

# The Role of the Diaphragm in Self-Awareness and Transformation

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## *Abstract*

This article addresses the key role the diaphragm muscle plays in the Rosen Method. It is excerpted from a forthcoming Rosen Method Bodywork resource manual that can be used when teaching workshops and intensives.

By influencing the movement of the diaphragm muscle through many different routes, Rosen Method Bodywork practitioners facilitate the release of the diaphragm and the freeing of the natural breath. A released diaphragm indicates an inner sense of safety and increased relaxation and is part of an active process of self-awareness. Using the language of neurophysiology, this article traces the interconnection of what we think of as “body” — the movement of the diaphragm — with what we think of as “mind” — self-awareness. We see how the self-awareness process that involves the release of the diaphragm contributes to the transformation of physical and emotional habit patterns; which, although protective, may be limiting our full potential.

Our full potential includes the spiritual experience of being in union with something more encompassing than our individual selves. We access this spiritual connection, this “pearl beyond price,” in those moments when our diaphragms release and we breathe fully, with no effort and no holding back.

## INTRODUCTION

Marion Rosen, while in her thirties, had a pivotal experience that became the foundation of what came to be called the Rosen Method (Rosen, 2003, p. 93).

I was invited to visit a male friend in the mountains, but when I arrived, he was not pleased by my presence. In fact, that night he left and spent time with another woman. During the night I woke up having an asthma attack. I had suffered from asthma as a child, but not as an adult. We were miles from any medical facility, so I had to help myself. I tried to visualize myself as a young child with asthma and asked the little girl in me, “What do you want?” The little girl said, “I want to cry.” I responded to the little girl, “You don’t have to cry when you are with me, you are all right.”

But the little girl started to cry about how many times love was thwarted in my life. I sobbed deeply, and when the crying stopped the asthma was gone. I had dared to express what I had

not allowed myself to feel so many times before. I packed my bags and left and have had no asthma since.

Marion concludes:

My own experience became part of the foundation upon which I based the Rosen Method: The degree of relaxation in the diaphragm is a barometer of how fully we are allowing ourselves to feel and acknowledge the physical and emotional distress that is affecting us in the present moment. When we allow ourselves to feel the emotional content underlying a physical symptom, often the physical distress and dysfunction disappear (Rosen, 2003, p. 94).

Marion Rosen proposes a positive correlation between the freedom of our diaphragm muscles to move through their full range of emotional response and our ability to be self-aware. She asserts that the ability to feel and acknowledge *underlying emotional content* is a self-awareness process that is in itself healing. This paper uses the language of neurophysiology to explain and validate how the movement of the diaphragm muscle participates in a self-awareness process that facilitates behavioral change.

The article begins with a brief look at the diaphragm muscle itself, and how it functions as the primary muscle of inhalation. It then traces the neurology of conscious and unconscious control of the diaphragm: how the diaphragm functions to allow us to express, control, or suppress our emotional feelings. Unconscious suppression cuts us off from an awareness of the underlying emotional feelings that are actually shaping our perceptions and our behavior, rendering them mysterious. To understand the diaphragm's role in emotional suppression we look at the neurophysiology of the threat/stress response, and see how we acquire our emotionally motivated habits of protection.

This article then describes how the breath of confirmation, or insight, is part of an awareness process involving healing and change. It concludes with a discussion of the diaphragm's connection to spiritual experiences, showing how Rosen Method Bodywork brings together body, mind, and spirit.

## BREATHING BASICS

### *Definition: What is the Breath?*

The exchange of oxygen and carbon dioxide in the lungs is called **respiration**. **Breathing** is the action that draws in and expels these gases to and from the lungs. The motor for this exchange is the diaphragm muscle, the primary muscle of inspiration. The oxygen we take in allows our cells to convert nutrients to energy, which is our life force. We breathe to stay alive. We remove CO<sub>2</sub>, a waste product of this energy production, by exhaling it: too much CO<sub>2</sub> is lethal to our cells. Along with all other living things, we inhale and exhale to stay alive; not surprisingly, then, the area that ensures our breathing is in the evolutionarily oldest part of our brains, the brain stem, which we have in common with all living creatures. The respiratory center is located in the medulla and pons of the brain stem. The respiratory center generates a self-perpetuating nerve rhythm of about 16 impulses per minute. The respiratory center is much more complex than this, however; it is an error-activated homeostatic system. **Homeostasis** (homeo = "equal," stasis = "to stand or stay") is the state in the body wherein it has an ideal level of oxygen, blood sugar, acidity, temperature, and so on, for optimal functioning). The respiratory system tests the chemical composition of the blood and varies its nerve rhythm to restore the optimal balance of oxygen to carbon dioxide (Harver

and Loring, 2000). If we have too much CO<sub>2</sub>, we will breathe faster and more fully; if we have too little CO<sub>2</sub>, our breathing will slow down.

### *What is the Diaphragm Muscle?*

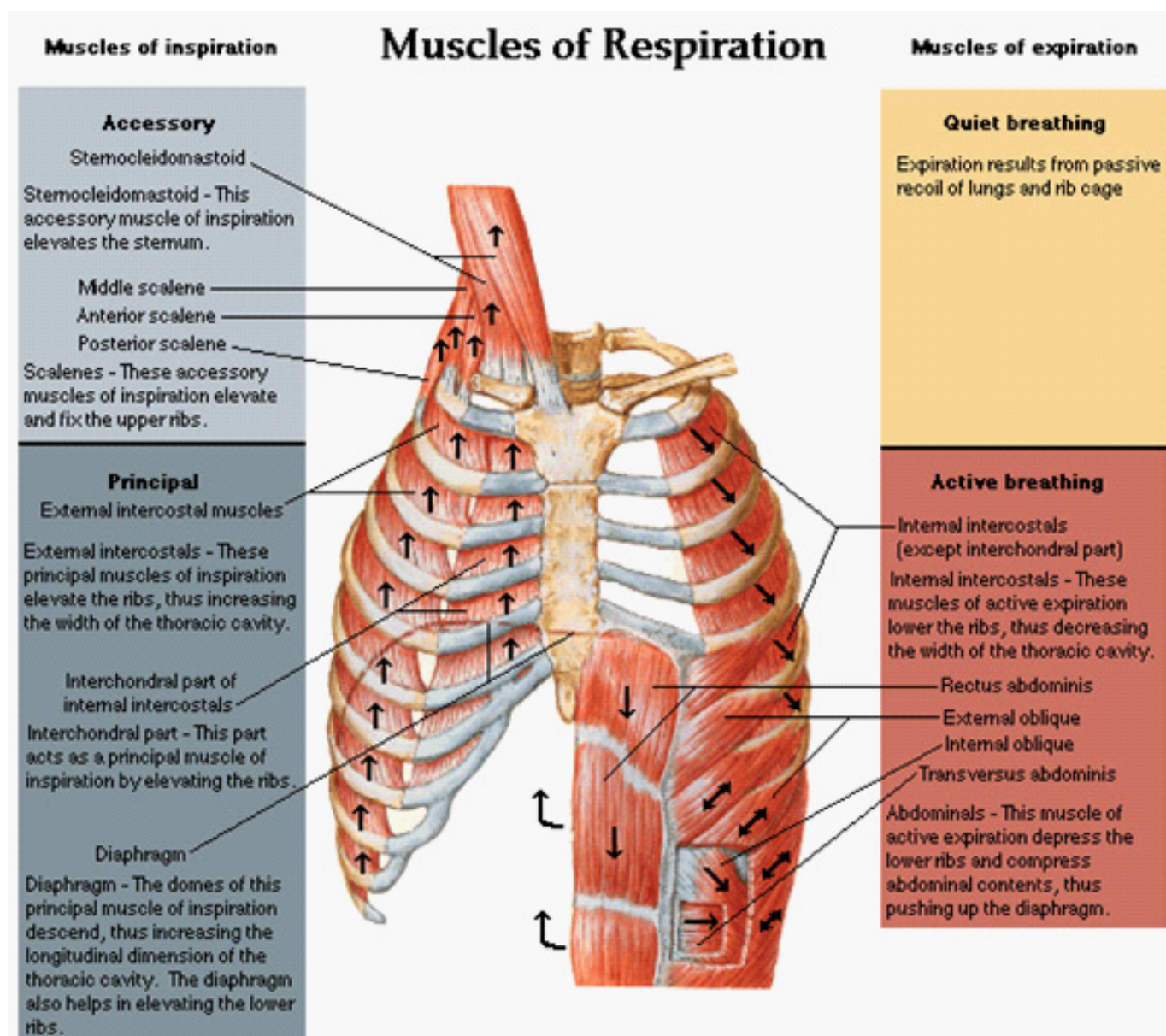
The diaphragm muscle is a moving horizontal wall of muscle and tendon that separates the chest cavity from the abdominal cavity, through which major blood vessels run. It attaches to the front of the bodies of the 12th thoracic and upper lumbar vertebrae. It also attaches to the inner surface of the lower six ribs and sternum, to the inside facet of the 12th thoracic vertebrae, and to the inner surfaces of the lower ribs (see Figure 1).

