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THE UNSEEN LINK: HEALING MODALITIES AND EMERGENCY RESPONSE

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Abstract: *Prior to recent scientific research, 'alternative' methods of wellness and healing were largely ignored and dismissed within conventional medicine. Some change of mindset, evident in increasing new research and growing acknowledgement of allopathic inadequacies, legitimizes the use of non-conventional methods. Caught between a system reliant on allopathic practices and a work environment producing high rates of injury, debilitation, and trauma, emergency responders battle an institutionalized organizational structure denying individuals knowledge of and access to alternative healing practices. Responders suffer consequences personally, professionally, and as a unit. Consequences further affect people in need of services and society in general. Stabilizer muscles, joint alignment, and trauma create a triad of disregarded issues within biomedicine. Stabilizers commonly malfunction due to lack of specific training, and can be exacerbated by emergency response duties. Joint misalignment can stem from lack of support from stabilizers and manifest through injury, common to responder work, impacting speed, agility, balance and the reflex/response systems. Trauma wreaks systemic havoc, often severely impacting responders, leading to physical, mental, and emotional degeneration. To what extent does the broken relationship between emergency responders and awareness of resources to restore damaged health create impaired individuals, diminished career and service, and weakened unit functioning? If emergency responder training and resources had methods to address such problems, tremendous transformation could occur, affecting long-term physical and mental abilities and length of occupational service. Such concerns should be considered an introduction into the profound disconnection between responder work and healing modalities beyond biomedicine, igniting deeper research and exploration.*

Key Words: *EMTs, healing modalities, diagnoses, biomedicine, joint alignment, stabilizer muscles, somatic trauma, PTSD, law enforcement, Firefighter*

INTRODUCTION

Research on true core (stabilizer) muscles, joint alignment, and how an individual processes trauma on a systemic level remains relatively new to the fields of medicine, therapy, and fitness, and, although changing, remains not universally well-known, understood, or utilized. True core muscles internally stabilize the spine, pelvis, and joints (Hsu et. al., 2018). Stabilizer muscles can be malfunctioning to high degrees in many populations without effects seen as obvious by many. Effects of poor stabilizer function include neck and back pain

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(especially the low back), spinal, pelvic, or joint instability, incontinence, constipation, pelvic organ prolapse, and sexual malfunction including erectile and ejaculation issues, pain with intercourse, and desensitization or over-sensitization of sexual organs (Jong). Poor stabilizer function impacts physical abilities further due to an association with reduced performance in balance, coordination, proprioception, and reflexes (Feldweg, 1990). Stabilizer muscles maintain a function critical for proper joint alignment and longevity. Unlike the image of a machine by which an injured or offending piece can simply be replaced (a misperception much of allopathic medicine still ascribes to), joints do not function as purely mechanical components. Rather, the system functions as a whole, dependent on information passed congruently through well-aligned joint channels. When a disruption via trauma occurs in one joint, impact will affect the others (Ohlgren & Clark, 1995). Additionally, unresolved trauma can have an enormous impact on the structure and function of the entire organism in nearly every way, from poor posture and lack of tone in key stabilizer muscles to impaired movement and reduced cognition (Levine, 2010). Improving any conditions stemming from poor stabilizer function, joint misalignment, or trauma requires knowledge, skill, and work far beyond the basics of classic physical conditioning and talk therapy. Finally, all factors both contribute to and remain affected by the individual's relationship with gravity (Frank, 1995).

Prior to recent research, difficulties lay in ascertaining (and thus legitimizing within the allopathic medical community) the contributing effect and value of stabilizer muscles as well as what actually constituted a healthy, functioning core. Research into stabilizers, joint alignment, and how the soma processes traumatic events, largely ignored by modern medicine until very recently, remains limited in knowledge, recognition of impact, and the wealth of resources available today. Rather, exploration into the cause, effect, and treatment of such components fell to specialists in the fields of fascial work, hands-on bodywork, some exercise and movement practitioners, a very few mental health therapists wise enough to recognize and pursue such connections, and other alternative health fields to study and ascertain function (Caspari, 2005).

