**Breathwork Practitioners   
Training Course with Dan Brulé**

***WORKBOOK AND TRAINING MANUAL***

**TABLE OF CONTENTS**

**MODULE 1: AN INTRODUCTION TO BREATHWORK 5**

Lesson 1: Why Breathe?

Lesson 2: The History of Breathwork, the scope and benefits

Lesson 3: The 4 elements of Conscious Breathing

Lesson 4: How to Conduct a Session

**MODULE 2: RESPIRATORY ANATOMY AND PHYSIOLOGY 24**

Lesson 1: The Anatomy of the Respiratory System

Lesson 2: Anatomy of the chest, diaphragm and breathing muscles

Lesson 3: Respiratory Physiology and Chemistry

Lesson 4: Breath, Stress and the Autonomic Nervous System

**MODULE 3: THOUGHTS, EMOTIONS AND BELIEFS 73**

Lesson 1: Working with Emotions

Lesson 2: Belief systems

Lesson 3: The Subconscious Mind

**MODULE 4: BREATH AND ENERGY 98**

Lesson 1: Understanding and working with energy

Lesson 2: Kundalini Energy

Lesson 3: Masculine and Feminine Energy

**MODULE 5: APPLICATIONS OF BREATHWORK 120**

Lesson 1: Therapeutic Breathwork

Lesson 2: Breathing for specific conditions

Lesson 3: Practical applications for everyday life

Lesson 4: Breath and the neurobiology of change

**REFERENCES**

**APPENDICES**

**MODULE 1: AN INTRODUCTION TO BREATHWORK**

**LESSON 1: WHY BREATHE?**

Welcome to the world of breath. Living and working with conscious breathing is about embracing the gift of life. It is also your birthright.

To open up to the spirit of the breath means to commit to living your fullest potential, taking responsibility for your health and your choices.

Making conscious breathing part of your life means that you have gained a lifelong tool that will support health and anchor you to your most authentic self.

Get ready..... Life will never be the same.

We are living in times of high demand. The pace and intensity of life is alarming. We are being called on by life to step up, stretch out and be the best we can be. The ability to achieve this requires a special set of skills that could be placed under the umbrella of “mindfulness”. Emotional intelligence, the ability to listen, communicate effectively, focus, and to make healthy choices requires that we live more consciously. The ability to manage our energy requires the ability to live and work with more awareness.

Breathwork is a tool that creates and supports this awareness. How?

Every psychological, emotional and physiological state has a corresponding breathing pattern or quality. When our state changes, our breathing patterns change too. And vice-versa: by changing our breathing pattern, we can change our state. When we get control of our breathing we get control of ourselves.

Just about everyone has sub-optimal breathing habits and patterns. In fact, it has been shown that poor breathing habits are an underlying cause of many health problems.

Our breathing system is the only system in the body that is both voluntary and automatic, both conscious and unconscious. That is not an accident; it’s an opportunity to take part in our own evolution and to determine our own nature.

We can look at breathing as an untapped resource. Most people have no idea of the power and potential that it holds. Conscious breathing (or proper breathing if you will) helps us to become more in tune with ourselves. The breath can be used as a tool to transform, change, strengthen, support and enhance various aspects of ourselves.

Sub-optimal breathing results in premature aging and inefficient metabolism. Our cells are not fed properly, we don’t sleep well, we have unnatural cravings, we suffer a poor quality of life and we increase the likelihood of many diseases and illnesses.

Breathing optimally gets us to shift out of inflammatory states; activating and supporting the body’s innate wisdom, by generating authentic energy vs adrenalized energy. Proper breathing supports the body’s natural ability to heal, to repair and recover.

Many people have learned to apply remedial breathing for: asthma, anxiety, pain management, chronic fatigue, high blood pressure-low blood pressure, weight loss, headaches, insomnia, depression, allergies, and auto-immune diseases. “Proper” breathing optimises peak performance supports clarity of thinking and feeling.

One of the first things we need to do in order to be proper optimal breathers, is to practice ‘breath awareness’. In other words, we need to cultivate the habit of tuning into our breathing at different times, during different activities, when desiring to accomplish certain things, or to be in certain states.

How do we breathe when you are feeling very calm, peaceful and content? How do we breathe when we are upset, angry, afraid or in pain? It’s important to bring awareness to our breathing at those times, because the way we breathe (either consciously or unconsciously) will either exacerbate or relieve the short and long term effects of those states.

This course will provide you with the basic all the basic theory and tools to help make breathwork an integral part of your life.

**NOTES:**

**LESSON 2: THE HISTORY AND SCOPE OF BREATHWORK**

From the beginning of recorded history, across many cultures from the East to the West though ancient Egypt, humanity has sought to define, to explain the indefinable- to attribute to all living things something beyond a mechanical explanation of how the body, the animal, the plant functions- to describe what they felt distinguished the living from the inanimate- the spirit that moved within.

In ancient Chinese texts, it is named as Chi or prana. In the times of ancient Greeks and Romans such as Hippocrates and Galen it was the vital spark- thought to be taken in through the air.

So it began this connection of breath to medicine and to spirit. Over time Western medicine especially became more mechanistic- focused upon only what could be observed and measured directly. As this Western mechanistic and causal orientation to medicine and to science flourished, the knowledge and understanding of life, of breath, of the forces moving within all life, within the human were ignored, forgotten by some, dismissed as superstitious by others.

The breath, to inspire and transcend, moved from the world of medicine to the world of spirituality and transformation. Beginning in the 20th century awareness and discussion of the power of these “intangible and indefinable” qualities of the breath has returned to the fields of science and medicine.

The ancient practices of yoga and breath, of Ayurvedic medicine and breath, the modern marriage of breath and peak performance have returned to the arenas of Western medicine, psychotherapy, and spirituality. As if the disowned/illegitimate child has been accepted at least provisionally back into the arms of its extended family.

Breathwork as a form of conscious connected breathing was first put forward by Leonard Orr with Rebirthing in 1974. Later named Rebirthing Breathwork, this work seeks to heal birth trauma memories through the utilization of a pattern of powerful conscious connected breathing that activates and releases the emotions of birth trauma and birth trauma breath patterns.

In 1979 Vivation as a breathing technique was introduced by Jim Leonard. Vivation is a technique that focuses upon the breather feeling and tracking the most prominent sensation or emotion in their body. The goal is to utilize the breath to breathe “through” the sensation/emotion in order to to integrate them. The release of the physiological energy used to contain or manage the sensation/emotion results in relaxation and bliss: Integration ultimately results in ecstasy.

There have been many other manifestations of conscious connected breathing. Holotropic Breath Work developed independently from Rebirthing Breathwork by Stan and Christiana Grof also utilizes conscious connected breathing. Spiritual Breathwork developed by Dan Brulé utilizes conscious connected breathing, with the focus of going even beyond “ecstasy” to connect with the Oneness that we all are.

There are many other breath workers and therapists who offer conscious connected breathing as a tool to increase self-awareness, integrate life traumas and bring a new level of health and wellbeing on an emotional, a physical and a spiritual level.

**The Scope of Breathwork**

Breathwork, its study and application extends from the ancient Chinese practice of Chi Gong (a physical, mental and energetic practice), through the application of Ayurvedic medicine, the spiritual practices of Buddhism, Zen, Taoism, Hinduism, the yogic traditions that began with Kriya and Tantra Yoga. It is infused into the Western practices of psychotherapy, rebirthing, performance enhancement, relaxation, transformational healing and medicine.

**Benefits of Breathwork**

The transformation of the automatic physical process of the breath to a conscious focused purposeful action has many benefits. Breathing not only improves physical functions, it is also a pathway inwards, a bridge between the body, mind and spirit. It affects our sleep, memory, concentration and energy levels. It is the foundation of mindfulness and for living consciously. Every aspect of our personality depends on our breath. Conscious connected breathing is used to transform and release feelings and patterns of thinking, feeling and behaving that create stress and ill health.

**Physical:** Breathwork can be utilized to alleviate, or eradicate specific physical conditions such Asthma, hypertension, depression, anxiety and chronic pain. By freeing our breathing pattern, we are optimising oxygenation of the cells and prevent buildup of toxins and inflammation. Breathwork balances the sympathetic and parasympathetic nervous system which is necessary for the functioning of the body- mind system. With modern life pushing us in the direction of adrenalised energy, we succumb the effects of a chronically activated sympathetic response and buildup of free radicals in the system. It improves sleep, memory, concentration and energy levels:

**Emotional:** Breathwork allows us to open to, feel and release emotional blockages that eventuality manifest physically. It supports us to feel safe in our vulnerability. Breathing not only improves physical functions, it is also a pathway inwards, a bridge between the body, mind and spirit. It is the foundation of mindfulness and for living consciously. Every aspect of our personality depends on our breath. Conscious connected breathing is used to transform and release feelings and patterns of thinking, feeling and behaving that create stress and ill health.

**Spiritual:** Breathwork is a simple and universal way to tap into our spirituality and have an experience of the divinity that resides with in. This brings us meaning and a deep sense of peace and fulfilment.