### **How the Diaphragm Muscle Works**

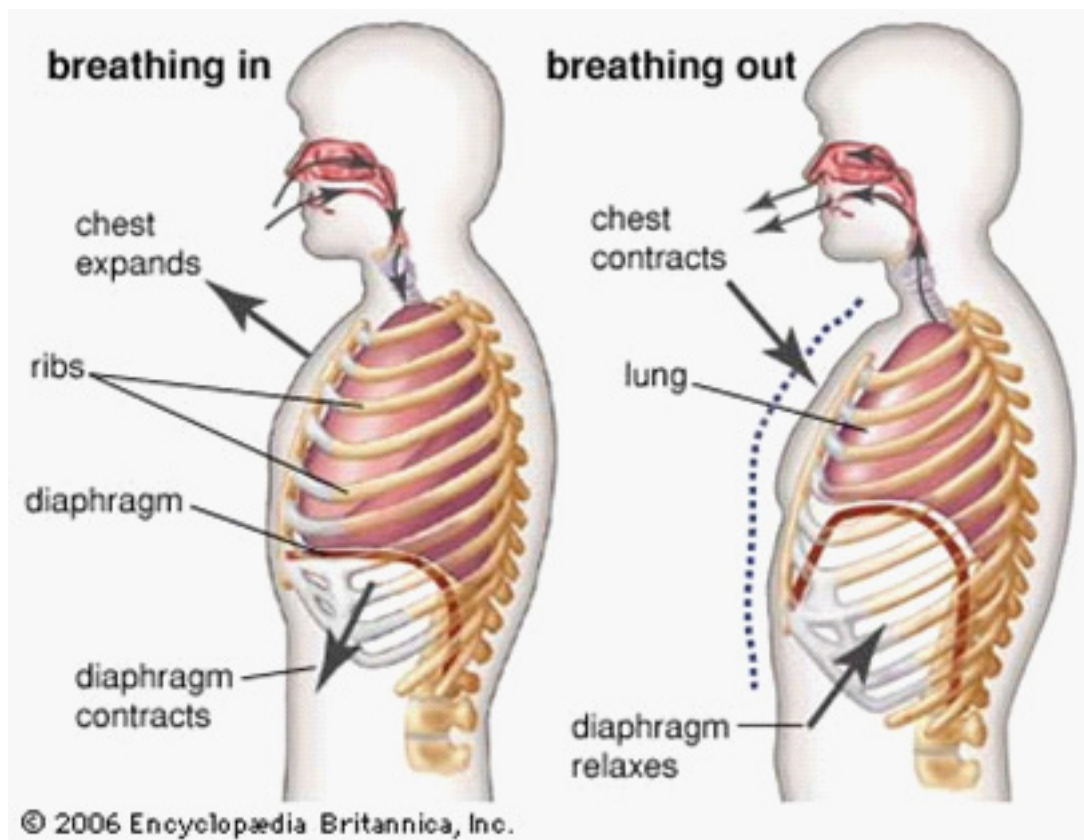
*Figure 1: Muscles of Respiration*

<http://elementsofwellnessva.blogspot.com/2011/09/respiratory-health-for-runners.html>;

[http://g09respirationr3a.wikispaces.com/\(4\)%09+Breathing+%26+gas+exchange](http://g09respirationr3a.wikispaces.com/(4)%09+Breathing+%26+gas+exchange)







As shown in Figure 1, a relaxed diaphragm forms a dome shape, like an opened umbrella. When it contracts, the dome shape flattens downward, increasing the vertical dimension (depth) of the chest cavity. When the diaphragm contracts, the muscles between the ribs (intercostals) also contract, lifting the ribs, like hoops on a barrel. This reduces their downward slant, increasing the horizontal diameter of the thorax (chest cavity). Thus two actions increase the internal space of the chest cavity as a whole: the floor (the diaphragm) contracts down, and the sides of the chest cavity (the ribs) contract up and out. Because the space inside the chest cavity is now larger, the internal air pressure is lower relative to the air pressure outside the chest cavity. This difference causes the outside air to rush in until the inside and outside air pressures are equal. This is what we call the **inhalation phase** of breathing.

When the diaphragm muscle relaxes and returns to its dome shape, and the intercostal muscles relax so that the ribs hang downward, the chest cavity shrinks. The internal air pressure is now greater than the external air pressure, causing the air inside the chest cavity to rush out to again equalize the pressure. This is the **exhalation phase** of breathing. Our muscles expend effort during the inhalation phase, and cease that effort on the exhalation phase. (Harver and Loring, 2000). Contrary to what it feels like, we don't actively pull in and push out our air; rather, we alter the spaciousness of our chest cavity, and this automatically results in air being pulled in and expelled (<http://www.youtube.com/watch?v=Mf8xTqfspp4>).

Unlike other skeletal muscles, the diaphragm never stops working. Like a skeletal muscle, it is attached to bones, although it does not directly move any joints. And, like a skeletal muscle, it is divided into **motor units**. Voluntary muscles contain different types of muscle cells, which are grouped together according to their function into numerous motor units. Each motor unit is innervated by a single neuron that contracts all the cells in that motor unit. A **low-threshold motor unit** is made up of slow-twitch muscle cells, which can respond to constant innervation over longer periods of time. Low-threshold motor units burn energy

efficiently to sustain their contractions. As a result, the diaphragm muscle, in addition to being a primary muscle of breathing, works to help us maintain posture and balance (Salvo, 1999).

Depending on how many motor units are stimulated, the diaphragm's contraction can range from partial (creating a shallow inhalation) to complete (creating a deep inhalation). The low-threshold motor units can maintain partial contraction of the diaphragm even during the relaxation (exhalation) phase (Butler, 2007). When the diaphragm remains partially contracted, the exhalation cannot be as complete as possible, and the contraction for the inhale has a smaller range of motion to move through, making the inhale less deep and higher up in the chest.

After the diaphragm muscle releases and we exhale, there is a cessation of movement, called an **expiratory pause**, before the diaphragm receives its next impulse to contract. This pause between exhale and inhale is an extension of the relaxation phase of the diaphragm (Cook, 1996). During this pause after the exhale (expiratory pause), both the diaphragm and the more superficial muscles that we can palpate are relaxed, soft, and yielding. However, if the low-threshold motor units are maintaining their contractions during the exhale, we may be able to feel residual tension in the diaphragm during the exhale and during the expiratory pause. When oxygen demands are high, stimulating the diaphragm to contract rapidly, there is no time for the expiratory pause, such as when we are stressed and are excited, anxious, frightened, angry, or in pain (Cook, 1996).

### *Neurological Innervation of the Diaphragm*

Marion Rosen tells us that conscious and unconscious processes meet at the diaphragm. Breathing is an automatic (unconscious) process that can be influenced by conscious intention.

The diaphragm is classified as a voluntary skeletal muscle. Voluntary muscles are those that we can move at will, such as all those muscles that we use when exercising and working at our computers. However, the term "voluntary," which we associate with conscious intention, is not inclusive enough to be accurate for these muscles. Voluntary muscles are not solely under voluntary control; they also carry out commands that are not consciously willed. These commands originate in the emotional networks in the brain's limbic system, as well as being influenced by the autonomic nervous system's response to threat and stress. The movement of the diaphragm muscle is regulated by, and associated with, the following neural regions:

### *The Respiratory Center in our Brain Stem*

The area of our brain that ensures that we breathe 24/7, when we are awake, asleep, or unconscious, is called the **respiratory center** and is located in the brain stem's medulla. The respiratory center contains sets of inspiratory and expiratory neurons, which continually generate a respiratory pattern that results in normal periodic breathing (Harver and Loring, 2000). The axons from the medullary neurons extend to the phrenic motor neurons of the diaphragm. The pair of phrenic nerves exit the cervical spine bilaterally at C3–5, and innervate the left and right sides of the diaphragm.

The Limbic (Emotional) System

The pattern of our breathing is also influenced by the emotional centers located in the brain’s limbic system. The emotional pathway connects with the respiratory control center in the brain stem and travels through the phrenic nerves to the diaphragm.

The connection of the limbic system to the diaphragm evolved because there are different oxygen requirements for different emotional states: we need more oxygen for the fire of anger than for the glow of contentment. Table 1 (Fogel, 2009, p. 235) shows the distinctive breathing patterns of different emotional states. These breathing patterns also allow us to express the emotion vocally: to cry, laugh, or sigh.

Table 1: Respiratory Patterns Linked to Specific Emotions

<u>Emotion</u>	<u>Respiration</u>	<u>Muscle Tension</u>
Tenderness/Joy	Regularly spaced, slow breaths with longer expiration than inspiration and long <b>expiratory pause</b>	<b>Relaxed</b>
Erotic love	Deep, fast breaths sequenced with slower and shorter breaths (high variability depending on level of engagement), which may or may not have an <b>expiratory pause</b>	<b>Relaxed</b> and <b>effortful</b> alternation
Laughter	Deep and abrupt inspiration with short expiratory bursts and short <b>expiratory pause</b>	<b>Relaxed</b>
Sadness/cry	Longer inspiration with short bursts and tremors, and sighs during expiration. May or may not have an <b>expiratory pause</b>	<b>Mostly</b> relaxed but there may be some tension in the chest in inspiration
Anger	Extremely deep and fast breathing with little variability and <b>no expiratory pause</b>	<b>Effortful</b>
Fear/anxiety	Very fast, highly variable, shallow breaths with incomplete exhalations and <b>no expiratory pause</b>	<b>Effortful</b>

(Fogel, 2009)

## *Voluntary (Conscious) Control of the Diaphragm*

The pathway for voluntary control of the diaphragm muscle travels from the motor and pre-motor cortex (areas of conscious control of movement), via the thalamus and limbic system, to the respiratory spinal motor nerves, which travel through the phrenic nerve to the diaphragm. This route is longer and more complex than the route from limbic system to diaphragm, and it bypasses the respiratory center located in the brainstem (Fogel, 2009, p. 230). This pathway allows us to control our pattern of breathing to some extent. When we talk and sing, we control the flow of breath moving through our vocal chords. We can hold our breath when we put our heads underwater and have temper tantrums. We can use breath meditation techniques to change our state of awareness.