As emergency responder (hereafter referred to as 'responder[s]') work follows classic medical standards, the system responsible for the health and safety of responders does not do enough to incorporate needed knowledge and resources from so-called "alternative" fields. Such response remains particularly calamitous due to the high rate of injury and trauma in practitioners (Orr et al., 2019). Many elements of responder situations, environments, and required duties challenge stabilizer muscle function and joint alignment, sometimes to extreme degrees, and can lead to unresolved trauma. Limiting the responder population from the full knowledge, resources, and healing available, works directly to the detriment of the individual, the functioning unit, and the entire practice of emergency response and security. The lack of connection between responder work and the resources available for healthy stabilizer muscle function, proper joint alignment, and the resolution of somatic-based trauma results in a critical need unable to be met.

To what extent does the lack of cohesion between knowledge of stabilizer muscle function, joint alignment, somatic trauma and responder work contribute to impaired individuals, reduction of career and service potential, and overall reduced unit function and security? Integrating up-to-date, research-backed joint and core stability and longevity, proper joint alignment and body

mechanics, and somatic trauma-reducing training into responder protocol as part of standard and ongoing physical and mental training to prevent injuries, rehabilitate more swiftly and effectively from any arising, and improve long-term physical and mental potency and occupational length of service could produce incredible and lasting change to the physical, mental, and emotional damage frequently occurring as a result of occupation.

CENTRAL THEMES

Stabilizer (true core) muscles need specific training beyond classical conditioning, especially in cases of malfunction, common in much of the population. If stabilizers do not function well, classical abdominal and other exercises can actually exacerbate poor functioning, and lead to injuries and further issues, including joint ailments. Joint misalignment generates far greater consequences than just injured joints. Such misalignment can create or contribute to decreases in speed, agility, balance, and proprioception, and increase injuries and wear. Classic physical conditioning on misaligned joints generally worsens the issue, and can wear out the joint faster and reduce physical abilities. Common perception links aging with so-called natural degeneration. However, degradation and degeneration driven by chronological aging remains neither natural nor inherent. Unresolved traumas, misalignments, and loss of stabilizer muscle function create a system less capable of healthy function and repair, and persist as true causes of degeneration, systemically wreaking havoc on the organism and worsening over time.

BACKGROUND

Joint injury occurrence escalates to high percentages in responder fields, and back pain is very common. One study from 2015 surveyed 180 EMTs and found two-thirds had back pain, with the greatest prevalence being low back pain (Rahimi et al., 2015). The study also found profound and complex interconnections between a variety of mental and behavioral health issues and back pain, and concluded that musculoskeletal disorders have become the most common cause of work-related disabilities among EMT nurses and possibly others in the responder field. Back pain, especially chronic back pain, remains a condition also well-known within law enforcement and firefighting, and a recurrent occupational complaint frequently observed in officers (Locatelli, 2021).

Unfortunately, back and joint debilitation remains an area of research lacking in medical and scientific study. Although research exists on the high prevalence of back pain in the general population, with significant evidence present to show responders suffer many injuries and have a high risk of on-the-job trauma, the need remains for more studies based specifically on responder back and joint debilitation, and more study based on responder trauma of all kinds (Antony et al., 2020). Although the high prevalence of traumas remain known within the field (however, generally not openly acknowledged or discussed), scientific studies on trauma-related crises due to emergency response work stand notably behind the already inadequate studies on trauma within the general population.

In addition to joint and back problems, multiple types of mental and behavioral health issues also raise higher in responders than in the general population (Heyman et al., 2018). Post Traumatic Stress Disorder (PTSD) runs especially high. One of the many effects of PTSD, serious distraction, can be to the point of inability to effectively respond to the situation at hand. A critically dangerous, even fatal, interference to the responder, fellow responders, and victims in need of their services. PTSD carries many effects. In one study, firefighters suffering

from PTSD were more likely to report work-related injuries than fellow colleagues without PTSD (Heyman et al., 2018). Performance deficits, especially in cognitively complex tasks (such as making tough, quick, or critical decisions), correlate to PTSD within responders of all fields.