**Ways of working with the Breath**

1. Breath Awareness

Breath awareness provides the foundation of all other kinds of breathing work but is transformational in itself. It is also the cornerstone of mindfulness. When we are aware of the breath and we turn towards it, we begin to change the way we perceive and respond to our thought, feelings and environment. Breath awareness shifts us from a reactive to a more responsive state and us to be more present with ourselves without judgement. By learning to be aware of the breath and to consciously track the inhalations and exhalations without trying to manipulate or change anything, we can gain many insights into the relationship of our breath and inner world.

2. Controlled Breathing/ Conscious Breathing

Conscious breathing and breath control techniques often practiced as part of yoga serves to support health, energy and balance in everyday life. Its role is to activate the parasympathetic nervous system which serves to relax and rejuvenate the system.

It can be seen as “maintenance breathing”.

Breath control exercises can also be used to bring about some kind of effect or change in state. There are thousands of techniques and exercises that are used across the spiritual traditions. The result is brought about by alternating the rate and rhythm of the breath and changing the speed of the inhalations, exhalations and pauses to bring about changes in our chemicals and hormones but also in our mind, emotions and consciousness.

Conscious connected breathing falls on the other end of the spectrum of breathwork. Breathing in a connected rhythm initially activates the sympathetic nervous system, and creates a slightly altered state of consciousness. This creates an opening for the release of stuck patterns of thought, emotion and posture that prevent us from accessing our natural state and our potential.

3. Focused breathing

Here, we use our focus and attention to experience the sensations in a particular part of the body and we use our intention to direct the inner and outer movements and energies of the breath to that area. We can use visualisation, but we do not intentionally alter the rhythm and rate of our breathing, we simply visualise a part of our body and imagine or sense that we are breathing into that part of the body.

This technique is very useful for self-healing and can help open up to the various breathing spaces, helping us to re-pattern dysfunctional breathing patterns. When we become aware of where we are not breathing, we can focus on these areas allowing the breath to engage them more fully.

4. Movement supported Breathing

Movement is a fundamental expression of life force. Life and breath depend on movement. The way we breathe depends on the coordination, flexibility and fluidity of our breathing muscles, fascia, bones, tendons, ligaments and bodily fluids. Every movement we make shapes our breathing in a particular way. Movement can be used to support breathing through, stretching, dancing, tai chi and walking.

5. Position Supported Breathing

“The specific positions and postures we habitually take often reflect our needs, hopes, beliefs, physical habits and attitudes towards ourselves and to life. They reflect our openness to ourselves and to others. Every position we take shapes our breathing in a particular way. If we habitually hold a posture that that tightens and restricts our back and causes the shoulders to be tight, this will in time, impede our internal movements associated with healthy breathing which involves learning how to engage all the breathing spaces in our body.

6. Touch supported Breathing

In touch supported breathing, we use various kinds of touch to awaken the sensory fibres in the skin and areas just below the skin. This can have a powerful effect on our breath as it helps us to release underlying tensions and activates the relaxation response. Touching can involve gentle touch, rubbing and massage, skin pulling, tapping and pressure.

7. Sound Supported Breathing

The sounds we produce with our vocal cords ride on the waves of our breath and contribute to the harmony or disharmony of our being, perceptions and life. They also shape the way we breathe. Work with sound can help is feel and give healthy expression to our often unconscious emotions and can release any negatively safely and creatively. Each sound we make and hear has a specific energy frequency that have very specific effects on our system.

The vagus nerve which is responsible for activating the parasympathetic response has tiny branches that innervate the larynx. So any chanting, singing and sighing with the breath will enhance the effects of the relaxation response.

**LESSON 3: THE 4 ELEMENTS OF CONSCIOUS BREATHING**

All forms of Breathwork begin here with the merging of the four elements that form the foundation of any Breath Technique: Awareness and Consciousness, Breath and Relaxation. We begin here with the most basic and essential elements of any breath technique.

**Awareness**

In this context Awareness is the manifestation of the passive form of Consciousness, a state of being, an observer and a watcher of the breath. As we turn our attention inward and watch the breath, how it feels, where it goes, what our bodies do with the breath as the inhale brings it into our body, and then the exhale “let’s go”. This is the first step-to become aware, to be the observer. Often this first step leads to deep relaxation and a meditative state:

**Consciousness**

Consciousness is purposeful; conscious directed action determines the rate, the intensity and the direction of the breath. Breath is both automatic and conscious. In its automatic form, we are usually “un” conscious of our breath, unless our system experiences an intense situation and a demand such as running, or anger or fear. It is like a computer program running invisibly and silently supporting all that we do. When we apply consciousness to the breath we move breath from the realm of the autonomic nervous system. With intent, and focus we control the rate of our breath, we control the intensity of volume of the breath and we direct the breath; breathing into our belly, our mid-section, our upper chest, or filling all three in a flowing continuous movement.

**Breath**

Breath names a process that is both automatic (as observed through awareness) and conscious when with focus and intent the breather changes and controls the pattern of the breath. Breath is both a physiological process and a servant directed by consciousness to create personal transformation and change on an emotional, physical and spiritual level. At its most basic, automatic level the breath is necessary to facilitate the continued health of every cell in our body. It is responsible for the removal of 70% of the toxins within our bodies; more that perspiration and elimination combined.

On a conscious level, the Breath continues to support our bodies and assumes another role- it becomes a servant of intention bringing the opportunity for change, transformation, health and inner peace.

**Relaxation**

Relaxation is the result of bringing awareness and consciousness to the body: it allows the energy of the breath to open within each person the space, the capacity and the potential to be even freer, more open to love, to the limitless possibilities of life, to experience even more joy, more health and more energy. Relaxation is the elusive partner to Awareness/Consciousness and Breath. We hold within our bodies’ layers of tension, some we are aware of, some have been with us so long they have become a default state of being. We store at an unconscious level, with in the cells, fascia and muscles memories of trauma, loss, fear and deep pleasure. Tension blocks the energy of the breath.

The more you can let go, the more you can allow the energy of the breath to move within you, the more change and transformation is possible. As we begin this journey of training as a practitioner to coach and support others, to release, to open, we are also making the journey within ourselves, for ourselves.

When we can be relaxed and aware, the breath energy can move throughout bodies, creating openings for even more. Consciousness and relaxation open us, prepares us for the transformative power of the breath.

It is here, with consciousness and awareness that we begin the journey of Conscious Breathing. It is here that we begin- to learn, and perfect breathing fully and freely: Mastering individual breathing techniques and joining the breath to consciousness as a willing servant of intention.

**Consciousness, Breath and Relaxation**

The more you can let go, the more you can allow the energy of the breath to move within you, the more change and transformation is possible. As we begin this journey of training as a practitioner to coach and support others, to release, to open, we are also making the journey within ourselves, for ourselves.

Now, conscious breathing and relaxation combine to allow effortless, powerful breathing as a way to create inner space for change and the opening of each being to the breath.

These four aspects: awareness, consciousness, relaxation (state of openness and non-resistance) and the breath are the essential components of many breath systems and individual breath techniques: systems such as Chi Kung, Prana Yoga, Kriya Yoga, and Kundalini Yoga, Rebirthing Breathwork, Zen and the Art of Breathing and Spiritual Breathing: Techniques such as latent breathing, breath counting, breath holding and many others.

**EXERCISES**

Using Breath awareness to purposefully begin your breath sessions. Journal what you discover.

Are you pulled outside of yourself by the actions of others, by outside events?

Are you moved from awareness by your own thoughts?

What is the general nature of these thoughts? Lists of what you should be doing, or will be doing? Reviewing and rerunning the movies of what has happened, what will happen?

What are your experiences when practicing breath awareness? Describe the thoughts, sensations, and feelings that you observe within yourself.

**NOTES:**

**LESSON 4: HOW TO CONDUCT CONSCIOUS CONNECTED BREATHING A SESSION**

**Before the session**

Prepare the room for comfort

Have tissues, water, pillows, and blankets available

You might play certain music

Establish a ritual (light a candle, prayer, affirmation

Settle into your centre - your intuitive self

Focus your own breathing, awareness, relaxation

Open and expand out to merge with the “information space” around us

Create an atmosphere of freedom and safety

Generate unconditional love and non-judging acceptance

Get clear of your own expectations, agenda

Voice any intentions or goals you have

Clear any attachment to the outcome.

Ask client their intention, or help the person to choose one

**During the Session**

Focus on:

The atmosphere: creating emotional psychological, energetic freedom and safety

Something Else: trusting the mystery, calling upon spirit of love, guides, angels, etc.

Support and encourage:

Circular Breathing

Complete Relaxation

Awareness in detail

Connected Rhythm Coaching Assists:

Make the inhale more conscious

Make the inhale more active

Snap the exhale loose

Set the exhale free

Let the exhale go

Release the exhale.

Don’t control the exhale

Don‘t strain

Don’t push

Don’t force

Smooth out the connection between the in-breath and the out-breath

Round out corners between the inhale and exhale.

Bring the breaths closer together.

Start the inhale sooner.

Make the inhale longer, fuller, richer

Pull the inhale thru the stickiness/shakiness, and release

Let go with a big sigh of relief

Feel the expansion on the inhale in all directions (top-bottom, front-back, side-side)

Take your time on the inhale.

Let the exhale go more quickly and completely

Make the rhythm a little quicker

Take little baby breaths

Slow down, no hurry…

Breathe in a quick rhythm for a few minutes, then take a cleansing breath or two.

Breathe into the upper space (under you collar bones).