## THE THREAT/STRESS RESPONSE AND THE DIAPHRAGM

The movement of the diaphragm is influenced by the neural networks that organize automatic responses to perceived or actual threats to our safety and well-being, including pain and the anticipation of pain (Harver and Loring, 2000). We have all experienced that our breathing becomes faster, shallow, and labored when we are agitated, and that it slows and deepens when we are relaxed. We involuntarily hold our breath and breathe faster and less deeply when we are in pain.

The contraction of the diaphragm is an integral part of the body's emergency responses of fighting, fleeing, or freezing, as well as its responses to longer-lasting social and psychological stressors. In this next section, we will see all the ways that our physiological responses to threat and stress create tension in the diaphragm, as it sustains a partial contraction into its relaxation (exhalation) phase.

We are making a distinction between the concepts of threat and stress, because there are complimentary systems in the body that organize our responses to each of these.

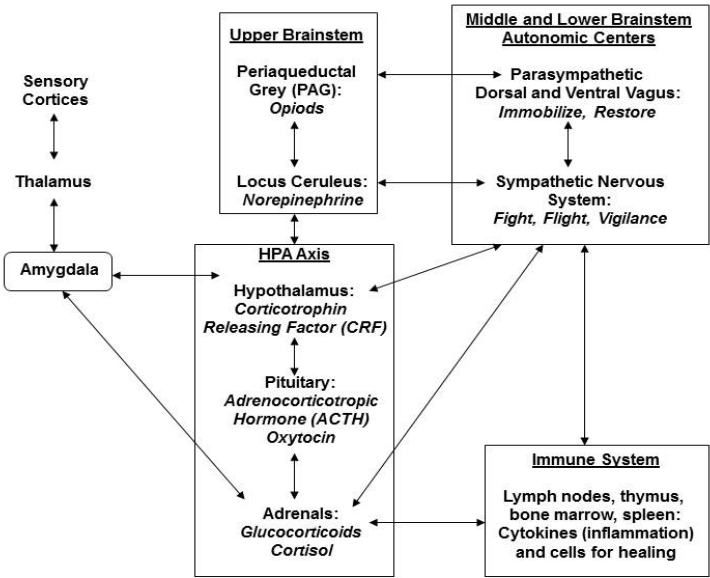
A **threat** is defined as something happening in real time that may endanger us. Our body's physiological response mechanisms are superbly adapted for dealing with the short-term emergencies we are calling threats. We respond to threats to our safety with the emergency responses of fighting, fleeing, or freezing, just like the rabbit and the turtle.

**Stress** is a broader category than threat; it includes everything that throws our bodies out of **homeostasis** – an injury, an illness, sleep deprivation, overwork, emotional fireworks. Being human means that there is a wide range of stressors that can knock us out of homeostatic balance, and the stressors may go on for a long time. Any social demand, like a first date or performance on the job, is a stressor. Good things can be stressors: the promotion at work, the purchase of a new house, the birth of a child. Humans don't even need stressful things to happen in real time: we can stress ourselves by anticipating difficulties and dire events. We stress ourselves with our thoughts (which may be constant) of anticipated future problems and past frustrations (Sapolsky, 1994). As we know from our Rosen Method Bodywork sessions, we can also trigger a stress response when we re-experience body-memories of traumatic events (Sapolsky, 1994).

Neural and Endocrine Pathways to the Diaphragm

We have two complimentary response systems for threats and for stressors: one system is a neural route; the other is an endocrine (neurohormones released into circulating blood) route. The neural route is the fastest responder. Faced with a threat, our sympathetic nervous system (SNS), along with the neural network comprised of the amygdala, hypothalamus, insula, anterior cingulate cortex, and prefrontal areas, activates the periaqueductal grey (PAG). The PAG in turn organizes the body's behaviors of fight, flight, and freeze. The PAG, which is located behind the hypothalamus at the top of the brainstem, has direct links to the respiratory spinal motor neurons, which travel via the phrenic nerve to innervate the diaphragm. These pathways are shown in Figure 2 (Fogel, 2009, p. 153).

Figure 2: Neural Pathway of Threat/Stress Response



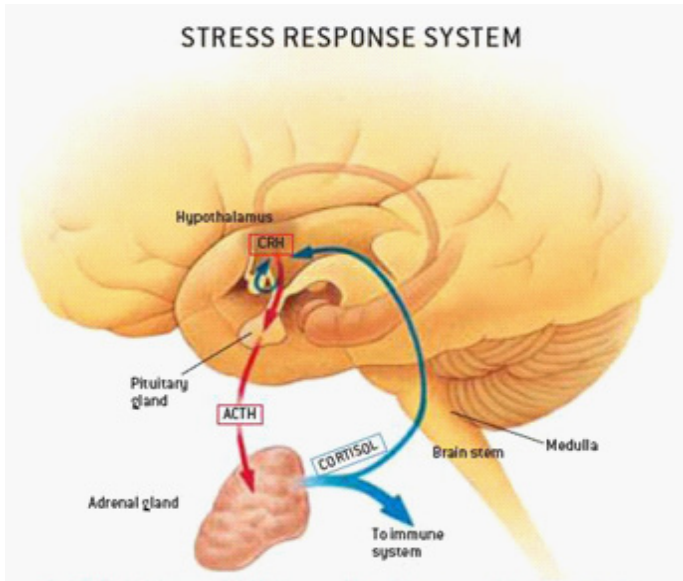
Source: Fogel, 2009, p. 156

The **sympathetic nervous system** (SNS), which is part of the neural route, is an interesting combination of nerves and biochemicals. It uses nerves to stimulate organs and glands all over the body to make resources (biochemicals) available to meet the emergency situation or to deal with the stressor. As you can see in Figure 2, the neural route of the SNS originates in the brainstem. Sympathetic (motor) nerve projections exit the spine and branch out to innervate nearly every organ, blood vessel, and sweat gland in the body in less than 15 seconds. This neural route uses the chemicals adrenaline and noradrenaline as their neurotransmitters. When SNS neurons stimulate the adrenal gland, the primary gland responsible for responding to stress in the body, it secretes adrenaline and noradrenaline into the circulating blood, giving us the immediate energy boost necessary for fight, flight or freeze behaviors. SNS neurons also increase our oxygen intake to support these behaviors through a functional interaction between circulation and breathing, which we will look at in greater detail later.



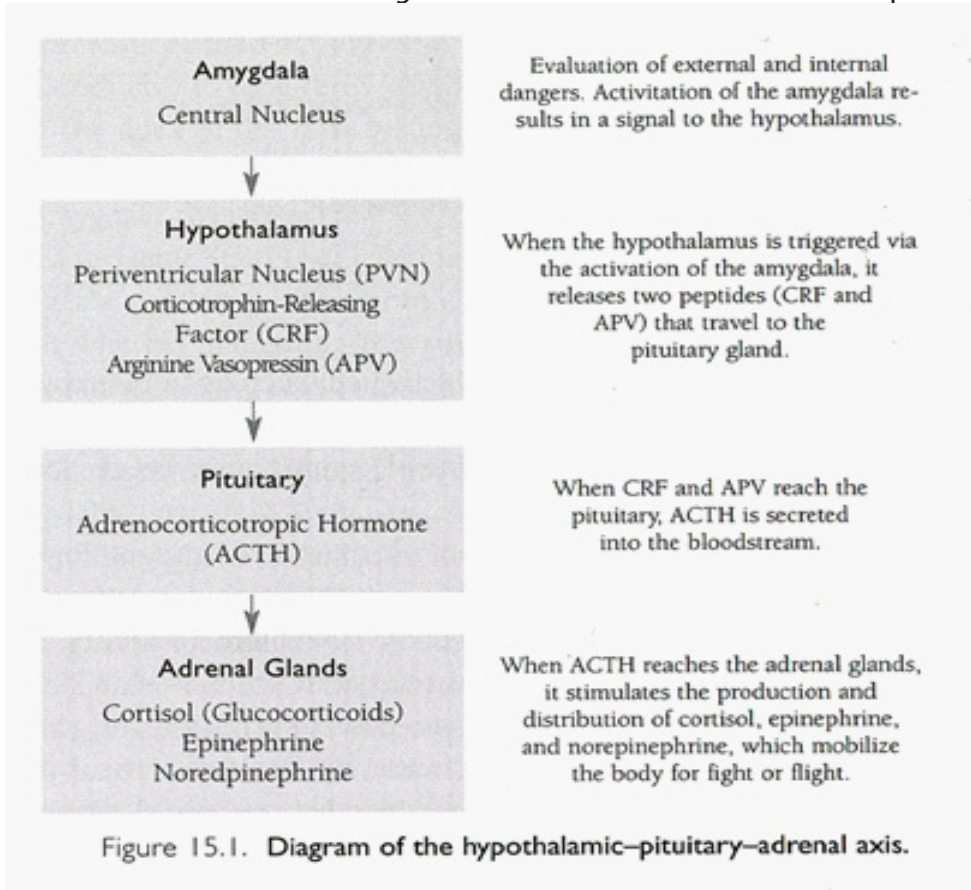
The neural route of the SNS is complemented by an endocrine (neurohormonal) pathway, which involves the **hypothalamic-pituitary-adrenal axis (HPA Axis)** (Figures 3 and 4). The hypothalamus, located in the base of the brain, is considered to be the brain's **master gland**. It contains a huge array of releasing and inhibiting hormones that act on the pituitary gland, which in turn regulates the secretions of peripheral glands all over the body, including the pituitary and adrenal glands. The end result of the activation of the HPA axis is the secretion of cortisol from the adrenals into the bloodstream (see Figure 5) (Sapolsky, 1994).