Tragically, the effects of trauma do not remain limited to problems in performance. A recent study concluded both firefighter and police officer death by suicide to be more likely than death in the line of duty (Weaver, 2021). Verified suicides, believed to be just a small portion of the real number as many suicides go unreported, should be considered in larger context. The Firefighter Behavioral Health Alliance, an organization responsible for receiving and processing confidential suicide reports, estimates only 40% of firefighter suicides go reported (Heyman et al., 2018). The true number remains unknown. According to recently documented years, both police officer and firefighter suicide rates stand much higher than suicides in civilian populations. In the state of Massachusetts in 2017, with the deficit in firefighter suicide reporting accounted for, the estimate of death by suicide climbed twice as high for firefighters as for the general population.

The full impact of suicide information hits even more devastatingly as all firefighter and law enforcement officers must pass psychological assessments and meet a baseline of mental health before entry into their field. Due to multiple stigmas, occupational barrier mindsets, and a very real and often accurate fear of losing the job, percentages of responders seeking mental health treatment remains low (Horan et al., 2021). Suicides along with mental and behavioral health degeneration reflect a deterioration of mental health through occupation, and a system catastrophically failing to meet the essential needs of responders providing lifesaving services to the public. Yet, a small spark of change may indicate a growing shift in both recognition and action. In November of 2022, 49 law enforcement agencies nation-wide received new federal grant funding for the support of mental and behavioral health in officers (Uphaus, 2022).

DISCUSSION

I. Stabilizers Require Special Care

Stabilizer muscles require specific training beyond classical conditioning, especially in cases of malfunction, a common issue for much of the population. Although considered skeletal muscle tissue, stabilizer muscles do not move body parts around in the same fashion as other skeletal muscles. Their function, appropriately named, exists to hold and stabilize the structure so healthy, non-injurious movement remains possible. Stabilizers remain especially prominent in areas needing high amounts of structural and functional support, such as the low back and pelvic areas, and play key roles in aligning, stabilizing and supporting joints. Without stabilizer-specific muscles, the body would struggle to orient and contain itself in motion, and likely suffer such high rates of injury as to render movement impractical, even impossible.

In optimal functioning, stabilizers engage prior to any movement made by the body as the first muscles to fire while the rest of the musculature prepares to come online for movement (Okada, et al., 2011). The physiology applies such a highly-intelligent method to ensure the most stability, best quality mobility, and swiftest reactions possible. This method remains useful under ordinary circumstances, and critical in cases of the unexpected; such as slips and falls, surprise attacks, hazardous scenarios, and other immediate-response or emergency situations. Such events persist as common in the responder environment, and therefore even more imperative officers, firefighters,

paramedics, and EMTs have highly-connected and functioning stabilizer muscles. Due to issues of unresolved trauma and a lack of stabilizer-specific exercises, inconsistent or improper activation of stabilizers occurs frequently in many responder populations.

When stabilizer muscles do not function optimally, they will be slow to activate, and the body will struggle to maintain stability while in motion. Areas with the greatest potential for injury, such as the lumbar discs and sacroiliac joints, will be at much higher risk for herniation and tears. The body will have to draw on additional resources, such as engaging muscles not capable of true stabilization in an attempt to bandaid together the most support available. In doing so, increased expenditure of overall energy and contortions in the fascia and posture result. Stabilizer activation may only be partial, or even very little, and both the structure (fascia, muscles, tendons, ligaments, bone) and the functioning control system and information pathways (brain, nervous system, and fascia) will be compromised in ability. The end result produces an individual less capable of responding quickly and accurately to a situation, including the ability to think, process information, and make decisions. Such an individual stands disadvantaged well beyond pure physical ability.

While other skeletal muscle tissue can be improved through increased or weighted repetitions, stabilizer muscles need specific nervous system retraining if any degree of malfunction presents. Retraining stabilizers requires first engaging the muscles separate of any movement, and tying reconnected stabilizers into breathing and eventually into automatic and permanent function. Once achieved, stabilizers can then be retrained to maintain connection while mover muscles engage, initially through simple motions, then increasingly complex and challenging ones. As a more evolved pattern sets into the nervous system, the body and mind integrate the abilities of stabilizer and mover muscles.