Breathe into your belly

Breathe into your back

Breathe into your heart

Breathe into that feeling/sensation

Breathe into that part of the body

Relax into it, relax around it, relax with it

You are feeling your own energy…

Welcome the energy

Invite the energy

Say yes to the energy.

Say yes to yourself… say yes to your body…

Say yes to your emotions, your experience

Be gentle with yourself

All your feelings are perfectly safe.

It’s perfectly safe to feel all your feelings.

Your feelings can’t hurt you.

It’s just a feeling.

It’s just a thought.

Everything is perfect just the way it is.

Perfect! Do that again!

Surrender.

Be the witness

Notice/watch your feelings and sensations and thoughts

And your reactions to them

Relax your jaw, forehead, neck, shoulders, etc.…

Encourage visualization… flow of water, energy, etc.

Use breath sounds (ooh… ahh… eeh… etc.)

Create a space between your teeth

Guard that space, check on it, return to it, keep re-creating it

Use touch to bring awareness to holding, tightness, unnecessary effort, etc.

Use pressure to guide people into breathing into certain breathing spaces

Use movement of limbs, extremities, head, neck, etc. to bring awareness and relaxation

Use recording of breathing rhythms

Model the breathing quality, speed, rhythm, pace, volume, sound, etc.

**What to do when people keep going unconscious, zoning out, or forgetting to breathe, when people keep stopping breathing:**

Intuitively determine if they are holding the breath to hold in feelings, or if they are zoning out, spacing out, and forgetting to breathe; touching (or avoiding) something in their unconscious, etc.

Remind them of their intention.

Use the sound of your own breath

Use touch (tap on chest, etc.)

Get them into a faster and fuller rhythm

Have them open their eyes

Breathe sitting up

Breathe standing up

Use touch

Use Baskakov methods (sensory bombardment, slow movements, gentle stretching)

Encourage movement to get the body breathing, then keep it going while relaxing

What would happen if you were to breathe more right now?

What would happen if you were to let go completely?

**Assists for when people talk too much during the session**

Focus on your body.

Notice how you are breathing

Notice what you are doing with your jaw, shoulders, fists, etc.

Where does that thought/feeling live in your body?

Focus there and just breathe

Just experience that

Let’s talk after the session

**How to end a session or wind it down**

Come back to the room.

Turn on your side…

Encourage gentle stretching, moving, rocking, rub hands together

Encourage yoga, tai chi, meditation, dance

Use music, use lighting,

**After the Session**

Some completion ritual… change music, etc.

Have snacks ready, water, juice

Debriefing: sharing observations, getting feedback/report

Encourage mandala drawing, doodling, journaling,

Connect with nature

Possible areas of adjustments, variations, focus, parameters to coach about during a session, things to watch for:

**Breath sounds**

Quality of the breathing rhythm: fast and full, fast and shallow, slow and full

Length and time of inhale and exhale; speed, volume, rate, depth,

Pauses, gaps, breaks, or changes in the breathing rhythm

Location and focus of breathing movement: high, mid, low

Expansions from side to side, front to back, top-to-bottom expansion

Anything blocking expansion?

**Body-breath coordination: (breath moving the body/body moving the breath)**

Are they in synch, in harmony?

Amount of effort or ease in the breathing

Smoothness, shakiness, gasping, rushing

Holding, controlling, avoiding, forcing, pushing

Conscious vs. unconscious expressions, reactions

Muscular tension, contractions, body movements, tremors, twitches

Forehead, brow, facial expressions, eyes, (closed, open, focused, glazed) pupils

Position and angle, and activity of head

What’s happening in the jaw, lips, mouth, tongue, throat

Adjustments of neck and shoulders, chest, spine, belly, pelvis

Position and movement of hands, fingers, legs, feet, toes

Skin tone, colour and temperature changes, visible veins and arteries, pulses

Overall state of comfort, focus, all actions and reactions,

Anything visible in the Aura?

Energy movements, sensations, accumulations, releases, tingling, vibrations

Not expressing obvious feelings, emotions, desires, etc.

Over dramatising feelings, emotions, desires, urges, etc.

The most important thing to remember is to make the client feel safe, be mindful of not projecting your need to rescue and control the outcome of the session,

**What can happen in a session:**

Laughing

Crying

Screaming

Tetany

Spontaneous movements

Support the client’s safety to express fully and ensure that the client is left feeling contained.

Follow up with the client after the session if necessary.

**MODULE 2: RESPIRATORY ANATOMY AND PHYSIOLOGY**

**LESSON 1: ANATOMY OF THE RESPIRATORY SYSTEM**

When working with the breath, it’s important to have a basic understanding of the anatomy of the respiratory system and all the structures of the body that are involved when we breathe.

Although we are studying the respiratory system in depth, bear in mind that no system in the body functions in isolation.

What makes the human body so perfect is that even though each system has its own unique structure and function they all work synergistically and communicate with other to ensure harmonious balance and the optimum human experience.

You will find that the more you study the structure and function of the body, the more you will begin to appreciate the absolute miracle that it is, and the more you will see that there is something far greater at work within the body that co- ordinates and orchestrates the functioning of the 600 billion cells that make it up. This is something beyond what we can see under a microscope.

For our purposes, let’s call this ‘Something ‘ , the body’s innate wisdom...

As we go through the physical anatomical structures, we will also bring a deeper awareness of what each part is related to from an emotional/ consciousness perspective.

**The Respiratory Tract**

The respiratory tract is a highly sophisticated and organised system that on a physical level facilitates the delivery of oxygen molecules to every single cell in the body. It consists of passageways that filter incoming air and carry it to the lungs. Here, in the microscopic air sacs, exchanges tale place between the external environment and the internal body environment.

The respiratory system consists of the following parts, divided into the upper and lower respiratory tracts.

**Upper Respiratory Tract**

* Nose, mouth and nasal cavity
* Pharynx
* Larynx

**Lower Respiratory tract**

* Trachea
* Bronchi
* Bronchioles
* Alveoli
* Diaphragm

**Let’s begin with the nose**

The mouth and nose are the airways cavities most directly in contact with the outside environment.

In an adult, 18 0000 to 20 000 litres pass through the nose each day.

The nose and nasal cavities have been designed in a way to process and filter the air from the outside environment before it enters and comes into contact with the delicate tissue of the lungs. It prepares the air so that is warm, humid and pure enough to be absorbed into the blood.

The nostrils are found at the entrance of the nasal cavities, which two parallel airways separated by cartilage are called the nasal septum and bone towards the top.

The entrance of the nose or *nares* are covered by large hairs which serve to trap the biggest dust particles from the air.

The nasal cavities are lined with a respiratory membrane with little vibrating hair or *cilia w*hich trap the dust particles entering the nose as well as mucous glands that not only trap the smallest particles, moistens and humidifies the air but also play an anti-infection role.

The side of the nostrils have an interesting shape, containing 3 folds that make up the *turbinates*which are funnel like structures that serve to channel the stream of air as it enters the nose, helping the create a interesting pathway to the lungs, giving the air more time to be warmed up and moistened.

Because the nostrils are smaller than the mouth, the air that is exhales through the nose creates a back pressure when one exhales, slowing the air escape so that the lungs have more time to extract oxygen from them.

Take a deep breath through your nose and then through your mouth and you will find that it takes a longer time to fill your lungs when you breathe only through the nose.

**Other functions of the nose:**

* Another major function of the nose is that it is the primary of smell. When we smell, say a rose, the molecules carrying the scent arrive in the nose and bind to the receptors on a small patch of tissue at the top of the nose called the olfactory epithelium, which then connect to the nerves in the olfactory bulbs which are located directly in the gap between the eyebrows. From there, the signals are sent to the brain.
* It forms part of what we need to produce sound. Try this experiment: close your nostrils and try to hum. You will find it impossible!

For your interest, please check out this website to learn more about **Neti,** the oldest and most researched method of nasal and sinus irrigation: www.jalanetipot.com

*“Through the nose we breathe in life sustaining oxygen so our relationship to life is reflected here. Whether we feel at ease with what we are breathing in, or if we want to opt out for a while; whether we feel clear or blocked. The nose also symbolises those times when we push ourselves into areas where we are not welcome – nose issues may indicate a need to respect other people’s privacy and boundaries. Perhaps we need to stop being so nosey and give others more space. The nose also enables us to take in both sweetness and the pungency of life.*

*“The function of breathing in oxygen is vital yet not always welcome. There are many times when life becomes overwhelming and we just want to take in any more. We can’t stop breathing but we can put up a resistance so that everything is shut out, as in a blocked nose. Is something getting up your nose? Is there something or someone you want to push away or resist? Are you wanting to pull back from life for a while? Or are you blocking something within yourself- getting stuffy and airless in your attitude? Are you being particularly prejudiced or closed? What do you need to do to open up and breathe freely again?” From* ***Your body speaks your mind*** *by Debbie Shapiro.*

**What about the sinuses?**

The sinuses are air filled spaces in the head around the nose area. There’s a pair under the eyes, a pair behind the bridge of the nose and another in the forehead just above the eyes. They make the skull lighter, helps the voice to resonate and provide protection for the brain in case of an impact.

They are lined with the same kind of mucous membrane that lines the inside of the nose. Mucous from the sinuses also has a system of drainage into the nose.

