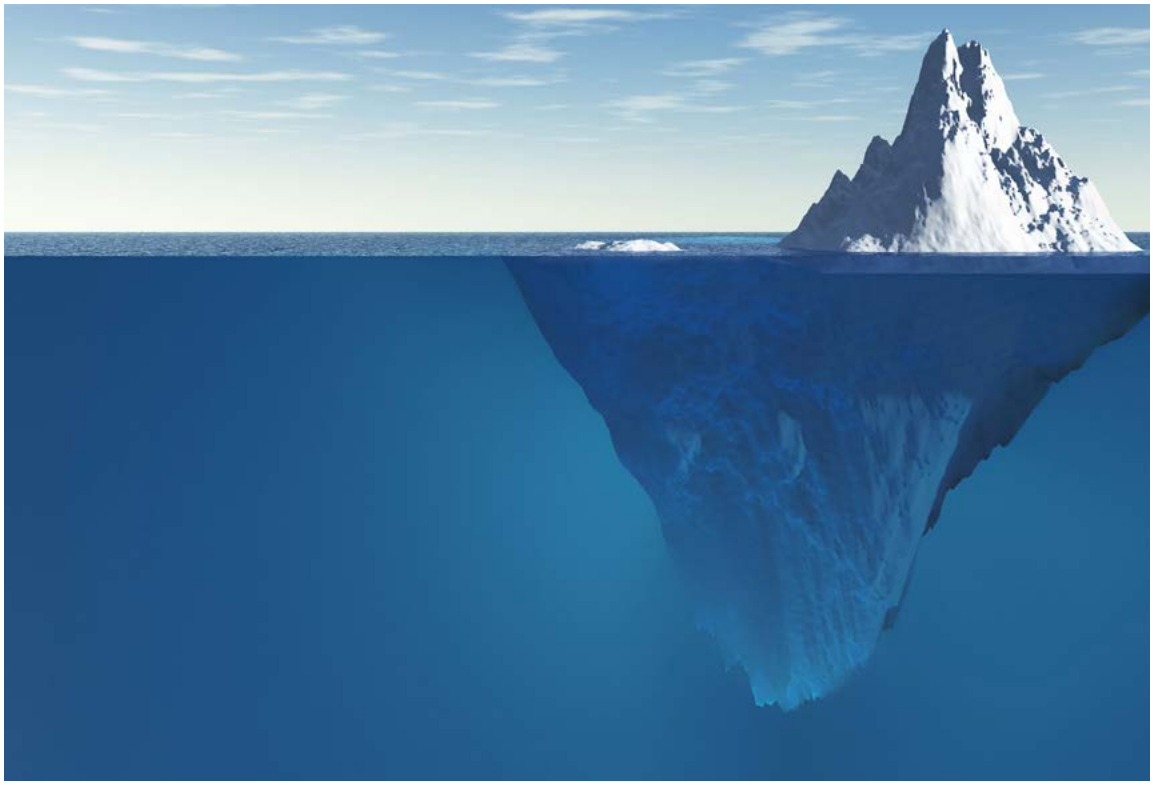
We all have our experiences with out-of-control anger and rage on airplanes, on the road driving, in the grocery store, or in the streets fighting. Tempers flare at work, couples and children trapped at home by virtual work and community lockdowns, and the stress and uncertainty of it all finds ways to leak out and explode. My mental health colleagues working with the court systems tell me they are overwhelmed with court-mandated anger management training requests. But this conversation right now isn't about anger management. Let's talk about what is good about anger and how anger can be healthy.

Like an Iceberg, the disappointed expectations, frustrated desires, and blocked goals of life pile up until they overflow in anger and a choice to act out.

What is Anger?

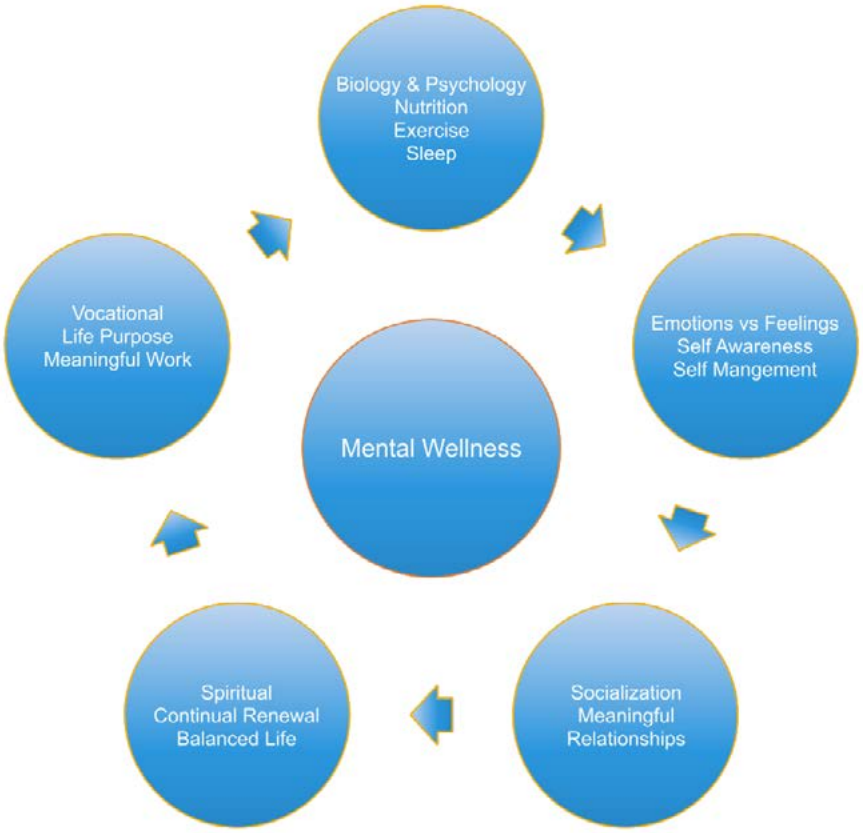
Anger is both a decision and an emotion. The decision comes quickly, almost unnoticed because it is due to other issues below the surface. What we end up experiencing, though, when anger is let loose is all the feelings of annoyance, irritation, vexation, temper, and even rage. This is why anger is often described as a secondary emotion.[1]

