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The survival-oriented prime directives of our biology and nature's endowments for implementing these directives have reached a tipping point in our collective evolution. They now are competing with our capacity for quality of life and have become contributors to many of our most common chronic ailments. Chronic conditions emerge from how human physiology accretively tends to react to stressful and traumatic circumstances, over time. Let us begin by reviewing a distillation of the research of Hans Selye, M.D., who is considered the father of our modern understanding of stress.

Dr. Selye was an endocrinologist, thus, his initial research was launched with the intent to discover the linkages between chemoreceptors which were potentiated by hormonal influence. What he discovered were central basics of physiology which continue to be guideposts for our profession today. Most notably, he concluded that the inflammatory process was the body's stereotypic biochemical response to a host of ailments that afflict humans: spanning infections, injuries and trauma.

Selye's notion of stereotypic responses and my 25 years of investigation have inspired me to extrapolate that nature has evolved other similar default responses. Physically, all soft tissues do basically one thing, they contract. Contraction both produces motion and inhibits motion. Consequently, in response to stress or trauma our soft tissues contract, sometimes morphing into varying states of contracture or painful spasm. Mentally, when humans are stressed, they tend to dissociate, allowing nature's primitive programming for fight/flight/freeze to take over. More specifically, we distance ourselves from our bodies and present time awareness is diminished. Conscious choice and taking responsibility for the effects of our behavior also diminishes.

Let's expand even further to explore the survival legacy of human experience. As I see it, the prime directives of biology relate to four survival mandates:

1. Fit in to the social grouping into which you are born.
2. Don't fall.
3. Build fat reserves and preserve fluids.
4. All of these serve nature's end game: live long enough to reproduce.

Nature's prime directives are designed help to ensure survival and reproduction, to ward off individual death and species extinction. Of course, nature has provided us with specific endowments which assist the completion of these prime directives: The Mind, creates survival-based models of the world; Hormones, crucial to initiating and lubricating physical growth and reproductive maturity, but significantly decrease between the ages of 35 to 55; Righting Reflexes, nature's hedge against pre-mature traumatic death; and Sympathetic Dominance, which governs our primitive responses of fight/flight/freeze.

Now, let's walk through our biological prime directives and nature's endowments beginning with an infant's first task to Fit In. As babies, we must survive the protracted time of our dependency upon our caretakers. We perceive energetically and feel everything around us. We do not distinguish where we end and others begin. Our experience of events is timeless: always and never. Thus, human learning is an inverted pyramid beginning in utero, more reflective of the energetics and emotions of our caretakers than any symbolic capacity to describe or physical ability to act upon our environment. We are immersed in our environment. There is no separation.

As we grow, we learn through association, building a matrix through our five senses. Somewhere between 2 1/2 and 4 years of age we have compiled enough symbolic sets to develop models of our world and can express them through language. These models grow from sets of "do's" and "don'ts" and associated cause and effect relationships. Sadly, the models typically reflect a massive number of motoric inhibitions.

The permissions for exploration that do remain are reflected in the "old saw" that humans only use 10% of their mental capacity. More accurately, the Mind consumes 90% of our neural capacity, leaving only the remaining 10% for curiosity, exploration and experimentation in order to fit into our birth family's social grouping.

The Mind is nature's primary endowment for the creation of these models. It's not wrong or bad. Its goal is survival. We are its beneficiaries. However, the mind is not our brain and spinal cord, nor our psyche, and is certainly not our soul or spirit. It's only a sliver of consciousness: a slice of the pie, not the whole pie by itself. The mind gathers the associations compiled in our early life and retroactively "assigns meaning" to these experiences. This is how the basic models which guide our decision-making are initially formed.

Our extraordinary capacity to adapt to the circumstances of our upbringing is a mixed blessing, for it leaves us restrained from updating our models of the world as we age. Consequently, we tend to be "perfectly adapted to circumstances in which we no longer live." A corroborating corollary of this notion is reflected in the difficulty we have with changing our first impressions. What seems to expand this enormous restraint and fixity is new sensory experience through touch and movement and emotional discovery.

The basic apparatus of the mind keeps us playing ping-pong with the hurts and self-doubts anchored in the past and caroms us forward in time to fret and fume and worry about future scenarios. Much of our energy and creativity is consumed by this ping-pong, yet it's the self-talk familiar to us all.

Anticipation is a wonderful thing when it's harnessed toward positive outcome. However, its dark side can plummet one's body chemistry into the abyss of inflammatory and/or immune suppressing states with the accompanying feelings of anxiety and depression, doing a dirty dance of inner torture with our physiology. The mind does this by commandeering the sympathetic division of the autonomic nervous system to drive the adrenals. This is another link to Dr. Selye's research, which concluded that the adrenals were neurally driven rather than regulated via the hormones of the endocrine system.

The prime directive of Don't Fall generally is accepted as our species singular genetically linked fear. Our large body righting reflexes are sub-cortically regulated, (i.e., we don't think about

them, they simply take over in times of emergency). Most of the time they transmute a major accident to a minor scrape. However, in my clinical experience, these reflexes tend to be perpetrators of chronic musculoskeletal dysfunction following traumatic episodes.

The endowments of the mind and the righting reflexes together reflect our species' collective genetic genius to be able to adapt to damn near anything. The problem is that once we have adapted, whether to our family of origin and/or to trauma, our mind and our reflexive calibrations resist new experience, new information and expansion beyond the set of parameters that have come to be considered normal. It's usually only when what used to work becomes very dysfunctional and painful that we look to changing the core elements of our being.