*“Sinusitis implies either a pushing away of that which inspires or nourishes us or an overload of mental work without enough creative energy. Sinusitis means you are feeling irritated or inflamed by something or someone or even yourself and this irritation is highlighting a sense of being emotionally or creatively stuck. Are you feeling blocked or limited, unable to break free of stuck patterns? Are you resisting inspiration and nourishment?*

*“Sinusitis is also connected to repressed grief and unshed tears, especially as there can be intense pain and a high temperature. The pain is expressing the inner anguish; the temperature shows the heat of emotion.” From* ***Your body speaks your mind*** *by Debbie Shapiro*

**The mouth**

The mouth is part of the digestive system but is also another channel that is used to inhale and exhale air.

As we can see from the anatomy of the nose, at rest it is ideal to breathe through the nose, as the nose has a particular structure to filter and prepare the air through the lungs but there are certain circumstances when it is necessary and normal to breathe through the mouth.

1. When the nose is blocked
2. During vigorous exercise in order to supply more oxygen
3. Naturally when we yawn and sigh!!
4. In breathwork! (we will go into this in more detail at a later stage)

**The TM joint**

The Tempo mandibular joint does not form part of the respiratory system per se, but while we’re at the mouth, and because of its relevance and importance in breathwork, let’s look at it here.

The TM joint us a small joint located at the front of ear where the skull and lower jaw meet.

This tiny joint and the big masseter muscle (chewing muscle attached to it) is often where so much stress is unconsciously stored. Many people, when they are dealing with anxiety, clench or grind their teeth at night, causing painful spasms and in severe cases “lock jaw”.

**The Pharynx**

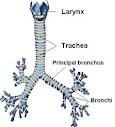
The pharynx is where the back of the nose meets the back of the mouth and it has a very important role: it is able to decide when a piece of food must go through the food pipe (the oesophagus) or when the breath of air must go through the larynx (voice box). There is a small flap of cartilage called the ***epiglottis*** that prevents the food of entering the trachea.

After passing through the pharynx, the warmed, moistened and cleansed air is ready to enter the respiratory passageways.

**The lower respiratory tract**

The respiratory tract is actually shaped like an upside down tree, with the trachea or windpipe being the trunk , the bronchi and bronchioles being the branches and the alveoli being the leaves where oxygen exchange takes place. It’s so incredible that even on a functional level they are perfect opposites, with trees inhaling carbon dioxide and exhaling oxygen that we then inhale.

It’s a perfect system!



**The Trachea**

The main passageway of the respiratory tract is the trachea, and open tube extending to the lungs.

The first part of the trachea is the larynx. The vocal cords are an important component of the larynx, and are therefore also known as the voice box where sound is generated. It also helps to protect the trachea by producing the strong cough reflex is any solid objects pass the epiglottis.

*“Difficulties with the larynx are associated with the fear of speaking, or with a repression of feelings. Conflict arise when it is hard to vocalise or feelings, or if we feel we are always saying the wrong thing. Through our voice we express our needs and ask for what we want. Are you speaking your truth or swallowing it back?”* ***From Your body speaks your mind*** *by Debbie Shapiro.*

The trachea is also known as the windpipe- the tube that carries the air from the throat into the lungs and is mostly situated in the neck and upper part of the chest. It is a flexible cylindrical tube that ranges from 20-25 mm in diameter and 10-16cm in length. The inner membrane of the trachea is covered in tiny hairs called cilia, which also catch particles of dust which we can then remove through coughing. The trachea is surrounded by15-20 shaped rings of cartilage at the front and side which help to protect the trachea and keep it open. They are incomplete circles because the oesophagus sits immediately behind the trachea and the trachea needs to partially collapse to allow for the expansion of the oesophagus when large pieces of food travels down it.

**The Bronchi**

The trachea divides into 2 tubes called bronchi, which enters each lung. The left bronchus is narrower and more horizontal than the right as it enters the lung. The left lung has 2 lobes and the right lung 3 –probably to make space for the heart.( another clever natural design) Irregular rings of cartilage surround the bronchi whose walls also consist of smooth muscle. Once inside the lung, the bronchi split several ways, forming smaller branches.

**Bronchioles**

Smaller bronchi divide even further to form even smaller tubes or bronchioles, which are less than one cm in diameter. They have no cartilage, and end in a bunch of grape like air sacs in the lung called alveoli

**The Lungs**

In the lower respiratory tract, the trachea, bronchi and bronchial tree lead to the main organ of gaseous exchange, the lungs.

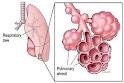
The left and right lungs are separated in the middle by the heart and *mediastinum* and are enclosed by the thoracic cage and diaphragm. (We will study these in more detail in the next module as they are very relevant to breathwork).

Each lung is surrounded by a double membrane called *pleura.* The inner layer of this membrane or visceral pleura is firmly attached to each lung which then folds back to become the outer layer or *parietal pleura***.** This then forms part of the mediastinum and lines the inner wall of the chest cavity. The space between the visceral and parietal pleura contains serous fluid and is called the *pleural cavity.*

The cone shaped lungs extend from just above the clavicle down to the level of the diaphragm.

The right lung consists of 3 lobes, the superior, middle and inferior lobes.

The left side has only 2 lobes, the left superior and left middle lobes.



**Alveoli**

These hollow air filled sacs is where gaseous exchange between the air and the blood takes place. The air sacs are covered by a rich network of capillaries which facilitate this exchange.

We will discuss more of this in the section on physiology.

*Emotionally the lungs generate grief to allow us to dissolve attachments to people, animals and life situations that are no longer part of our life. The consciousness of the lungs is surrender, because we have to release our attachment to the past as we release each breath. When we hold on, our breathing becomes shallow and we feel suffocated and unable to grow. When we can’t grieve, we cry instead into our lungs creating pneumonia and other chest infections. The primary job of the lungs is to allow us to breathe in and accept life and surrender out attachments to people and life situations so that we can make graceful transitions.*

**EXERCISE**

There are two aspects to Breathwork: *Breath Awareness* and *Conscious Breathing.*

Let’s begin with breath awareness.

We need to develop a very conscious relationship to the breath. This means tuning into our breathing. It means observing the breath, witnessing it, looking for subtle details in it.

We are talking about the practice of "meditative awareness." It's what the Buddha was doing when he became enlightened: he was watching his breath!

Most of the time, we are not conscious of our breathing. It's happening outside of our awareness. To compensate for this, and regain a certain balance and stillness, we need to meditate on our breathing.

We can practice Breath Awareness anytime, anywhere, for a minute or two, or for an hour or more.

The more conscious we become of our breath, the more conscious we become of everything: our thoughts and feelings, our habits, patterns, posture, our behaviour.

The more aware we become of our breathing, the more aware we become of life and everything around us.

The more breath awareness we have, the more benefits we gain from our conscious breathing practice. So let's get right to it!

Put aside some time for your breathing meditation. Ten minutes is good. Twenty minutes is better. See that you won't be disturbed or interrupted.

Be sure to leave some time for yourself afterward, to move and stretch, to write in your journal, to enjoy a cup of tea, or to do something else that you love.

Do not underestimate the value of this simple practice! It has both immediate and cumulative benefits.

The main thing about the practice of Breath Awareness is that you are not doing the breathing... Not breathing in any particular way.

You are letting the breath breathe you. You are allowing the breath to come and go by itself, the way it wants. You're just an impartial observer, a detached witness.

If the breath moves through your nose, focus your attention on the feelings and sensations in your nostrils and at the tip of your nose as the air passes in and out. If breathing through your mouth, notice the feelings and sensations of the air as it passes over your lips and tongue, the roof of your mouth and your throat.

You can also focus on the feelings and sensations in your chest or belly as the breath moves in and out. Be aware of what moves in your body when you breathe.

When your mind wanders, or you get caught up in thinking, or when something else pulls your attention away, come back to your breathing: focus totally on your next breath.

When feelings and sensations in your body distract you, notice how they affect the breathing.

After the exercise, review/evaluate your experience. What feelings, sensations, or movements did you notice? Where?

How would you describe or characterize your breathing pattern: slow, quick, deep, shallow, smooth, chaotic, forced, natural, effortless?

If breathing is the language of the soul, if your breathing reflects and expresses your relationship to life, what does your breathing pattern tell you about yourself and your attitude toward life?

Begin to pay attention to the breathing in others: people you meet in public and in private, those with whom you work and play. Pay attention to their breath when they speak, move, complain, celebrate, watch TV or listen to music, when they are angry, nervous, embarrassed, etc.

**Questions for self-reflection:**

* What are the benefits of breathing through the nose?
* In which circumstances is mouth breathing necessary and acceptable?
* What is the difference in the feelings and sensations that arise when we breathe through the mouth as opposed to the nose?
* Which area in your respiratory tract feels blocked?
* Do you notice a difference in your breathing pattern and energy levels when you’re in a natural environment? Why do you think this is?
* Has your relationship to your breath changed now that you have a better understanding of the anatomy of the respiratory tract?

**NOTES:**

**LESSON 2: ANATOMY OF THE CHEST CAVITY, DIAPHRAGM AND MUSCLES INVOLVED IN BREATHING**

When we work with the breath, it is important to be aware of the dynamics that occur in the two cavities that make up the torso-

1. The *thoracic or chest cavity* which contain the vital organs of the heart and the lungs
2. The *abdominal cavity* that contains the digestive organs – stomach, liver, gallbladder, spleen, pancreas, small and large intestines, kidney, bladder and as well as the reproductive organs.