Like an Iceberg, the disappointed expectations, frustrated desires, and blocked goals of life pile up until they overflow in anger and a choice to act out. To step out of this reaction to life, even when you cannot change your life, is to find mental well-being. Mental well-being is characterized by thinking, feeling, and acting in ways that create healthy physical and social well-being.[2] Your mind is in order and functioning in your best interest. This place is the



result of a number of key factors in balance with one another.

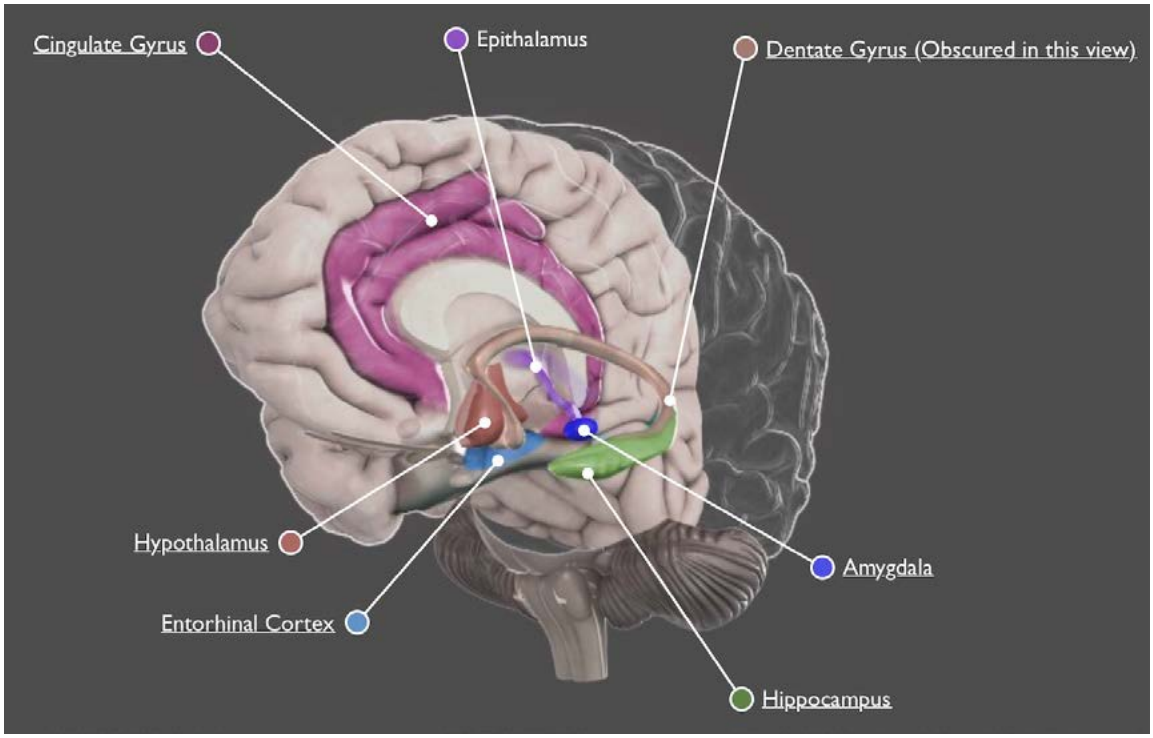
These factors come in and out of focus for all of us. The secret to resilience in life is to be attentive to where balance may need to be restored. Resilience and balance in life will help us manage most anger issues that pop up in our experience, no matter if they are our issues or someone else's. It won't keep us from being angry but will set us up to experience anger when it does show up as a friend. To do this, we need to understand something about anger and the brain.



Listening to the conversation between the dad and his son during the flight was very helpful to understanding what was below the waterline in his life. Recently widowed, and even more recently diagnosed with cancer, he was clearly struggling with the loss of all his dreams regarding a future full of shared experiences with his family. Waiting anxiously for a flight that seemed like it would be canceled created anticipation of just one more disappointment. Frustrated he could not get the cooperation he wanted from the Flight Attendant to hang up his coat, feeling judged and rejected by this individual as a sort of metaphor for his life experience in the moment, and nearly overwhelmed by the idea that the good life was over...he flew into a rage at the provocation found in the symbolic loss of his overhead space in the bin.

Disappointment, frustration, judgment, rejection, and fear registered in his Prefrontal Cortex, activating his Amygdala which signaled the Hypothalamus and Pituitary Gland. In turn, this charges up the Adrenal glands which secret stress hormones into the body producing a fight or flight response. In this case it was a verbal war that escalated. This is our body at work. All of the chemistry involved is created in our body by the food we eat, the air we breathe, the water we drink and the exercise and sleep we get. Healthy body, healthy brain; healthy brain, healthy mind. Our biology affects our psychology. Dad evidently had not eaten anything or had anything to drink since the day before, got up at the crack of dawn to rush off to the airport without much sleep, and looked to be in his eighties when I saw him walking down the aisle toward my seat. He was fifty-two years old.