Biology's directive to Build Fat and Preserve Fluids is a major contributor to our culture's current epidemic of obesity and fluid retention ailments, culminating in our high rate of diabetes, high blood pressure, congestive heart failure and kidney dialysis. Yet, we wouldn't have gotten here without them, as starvation and fluid loss were common causes of death for prehistoric humanity.

Nature's end game, Living Long Enough to Reproduce, is facilitated by hormones to ensure the perpetuation of the species. Hormones are the pesky accelerators of our physical and reproductive growth. Two key factors need to be remembered. Hormones tend to be "dumped into the system" rather than added in measured doses and their production decreases in a similar fashion during mid-life, thus the tendency for unpredictable, variable and unsettling effects.

During adolescence, the intensity and quantity of hormonal cascades produces accelerated growth such that the bones often grow faster than the soft tissues can match for a smooth transition. This sets the stage for many and varied physiological and musculoskeletal problems later in life. Also, hormonal production decreases dramatically as we reach our middle years of 35 to 60. These are the very demographics of the people most likely to become new massage clients. It's no accident that people are turning toward our profession.

Nature's endowment of Sympathetic Dominance relates to the tendency of human physiology to "get stuck" in the overdrive mode. This selection has obvious survival enhancing qualities, especially to fight, escape or avoid detection from a predator or a perceived lethal enemy. However, activity and rest need to be balanced in order for our internal functioning and our energetic reserves to be maintained and renewed. It's a simple notion historically codified and prescribed by most cultures and religions.

At a more precise level, sympathetic overdrive shunts blood (and thereby oxygen and nutrients) to the musculoskeletal system and starves the visceral organs of their fair share. This involves timing, quantity and quality. The shunting of blood sets the stage for the eventual development of pathology. Degeneration and disease emerge from the deprivation of oxygen and nutrients usually resulting from states of fluid congestion and stasis. Reflect on how often your clients exclaim, "I hurt, I am no longer able to, I have little or no energy." Physiology operates very much like a credit card: one can continue to keep spending, yet the interest quickly builds the debt, and eventually, the debt must be paid. Pain, injury, illness and reduced quality of life are the common forms of paying the debt.

Depending on one's mental strategy for survival, certain parts of our musculoskeletal system get more blood than others. But the real questions are why and what function does this serve? Let's again relate this to nature's endowments. Fight, flight and freeze are our reflexive responses to intense or perceived to be threatening stimuli. Our mental strategies generally reflect a tilt toward one of these three orientations, rather than a balanced blend among them. Thus, our bodies and our physiologies shape themselves to reflect this tilt. In sum, some muscles get more than their fair share while the others become ischemic. All chronic syndromes or conditions reflect this skewed allocation of resources.

In my earlier articles, I have outlined what I have clinically experienced to be the path of discharging the tension that builds within us as human beings in response to stress and trauma. It happens from the inside-out, beginning with the sacs and tubes and suspensory ligaments of the viscera, and eventually spilling over into the intrinsic musculature. Next, as the body endeavors to distribute the strain over as wide an area as possible, one or more dysfunctions of motion is created in the kinetic chain of the joints. Then the extrinsic musculature is stimulated to contract or spasm to maintain the integrity of the involved joint(s). Now to the most important question, where does it all begin? The "meaning we assign" to events is the source of our stress. Change the assigned meaning appropriately and one experiences less stress. Let's consider a continuum between threat and pleasure with a feeling of neutrality somewhere in the middle. What usually grabs our attention? That's right, threat and worry.

The mind commandeers blood flow to support its basic survival strategies. It responds to symbolic stimuli in the same fashion and with the same intensity as it would as if that stimulus truly was life-threatening. Remember, the mind creates models for its survival. This results in the application of its survival strategies to questions of right and wrong. We all have experienced how this orientation to being right and the avoidance of being wrong perpetuates conflict. Repeated countless times, this depletes our energetic reserves and diminishes our quality of life. The mind also tilts our selection of life circumstances subconsciously and, thus, we tend to symbolically re-create the need for the defenses which are central to our individual survival strategies. This especially relates to the types of partners we choose and the repetitive conflicts which emerge in our private, social and work lives.

Many of the healing arts attempt to harness the mechanism of the mind to expand beyond this slavish dedication to survival. All help to some degree, yet the mind cannot expand beyond its own fundamental programming alone. It's unable to solve the conundrum: what's life all about? Accessing one's spirit, heart, instinct and the broader expanse of the psyche through expanded awareness is where actual shifts occur.

Touch accesses the central circuitry where the mind's meaning assignments are anchored. Touch enhances healing across the spectrum of one's perceptual matrix, assisting reflexive reactions to become conscious choices again.

Our current world circumstances reflect both the best and worst of nature's survival orientation and its endowments. However, biological survival alone tends to be exclusive and ethnocentric. Presently, there is an obvious need to enhance our ability to make more inclusive choices. Because of our sheer numbers on the planet, our collective survival might now depend on this.

Inside-Out Paradigm© / Survival vs. Quality of Life Dale G. Alexander Ph.D. L.M.T.

Published in Massage Today

Parts 1 & 2, Nov. 2005, Vol. 05, Issue 11 & Dec. 2005, Vol. 05, Issue 12

Curiosity, cooperation and the exploration of options for the common good are what are needed now.

The massage therapy profession actually has an honored place and crucial role in this evolution of consciousness because we touch people and take time with them. We nourish and assist them to update their models through the experience of touch and the quality of our presence. Let us dedicate ourselves to join with others to develop healing models which might light the way for our clients to improve the quality of their lives through this expansion of human awareness.

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Published in Massage Today Part I and Part II

November 2005, Volume 05, Issue 11

December 2005, volume 05, Issue 12

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