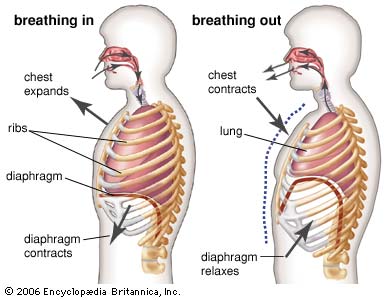
The spine creates the support for both of these cavities at the back and the diaphragm is the sheet of muscle and fascia that separates these cavities- it forms the *floor* of the thoracic cavity and the *roof* of the abdominal cavity.

When we breathe, both of these cavities change shape, and it’s important to understand the different ways that they do.

When we breathe in, the lungs inflate like a flexible gas filled container, and the entire chest cavity changes its shape *and* volume. As this happens the diaphragm flattens, and the abdomen changes shape like water balloon, so in the context of breathing, the abdominal cavity changes shape *but not* volume.

However, when we eat or drink something, the volume within the abdominal cavity does increase as the stomach, bowel and bladder fills up and this increase in volume will produce a corresponding decrease in the volume of the chest cavity. That’s why it’s harder to breathe after a big meal, before a big bowel movement or when pregnant.

In a living, breathing body, thoracic/ chest shape change cannot happen without abdominal shape change. That is why the condition of the abdominal region has such an influence on the quality of your breathing and why the quality of your breathing has a powerful effect on the health of your abdominal organs.



**The diaphragm**

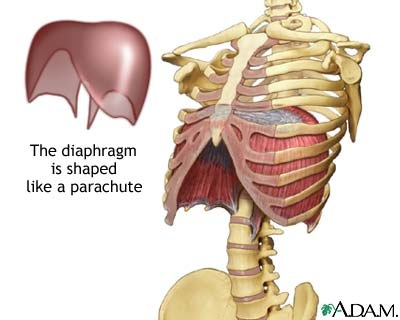
The diaphragm is the primary muscle of breathing and in order to master your breathing practice, it’s helpful to examine this interesting muscle in detail.

Shape and location

This dome shaped muscle separates the chest and abdominal cavities, with the top of the dome reaching the space between the 3rd and 4th ribs and the lowest fibres attach to the front of the third lumbar vertebrae- so basically it extends from *nipple to navel.*

The diaphragm’s shape is created by the organs it encloses and supports i.e. the liver pushes the right dome up and the heart pushes the left side down – and this gives it an asymmetrical shape.

A number of different structures go through the diaphragm but 3 main openings in the sheet of muscle make space for the aorta, oesophagus and vena cava to pass through.



Origin and Insertion

The lower edge of the diaphragm attaches in 3 places

* The bottom part of the sternum( breastbone)
* The base of the ribcage
* The front of the lower spine.

All the muscular fibres rise upwards from these 3 origins and arrive at the flattened horizontal top of the muscle, the central tendon into which they insert- so basically, the diaphragm inserts into itself- its own central tendon, which is fibrous non contractile tissue.

Organic connections

The central tendon of the diaphragm is the point of anchorage for the connective tissue that surrounds the organs of the chest and abdomen. These structures can be remembered as the 3 P’s

* *Pleura-* surrounds the lungs
* *Pericardium* – surrounds the heart
* *Peritoneum* – surrounds the abdominal organs

So now, it starts becoming clear that the optimum movement of the diaphragm has a profound effect on the movements of the organs that these cavities contain.

With each breath cycle, the movement of the diaphragm massages and tones all the abdominal organs and also squeezes the heart, optimising its function.

Interestingly, it also squeezes the abdominal lymphatic nodes and vessels that sit under the diaphragm. The lymphatic vessels no not contain valves to direct the lymphatic fluid and depend of the movement of the diaphragm to help to channel the fluid.

Actions

Because the diaphragm has two parts- the muscular part on the periphery and the central tendon in the centre, the movement happens in 2 phases

If you take in a deep breath, you will find that either the belly bulges out before the chest expands or the chest expands first and then the belly rises afterwards.

If the belly bulges out first, this means that the base of the ribcage is stable and the central tendon is mobile and pushes the contents of the abdomen down.

If the central tendon is stabilized and the ribs are free to move, this is a chest breath.

If you breathe fully, slowly and deeply, however both these areas move, but it will happen in two phases.

*Try it for yourself- lie flat on your back and place one hand on your belly and the other on your chest. Take a deep breath and see which moves first- your chest or abdomen and then try to reverse it.*

**Other functions of the diaphragm**

The diaphragms function goes beyond the action of breathing as separating the chest from the abdomen.

It also acts as a “halfway house “of the emotions. In bioenergetics, most emotions find their way to the diaphragm for distribution.

The emotions arrive at the diaphragm from 4 different sources:

1. A *current event*- such as an argument or bad news
2. A *stored emotion* that has been activated by something that we have seen or heard
3. An emotion that has been *absorbed* by an external source
4. *Contrived emotions* that are created by our minds through conditioned thinking.

From the diaphragm, the emotions can go in 4 directions:

1. Up to the chest and head where they are *experienced immediately* as expressed emotions. for example- our pet dies and we have the immediate expression of grief
2. They can go down to the *intestines to be eliminated* from the body. This is the healthiest way to go with any emotion other than the acute emotions which are often better expressed outwardly
3. They can be *held in the diaphragm* for a while but not let go either up or down. At this stage, the liver decides to take the emotion and store it in the connective tissue for release later. This now becomes an active stored emotion and one of the main the main triggers in disease.
4. Rarely, emotions do not move from the diaphragm especially in a person who finds it difficult to let go. These emotions end up in *the connective tissue of the diaphragm* muscle and compromise the function of the diaphragm

It is becoming more and more evident how important the movement the diaphragm is on so many levels!

**Accessory muscle of respiration**

Although the diaphragm is the principle muscle of breathing, there are other muscles that are engaged in changing the shape of the chest and abdominal cavity. These are called the *accessory* muscles of respiration and once all the musculature of the body is coordinated and integrated with the action of the diaphragm; breathing will be effective and efficient.

The intercostal muscles

As the name suggests, these are the muscles that lie between the ribs.

The *external intercostals* – there are eleven pairs between each rib and when they contract, they pull the ribs towards one another and elevate the ribcage.

The *internal intercostals* lie deeper than the externals and lie at a right angle to them.

When they contract, they draw the ribs together and depress the ribcage.

Abdominal and thoracic accessory muscles

The abdominal cavity and its musculature can be imagined as a water balloon surrounded by all sides by elastic fibres running in all directions. The shortening and lengthening of these fibres in coordination with the contractions of the diaphragm produce the many shape changes that can occur with respiration.

Other Accessory muscles

Chest, neck and back muscles can also expand the rib cage, but they are far more inefficient than the diaphragm and external intercostal muscles at doing this.

Considering the degree of muscular tension that occurs in using the accessory muscles in breathing, the net payoff in oxygenation makes it a poor energetic investment.

In other words, it is a low effort to energy ratio.

That is why improved breathing is a result a decreased tension in the accessory mechanism, which allows the diaphragm, with its shape changing ability, to operate as efficiently as possible.

**Diaphragmatic breathing**

Diaphragmatic Breathing is taught in most yoga schools. And most martial artists learn belly breathing if they want to derive the most… or if they want to reach any level of skill… diaphragmatic breathing is very important.

It is also important to any athlete, or in any athletic endeavor; for singers and performers it is very important. Any activity that requires balance, grounded-ness, calmness or a sort of serene power… [those are times when you need to breathe].

Belly breathing is a good place to start. And to reach any level of mastery in any of those areas, you pretty much have to get belly breathing down. So, belly breathing is really quite simple. You can watch a baby and see how active their belly is when they breathe.

And it seems as we grow, and as get older, we get more and more “uptight.” This uptightness is reflected in the level of the breathing: that is, the center of the breathing seems to move higher and higher up into the chest. And when you become very afraid, the breath moves very high up into the chest, and it is quite visible.

But you can also notice it in very subtle ways in just about everyone. You can notice high-level breathing or breathing high up in the chest. You can notice that in people by the activity in their shoulders and their neck as they breathe.

Good belly breathing requires absolutely no involvement of the muscles up around the chest and the shoulders, neck, or the upper back. Those muscles are simply not required for breathing.

When there’s a grave demand for breath, and you can see this in runners and athletes especially recovering after they have run a distance, or you can also see it in emphysema patients, and people with COPD, and asthma, and so on: struggling to breathe. And you can see that the accessory muscles are involved in the breathing.

These accessory muscles, which include muscles around the shoulders and the upper back and the chest, they come into play in breathing when extra demand is put upon the breathing

But they are not normally used for breathing. In emergency cases they will come into play to support. Using those muscles requires quite a bit of skill and coordination, and without the foundation of good diaphragmatic breathing it is very likely that the breath, the breathing mechanism will get quite uncoordinated.

What happens is one muscle begins to fight against the other and the breathing gets all jammed up. Another thing that happens is that the natural sense of the flow of breath is lost. And when we deliberately begin to force ourselves to breath or to breathe deeper or quicker, we artificially begin to manipulate the breathing mechanism, and we cause it to get even further out of balance.