If stabilizers do not maintain healthy function, classical abdominal and other exercises can actually exacerbate and contribute to poor function, increasing risk of injuries and further issues (Czaprowski et al., 2018). As stabilizer muscle function lessens, joint alignment begins to compromise. The less support offered by stabilizer muscles, and the more misalignment present in joints, the greater the risk of injury, slow response time, and overall decreased function: a concept contradictory to elements of the contemporary physical conditioning mindset equating increased repetitions, resistance, and speed with improved performance. In the case of stabilizers, if function decreases, the muscles will remain in a less active state until reconnected, and structural support will be also reduced. Reactivation, unlikely to happen on its own, necessitates specific nervous system involvement and retraining.

While physical injury, surgeries, back pain, childbirth, structural misalignment, and chronically poor functioning can significantly impact the abilities of the stabilizer muscles, physical issues do not establish the only causes of dysfunction. Emotional trauma, sexual abuse, even abuse without physical injury, and Post Traumatic Stress Disorder (PTSD) can deactivate core muscle and weaken connecting links between mind and body (SAMHSA, 2014). Severing can range from mild to chronic, including cases so severe the individual maintains difficulty even feeling stabilizer muscles contract, and increase over time, creating a plethora of physical, mental, and emotional conditions and illnesses (NICABM, 2021). Especially prominent in cases of abuse, sensations of discomfort, strong emotions, even pain accompanying stabilizer muscle activation after such an incident, even if the incident took place many years prior, can manifest. Sensations can be physical,

emotional, or energetic in form, and often combinations. Any therapist working with such a patient must be able to discern any physical injury potentially taking place from trauma previously frozen into the flesh, now being felt and expressed. Further, the therapist must be trained or at least knowledgeable in somatic trauma, and able to work at the speed the individual needs to somatically process through such trauma. Generally advised to assist in tandem with the somatic work include complementary therapies, such as counseling.

Although well-known information to many practitioners of structural integration, physical therapists, and some educated movement therapists, the field of hard scientific research now legitimizes mind-body connections. Recent findings show key areas in the primate cerebral cortex link to the adrenal medulla. Cortical areas involved in movement control, cognition, and emotions contain potential sources of sympathetic arousal (the fight, flight, freeze, etc. survival states), and provide a scientific and anatomical basis for (so-labeled) psycho-somatic illnesses. Additionally, the studies also show the ability of mental states to alter organ function (Dum et al., 2016).

Core stabilizers stand as unique from muscles of movement in many ways. The body degrades over time partially due to the extent of core muscle degradation, and remains only as strong and adaptable as core muscle function. Stabilizer muscle function directly impacts joint function, ability, and longevity. As a result, joints can be affected by many of the same factors impacting stabilizer muscles.

II. Consequences from Incorrect Joint Alignment Go Far Beyond the Joints

Proprioception and kinesthesia, or the awareness to discern the body itself and in relation to space and all other material, and sense the movement quality, strength, and behavior needed, stands as a backbone of movement, balance, agility, speed, coordination, grounding, and all reactions and responses initiating from the body (Lesondak, 2017). Commanding vital influence over physiological responses as well, kinesthesia and proprioception work in tandem to provide the quickest and best possible reactions, especially to unpredictable, dangerous, or unexpected situations. Higher-functioning of the senses creates a more effective responder, and greater potential for lifesaving outcomes.

Joints and the sensory organs within them, known as proprioceptors, collaborate with many elements of the proprioception and kinesthesia senses. Such senses and abilities rely on healthy joints and joint alignment. Proprioceptors, also located in muscle tissue and the skin, have a partnership role with the fascia. Injuries, inhibitions and poor alignment and functioning of the joints affects abilities of both proprioception and kinesthesia; information verified through many decades of Structural Integration work by hundreds of practitioners in the field (Davis, 2017). Structural Integration, a form of hands-on bodywork providing realignment throughout the body primarily through fascial treatment and influence, reduces the effects of injuries and trauma. The SI profession requires in-depth knowledge of spinal and joint mechanics and abilities.