Anger causes elevated levels of cortisol in our blood which erodes our immune system.[3] It also attacks neurons in the Prefrontal Cortex preventing us from using our best judgment, making good decisions, or being concerned about the future.[4] It gets worse: elevated levels of cortisol attack neurons in the Hippocampus, affecting short term



Those who constructively control their anger are more apt to experience their needs being fulfilled than those who suppress their anger.

memory and interrupting the production of Serotonin, the neurotransmitter that makes you feel happy. If someone is angry all the time in an unhealthy manner: the heart, digestive system, and kidneys pay the price.[5] However, healthy anger has none of these negative effects.

The Benefits of Anger

Health experts have increasingly recognized that when anger is constructively managed it is a beneficial emotion to well-being.[6] Yes, anger can be destructive, but also can motivate us to action, help improve communications, and promote optimism. Anger is an emotion that can also be misused to intimidate and dominate others. If not managed, anger can turn into violence and aggression or internalized as depression and health problems. People and circumstances are not always things we can control. But we can control our perceptions of those things in ways that allow us to see what is really going on and put our Prefrontal Cortex and Working Memory (where we think) to good use without triggering the Amygdala. Now we are changing the chemistry of our brain, in effect using our thinking to influence our biology. Here are some easy ways to help that process over time.

Sometimes anger is like a warning light on the dashboard of your car. For example, your radiator is in danger of overheating and the red light comes on and stays on, telling you something under the hood needs attention now! When we feel anger coming on in the form of irritation or frustration, consider that to be your warning light and take a look under your hood. Where is the frustration coming from? Naming the source takes the steam out of the frustration and can lead to a solution.

Anger also is a natural response when we sense risk or danger that threatens our safety. This kind of anger is a warning to avoid or move away from the potential threat, physical or emotional. For example, it may be a warning to avoid that person or walk away from a conversation headed in the wrong direction. Be grateful for the warning, and the anger will leave quickly.

This pull to move away from something or toward something is called approach-related motivation.[7] It involves our emotions, thoughts, and actions reflecting our desired outcomes even if we are not aware of them. When you feel drawn to risky situations, or want to move away from some unpleasantness, ask yourself why? Anger can promote greater self-awareness without overtaking your good judgment or provoking an alarmed response.

Constructive anger can propel us to use our skills, gifts, and power to accomplish things that produce a sense of control and optimism. This happens when we catch ourselves early before anger takes us down the road of unhelpful retorts and conduct that wounds others by the words we use or the things we do. My parents used the refrain, "Think before you act." Little did they know that this neurologically is an exciting option instead of losing your temper. It is another brain-changing reaction we can control!

Those who constructively control their anger are more apt to experience their needs being fulfilled than those who suppress their anger. They also will focus with greater clarity, reduce their fear, and more easily remain calm. The heightened alert, elevated heartbeat and breathing that occur before flight or flight kicks in due to the Amygdala sounding the alarm actually makes for better decision making. As a combat veteran, I know this training saves lives simply because we remain calm and let our biology help us without losing self-control. Rarely are we in a life-and-death situation. But our Amygdala doesn't recognize that reality and without good self-management our body and our mind will react as if we were in danger.

When anger is justified and expressed constructively, it can led to greater

cooperation, better relationships, resolve misunderstandings and conflicts. Anger, expressed with appropriate transparency and vulnerability, can bring empathy and understanding into our longterm relationships in life and work. Failing to express anger at all or inappropriately expressing anger can also end a relationship.

Allowing ourselves to feel anger, both our anger toward others as well as their anger toward us, creates better self-awareness and can lead to greater personal growth. It also teaches us how to embrace difficult emotions in addition to anger. This practice improves our emotional intelligence, empathy, and resilience. Those who avoid uncomfortable emotions and prefer only happy feelings tend not to have the same level of emotional intelligence or resilience.