Figure 3: Neural Areas of the Stress Response System



Source: Fogel, 2009; <http://yang-sheng.com/?p=783>

Figure 4: The HPA Axis of the Stress Response System

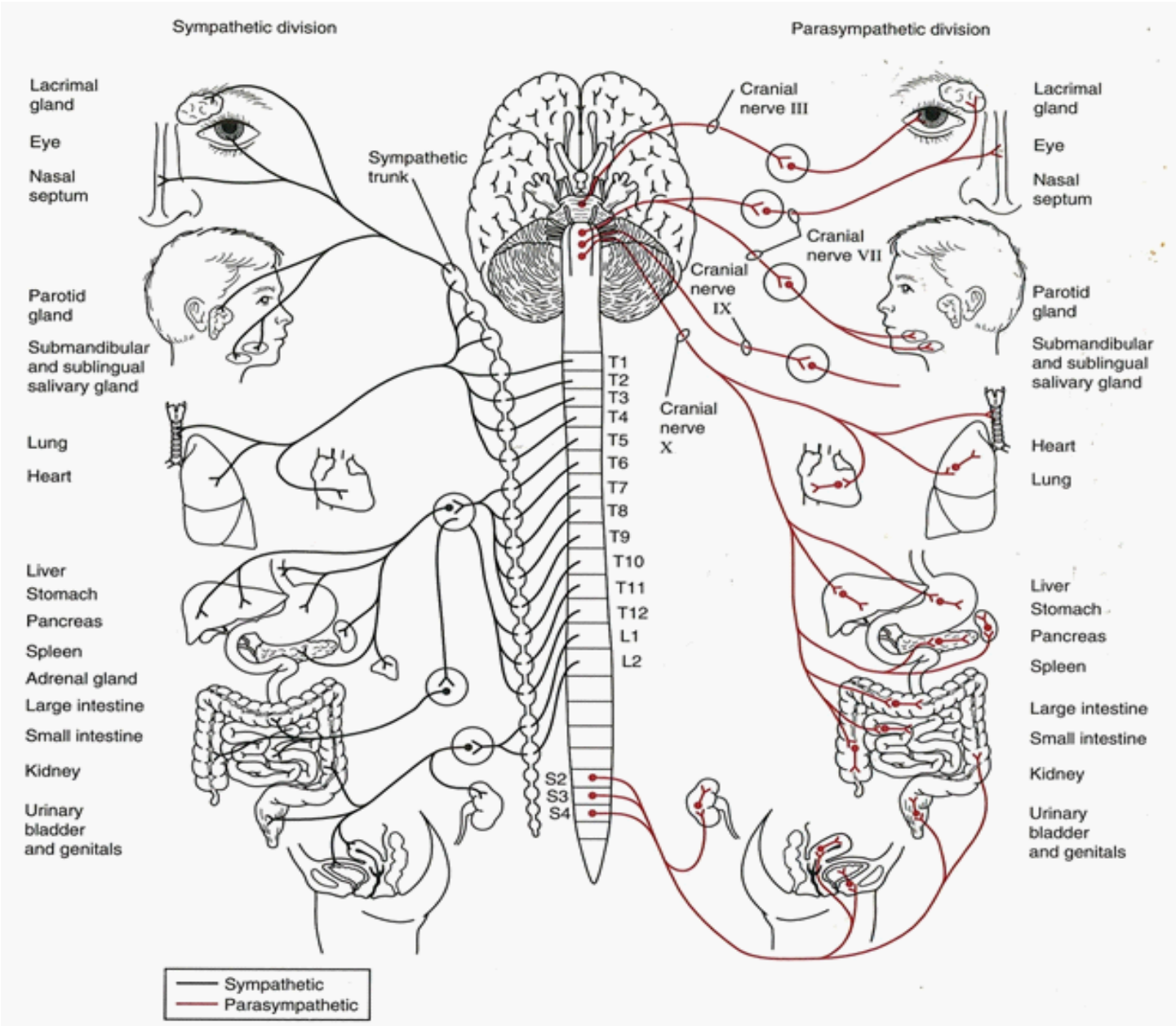


Source: Cozolino, 2006

The body's pattern of response to stressors is not consistent; it is a nuanced system. The pattern of hormone release (speed and quantity) tends to vary from stressor to stressor, especially for the more subtle stressors. A frown from a loved one elicits a much more modest biochemical response than does being fired from a job.

Because the sympathetic nervous system is a major player in our responses to both threats and stressors, it is helpful to have a brief overview of its functions. As you can see in Figure 5, the SNS is a branch of the **autonomic nervous system** (ANS). The ANS innervates smooth muscle (as opposed to voluntary, striated muscle), cardiac muscle, and glands. The ANS, together with the endocrine (neurohormone) system, regulates the body's internal organs. Because the diaphragm muscle is a *voluntary* muscle, the ANS and the endocrine system influence its tone *indirectly*, via routes that we will describe.

Figure 5: The Autonomic Nervous System



Source: Salvo, 1999

The ANS is composed of both the sympathetic and the parasympathetic nervous system branches. The nerves from both divisions supply the same organs (dual innervation), with one exception (the adrenal glands). The ANS stimulates the adrenal glands to secrete epinephrine (adrenaline), which sustains the actions of the SNS via the endocrine system. There is no inhibitory stimulation of the adrenals from the parasympathetic division: the sympathetic nervous system excites the visceral organs; the parasympathetic system inhibits these organs.

This complimentary relationship controls the body's internal organs in such a way as to maintain homeostasis. Working in concert, these two branches control the circulation of the blood, the activity of the gastrointestinal tract, body temperature, and many other functions. The motor signals that the ANS sends to organs are not under our conscious control, thus involuntary.

The **sympathetic branch** (SNS) of the autonomic nervous system, as mentioned before, mediates vigilance, arousal, activation, and mobilization. The (SNS) prepares the body for emergency responses (fight, flight), and provides our muscles and our brains with higher levels of nutrients necessary to carry out survival behaviors. The SNS narrows our perceptual field – the better to focus on the threat to the exclusion of other momentarily unimportant details. The SNS is also activated anytime we are faced with a physical or emotional, real or imagined, stressor. (Physical stress can be our morning jog or the uncomfortable physical positions we maintain over our computers for long hours.)

By contrast, the **parasympathetic** branch of the ANS is known as the housekeeping system. When there is no threat, when we are not physically and/or emotionally stressed, when we do not need an energy boost to accomplish a goal, the parasympathetic branch restores and maintains homeostasis by stimulating our visceral organs to function normally. When we are calm, our digestive organs break down our food, our heart regains its slower “normal” rhythm, our perceptual field widens so we can notice more options. In general, the sympathetic branch makes energy and other resources available to spend, while the parasympathetic branch conserves energy, replenishes our resources and allows us to recover and heal.

Our nervous system responds to both threats and stressors at lightning speed. We run away, sweat, avert our eyes, or focus our vision before we are even consciously aware of what we are seeing or why we are cringing. The neural networks that allow for conscious awareness and for behavioral choice are more complex; they take a longer time to process the information in their unique ways. Faced with a threat or a stressor, we act first and reflect later. However, because stressors often go on for longer periods of time, we have the time to access and use our conscious awareness to modify our ongoing responses to these stressors. The embodied self-awareness that we gain through Rosen Method Bodywork sessions gives us the opportunity to consciously access our healing resources.

The sympathetic branch of the ANS turns on, concurrently with the HPA axis of the body's stress response system, in response to threat, stress or pain, and when it is turned on it can inhibit the ability of the diaphragm muscle to fully release. This unfortunate link results in part from the functional interconnection of breathing and circulation, which works as follows:

The ANS and the phrenic nerve work together so that the inhalation phase is accompanied by an increase in heart rate and blood pressure (sympathetic excitation, parasympathetic inhibition) and the exhalation phase is accompanied by a lowered heart rate and blood pressure (parasympathetic excitation, sympathetic inhibition). This allows the circulatory system to efficiently distribute the inhaled oxygen to

all our cells. This interdependence has an important consequence for the tone of the diaphragm muscle, "because contraction of the diaphragm during inhalation and activation of the sympathetic nervous system occur together, the diaphragm contracts when the sympathetic nervous system activates to prepare the body to respond to a threat or stressor" (Fogel, 2009, p. 232).

When the sympathetic nervous system, along with the stress response system, is activated in response to threat/stress or pain, the activation persists into the diaphragm's exhalation phase, inhibiting complete relaxation. Because the diaphragm has low-threshold motor units these can stay contracted and prevent the diaphragm from fully releasing. This results in the chronic tension of the diaphragm in response to chronic stress and chronic pain that RMB practitioners observe.

Alan Fogel (2009) describes six ways that the sympathetic nervous system (SNS), which innervates smooth muscle but not skeletal muscle like the diaphragm, can increase tension in the diaphragm when we respond to a stressor. The first two ways are how the SNS, as well as the neurohormones released by the stress response, create muscle tension in skeletal muscles all over the body. The last four are unique to the diaphragm muscle.