Some scientific research concludes proprioceptors in skin and muscle may be more responsible for kinesthesia than proprioceptors located in joints; a finding based on claims and some supporting evidence of joint replacement surgery not leading to deficits in kinesthesia (Proske & Gandevia, 2009). Interestingly, the conclusion stands in direct contrast to the findings of Structural Integration practitioners, who notice both immediate and long-term proprioception and kinesthetic affects post-joint and post-joint replacement

surgeries in their clients. The difference in findings could be due, in part at least, to highly different methods of comprehending, testing, and applying information. Perhaps the joints, or the fascia surrounding them, function more akin to a global connecting port for proprioceptors in the skin, muscle, and joints to communicate, and cleaner alignment in the joints creates enhanced proprioceptive and kinesthetic abilities. Other factors may be involved with the senses. Undoubtedly, much remains to be learned in the mysterious and fascinating function of joints.

Both direct injuries to the joints and surrounding tissue and improper physical conditioning creating imbalances in the musculature and fascia can result in joint misalignment. When injury or structural imbalance forces joints into misalignment (which may become integrated structurally and thus a "natural" part of posture and movement), they begin to lose functional abilities, and the body as a whole begins to lose its full potential in many regards. Structural problems lead to functional ones. Loss compounds over time and may lead to more injuries, including joint, spine, and sacroiliac compression, wear, tears and herniated disks. In addition to a loss in reaction/response ability, the body must also create an artificial sense of ground (the 'down' element contributing to stability and grounding) and lift (the 'up' element contributing to length and decompression). Although necessary for continued functioning as the body must have up and down reference points, artificial navigation lessens functioning of both mind and body, reduces the ability of the body to adapt quickly to an environment or situation, and further degrades joints over time.

Continued physical conditioning on misaligned joints can worsen, not improve, ability and function (Davis, 2017). Unfortunately, responders have very high rates of injury, particularly of the back and lower joints, and such injuries often have long-term effects. Responders also face pressure to return to work quickly, often before full healing can occur (Reichard & Jackson, 2010). A swift return to work and its risk of hazardous environments compounded with a lack of the full spectrum of healing resources and modalities can allow what may have been temporary injuries to instead become long-term and bear heavier consequences.

Joints can be realigned and retrained into healthier, higher functioning after injury or malfunction. Even poorly aligned joints dating back to early life can be realigned and returned to high-functioning with the right fascial and movement therapies (Schleip, 2017). The inevitability need not exist for injured and misaligned individuals to be weeded out in training or in the field, or permanently injured on the job. Such an improvement to the health of highly valuable officers, firefighters, paramedics, and EMTs could mean continued service and retention of career, and a healthier, happier person. Both outcomes have far-reaching implications for communities of service and the responder profession as a whole.

In addition to structural and functional misery, misalignment reduces the ability of fascial tissue to process trauma out of the body. Fascia provides structural and movement support, a network of communication between all systems, and the tissue plays an enormous role in how the body deals with trauma. Fascia contains the potential to both store trauma within its own tissue, or move detrimental trauma and patterns out of the system entirely. Fascia can contain injuries and other traumas through twists, adhesions, contortions, and through solidifying itself into fibrous scar tissue (Guimberteau, 2014). Fascia can release traumas by unbinding, expanding, and hydrating itself into its liquid form, allowing

the injury to travel through surrounding tissue until reaching the end of the body, and being released. Misaligned joints can become points of congestion difficult for fascia to move through and navigate trauma out. Traumas may remain to wreak havoc in the nervous system, body, and mind to the detriment of the individual, and be compounded upon with each injury and traumatic incident (Schultz & Fetis, 1996).

Joseph Pilates, founder of Contrology principles and exercises, strongly linked proper physical functioning with enhanced mental function. Although his era did not have access to the scientific research available today, he discovered and verified his conclusion through decades of work in healing and enhancing the minds and bodies of clients in addition to his own. In connecting consciousness to physical action, he concluded better alignment and superior physical functioning enhanced decision-making skills. If the body could be regulated through proper alignment and stabilizer-muscle training, the mind and mental power could be used for both rapid and long-term decision making without unnecessary physical distractions due to the body reacting and responding as trained to do (Pilates, 2010). Likely, Pilates discovered the link between healthy alignment, engaged stabilizer muscles, and the reaction/response ability of the senses. Although better known as "Pilates" today; an unregulated, un-standardized movement modality often given up to the world of fad exercises, decades of research, observation, experience, and testing backed Pilates' original work. He held a rigorous standard in his exploration of how the body and mind function, even in the absence of medical and scientific research related to his work. Undaunted, Pilates concocted and conducted many of his own experiments, and remained a prolific inventor throughout his life. His early work included rigging the beds of fellow prisoners in a WWI internment camp so all prisoners could exercise, even the bedridden (Kloubec, 2011). He may have begun his exploration into health due to his own illnesses in childhood, with conditions including rickets, asthma, and rheumatic fever. Pilates resolutely worked with his body and mind until his conditions cleared, and by age 14, achieved a level of fitness and structural balance so high he modeled for anatomy charts.