Icebergs to Guard Against

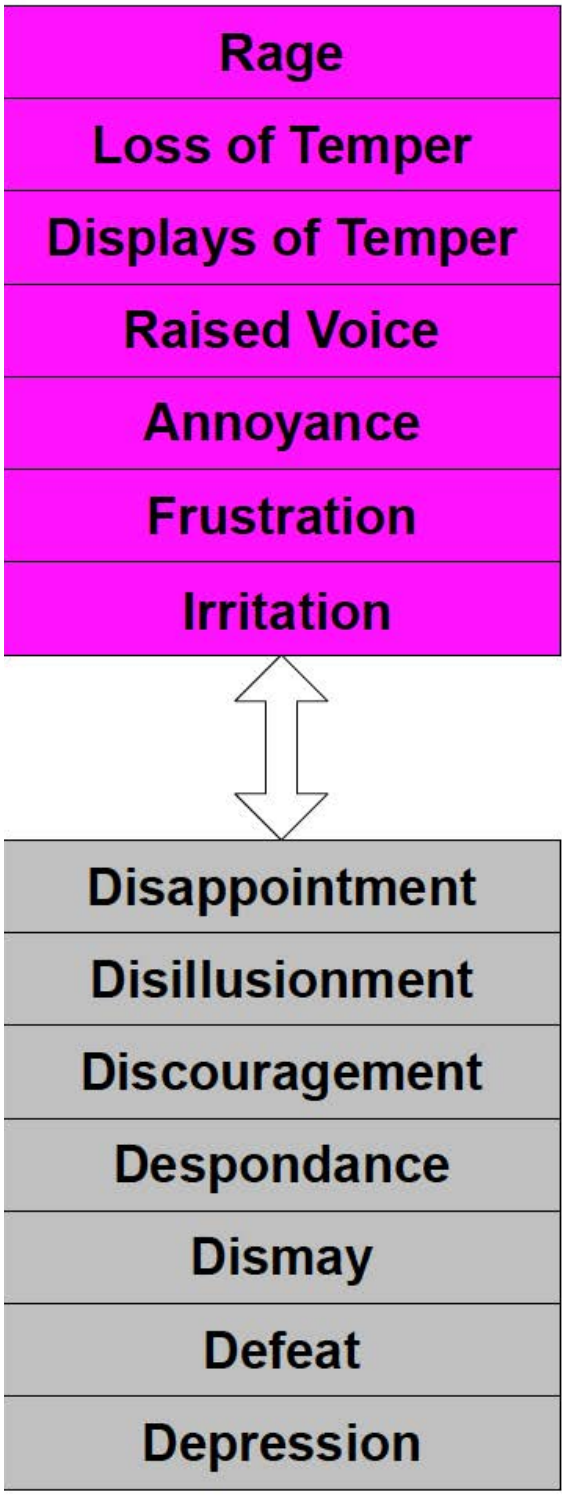
Sometimes the anger in the room that needs to be dealt with is ours, not someone else's. This is the challenge of the iceberg. We can be the ones blindsided by underlying frustrations that seem to overflow into our relationships in surprising ways. It may even seem to others that we are being passive-aggressive. This is another way of describing how internal struggles can cause us to be perceived as two-faced by others. On the outside we seem to be happy, agreeable, cooperative, and engaged. Actually, on the inside we are angry, resentful, disagreeable, and uncooperative.

People who are passive-aggressive don't express their anger, disagreement, or negative emotions directly.[8] Instead, they respond through hostile or mean-spirited acts including bad attitudes, talking negatively behind your back, starting rumors, refusing to follow-through on something they agreed to do willingly (it seemed), and making excuses for themselves but no one else. If you are ghosting people, giving them the silent treatment, procrastinating, or making excuses the anger you sense directed

toward you may be a response to your passive-aggressive behavior.

Our emotional responses to people can unconsciously bias our interactions with those same people. Our interactions with someone else always contain emotional content communicated in our tone of voice, the words we use, body language, attitude, gestures, and eye contact. These cues are a reflection of unconscious stereotypes and are influenced by the other person's stereotypes as well. This is a form of countertransference: a reaction to the other person's emotional contribution to the conversation.[9] Another way of saying this is that you are reacting negatively to how the other person is reacting to you.

If you find yourself developing a dislike for someone in the middle of a conversation, or preoccupied with how the conversation went after walking away, or are impatient to offer uninvited advice, or simply recognize a diffuse anger: you may be on the verge of countertransference. The problem with this is one of escalation. If you are frustrated, the other person probably is as well, and you will continue to ramp one another up. Good boundaries protect relationships. Poor boundaries can lead to passive-aggressive behavior if this cycle of mutual annoyance continues.



Developing good boundaries in relationships is easier when you can name the anger you may be feeling. Anger shows up in a spectrum ranging from very visible outward conduct to very invisible inward thoughts.[10]

If you can recognize any of these habitual symptoms of anger toward other people, it is time to name what it is and consider what boundaries in that relationship may be necessary to create or enforce. Our emotions and perceptions color our responses to anger in others, especially when it may be directed toward us. If we can reasonably identify what it is about us that is triggering their anger, we

Allowing ourselves to feel anger, both our anger toward others as well as their anger toward us, creates better self-awareness and can lead to greater personal growth.

can bring the temperature down in the room by changing our response and using healthy boundaries. This will interrupt the back-and-forth triggering of negative responses even if the other person continues to act out of sorts.

Healthy anger can be our friend: warning and protecting us, creating readiness learning moments, moving relationships to greater trust and intimacy, and ourselves to greater accomplishment. When we find ourselves in early stages of anger focus on these outcomes and watch the anger resolve itself in something heathy and constructive. Healthy anger is a part of mental wellness and a normal part of our daily lives. Irritation and frustration as well as disappointment and disillusionment are early signs of anger, we all experience in small ways every day. These are clues and cues to opportunities to focus on shifting this emotional energy to something healthy and friendlier.

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A lifetime focus on humanitarian service is reflected in Jeff's role as the Chief Executive Officer and co-founder, with his wife Nancy, for the Hidden Value Group, an organization bringing healing, health, and hope to the world in the wake of mass disaster and violence through healthcare, education, and leadership development. They have completed more than 300 projects in 25 countries over the last 27 years. Jeff currently serves as a Subject Matter Expert, Master Teacher, Research Mentor, or Fellow in the following professional organizations: American Association of Suicidology, National Association for Addiction Professionals, The American Institute of Stress, International Association for Continuing Education and Training, American College of Healthcare Executives and the Wellness Council of America.

Let Go *and* Get Control

By Josh Briley, PhD, FAIS

As a licensed clinical psychologist, I have worked with patients in a variety of settings (community clinics, Veterans Affairs, Federal Prisons, private practice, and tele-mental health) over the course of my career. I have treated patients with debilitating depression, anxiety, posttraumatic stress, addictions, and many other mental health, social, and personal struggles. In working with patients in all of these settings, I have learned that stress and anxiety are almost always related, in some manner, to an attempt to control what either feels, or actually is, out of our control.