For good practice or good understanding of this “coordinated breathing” you can look into the work of Carl Stough, who has a method called SIMBIC: the Stough Method of Breathing Coordination. He had over 30 years or more of work on the mechanics of breathing.

Sometimes you can hear the same thing over and over again and suddenly you hear it for the fourteenth time and you get it! Sometimes you hear it in a certain way and you suddenly get it! You have to “get” Diaphragmatic Breathing if you are going to get anywhere in Breath Therapy. It is a real foundation skill.

**EXERCISE**

You can begin this practice by laying down flat on your back, and putting your hands right over your belly button. And as you breathe in… with the inhale… you should feel movement under your hands… As you pull the breath in, as you pull the breath in, your belly should rise up.

What is happening is, as you breathe in, the diaphragm moves down, popping the belly out. The diaphragm is that huge muscle that separates… it’s the ceiling of the abdomen and the floor of the chest.

As you breathe in, the diaphragm flattens and sort of moves downward, although it is anchored, it really doesn’t move, we use just that as an expression. The diaphragm moves downward, displacing the organs in the abdomen and causing the abdomen, the belly, to pop out. So, as you breathe in, the belly pops out. As you breathe out, the belly flattens.

So, take in a breath now. Your hands are on the belly. And it is as if you are breathing into your hands and moving your hands with the inhale. Don’t use your belly muscles. Send the breath low into your belly. And feel your belly expanding. As you exhale, your belly flattens. It is, as if, your lungs are in your belly. And as you breathe in, your belly expands. And as your breathe out, your belly empties or flattens.

A good image is given in Nancy Zi’s book, The Art of Breathing. She talks about a bellows, you know, that old piece of equipment, used to fan the fire. It’s got two handles on it, a little spout at the end and you sort of pump it [like an accordion], and you fan the flames in a fire. Well, you can imagine that the bellows… the handles of the bellows… are down, one is at your belly button and the other is at your spine.

As you exhale, the bellybutton moves toward the spine. As you inhale, the bellybutton moves away from the spine and your belly pops out. So, practice that. Breathing in, the belly pops out. Breathing out, the navel, the belly button moves towards the spine, the belly flattens. And, if you exhale completely, as you blow the breath out, as you exhale, the belly button gets closer and closer to the spine. The belly flattens more and more until you are completely empty. Then when you inhale your belly begins to pop out.

It is very much like you fill a glass. If you fill a glass with water, it fills from the bottom up. The same thing with breathing, the first bit of breath that enters you should go very deep, all the way down …low, into the belly. So, you begin to fill the lungs from the bottom up.

As you breathe in the diaphragm moves down and the belly pops up. As you breathe out, the belly flattens, the diaphragm moves up. This is the natural cycle of diaphragmatic breathing. Very important to learn, very important to practice and should be a natural, automatic reflex. It should be the normal way that the breath flows.

So, if you don’t have this habit, begin to practice so it becomes natural and becomes a habit. It doesn’t require effort. It requires awareness and practice.

It is also useful to lie on your back and put a heavy book on your stomach, and as you breathe in, you lift the book with the inhale. As you breathe out the belly seems to empty and the book gets lower and flattens your belly.

You can also play with the small of your back and your sides around your waist. You can put your hands on your waist, for example, sort of standing arms akimbo, one hand on each side of your waist. And as you breathe in you feel the expansion happening around you waist, as if your belly is filling with air. This expansion should take place front to back, side to side, and you feel the expansion in all directions. Make the belly a very lively place as you inhale and exhale.

In many people the belly is frozen, because of our need to look good, to look like the magazines look, the old-fashioned military posture, the idea of sucking in the belly and popping out the chest. Nothing screws up the breathing more than that posture habitually held.

So, here, the idea is to relax and soften the belly. Allow the breath to move into the belly, and enliven and awaken that place, so the belly responds easily, effortlessly, as the breath comes in. There is no interference, there is no rigidity in the belly, and there is no holding of the abdomen to prevent those lower spaces in the lungs from filling.

So, now we have diaphragmatic breathing, very simple, very basic fundamental breathing exercises, upon which all of the other breathing exercises are built, without which you won’t have balance, you won’t coordination, and you will make very little progress in the end.

**NOTES:**

**LESSON 3: RESPIRATORY PHYSIOLOGY AND CHEMISTRY**

A person can live for weeks without food and a few days without water but only a few minutes without oxygen. Every cell in the body needs a constant supply of oxygen to produce energy, repair or replace itself, and maintain vital functions. The oxygen must be provided to the cells in a way that they can use.

It must be brought into the body as air that is cleaned, cooled or heated, humidified and delivered in the right amounts.

In the previous lessons, we saw how the respiratory system is structured in order for this to happen. Now, we will look more closely at the physiology or functions of respiration as well as the mechanics and chemistry involved in breathing.

So far, we have learned about the **conducting zone**:

1. Air containing oxygen enters the body through the nose and the mouth; from there it passes through the pharynx or throat on its way to the trachea.
2. The trachea divides into 2 main airways called bronchi upon entering the lungs
3. The bronchi subdivide into smaller and smaller branches called bronchioles
4. After about 23 divisions, the bronchioles end at the alveolar ducts ( air sacs)
5. The oxygen system is finally transferred into the blood stream at the alveoli

Now we learn about the **Respiratory zone** where the process of ventilation, gaseous exchange occurs and the role of the circulatory and nervous system.

Each alveolar sac is surrounded by capillaries having direct contact with each other. Gas exchange occurs through this alveolar- capillary membrane as oxygen moves into and carbon dioxide moves out of the bloodstream.

Although the 300 million alveoli in the lungs are microscopic, they have a total surface area equivalent to the size of a tennis court!

As we can see, the circulatory system is part of the system that is involved in transporting the oxygenated blood to the body’s tissues and the de oxygenated blood from the tissues back to the heart. Let’s follow this process which happens in 4 stages:

1. **Ventilation**

* Air travels through the conducting zone to the alveoli.

1. **Pulmonary Gas exchange**

* Oxygenated blood gets diffused from the alveoli into the capillaries that surround them

1. **Gas transport**

* The alveolar capillaries link up to form larger vessels which carry the oxygenated blood to the left side of the heart. The heart then pumps this blood through the main artery, the *aorta* which branches out into arteries, and further into tissue capillaries

1. **Peripheral Gas exchange**

* Oxygen then gets absorbed from the tissue capillaries to all the cells and mitochondria within them

The Carbon dioxide produced by the cells gets absorbed by the capillaries and this gets carried in the veins. These micro vessels then gather up to from tiny veins, then larger ones to link up to form the pulmonary circulation and transports this oxygenated blood to the left side (atrium) of the heart via the inferior and superior vena cava.

The heart then sends this blood to the lungs via the pulmonary veins to be oxygenated again through the alveolar-capillary membrane, and the cycle begins again.

The pulmonary veins transport this oxygenated blood to the left side (atrium) of the heart

The aorta is the main big artery that emerges from the left ventricle of the heart branches out into smaller arteries and eventually the tiny tissue capillaries.

**But what drives breathing?**

Breathing in humans is both involuntary and voluntary.

*Involuntary breathing*

Involuntary breathing is regulated by the autonomic nervous system which means that the breathing happens automatically without you having to think about it.

There are various receptors in the body that send signals to the respiratory centre in the midbrain (medulla and pons)

* Chemo receptors in certain arteries pick up changes in oxygen, carbon dioxide and hydrogen ion levels
* Receptors in muscles and joints
* Pain receptors and emotional stimuli which act through the hypothalamus in the brain
* Stretch receptors in the lung
* Irritant receptors in the lung

The respiratory centre in the midbrain then sends the signals via nerves to the lungs and muscles of respiration

*Voluntary breathing*

Breathing is the only autonomic process in the body that we can override consciously – the processing for this kind of breathing occurs in the higher centres of the brain- in the cortex.

**Breathing mechanics**

**Inspiration**

* The contraction of the inspiratory muscles (principal inspiratory muscle is the diaphragm) causes the chest cavity to expand, creating a negative pressure.
* The resulting flow of air into the lungs is called inspiration.
* During a maximal inspiration, the diaphragm contracts forcing the abdominal contents downwards and outwards. The external intercostal muscles, found between the ribs, are also involved. These muscles contract and raise the ribs during inspiration, thus increasing the diameter of the chest cavity. In addition to these muscles, the scalene muscle and the sternomastoid (accessory muscles) in the neck may be employed during extreme ventilation or in conditions of respiratory distress.

**Expiration**

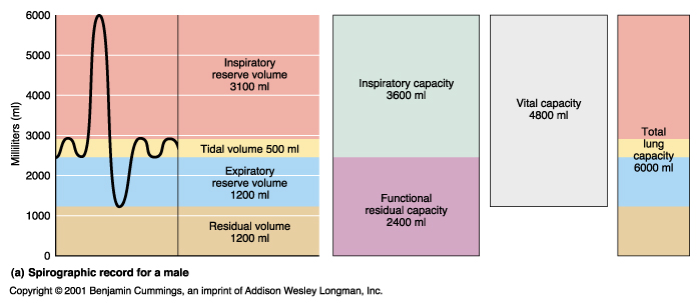
* Normal expiration is a passive process resulting from the natural recoil or elasticity of the expanded lung and chest wall. (However, when breathing is rapid, the internal intercostal muscles and the abdominal muscles contract to help force air out of the lungs more fully and quickly.) A lung can be viewed as the opposite of a sponge. When a sponge is squeezed and released, its elasticity causes it to rebound to its larger initial size. At the end of an inspiration, the elasticity of the lung causes it to return to its smaller inter-breath size. The ability of the lung to do this is called *elastic recoil.*

The degree of stiffness or *compliance* of the lung tissue affects the amount of pressure needed to increase or decrease the volume of the lung. Lung compliance can affect elastic recoil. With increasing stiffness, the lung becomes less able to return to its normal size during expiration. This happens in conditions like emphysema.