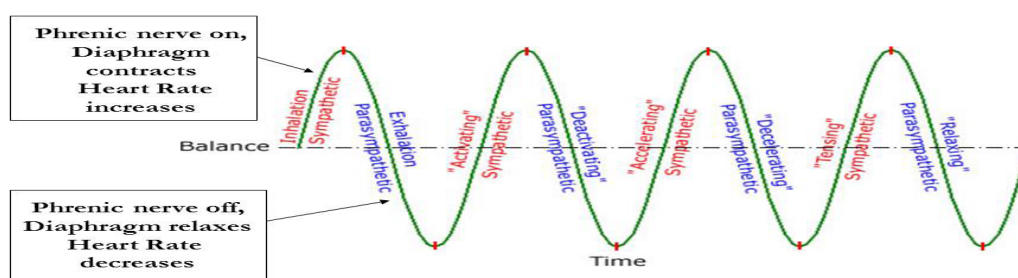
1. The sympathetic nervous system can dilate the smooth, involuntary muscles, which make up the blood vessels that run through the voluntary diaphragm muscle. This can cause pain, which induces (voluntary) muscles to contract in response.
2. The sympathetic nervous system activates the release of stress hormones into the blood from the adrenal glands. These stress hormones can induce muscle fibers in the diaphragm and skeletal breathing muscles to contract by activating the stretch reflex in their muscle spindles. Stress hormones circulate in our blood, remaining effective for up to 30 minutes. When we are in stressful situations that last for hours, days, weeks, and years, or when we constantly play tapes in our heads about difficulties in the past and in the future, we are living with an almost constant heightened level of stress hormones. These heightened levels of circulating stress hormones create chronic tension in the diaphragm muscle, as well as in other skeletal muscles.
3. The sympathetic nervous system directly innervates the heart, which is smooth muscle. As blood pressure increases from sympathetic activation of the heart, there is a need for more oxygen in the blood. Chemoreceptors in the arteries signal the brain stem respiratory motor neurons to fire when they sense an increase in the level of CO<sub>2</sub> in the blood. These respiratory motor neurons travel through the phrenic nerve to stimulate contraction in the diaphragm.
4. The sympathetic nervous system indirectly influences breathing via the heart rate. The parasympathetic vagus nerve, which supplies the heart, speeds up or slows down the heartbeat through vagal inhibition. The vagus nerve interacts in the brain stem with the respiratory motor neurons of the phrenic nerve. When the inhibition of the vagus nerve speeds up the heartbeat it also excites the respiratory motor neurons in the phrenic nerve and causes the diaphragm to contract. Conversely, when the vagus nerve slows down the heartbeat, it also reduces the firing of respiratory motor neurons, so that the diaphragm can fully release between contractions.
5. As mentioned earlier, when our well-being is under threat, the sympathetic centers in



the brain stem (along with the safety/ threat neural network of amygdala, hypothalamus, insula, ACC, and prefrontal areas) activate the periaqueductal grey (PAG) in the upper brain stem that organizes the body's behaviors of fight, flight, and freeze. The PAG has direct links to the respiratory spinal motor neurons which travel via the phrenic nerve to innervate the diaphragm. Pain, which is also processed by the safety/threat network, also increases respiration rate.

6. Baroreceptors for pressure in the larynx and chest cavity send information about air flow and pressure to the ANS and respiratory centers in the brain stem. When the volume of air taken in is too low, this activates the sympathetic ANS, which in turn activates the respiratory motor neurons in the brain stem.

Figure 6: Relationships Between Respiration and Heart Rate



As shown in Figure 6, there is an ongoing coregulation between the vagus and phrenic nerves, which produces respiratory sinus (heart) arrhythmia: RSA. If there is a sense of threat or high metabolic demands from exercise, the sympathetic activation continues through the expiratory phase leading to increased tension of breathing muscles, increased heart rate, and blood pressure, and a decrease in RSA. A low RSA is an indicator of both psychological and physiological stress (Fogel, 2009, p. 233).

### *How the Neurohormonal Anatomy of the Diaphragm Affects the Experience of Stress/Threat*

We have seen that the contraction of the diaphragm is an integral part of our innate threat/stress response. When our diaphragm remains partially contracted in its relaxation phase, it is unable to fully move, as it is meant to do, with the emotions that are underlying and triggering this body-wide protective response. *Put simply, our bodies are involved in the experience and activity of defense, rather than the experience and activity of the emotional content that is motivating that defense. The emotional content, with its associated memories, images, and thoughts, is not readily available for us to feel or know.* To illustrate this point, let's analyze Marion Rosen's pivotal experience, which introduced this article.

I was invited to visit a male friend in the mountains, but when I arrived, he was not pleased by my presence. In fact, that night he left and spent time with another woman. During the night I woke up having an asthma attack. I had suffered from asthma as a child, but not as an adult.

Marion's asthma was triggered in part by her diaphragm's contraction in response to the emotional pain of betrayal. Marion knew she was distressed by her friend's actions, but she did not know the depth of her distress, nor did she know about the association of her associated thoughts and memories with her distress. She could not "fix" her asthma medically, so she paid attention to the message her body was telling her with the asthma symptom.

We were miles from any medical facility, so I had to help myself. I tried to visualize myself as a young child with asthma and asked the little girl in me, "What do you want?" The little girl said, "I want to cry." I responded to the little girl, "You don't have to cry when you are with me; you are all right."

The adult Marion did not want to feel the intensity of her emotional pain and tried to convince her emotional system (symbolized by her inner child) that she was safe and did not need to cry.

But the little girl started to cry about how many times love was thwarted in my life. I sobbed deeply, and when the crying stopped the asthma was gone. I had dared to express what I had not allowed myself to feel so many times before. I packed my bags and left and have had no asthma since.

Marion allowed her body to fully express her emotions, and allowed her mind to be fully aware of the meaning of her emotions. After the physiological intensity of her emotions had run its course, her body returned to a state of homeostasis via her calming, healing parasympathetic nervous system activity. The next section looks at how Rosen Method Bodywork practitioners attend to and influence the movement of the diaphragm to facilitate this *awareness process that is in itself healing*.

## INTERSECTION OF VOLUNTARY AND INVOLUNTARY PROCESSES AT THE DIAPHRAGM

The breathing patterns of emotional states happen involuntarily as we respond to stimuli both inside and outside of ourselves, but we can suppress their expression (stop our crying, lower our voice), or amplify them (perform, act them out), by engaging the diaphragm and the other muscles of emotional expression. We've all learned how to stifle our emotional spontaneity by tightening the muscles used to express them, and how to dramatize our state with exaggerated gestures and greater volume. Although we can no more stop the mind/body changes that occur in an emotional state than we can stop a sneeze, we can control how fully we experience and express them, just as we can partially control a sneeze (Damasio, 1994).

One of the diaphragm movements that Rosen Method Bodywork practitioners look for is muscular suppression (or amplification) of emotional state. In the case of **suppression**, for example, a client begins to experience sadness, but instead of letting the diaphragm contract gradually for a longer inhale, possible

tremble, and slowly relax so that sighs can accompany the exhale, the client grips the diaphragm muscle and holds it back from these movements. Or, in the example of **amplification**, the client begins to experience sadness and turns her attention and effort into “performing” sadness by engaging the diaphragm in loud, effortful sobbing. Marion Rosen tells us that when we perform an emotion, we cannot feel and experience it authentically. She reminds us of the power of one small tear (Rosen, 2003, pp. 13, 94).

Rosen Method Bodywork practitioners detect muscular suppression or amplification and bring their clients’ attention to this action. The clients’ awareness of the muscular work involved in suppression or amplification gives them the opportunity to explore what they would experience if they stopped managing their breathing.

What takes great skill and training is the Rosen Method Bodywork practitioner’s ability to detect and work with the effects of **involuntary/unconscious suppression of emotional states** on the tone and rhythm of the diaphragm muscle. Even when a person is aware that he is muscularly suppressing an emotional state, his muscular suppression is considered to be partially unconscious if he is unaware of the underlying material motivating it. (This form of suppression would be called *repression* in Freud’s psychoanalytic model.) As we have seen, the involuntary suppression of emotional states arises from perceived threats to our well-being and is orchestrated by our safety/threat networks.

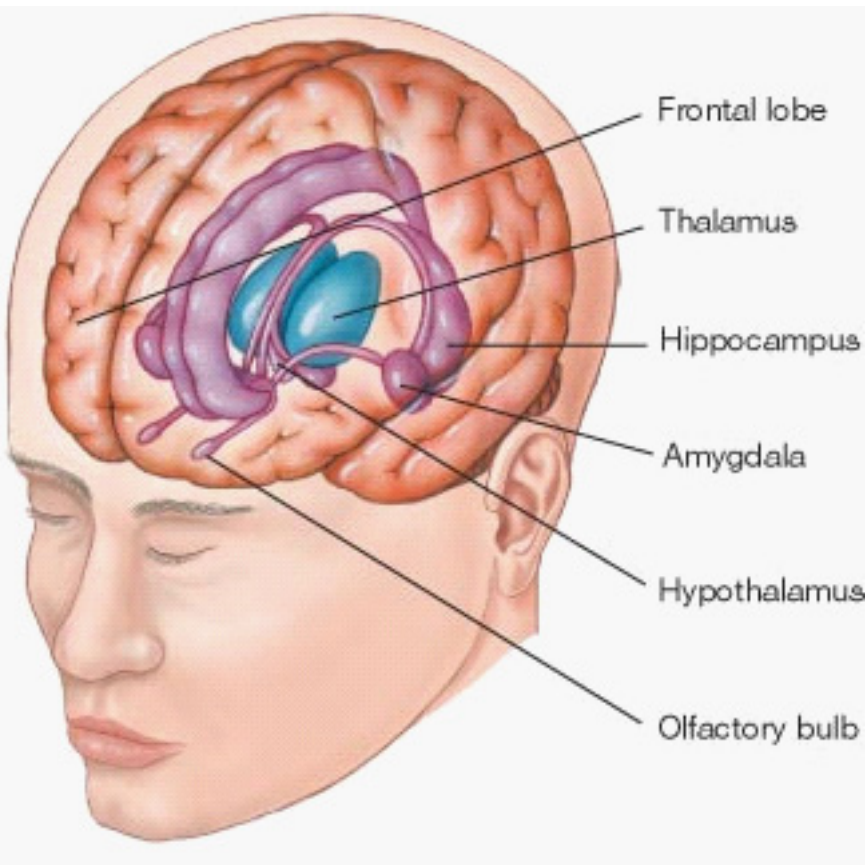
When our Rosen clients first walk in the door, tension in their diaphragm may reflect their day of stressful events (residual tension), or be the product of dire anticipatory thoughts. This is why Rosen practitioners first give clients some time to come into the present moment (they are no longer at work, they are lying on a comfortable table) and then use touch and words that enhance their sense of being in a safe container of relationship.