As humans, we feel calm, confident, and competent when our environment, our emotions, our bodies, and our circumstances are running smoothly. In these rare moments, we feel as if we have things under control. We feel as if we know what is happening and what will happen. We feel as if we are making progress toward our goals. However, life does not always stay in this peaceful state. The last few years have, for many people, been very stressful and chaotic. Political upheaval; incidents of violence; a global pandemic; quarantine; controversy over attempts to overcome the pandemic including masks, vaccines, working remotely or returning to the workplace, and social distancing; supply chain and worker shortages have all contributed to a very chaotic, unpredictable, and stressful time. At no time in recent history have people felt less in control of their surroundings or even of their lives. The rising prevalence of mental health disorders, including depression and anxiety reflect this uncertainty and lack of control.[1]

The more things feel out of control, overwhelming, or threatening, the more our minds engage in thoughts and behaviors that are an attempt to regain that sense of control. When such attempts are ineffective, there is an increase in emotional distress that we interpret as stress and anxiety. This increase in emotional distress exacerbates our fight or flight response, contributes to self-defeating thoughts and beliefs about ourselves and our circumstances, and contributes to the development or exacerbation of coping behaviors to either further attempt to feel a sense of control or to escape the distress. Such escape-related coping attempts can include any number of avoidant behaviors, including overuse of alcohol or drugs, overeating, sleeping excessively, or binge-watching TV shows. Attempts to regain a sense of control can include behaviors such as compulsions or perfectionism, food restriction, exercising excessively, or staying overly busy. Such coping skills help provide the illusion of having control over one area while many other aspects of our lives spiral more and more out of control. Neither coping approach is a healthy, productive response to stressful situations.

Traditional stress management techniques include meditation, breathing

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or self-soothing exercises, challenging irrational thoughts, and increasing self-care behaviors. While these techniques are important aspects of managing stress and anxiety, they are often insufficient for most people. Such coping techniques are designed to address the symptoms of stress and anxiety, but do not address the core issue contributing to the escalation of stress and anxiety: a need for control.

I have found it helpful, both in my personal life and in working with clients, to identify this element of control and work to refocus efforts on the aspects that are controllable. There are always elements we have under our control, and elements we do not have the ability to control. When combining this attitude of focusing on what I can control and letting go of what I cannot control, especially when used in conjunction with a relaxation or mindfulness exercise, I find that I am able to respond more productively to my circumstances and reduce my stress levels.

Even when things are going smoothly and we feel like we are in control, there are obviously elements of our lives that we objectively have no control over.

Elements We Cannot Control

Even when things are going smoothly and we feel like we are in control, there are obviously elements of our lives that we objectively have no control over. However, the more difficult things become, and the more stressed and anxious we feel, the more we often attempt to control these very elements that we do not have control over.

The first element that we have no control over is people. Objectively, we know this to be true. However, when we are in heightened emotional distress, the more often we attempt to control the people around us, or conversely, the more upset and anxious we become when the people around us do not act and respond the way we want them to. This reaction can take the form of being upset that a coworker does not complete a job in the same manner or as timely as we want them to, of getting upset that your spouse does not anticipate what you need or want, or even overreacting when our kids do not obey immediately when told to do something. Frequently, we react to such situations with anger in an unconscious and unsuccessful attempt to exert that control over the people around us, to "force" them into doing what we want the way we want it done. However, the result we often obtain is that the people around us respond with their own heightened anxiety, anger, or avoidance behaviors, which further exacerbates our own stress and anxiety.

The second element we have no control over is places. When we are stressed and anxious, we have little or no capacity to deal with such everyday occurrences as wait times at restaurants, check out lines, or an uncomfortable room temperature, just to name a few. With rare exceptions, we cannot control what is occurring in the places we find ourselves. People with trauma reactions acutely feel this sense of a lack of control and respond with a sudden and severe increase in anxiety and hypervigilance. In response, we engage in behaviors designed to give us a false sense of safety and control. We sit with our back to a wall and facing the door; we scan the people we can see; we avoid situations where we feel we cannot easily get out; or we avoid the situation completely. We have all witnessed someone losing their temper and causing a scene in a public setting. While many people wonder what could cause someone to have such an extreme reaction, or attribute the behavior to some personality defect, the truth is most of these reactions come from people who

are simply too emotionally distressed to have the capacity to deal with one more thing that does not go according to plan, and when that happens, all of the pent-up emotions come exploding out.

The final element over which we have no control is things. Any office I have ever worked in has recurring jokes about the computers and printers sensing when you are in a hurry and slowing down or refusing to work properly in response. We have no control over something as simple as whether your car will have a flat tire or a dead battery the next time you get in it. We do not even have control over whether our cell phones will have a signal or if the app we are using will lock up or crash.

Obviously, we can influence these three elements. The way you treat people generally has a direct effect on how they respond to you. Thus, if you are friendly, caring, respectful, and patient, then most people will respond positively to you. However, some people will not, and sometimes people we interact with on a normal basis may respond in a way that is out of character due to their own personal circumstances. You can maintain your possessions to increase the chances they will operate properly when needed, but the unexpected happens, and often at the most inopportune time.

By learning to "let go" of attempts to control the people, places, and things in our lives, it is much easier to respond, rather than react emotionally, when things do not go as hoped or expected. Not expending the emotional and mental energy in this manner frees us up to focus on the three elements we can control.