The amount of airflow *resistance* can also affect lung volumes. Resistance is the degree of ease in which air can pass through the airways. It is determined by the number, length, and diameter of the airways. An individual with a high degree of resistance may not be able to exhale fully, thus some air becomes trapped in the lungs. This happens with asthma.

Lung volumes

As a breathworker, it is helpful to understand lung volumes and lung capacity.



**Dead space:**

In respiratory physiology, dead space is the air that is inhaled by the body in breathing, but does not take part in gaseous exchange. Not all the air in each breath is able to be used for the exchange of oxygen and C02. About a third of every resting breath has no change in 02 and C02 levels. In adults it is usually about 150ml.

The average resting respiratory rate is 12- 16 breaths / minute, but because of dead space, taking deep breaths more slowly e.g. 10 breaths/minute is more effective than taking shallow breaths more quickly e.g. 20 breaths/minute. A large proportion of the shallow breaths is dead space and does not allow oxygen to get into the blood.

Total dead space can be divided into anatomical and alveolar dead space

*-Anatomical dead space:*

This is the gas that is found in the conducting system of the respiratory tract- such as the mouth and trachea where the air does not come into contact with the alveoli where gaseous exchange occurs.

*-The alveolar dead space:*

This is caused by air contacting alveoli without blood flow in their adjacent capillaries (i.e. ventilation without perfusion). As a result, no gaseous exchange can occur.

Alveolar dead space is negligible in healthy individuals, but can increase dramatically in some lung diseases.

**CO2: It’s good For You and Tasty Too!**

Over 70% of the population tested to date shows a deficiency of carbon dioxide in their system: a condition known as ***chronic hypocapnia****.* In other words, if you are like most people, you are probably “blowing off” too much CO2 when you breathe: a condition known as ***chronic hyperventilation***. Over breathing means that the rate of ventilation is in excess of what is required by the rate of production of CO2 by the tissues. This CO2 deficit causes the micro vessels to constrict, so that even though one is huffing and puffing, the vital supply of oxygen to your cells and tissues is reduced -a condition known as ***chronic hypoxia****.*

You see, we need a certain level of carbon dioxide in the system in order *stimulate the transfer* of oxygen from the blood to the cells and tissues that need it. CO2 is responsible for the dilation and the constriction of blood vessels: large and small arteries in the heart, lungs, brain, and intestines. CO2 also plays the critical role in maintaining your acid-base balance (pH).

The optimum level of carbon dioxide is in the range of 40 to 45 millimeters of mercury (mmHg) or about 5% of exhaled CO2. But, less than 3 people in 10 tested, measure more than 30 mmHg! In other words, most people are unconsciously, habitually over breathing!

This condition can trigger symptoms and illnesses such as dizziness, insomnia, migraine, poor memory, lack of focus, loss of concentration, etc. Constriction (spasm) of micro-vessels in the heart results in various cardiac disorders, because muscle tissue, and other cells don't get enough oxygen.

The constriction of micro-vessels leads to increased peripheral resistance in the vessels, and results in increased arterial blood pressure. The heart has to work harder, causing various symptoms. One may then provoke a crisis through some ordinary activity, or slightly increased stress.

In the case of asthma, the dynamics are the same: bronchioles constrict in response to lowered CO2 levels resulting from over ventilation.

A low level of CO2 leads to acid-alkaline imbalance (alkalosis) of blood and tissues. This leads to developing of atherosclerosis, arthritis, and formation of “stones,” deposits, etc.

We can now understand the symptoms of breathlessness, shortness of breath, chest tightness and pressure, chest pain, feelings of suffocation, sweaty palms, cold hands, tingling of the skin, numbness, heart palpitations, irregular heartbeat, anxiety, apprehension, emotional outbursts, stress, tenseness, fatigue, weakness, exhaustion, dry mouth, nausea, lightheadedness, dizziness, fainting, black-out, blurred vision, confusion, disorientation, attention deficit, poor thinking, poor memory, poor concentration, impaired judgment and problem solving, reduced pain threshold, headache, trembling, twitching, shivering, muscle stiffness, tension and spasms, and abdominal cramps. Many people experience the effects of over breathing without even realising it.

It turns out that periodic “overdosing” of carbon dioxide (hypercapnia) is necessary for maintaining healthy physiology. This happens for example as a result of jogging or exercise, and it explains some of the natural benefits of “aerobic” activities.

Have you ever thought why you feel the need to take a breath every few seconds? Is it because the content of oxygen in your blood drops? No! The blood is almost always 96%-98% saturated with oxygen. Our breathing is regulated, first and foremost, by the amount of CO2 in the blood, not oxygen!

When your muscles work, they burn glucose. This process produces carbon dioxide. This CO2 ends up in the blood stream, and stimulates the respiratory system in order to remove it.

When blood circulates through lungs, it picks up inhaled oxygen. Molecules of oxygen bind to haemoglobin and are carried by the blood to all the tissues and organs of the body. There, the haemoglobin releases oxygen so the cells can use it. But guess what is necessary for oxygen to be released from the haemoglobin? Carbon Dioxide: CO2! (that stuff everyone thinks is so bad!) If there's not enough carbon dioxide in your blood, no matter how much oxygen your blood might contain, this oxygen will not be released into your cells and tissues.

With conscious breathing, you can adjust your CO2 receptor, to induce optimal chemistry. Carbon Dioxide is also a natural *vasodilator*. A *vasodilato*r is a substance that directly influences smooth muscle fibres which make up the walls of the arteries and other blood vessels, and air passages as well. So we can see how higher levels of C02 actually results in better oxygenation of body tissues and cells. This in turn corrects or prevents a number of conditions related to hypertension, or dependent on vaso-constriction and tissue hypoxia. Optimal level of CO2 in the blood is 6.5%

Breathing Training can produce a significant and sustained reduction in blood pressure. With training, one can go from breathing 8 to 12 litres of air per minute, to 3-5 litres per minute. (Ideal is 2-4 litres per minute). With training, CO2 in the blood can go from 3%-4%, to 5%-6%. (Ideal is 6.5%). Utilization of Oxygen can go from 25%-40%, to 60%-70%. (Ideal is 70%-75%).

It is important to note that oxygen saturation of the blood in just about everyone, remains a constant 96%-98%, regardless of breathing rate, volume, etc. That means that “getting oxygen into the blood” is not a major concern in breathing training. Getting that oxygen rich blood from the lungs to the cells is the major concern in training.

A large range of symptoms can accompany respiratory alkalosis (over-breathing): light-headedness, paraesthesia, muscle cramps, angina, nausea, confusion. Severe alkalaemia (respiratory and metabolic alkalosis) causes cerebral vaso-constriction, muscular tetany, and seizures, ventricular arrhythmias. Treatment can vary from paper bag breathing to sedation and intubation.

It is possible to over-ventilate when obstructed airways don’t allow for rapid exhale.

If rate and volume are too high, the lungs won’t have time to deflate, and “breath stacking” takes place: increased lung volumes and intrathoracic pressure that reduces blood return to the heart. Blood pressure can drop rapidly and dramatically resulting in cardiac arrest and death! Reducing the frequency and volume of ventilated breaths can avoid this.

Regular practice of Breath Awareness and Conscious Breathing can restore natural, healthy physiological and chemical states. It is not unusual for people to heal themselves of hypertension and any number of other illnesses in as little as a few weeks. The key is daily practice.

***Did you know?***

*Mosquitoes are attracted not by your body heat, but by the carbon dioxide that you give off?*

**EXERCISE**

POSTPONING THE INHALE

(Lengthening the Pause after the Exhale)

Today we are going to experiment with "Breath Holding." We all remember as children having contests to see how long we could hold our breath. This game has certain intuitive wisdom.

Breath holding has a number of physical, psychological and emotional benefits. And being able to hold our breath for a time can come in very handy, for example when swimming (or when visiting certain public toilets!)

The natural physiological breathing pattern at rest is: inhale, exhale, pause... inhale, exhale, pause... inhale, exhale, pause...

When most people hold their breath, they hold it after the inhale and before the exhale. In other words, they postpone the exhale. But since a natural physiological pause already exists after the exhale, we are going to hold the breath at that point: in other words, we are going to postpone the inhale.

When you hold your breath, one of the things that happens is that carbon dioxide (CO2) begins to build up in your system. This triggers many thoughts, feelings and sensations, and emotions.

The longer you hold your breath, the stronger these triggers become. The urge to breathe becomes stronger and stronger, until finally it borders on panic, and you simply MUST breathe.