When there is a sense of safety, the client’s hypothalamus inhibits the secretion of corticotrophin releasing factor (CRF) (see Figure 5), which in turn inhibits the activation of the sympathetic nervous system. This allows the parasympathetic vagus nerve to indirectly reduce motor innervations of the diaphragm, slowing the rate of its contractions. In this state of safety, the hypothalamus secretes hormones that induce the pituitary to secrete the hormone oxytocin (trust, bonding, safety) into the blood stream (Fogel, 2009, p. 158).

Let’s imagine that the session has begun, that the client is in the present moment and feels safe, and that his diaphragm is responding with slower, fuller breaths. If the client’s diaphragm tightens again, it indicates that an internal alarm bell has rung and activated his threat/stress response. A sensation of danger, an emotion, or an impulse to act has been detected by the amygdala, which in turn activates the PAG and the sympathetic nervous system, causing the diaphragm to stay contracted into its exhalation phase. The danger for the client is the internal feelings and impulses that have been met with punishment or disapproval, or which have been overwhelmingly intense in the past.

In order to understand the mechanics of involuntary suppression/repression, we need to look at the amygdala and related structures. The amygdala’s neural architecture makes it a superb central alarm system (Goleman, 1995, p. 16). All incoming sensory data about our internal and external environment travel to the thalamus and then, across a single synapse, to the amygdala. A second signal from the thalamus is routed to the neocortex, the higher brain, where many additional neural networks allow us to think about what is going on and consciously choose an appropriate response (see Figure 7). The amygdala controls the first (involuntary) response to incoming data.

Figure 7: The Amygdala and Its Links to Other Limbic Structures



Source: Fogel, 2009; <http://cwx.prenhall.com/bookbind/pubbooks/morris5/chapter2/custom1/deluxe-content.html>

Groups of neurons in different sub-regions of the amygdala each have a distinct set of projections, with receptors primed for different neurotransmitters. This allows the amygdala to function like an alarm company in which operators stand ready to send out emergency calls to the fire department, the police, and a neighbor, when the home security system signals trouble. These projections extend to every major part of the brain, including the hypothalamus, for the body's chemical emergency stress response system; the corpus striatum for movement; the autonomic nervous system for activation of smooth muscle, glands and organs; and blood flow to skeletal muscles, the cardiovascular system, and the gut (Goleman, 1995, p. 16).

As long as the amygdala detects danger, the diaphragm will be unable to move into the expression of an authentic emotion. Marion Rosen called muscle tension in the diaphragm a barrier to experience. *The muscle tension is the protective response to what has hurt or overwhelmed us.* Marion Rosen says that the degree of relaxation in the diaphragm is a barometer of how fully we are able to accept what has hurt us in the past and continues to cause pain in our lives. She means that Rosen practitioners can use the tone and movement of the diaphragm as a guide to know when the client is suppressing, repressing, or allowing the experience of a difficult or uncomfortable authentic emotional state.

We develop a **conditioned fear response** to certain internal states (anger, for example) when these states have been met with disapproval or punishment during our formative years. This conditioned fear response is called **avoidant learning** (LeDoux, 1996). An avoidant response is not hardwired to an *external* trigger, like a father's slap or a mother's frown, but is a response to an *internal* state. *Avoidant conditioning*



*is like developing a phobia to a trigger inside the self.* When our amygdala, in its rough fashion, perceives a “dangerous” internal state, it sounds the alarm, which in turn readies the behavioral response (freezing in place) that has worked in the past to prevent punishment. The amygdala’s alarm activates the PAG and the sympathetic nervous system, both of which influence the diaphragm to contract and to sustain some degree of contraction into the exhalation phase. This entire process happens very quickly and automatically.

This style of avoidant learning is highly resistant to change because it is positively reinforced. Positive reinforcement works as follows: the behavioral response (for example, freezing in place) short-circuits the conditioned fear: we do not become fearful and distressed, so we do not experience the internal trigger of our anger, or its conditioned fear response; we just experience ourselves freezing in place momentarily. This is why the client may not only be unaware of the “dangerous” internal emotional state but also unaware of the (conditioned) fear that it is paired with, since the protective freezing response may short-circuit the body-wide arousal of fear. However, the tension in the diaphragm reveals the protective response of freezing.

If the learned protective response to an internal feeling state is to disguise it with a different feeling state, then the diaphragm will reflect this unconscious deception, or switch. If, for example, a client seems to respond to most inner and outer events with anger, it may turn out that for this client, fear was the dangerous emotional state. It may be that if she ever showed her fear or vulnerability, she was threatened or punished; she learned that showing anger kept her safer. As a result, as an adult, when her emotional state is in fact fear, she automatically accesses a state of anger instead. Another example is the person who learned to show the world that she is always okay, even when she is not. This person has mastered putting a lid on any “upsetting” or “destabilizing” emotions, and does this so well, that she believes that she feels okay. However, she is chronically out of touch with her feelings and needs.

Emotional feelings often seem to occur in layers, like those of an onion, wherein the process of experiencing one layer of feeling reveals a deeper layer. For example, clients who automatically experience anger when they are in fact frightened will spend time in sessions experiencing their anger, which is the outer layer of their emotional response. As their level of safety grows, and they consciously become curious about their ever-present anger, they may experience that the anger is not the whole, nor the wholly accurate, story, as it will not run the course of an authentic emotion.

An authentic emotional state, no matter how strongly it grips the client, flows through the body like a wave. Emotions may be very intense, but they are brief physiological changes. When they are allowed to run their course, they crest and subside, leaving the client with a sense of completion and calm, which is reflected in slower, deeper breaths.

When the client is voluntarily or involuntarily suppressing their emotional state, the physiological picture will be very different from a brief wave. For example, our ever-angry client’s anger will have a repetitive quality to it, and in fact may feed upon itself, building and building without leaving her feeling calmer and completed. The tone of the diaphragm will reflect this incomplete experience through incomplete relaxation, in which the breath does not achieve a naturally fuller depth. This indicates to the trained observer that there is something more to be known. The Rosen Method Bodywork practitioner guides the client to look more deeply for other strands of experience underneath the anger.

In Rosen Method Bodywork, when we pay attention to the action of the diaphragm, we are paying

attention to the “psychological muscle,” which does the following:

- allows us to fully experience and express what we feel;
- helps us suppress and disguise what we feel;
- protects us from being aware of our authentic emotions, from re-experiencing emotional states that were dangerous in the past.

The movement and tone of the diaphragm is a barometer that reveals the complex interactions among conditioned (learned and now automatic) processes, voluntary (conscious) processes, and involuntary (unconscious) homeostatic and emotional processes.

## ROSEN METHOD BODYWORK IMPACTS THE DIAPHRAGM

The Rosen Method Bodywork practitioner influences the movement and tone of the client’s diaphragm muscle by many routes. When the practitioner, through touch and words, facilitates any muscular release in the body, that release will be echoed by a release of the diaphragm. When the practitioner guides a client to her authentic sensations and emotions, this moment of insight is accompanied by a release of the diaphragm. Let’s look at these processes in greater detail.

### *Functional Interaction of the Breath, Muscles, and Brain*

The action of the diaphragm muscle is influenced by the action of muscles all over the body. Effort anywhere in the body and brain changes the pattern of the breath (Fokkema, 1999). For example, make a fist. Notice as you do so that you hold your breath momentarily. When we are concentrating hard, for example, to solve a puzzle, to search memory for the right answer, to learn a difficult dance step or piano run, we (involuntarily) hold our breath. The physiological connections here involve increased levels of adrenaline that ensure vigilance, as well as the stress response connected to the performance anxiety we feel at these times (Fokkema, 1999).

Conversely, relaxation anywhere in the body and brain also changes the pattern of the breath (Fokkema, 1999). For example, try tensing all the muscles of your body. Notice that when you release the tension, you take a deep breath. When we are done with a difficult task—solve a puzzle, remember the answer, finish the dance step—we relax. Again, when the sympathetic nervous system is no longer activated, the parasympathetic can reign. The diaphragm is part of this relaxation: it releases completely, pauses, and contracts fully to give us one or more natural (unperformed, see below) deep breaths. Therefore, when the Rosen Method Bodywork practitioner, through touch and words, facilitates any muscular release, that release will be echoed by a release of the diaphragm.

### *Our Unique Breathing Patterns*

Breath is life. When the umbilical cord is severed, ending the blood-born oxygen supply from the mother, the infant must find her own breath for the first time. Her diaphragm muscle begins its lifelong dual function: to allow her to breathe and to allow her to express herself. We hear this duality with the baby’s first cry.