Things We Can Control

Regardless of the circumstances we find ourselves in, no matter how chaotic or overwhelming, there are three things that we can learn to have control over. However, in my work with others, and in my own introspection over the years, I consistently see that we expend the least amount of effort controlling these three aspects. In fact, when I tell clients for the first time that they can have total control over these three elements, they often disagree and claim to have zero control over them. Once they learn to control these features, they find that they are able to handle most situations without an overwhelming feeling of stress and anxiety. That is not to say they do not experience these emotions, because stress and anxiety, as well as all of our other emotions, have a place and a purpose, but that is a topic for a different article. Let's explore these

controllable aspects. You will quickly see a common theme running through them.

The first thing that we have total control over, no matter the circumstances or situations we find ourselves in, is our actions. We, and we alone, are able to choose how we act in any given situation. However, most of the time we are reacting to our irrational thoughts and beliefs or our emotions about the situation. Such reactions are often the attempts to avoid or exert control that I described above. When these attempts are unsuccessful, the result in an even greater escalation in emotional distress, which leads to even more reactions, and so on and so on. However, by stopping for a moment, attempting to see what is happening from a different perspective, and responding based on that new perspective, rather than reacting to our irrational thoughts and beliefs, we will be able to engage in behaviors that will have a greater likelihood of de-escalating, or even resolving, the situation.

The second element we have total control over, no matter our circumstances or situations, is our attitude. Our attitude is a significant component of whether we will feel overwhelmed and powerless, or effective and competent. In any stressful or difficult situation, it is easy to focus on the things that are going wrong, that are uncomfortable or unpleasant, to the exclusion of anything else. However, most of the time, while there may be things that are going wrong, there are also more positive things occurring that we miss because our attention is not on them. I remind myself, and tell my clients, that the things that go wrong, with our plans, with travel, etc., are the funny stories we will tell later. Therefore, when something is not going the way I planned, I start rehearsing the story that I will tell about that incident in my head. This simple act changes my attitude. Instead of being stressed out or upset, I am able to see the ironic, the humorous, or the outlandish in the events that are happening.

Finally, the last element we can control is our faith. I do not mean this solely in a spiritual context, though it definitely includes your spiritual beliefs. What I mean by "faith" in this context is what you believe about yourself, others, and the world in general. For example, when things are stressful and you are anxious, or depressed, it is easy to believe that it will always be that way, that the universe is out to get you, that people hate you, or that you cannot do anything right. Our memories tend to match our emotional state, so we are more likely to remember only difficult times, further enhancing the belief that things have always been, and will always be, difficult for us. Additionally, we can lessen our enjoyment of good times with the belief that it is only a matter of time before "the other shoe drops."

Controlling our actions, our attitudes, and our faith (in other words, what we do, what we think, and what we believe) takes practice. The coping skills mentioned above (self-soothing, breathing and relaxation exercises, even mindfulness) are all helpful tools in calming our fight and flight response sufficiently to allow us to exert this control over ourselves instead of over the people, places, and things in our lives. This change can influence the outcome and contribute to reduced rather than increased stress.

To use myself as an example, a few years ago I encountered a stressful situation that, just a few years earlier, would have caused me to get very stressed out and angry for the rest of the day, if not longer. One morning, on my way to work at the VA, I realized about a half mile from the clinic that I had left something at home that I had been intending to bring with me for a few days. It was not a crucial item, but I was early enough that I could turn around, drive the few miles home, get the item, and make it to work before the clinic opened at 8:00 am. Even if I was a couple of minutes late, I did not have anything on my schedule until 9:00. So, instead of going straight at the four-way stop to get to the clinic, I turned right, then turned right again on a small two-lane road to head back to my house.

Within a half-mile, I was stopped behind a cement mixer attempting to turn left against a steady stream of traffic coming from the other direction. I'm not exaggerating (I was watching the clock), I sat behind the truck for close to five minutes before he was able to turn. Instead of getting frustrated or upset, I reminded myself I had no control over the truck driver needing to make that turn, nor over the people who were driving toward us, probably just trying to get to work themselves. I was able to take some slow breaths and calm myself. I had plenty of time.

When I got home, since I was just running inside for a few seconds, I parked in the driveway rather than in the garage as usual. However, I did turn the car off. I grabbed the item and hopped back in my SUV without noticing the automatic running boards had not descended when I opened the door, as they are supposed to do. When I put the key in the ignition, and heard the engine make that disheartening "click-click-click" sound. I tried a couple of more times before giving up. Remembering my neighbors across and down the street had been renovating their house for months, I went around the front of my house to look for one of the neighbor's workmen to jumpstart my car there was no one there. In fact, there were no visible cars or people visible anywhere on my street. All of my neighbors, friends, and colleagues were at work by that point.

I felt the stress rising as I called roadside assistance to get someone to

Our memories tend to match our emotional state, so we are more likely to remember only difficult times, further enhancing the belief that things have always been, and will always be, difficult for us.

come jumpstart my SUV so I could get to work. They assured me someone would be there in a few minutes, so I called the clinic and let them know I would be a little late. I then went back into the house and began pacing impatiently, checking out my window to see if the tow truck was coming. After a couple of minutes, I stopped myself and asked what I would tell a client in this situation. I took a couple of slow breaths and looked around, changing my focus from the fact that my car would not start, and I was now late for work, to what needed to be done in my immediate surroundings.