Dr. Ida Rolf, the founder of Structural Integration, discovered through decades of hands-on work and research a unique form of warfare ensuing between poorly aligned individuals and gravity. She concluded a misaligned body must fight gravity to remain upright (Rolf, 1978). Not only does fighting gravity require constant and tremendous expenditure of energy to maintain basic function (what should be an automatic and already integrated element), but the distraction and expenditure of resources reduces the ability of the individual to fight anything else. Dr. Rolf considered the internal war against gravity to be one of the underlying reasons humans engage in wrongful acts of aggression. Eliminate the fight with gravity from the body, and the creation of an individual capable of fighting with not only more intensity and stamina, but also for the right purpose, and reason could be possible. Dr. Rolf saw evidence of gravitational warfare in her scientific work in bio-chemistry, and in her decades of Structural Integration practice. She further verified a reduction in unnecessary aggression with a reduction in gravitational warfare through her hands-on bodywork. Elements of her work continue to be validated through current and ongoing research in the fields of bio-chemistry, physical therapy, and mental health.

Many factors, both short and long-term, heavily influence joint alignment and function. Healthy joints have far-reaching

benefits well beyond physical performance. Joint healing and wellness remain achievable through a variety of modalities. Unfortunately, not all modalities stand available or even known to responders. Such individuals face significantly increased risk of joint injury and misalignment, and occurrence can impede abilities on the job and alter career paths. The full spectrum of training and treatment must be made available.

III. Aging vs "Aging"

Despite the many recent advances in science and medicine, a common misconception persists to create confusion and stumbling blocks on the path to true health: the detrimental and far-reaching misinterpretation of a natural and inherent degradation and degeneration of body and mind due chiefly to chronological aging. While chronological aging affects the function of the system and does have its own set of impacts, chronological accumulation itself does not drive the force of the degeneration classically attributed to aging. Rather, the body and mind degrade and degenerate with injury, misalignment, and unresolved trauma wreaking havoc systemically on the organism (Van der Kolk, 2021). Chronological aging and trauma-induced aging (or "aging") remain correlations, not a causation. The longer an individual lives, the more time and possibility they have to accumulate traumas of all varieties. The more accumulation without resolution occurs, the more degeneration sets in and establishes. However, with the right work, much of the damage can be removed out of the system, and deep transformative change can occur. One can be structurally and functionally youthful or aged at nearly any chronological status.

Engaged and functioning stabilizer muscles generate a critical component of healthy, chronological aging. The higher the functioning of the stabilizers, the higher the functioning of the body overall, and less chance of injury and a better outcome if injury does occur. Proper joint alignment remains essential to retention of youthfulness, especially for reducing occurrences and severity of arthritis, pain, and other joint issues (Ranota, 2020). As somatic reflexes can be improved with both enhanced stabilizer function and improved joint alignment, an individual can actually work to 'de-age' themselves and function with more vitality, youthfulness, and effectiveness than in previous years.

Although not receiving near the amount of attention as physical injury, emotional and mental traumas can be just as impactful in physical, mental, and emotional degeneration. Like physical trauma, emotional and mental trauma patterns and effects will persist until resolved. Without resolution, they stand likely to remain throughout the individual's lifespan (Levine, 1997). Additionally, one does not need to be the subject of an event to be traumatized by it. Witnessing a traumatic event without any personal assault or involvement can bring about full-spectrum trauma to the individual, including PTSD.