When a healthy baby breathes, its entire body, from head to toe, moves with the breath. Its chest and abdomen swell and fill, then collapse, transmitting movement to the shoulders, neck, head, hips, and legs. It

is the freedom and flexibility of the baby's muscles that allow for this wave of movement, which constitutes an internal full body massage. In the relaxed position, during an exhale, the dome of the diaphragm is in contact with the heart and lungs, giving these organs lift and support. In the contracted position during an inhale, the diaphragm flattens out against the liver, stomach, pancreas, and kidneys, giving them a gently stimulating massage. The diaphragm's cycle of tension and relaxation stimulates blood circulation, for the vena cava runs right through the diaphragm sheath.

When we develop patterns of chronic tension—around our hearts, for example—the wave of the breath will stop at that muscular wall, unable to move through it. The breath will flow into areas of the body that can move in order to compensate for the areas that are being held. So if our chest is in a holding pattern, we will be stomach, or even neck, breathers. The fullness of our inhale will be restricted. The same is true for the exhale or relaxation phase of the breath—the exhale may be limited if the surrounding muscles cannot relax (Rosen, 2003).

The way our breath moves through our bodies is as individual as our signatures, and as revealing of our personalities. Here are some examples of what we might see when we look at individual breathing patterns. Please keep in mind that these are *not blueprints* but ideas to stimulate your thinking. Rosen Method Bodywork students and practitioners *do not rely on formulas* that tell us the meaning of what we observe; rather, we strive to be open to our unique experience of this client in the present moment.

The inhale and exhale may be very small, bound by a compressed ribcage, showing us that this person has had to hold herself in, keep to the straight and narrow, take up very little space, keep experience small. The inhale and exhale may be consciously controlled, so that it is smooth and even, which presents an “everything is fine, I’m okay” surface to the world, with the more personal self hidden within. The breath may move only into the abdomen, stopped by the weight of a heavy heart. Heavy, labored breathing with a forced exhale (frequent sighing) indicates these individuals work hard at relaxing, never stop trying: everything is an effort for them. When the breath is never completely exhaled, often accompanied by a barrel chest, it suggests that they have had to be brave, to maintain a stance of being bigger and stronger than they actually feel they are.

In Rosen Method Bodywork sessions clients may gain an awareness of how their bodies hold them in postural, breathing, and movement patterns that may not accurately reflect their current abilities and potential. During a session they may experience that when their chests move with their breath, they begin to feel warmth around their hearts, which may feel like love and expansion. Individuals with barrel chests may get in touch with their gentleness and receptivity as their chest muscles relax into smaller shapes.

### *Resetting the Diaphragm's “Normal” Tone*

The human condition has often been described as one of low-level anxiety, courtesy of the amygdala's protective vigilance (LeDoux, 1996). Most of us experience this as normal. Buried deep in the brain, we cannot see or feel the amygdala constantly scanning for danger, but we can tell by the tone of the diaphragm when fear/anxiety is present. We have seen that breathing is exquisitely sensitive to conditions of safety or threat. Anxious individuals have a higher incidence of hyperventilation (breathing in excess of metabolic needs) than non-anxious individuals. Individuals with panic disorder are more sensitive to increases in CO<sub>2</sub>, and they respond by hyperventilating to take in more oxygen (Fogel, 2009, p. 239).

Chronic and excessive life stresses gradually change the tone of the diaphragm, causing it to lose

elasticity. Its resting length thereby shortens, interfering with its ability to fully contract and fully relax. In a self-perpetuating feedback loop, the sensory neurons in the diaphragm report back to the amygdala a state of high tone (tension), which it interprets as arousal and readiness for protective action. As a result, additional neural nets in the brain scan the internal and external environment for danger, and can usually find some (Saltzman, 1987). For example, our thoughts may turn to problems at work, or we may begin to worry about what our headache might indicate, or we may perceive our partner's smile as sarcastic, and so on.

The level of tone in our lives is like a background noise to our lives. The greater the tone, the greater the struggle in which we feel engaged. Tone is essential to life, but when it is set at too high a pitch, as it is for many of us, then the possibilities of peace and simple pleasures are lost. Life is then one battle after another, and although we wonder why the world is battering us around so, it is our own level of tone that is setting the stage for these battles (Saltzman, 1987).

The attention that Rosen Method Bodywork practitioners bring to the movement and tone of the diaphragm is very valuable. The diaphragm often needs input from outside the influence of this feedback loop in order to learn to reset itself to a lower resting tone.

When I was teaching psychology, I became friends with a 75-year-old woman student. She came to know me well and trusted me. She had recently immigrated to the United States from Russia after her husband's death. She was a dynamo: taking classes, long walks, and going to museums and concerts. She was very anxious, however, and slept poorly. She asked me to help her relax. I offered her a Rosen session. As I placed my hands on the region of her diaphragm, the surrounding muscles softened and her breathing deepened. Over the next half hour, what had been a raised, tight ribcage began to sink and move. This woman's "normal" state had been one of high anxiety for many years. After all these years of stress tension, her diaphragm needed some external cueing to "remember" how to release. After several sessions in which her diaphragm went through this journey to supple movement, she could get a good result on her own by imagining my hands touching her diaphragm. As she went through her days, her diaphragm reverted to that "normal" higher level of tension, but she became aware of it faster and could relax it more quickly on her own. In this way, her diaphragm muscle was able to practice resetting itself to a lower "normal" resting tone.

We have seen that breathing is exquisitely sensitive to conditions of safety or threat; diaphragm relaxation and a full natural breath occur only when we feel emotionally safe. When we are in physical or emotional pain, or under stress, our diaphragms tighten, reducing the sensations of our pain and the awareness of our stress. However, this effort is actually counterproductive, because it maintains a feedback loop of sympathetic nervous system arousal. Marion Rosen taught her clients that they could tolerate pain more easily if they consciously acknowledged their pain and allowed themselves to exhale, interrupting the feedback loop for more arousal and thus more pain and more stress.

### *Definition: the Natural, Free, or Unperformed Breath*

The full, natural breath of a released diaphragm is not the same breath we take when we intentionally breathe deeply. The natural breath feels as if *it breathes you*, not as if you actively do something to breathe it in. When we refer to the natural or unperformed breath in Rosen Method, we are specifically referring to the patterns of breathing (rate, depth) that occur when they are innervated from the brain stem (homeostatic



functions) and limbic system (emotional states), not from the motor cortex (volitional control).

When we control our breathing, each breath often looks the same as the one before; we impose a regularity of rate and depth as we “take” our breath. The natural, unperformed breath varies from breath to breath.

When patients do a breath, they take air into their chests. To do this there is unnecessary contraction of muscles, either around the neck, intercostals, or diaphragm. When patients allow the breath to come in without doing, they allow the muscles of the chest to relax. The chest can widen to its fullest capacity and the breath can come into this area naturally. The non-performed breath is much deeper than the performed breath. We can also see that the performed breath does not show the emotional state of a person while the natural breath does (Rosen, 2003, p. 66).

There are spiritual and psychological techniques that control the breath to achieve altered states of consciousness. By contrast, Rosen Method Bodywork practitioners encourage clients *not* to interfere with or change their breathing patterns, so that their breath can 1) reveal when emotions are surfacing or being suppressed; 2) allow the emotion to be fully experienced; and 3) indicate when an emotional truth has been uncovered.

A type of natural, unperformed breath that is extremely important in the Rosen Method is one that indicates insight, or confirmation of an emotional truth. This is a naturally full release of the diaphragm that occurs when we acknowledge what is physically and emotionally true about ourselves in this present moment.

In this moment of truth, the conviction is so strong it does not feel like a thought but like a body action. There is a feeling of expansion, lifting, satisfaction, and a greater sense of freedom and energy. Every time you have an insight it's as though you're opening a bottle of perfume and smelling something—freedom, satisfaction. There is a sense of being closer, more intimate, with yourself. There is more warmth, more connection, to yourself. When you seek the truth, you do not seek the facts as much as you seek yourself (A.H. Almaas, 1988).

The breath of confirmation feels good. It is a full inhale and exhale, a rush of warmth, a “gut” experience of certainty that is both relaxing and energizing. It may feel good because reward chemicals like dopamine are being released into the blood and brain. It has been suggested that insight is the neurological process by which the right hemisphere of the brain (the intuitive, emotional processing side) chemically rewards the left hemisphere of the brain (the linguistic, reasoning side) for getting it right—for putting the feeling experience into words that describe it accurately. One of the most empowering tools we gain from Rosen Method Bodywork sessions is learning that our own insight breath confirms that we have arrived at our true feelings, rather than spinning our mental wheels.

Simply experiencing and acknowledging the truth of **what is** (in this moment) is sufficient to create neuromuscular change. In the previous example, in which Marion Rosen taught her clients to allow themselves to acknowledge and feel their pain, their diaphragms released with this truth, and this release interrupted a feedback loop that had maintained tension. When Rosen Method Bodywork practitioners do something as basic as bringing a client's awareness to the fact that their muscles are contracted, the client's breath of confirmation occurs, beginning the process of relaxation that will lead to greater awareness.

The breath of confirmation is our gold: it not only brings us closer to our authentic selves, it is part of a process that creates lasting changes in our nervous system's pattern of response. In this moment of emotional confirmation our nervous systems begin to build new neural pathways that can inhibit our automatic defensive reactions, making new responses possible.