That was when I noticed the water bowl for my pets was completely empty. If I had not gone home, and if my car had not died in my driveway, then my animals would have been without water all day, not good on a blistering hot day in August in central Texas. I cleaned and filled their water bowl. The tow truck driver still wasn't there, so I emptied and reloaded my dishwasher. Still no tow truck driver. The online tracking service showed he was still at home, and there was no response when I called the number that roadside assistance had given me. After some more breathing exercises and reminders that I could not control the tow truck driver and whether he came when I expected him, that I could not even control the fact that my car was not starting, I continued to focus on what I could control. Instead of getting stressed and angry at the situation, I was grateful that the situation allowed me to take better care of my animals and a few more moments to complete some household chores. I drank another cup of coffee and enjoyed the unexpected free time for the morning, allowing myself to decompress instead of allowing my stress and anger to escalate. I finally found a friend who could give me ride to work, so I called roadside assistance and rescheduled the tow truck to meet me after work.

By the time I got to the clinic, I was 20 minutes late for my 9:00 appointment, a PTSD group session. After some good-natured ribbing from my Veterans about being late, I started the session. A few moments later, my phone rang. I saw it was the tow truck driver I had been trying to reach for over an hour. I excused myself, stepped into my office, and answered the phone. The driver was very apologetic for the delay and explained that, when he received the call to come jump start my car, his own truck would not start. His boss had to send the mechanic out to fix the tow truck. I was able to respond with both compassion and humor at the irony of his tow truck being broken down, preventing him from helping

me with my broken-down car. I confirmed the rescheduling for after work and had a great story to tell my coworkers.

I know this example is not a major ordeal. I deliberately chose the type of everyday occurrence that we allow to cause us undue stress, anger, and anxiety. I could have become overly stressed about being late for work, gotten angry that my car, that I generally maintained well, would not start, or gotten very angry (a common emotion men channel our stress and anxiety into) at the tow truck driver for what I could have assumed was his poor work ethic and lack of commitment to his job by ignoring my calls. In contrast, by keeping my focus on my actions, attitude, and faith rather than the people, places, and things I could not control in this situation, I was able to make the best of an unforeseen occurrence, take advantage of the unexpected free time to take care of some tasks that needed to be done, notice things I had not noticed earlier, and I was ultimately able to appreciate the irony of a tow truck driver attempting to respond to a car that would not start only to learn the tow truck was broken down as well. My day was not ruined by this experience, in fact, my mood was not adversely affected during this experience because I did not feel out of control in the moment, I focused on the elements I could control.

This approach sounds simplistic, and in working with patients to help them change their perspectives away from people, places, and things and onto their actions, attitudes, and faith, I know that the process itself is not difficult. It does take diligence and practice to learn to redirect your perceptions adequately, but once you learn to control your actions, attitudes, and faith, then the people, places, and things in your life cannot so easily increase your stress.

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Trust in Yourself *for* Less Stress

By Jen Butler, MEd, BCC, DAIS

A technology leader received a promotion to manager reflecting his excellent skills, his ability to build relationships with clients and teams, and his sense of what the company needed. After six months, he requested a demotion back to his old level: he hated administration and needed to be closer to the work.

That leader knew what he wanted was far more important than what the company wanted, and he took a major chance that worked out well. As a result, he thrived where he might have failed and years later, he retired stress-free and satisfied.

You may find yourself on a different path — wanting and enjoying that

promotion. But whatever direction you take, you have to begin with liking and trusting yourself enough to ask for what you want and the courage to take action. When you stay true to the trust you have in yourself life is more fulfilled and far less stressful.

Step 1. *Know Your Decision Gates*

Decision gates are what we call those filters that you compare potential decisions against in order to see if you should move forward. Your decision gates are those things held dear to you, the core of who you are. These gates can be people, lifestyles, internal values, mindsets, and more. Things are the things you need in your life to be happy and fulfilled. They are in hierarchical order and if a decision supports your first gate, you move to the second, and so on. With these gates you ask the simple, yet very deep question, "Is this good for X."

Let's take the example from above and use that to explain further.

You are offered the promotion to manager and know this will be more responsibility, pressure, and require a lot more energy and effort from you. This decision will definitely change your current work life, so before you accept, you measure the decision against your gates.

1. **Gate 1- Family Time:** Is this promotion going to be good for family time? Will it give me more family time? Will it give me more flexibility with family time? If you can answer in a way that positively supports your family time, then the decision to take the promotion has passed the first gate.
2. **Gate 2- Cycling:** Is this promotion going to be good for my passion with cycling? Will I be able to cycle with my club still? If you can answer positively, you've passed the second gate.
3. **Gate 3- Financial Planning:** Is this promotion going to be good for our financial planning? Answer positively, move on.
4. **Gate 4- Career Development:** Is this promotion going to be good for the career development plan I have for myself? Will this add to my resume in a way that I'll meet my career goals? Will I learn new skills I can apply later in life to achieve my ideal job? Pass? Then, onto last gate.
5. **Gate 5- Stress Levels:** Is this promotion going to be good for my stress levels? Will I be able to manage the added stress that comes with the new role? You honestly know the stress of this will be too much for you and decide to pass on the position.

You may only have three Decision Gates, maybe you have more than five. Whatever the number, you maintain your commitment and clarity for what you want and what's good for you in your life. You trust yourself to know thyself.

Decision gates are what we call those filters that you compare potential decisions against in order to see if you should move forward.

Step 2. *Focus on Priorities*

Our priorities in life are what we spend our time and energy on and take up much of our mental space. The way you divide your time and energy should reflect

your priorities, so at the end of each day you feel productive and your day and life have meaning. Life can intervene, such as being offered a promotion that would shift priorities, and we may have to limit the time and energy we expend on what we love to do. When we have trust in ourselves, in how we are living our lives, and what our priorities are, there is far less stress and a lot less guilt at the end of each day.