Although the body, the mind, and the emotions remain conventionally thought of as separate categories, they possess much more interconnection than the current establishment of medical practice acknowledges and realizes. All traumas can, and typically do, span well beyond the associated injured field as the soma itself bears the affliction. While often used interchangeably with 'body,' the soma may be better understood as the awareness of the body of itself, and the consciousness within the many individual systems uniquely (individual organs, muscles, fascia, etc.), and the organism as a whole. Within the soma, the emotional, mental, and physical fields retain a connection and elements closely tied

together and overlapping, especially within and through physiological activation, both in sympathetic and parasympathetic states.

The mechanism of how and why unresolved trauma prevails as directly responsible for reducing total system functioning, generating systemic malfunctions, and establishing potentially lifelong, life-altering patterns lies in the body-mind-emotions interconnection (Levine, 2010). Emotional injuries also have physical and mental implications, physical injury can bring about emotional and mental repercussions, and other interconnections. A classic example, PTSD, does not exist "all in the head" as previously addressed, but holds an origin in the physical body and soma's total and global response to the traumatizing event (Van der Kolk, 2014). PTSD symptoms span the whole range of mental, emotional, physical, and physiological fields due to origination within the soma. Likely, even more fields (even less understood and acknowledged in current thought) could be involved, such as the spirit, and perhaps others even without a known name.

Unresolved trauma of all kinds within the soma endures as critically overlooked, misunderstood, and underrepresented in allopathic medicine. The giant, invisible 'gorilla in the room,' though better thought of as a boa constrictor, squeezes the life out of the person. Sadly, individuals in the emergency response field often feel hesitant to bring such personal issues to light. Much stigma remains in admitting to personal feelings often construed as "dark" or "weak" (even to oneself), especially in a field of work emphasizing the strength, ability, and qualities both needed and valued as a responder. The potential loss of one's job and tied with it, personal identity, persists as legitimate threat also. When feelings happen to be disclosed, individuals generally undergo a course of medication and talk therapy for emotional and mental issues, many of which bear direct causation by or relation to work. While such modalities may be useful in certain circumstances or in conjunction with deeper work, they generally do not address root physiological and somatic causes, and often worsen symptoms by ingraining physiological responses deeper into the mind and body. A tragic blight in the system afflicting employees in a desperately-needed field with such high rates of trauma.

Many of the injuries (physical, mental, emotional) commonly associated with chronological aging can be lessened, removed, or even avoided for responders. Such reduction upon a population generating far more risk and actual injury than most other populations would be profound, and significantly improve the health and function of both the individual and the system.

CONCLUSION

One of the greatest revelations of the current era will be the realization of the human potential to transmute and regenerate from the various and devastating traumas common to our species. No predetermined or ingrained component or pattern within holds the power to sever completely regenerative abilities and force permanent degeneration after injuries, surgeries, war, or abuse. Life beyond injury, accidents, and trauma of all sorts contains so much more potential than basic survival, and while no shame exists in identifying as a survivor, the naïve, heartbreaking, and detrimental decision to limit human potential to simply surviving day by day after an event bears great and terrible consequences for individuals and society. Such band-aiding of a situation, typically utilized by allopathic practice, severely reduces overall abilities, and keeps dormant systems which could truly heal and regenerate.

Physical and emotional trauma, pain, and injuries can be worked out of the tissue, the nervous system and the entire soma with the right bodywork and movement therapies.

Such forces do not need to remain, wreaking havoc in the mind and flesh (Rolf, 1989). All components of the self and its fields (body, mind, emotions, somatic elements) stand capable of retraining into higher, more beneficial functioning. Such enhanced functioning brings many increased abilities to individuals and organizations willing to pursue the work needed**.** Should the systems and practitioners serving individuals in emergency response incorporate the knowledge and healing modalities existing in non-allopathic practices, better performance, service, longevity, and happiness would result.

Benefits hold the potential to extend well beyond responders. Already documented within all military branches, PTSD, substance abuse, and a plethora of injuries and debilitation influences many soldiers and military families (though the full scope and true accuracy of representation remains debated). Military and emergency response work share a great many similarities in both the potential to produce injury and trauma, and the need for clear-minded, quick-response capable individuals and teams. Further, responders often come from a military background. Deeper studies into the association of trauma within emergency response and military, and the potential for trauma to impact and accumulate between fields stands more than warranted.

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