Fear researchers (LeDoux, 1996) tell us that the amygdala may always respond with alarm to internal and external stimuli that have frightened or threatened us at some time in our lives. However, the experience of confirmation of our emotional truth creates inhibitory pathways capable of modulating our stress response and our emergency responses of fight, flee, or freeze. In a Rosen Method Bodywork session, the body-memories of these emotional triggers become paired with feeling safe in relationship and having our diaphragm release for the breath of confirmation. We are not simply reliving these body-memories, we are encoding new memories in which the original experienced memory becomes connected with a feeling of safety and acceptance.

Eckert (2010) suggests that when we access a body-memory of a frightening or difficult event while we are producing oxytocin (trust, safety, caring connection) the memory trace actually changes. The oxytocin cascade is part of our parasympathetic nervous system's healing mechanisms, and as such has a counterbalancing effect on our sympathetic nervous system's threat/stress response. This results in toning down the amygdala's alarm response. Additional inhibitory pathways involve the cerebral cortex. We consciously identify these previously threatening stimuli as less dangerous. This form of inhibition allows us to choose new behaviors.

For example, in our Rosen practices, we encounter clients who have lived through traumatic events. When we first touch an area of the body that has been severely or repeatedly hurt, the client may respond by freezing (dissociation), fighting, or fleeing. Over sessions, the safety of our therapeutic bond may allow the client to learn to tolerate sensation and touch in those areas. One client was able to learn to dance, which she had always longed to do, because now she could not only let her hips move but also move her hips with a partner.

In another case, I worked with a client whose nervous system would go into fight-or-flight mode when an adult man locked gazes with her. In the safety of our Rosen relationship, we practiced eye contact until she responded with less sympathetic nervous system arousal and with the conscious awareness that this was not dangerous to her. Then we brought in a male Rosen Method practitioner to work with her on eye contact. Her final step was to go out into the world of male gazes, armed with her conscious learning that locking gazes with a man was not necessarily a life-threatening event. Because her nervous system did not throw her into prolonged freezing or fleeing, she could choose to talk to the man.

These inhibitory pathways, which are both conscious and unconscious, influence our alarm system's appraisal of danger. This particular emotional feeling or sensation is no longer assessed as overwhelming enough to need a high degree of protective action. When these inhibitory pathways kick in, the diaphragm is no longer strongly innervated to sustain its contraction against the sensations of our physical or emotional pain and distress. This lets us breathe more fully through our distress; we can tolerate it more easily.

Marion Rosen says that the truth will set you free. Experiencing our emotional truth, without need for muscular defenses, allows us to modulate the protective responses that were vital for an overwhelmed

infant or a dependent child, but which prevent us from using all our potential as adults.

### *Beyond Insight: The Diaphragm and Spiritual Experience*

When we demonstrate a Rosen Method session in an introductory workshop to first-time observers, they often describe the feeling in the room as *holy*, and their experience as being *in awe*, or *seeing grace*.

"I was in seminary," writes Asha Stager, a senior Rosen Method Bodywork teacher, "and I stumbled into a Rosen Method Bodywork class in my search for a way to take care of my body. I had become disillusioned with traditional religion, and I was searching for a spiritual connection. When I saw a Rosen demonstration I just knew that what I had been searching for was right there in the room. As I watched and felt what happened in the room as the client began to soften and relax, her breath flowing in and out, I felt it happen also to everyone in the room. I felt I was seeing the spirit moving in this mysterious way through her body. Spirit and breath are the same word in Hebrew, and it felt to me in that room that her spirit was her breath moving freely through her body. It was a demonstration to me of what I would have expected to see as a laying on of hands, and the experience of being touched by God."

Sometime later, I had the experience of an Rosen Method Bodywork session. I sank deeply into this place that I had been struggling to find, which I'll call forgiveness. This place—it is difficult to describe—was similar to my experience at the birth of my first child. My struggle had stopped, and what I felt was absolute trust, absolute forgiveness, absolute peace, my whole body wreathed in smiles. And the practitioner said, "This is your treasure, your gold."

The diaphragm is viewed as the spiritual muscle (Saltzman, 1987). Ancient, highly evolved methods of spiritual development all include focusing on or changing our pattern of breathing in order to free the diaphragm, which is seen as the real force behind growth and transformation. When the diaphragm swings freely, the boundaries of the personal ego relax and expand, bringing the experience of a loving connection with something greater than the individual self—God, universal intelligence, universal love. "The clue to this work is in the fact that the universe is love. Our loving is then connected to the all-love of the universe" (Marion Rosen, as quoted in Mayland, 1984, 2005, p. 89).

The experience of connection and union with "all that there is" occurs in those moments when the body breathes with no holding back, completely taking in and giving out.

There is a give and take, just like in the breathing, which is a taking in and a giving out. An attitude of surrender is included, which allows all this to happen. You do not oppose the universe, but become part of the universe. I am certain that this is at the bottom of many of the healing processes that go on. When people get into that state, they really allow their bodies to function. They do not hold back (Marion Rosen as quoted in Mayland, 1984, 2005, p. 89).

This transpersonal connection is the ultimate holding environment, "the experience of safety and rightness from which one is able to sense the interpenetration of all things. The effect of this experience is that thereafter one feels singularly at home and unafraid in the universe" (attributed to Einstein). As in all spiritual journeys, Rosen Method Bodywork's pot of gold is found in arriving, over and over, at this breath.

Marion Rosen said in a training class:

When a feeling comes, the diaphragm swings. When there is trust, the diaphragm releases. When there is surrender, and peace, the diaphragm completely lets go and there is a connection to something beyond oneself, which becomes available to the self. I cannot bring people to this place of trust and surrender. This happens as a byproduct of this method. But this is the place where healing takes place. This healing will be reflected in the person's ability to use more of their full capacity, to live more meaningfully. You cannot take this experience away from a person. It does change their life. This is what I mean by transformation. (See also Rosen, 2003, pp. 32, 40 and 68).

Trust and surrender involve neurophysiological processes that are the opposite of those which organize protection and defense. The "trust system, or human connection system," releases the oxytocin cascade, which brings about stress release, pain release, restoration, growth, and a connection to yourself, to others, and to something larger than yourself (Hrossowyc, 2009, p. 8).

Early in my Rosen training," says Anais Salibian, Rosen Method Bodywork teacher, "I had my hand between my client's shoulder blades. I had found a tight muscle and was reaching for the depth of it. The client was telling me a dream which contained terrible images of her emotional pain as a child. Suddenly I realized, and said aloud, 'I can feel your pain with my hands.' Because she was not alone in that painful place, she began to cry. What amazed me then was that my hand reached to a deeper place where I felt like I was touching something larger—more like space than body—and I said, 'I feel like I am touching your soul.' 'Yes,' she confirmed. My experience was one of reverence, of having entered a holy space which was beyond the level of pain. There was nothing more to do being there together. It felt like ecstasy. I needed to know this, to know that this interior, infinite universe is our final destination."

Almaas uses a vocabulary of love to describe spiritual experience: "The great lover is already in residence at the center of the psyche. Whenever consciousness is sufficiently raised to apprehend this presence, the unconditional and unrestricted love is experienced inwardly" (Almaas, 1998).

We dip into this experience of loving connection, which Marion Rosen calls "reverence for the client's being," when we give and receive Rosen Method Bodywork sessions. It is possibly our greatest resource for healing and transformation (Zettmar, 2011). As a Rosen student in Russia once remarked, "I thought this method would teach me to relax my body, but now I know it is about releasing my soul."

## REFERENCES

- Almaas, A. H. (1988). *The Pearl Beyond Price*. Berkeley, CA: Diamond Books.
- Butler, J. E. (2007). Drive to the human respiratory muscles. *Respiratory Physiology and Neurobiology*, 159(2), 115–126.
- Cozolino, L. (2006). *The Neuroscience of Human Relationships*. New York: Norton.



- Cook, L. B. (1996). The importance of the expiratory pause. *Anaesthesia*, 51(5), 453–460.
- Damasio, A. (1994). *Descarte's Error: Emotion, Reason and the Human Brain*. New York: Avon Books.
- Eckert, B. (2010). The Brain's Rules for Change. *Psychotherapy Networker* 1–4.
- Fogel, A. (2009). *Psychophysiology of Self-Awareness*. New York: Norton.
- Fokkema, D. S. (1999). The psychobiology of strained breathing and its cardiovascular implications: A functional system review. *Psychophysiology*, 36(2), 164–175
- Goleman, D. (1995). *Emotional Intelligence*. New York: Bantam Books.
- Harver, A. and T. Loring. (2000). Respiration. *Handbook of Psychophysiology*, 2nd ed. Cacioppo, Tassinari, Berntson (Eds). Boston, MA: Cambridge University Press USA.
- Hrossowyc, D. (2009). *Resonance, Regulation and Revision: Rosen Method Meets the Growing Edge of Neurological Research*. *Rosen Method International Journal*, 2, 3–9.
- LeDoux, J. (1996). *The Emotional Brain*. New York: Simon and Schuster.
- Mayland, E. L. (2005). *Rosen Method: An Approach to Wholeness and Well-being Through the Body*. Santa Fe, NM: 52 Stone Press.
- Rosen, M. (2003). *Rosen Method Bodywork: Accessing the Unconscious Through Touch*. Berkeley, CA: North Atlantic Books.
- Salvo, S. (1999). *Massage Therapy: Principles and Practice*. Philadelphia, PA: W. B. Saunders Co.
- Sapolsky, R. M. (1994). *Why Zebras Don't Get Ulcers: A Guide to Stress, Stress-Related Diseases and Coping*. New York: W. H. Freeman and Co.
- Saltzman, A. (1987). *Diaphragm*. New Haven, CT: Yoga Tools, Inc.
- Zettmar, K. (2011). How Love Heals. *Rosen Method International Journal* 1, 2–8.