Create your priority list and then ask yourself:

- **"How long have I been thinking about this?"** If a task remains on your list for weeks (months, years), you should consider crossing it off. Completion clearly has little or no effect on your life right now.
- **"Why am I doing this? What is the goal? Do I have control over the desired outcome?"** If you answer "no" to having control over the outcome, stop. Cross that item off your list. Focus on what you can control.
- **"What will it take for me to succeed?"** If you lack the resources to succeed at this goal, you need to gather the resources first. If the item is too large ("run a marathon"), break it into doable pieces ("run 1 mile").
- **"What happens if I chose not to do it right now?"** Check in with yourself on how important the task is right now. When you have trouble saying no or you give every obligation the same weight, you are courting stress.

When you put everyone's needs before your own, you begin to believe that saying "no" makes you a bad, rude, or selfish person. Learning to say "no" is realizing that you are valuable and that your needs are vastly important as well.

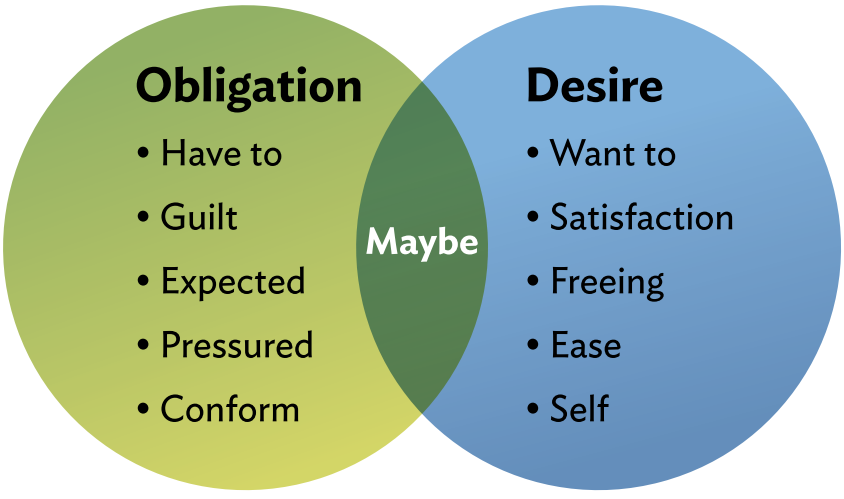
You will probably find that when intentional thought is given to why something is on your priority list, you'll have a much shorter priority list.

Step 3. *The Power of Your Response*

People ask favors that can step over what you feel is a boundary or requests that push you out of comfort zones. We often say "yes" out of misdirected impulses such as fear of conflict, people pleasing, or simply not realizing you have another option. You don't have to say "yes" if it causes you to go against what you trust about yourself.

When you put everyone's needs before your own, you begin to believe that saying "no" makes you a bad, rude, or selfish person. Learning to say "no" is realizing that you are valuable and that your needs are vastly important as well. Saying "no" is a great option so you don't compromise.

Many people think in "yes/no," so when a request is placed upon them, they don't see the all of the other options available to them. They only respond in the binary, missing out on other solutions that could create win-win-win situations; they forget about "maybe."



TIP: A common block for people in saying "no" is they don't know how to say it. The power of "no" is in stating clearly to others what is okay and what is not okay. Here are

some tips to harness the power of "no" and reduce stress in your life:

- **Be brief.** Avoid elaborate justifications or explanations.
- **Be respectful and be polite.** But remember, "no" is a complete sentence.
- **Be honest.** Fabricating reasons to refuse a request will only create the stress you are trying not to have.

Step 4. *Accept That You Will Fail—and Succeed*

No matter how often we are told that failure is a learning experience, it is still a painful learning experience and one that increases our stress levels. For some people, success itself is a failure, igniting the stress of surpassing or leaving behind their peers, challenging values they thought were important to them, and triggering the sense that they are unworthy.

Your own sense of failure may not align with anyone else's, but that doesn't make it less real.

- **Learn your stress response to success and failure.** The sooner you become aware that you are stressed, the easier it will be to find a coping method and the faster you will return to balance.
- **Separate who you are from what you do.** One mistake does not make you a bad person, and solutions are more important than finger-pointing. That's a lesson you may be communicating to your team; now it's time to apply it to yourself.
- **Commit to not going it alone.** Whether you confide in family or friends, see a coach or consultant, gain a mentor, or visit a therapist, you should commit to accepting help from day one.
- **Focus on one thing you would change as a result.** Make one change, form one new habit, and then move onto the next thing. Start with the easiest or the one that will make the most impact in your life; it doesn't matter which. It's the process of changing that makes the difference.

Step 5. *Reward Yourself*

There's an app for that. Really. You can now set your phone to remind you of your priorities, track your steps toward liking yourself, display your progress in lush graphics, and reward you with beautiful displays or badges.

Whether liking yourself involves refusing yet another committee chair, increasing exercise, not yelling at your team or your family, or finding time to relax, these apps will help get you there.

But don't forget the power of rewarding yourself in real life. A reward can range from buying a scarf to replacing a whole wardrobe; it can be a walk around the block or a vacation in Europe. Whatever works for you.

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While earning two bachelor's degrees - one in Public Health Administration and the other in Educational Psychology - Jen worked in hospitals, private practices, and became a paramedic, learning first-hand the challenges and relentless stress faced by medical professionals. Building on her education and 25-years of experience in learning & development, Jen Butler has worked with entrepreneurs, small business owners, corporate leaders, and executives on how to obtain sustainable profitability with less stress and more fulfillment. Jen is also a Diplomate of The American Institute of Stress. If you would like to learn more about the great programs at JB partners just go to jbpartners.com

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