A healthy person at rest should be able to manage a controlled pause of thirty seconds or more after the exhale, with no discomfort. However many people begin to experience "air hunger" and the feeling that they "must" breathe after a pause of only five to ten seconds!

The practice of lengthening the natural pause after the exhale is a very healthy and revealing exercise.

You can use the second hand on your watch or clock, or you can count your heartbeats. The point is to see where your comfort level is, and gradually increase the length of the comfortable pause after the exhale.

The idea is to practice postponing the inhale... longer and longer... without experiencing any stress or strain or discomfort of any kind. This is not about forcing yourself to turn blue, or trying to break the world record! This is about gently training your system to tolerate higher levels of carbon dioxide. This has profound physiological, emotional, and psychological benefits because carbon dioxide is a volatile acid, and therefore it affects the pH balance in your body.

Carbon dioxide also acts as a vasodilator, affecting the smooth muscles that form the walls of blood vessels, bronchial vessels, and your intestinal passages. As CO2 increases in your system, it causes micro-vessels to dilate (to open and expand). This sets the stage for oxygen delivery and transfer of nutrients and metabolic wastes to and from the organs, tissues, and cells.

**EXERCISE**

This exercise is best done sitting.

Enjoy a normal inhale, and let the breath out naturally.

Them without tensing any muscles... simply wait... don't breathe in.

During this pause, notice the feelings and sensations arising in your body... And notice your REACTIONS to these feelings and sensations. Relax into them.

Look, listen and feel inwardly as the urge to breathe get stronger... Remain relaxed during this growing sense of urgency... And when the feelings begin to get too strong... simply let a natural inhale happen.

If you have to recover, that is if you find yourself gasping for air... or if you need to take several big breaths after the pause... it means that you have held your breath too long. After a few moments, try again, this time back off on the length of your pause... not holding the breath out as long.

Practicing this method several times per day (increasing the length of the pause by only 1 or 2 seconds every day or two), over the next several weeks, you can increase your controlled pause to a comfortable 30 to 45 seconds.

Many people around the world have healed their asthma using this method, and they have overcome anxiety attacks and panic disorders, as well as many other conditions...

It is a very powerful Breath Therapy Exercise/Technique!

Good luck with your practice! Remember to be gentle and patient with your system. Absolutely no forcing or straining!

**NOTES:**

**LESSON 4**:  **BREATH, STRESS AND THE AUTONOMIC NERVOUS SYSTEM**

So far in this module, we have explored the respiratory anatomy, physiology and chemistry, which have given us a greater understanding of the mechanics of breathing.

Now in this lesson, we will begin to delve a little deeper into why breathing becomes disordered and why breath awareness and optimum breathing is such an important, valuable and essential tool in our lives.

The study of the nervous system will assist with this understanding.

**The Nervous system**

The nervous system is a very complex and fascinating system in the body, and much of how this system works in coordinating all its functions has been studied and understood, but much of it still remains a mystery.

The whole system has been designed to allow the body to react and adjust to changes in the outside environment and within the body. Sensing stimuli and conveying them to the brain and spinal cord, the nervous system encourages analysis, comparisons and coordination by the body. Messages are then conveyed by the nerves to the glands and muscles for action.

There are 2 core systems that make up part of the nervous system.

***Central nervous system***

The two key components of the central nervous system are the brain and spinal cord which can be seen as the central control of the body. It receives and interprets stimuli and then dispatches impulses to glands and muscles for appropriate actions.

Higher mental faculties are centered in the brain while many automatic reflex actions depend on the activity in the spinal cord.

***Peripheral nervous system***

The peripheral nervous system is made up of all the nerves and wiring that lie outside the brain and spinal cord and allows them to communicate with the remainder of the body.

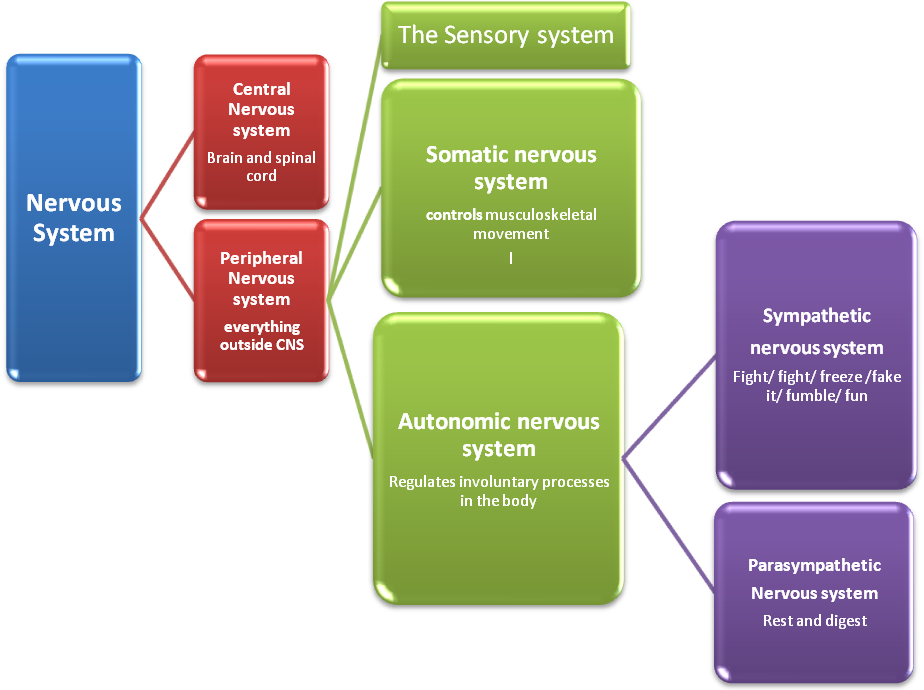
The PNS is further divided

* The *sensory* division – which sends the signals from the organs and the skin
* The *motor division* is divided into the

**Somatic nerves**: these carry impulses from the central nervous system to the skeletal muscles and the

**Autonomic nervous system.**

And will explore this in more detail now.



The word ***autonomic*** implies self-regulating–implying that it is through this part of the nervous system that the body achieves balance and homeostasis.

Whereas, the central nervous system has specific pathways, the peripheral nervous system is widely dispersed throughout the body, maintaining this homeostasis by regulating the body’s temperature, digestion, heart rate, respiration, hormonal balance, etc.

This system ( except for the function of breathing ) acts below the level of consciousness and works through the interplay of the sympathetic and parasympathetic system which have opposite effects but work together so that the body is kept in balance.

**The sympathetic nervous system.**

The sympathetic system is what kicks in when energy is needed quickly. It is a primal response that occurs to a threat, a perceived threat or even to excitement.

**Think of the F’s:**

**Fight:** you perceive a threat and you get ready to attack

**Flight:** You perceive a threat and run for your life

**Freeze**: you see a snake and freeze, holding your breath and trying to shrink to become invisible

**Fake it:** Pretending or performing puts the body in a hyper alert state

**Fumble:** When you trip and fall in front of an audience

**Fun**: when you’re partying up on the dance floor or having an orgasm

In each of these scenario’s there is a surge of adrenaline and other hormones from the adrenal gland which set in motion a whole cascade of physiological and biological events, mobilising resources and providing the body with the energy it requires to deal with the situation or emergency.

Let’s look more closely at what occurs:

* There is more **cardiac output** as the heart beats faster and more strongly. The blood pressure is raised and the pulse rate increases
* The blood supply to the skeletal muscles increase to provide them with more energy to fight or flee! The **muscle tone increases**.
* The blood vessels in the lungs dilate making more oxygen available to be absorbed and the **respiratory rate increases**. Either the breathing becomes fast and shallow or stops all together in the **“freeze”** response.
* The **pupils dilate** to get in more light
* All 5 senses and definitely the 6th **sense become heightened**
* The **blood vessels in the skin constrict** so in case there is injury, blood loss is minimised. The body is so clever! “ she went as white as a sheet”
* All the **non-emergency functions in the body are suspended** – so the blood supply is directed away from the bowel and digestive system. The digestive secretions stop. Think about how your mouth becomes dry when you are anxious about speaking in public
* **Energy is directed away from the immune system**.

**The Parasympathetic Nervous system**

Once the body and mind perceive that emergency has been dealt with and the excitement has settled down, the parasympathetic nervous system kicks in and the body goes into “Rest and Digest” mode. The levels of the stress hormones fall and the body winds down and rebalances itself.

* The **breathing slows down** and deepens
* The **muscles relax**
* The **digestive juices flow**
* The **bladder and bowel** are ready to **function optimally**
* The **immune function kicks in**
* Sleep and rest is supported and **the body regenerates itself.**

In an ideal world, the sympathetic and parasympathetic nervous system works synergistically, each kicking in at the appropriate time, keeping the body in balance and maintaining homeostasis.

Like a happy couple, these two systems dance together, supporting, interacting and balancing each other.

Watching the behaviour of a cat gives us good sense of how these systems work in balance. At any sign of a perceived threat, she becomes hyper vigilant and alert, but then she is able to completely relax and laze in the sun when she feels safe. Unfortunately, many of us living in a modern world are in a state of chronic sympathetic overdrive.

**Why?**

The study of an interesting little structure in the brain sheds light on the subject.

**The Amygdala**

The amygdala is an almond-shaped structure in the centre of the brain. It has direct links to the reptilian brain, the limbic brain, and the cortex, and is the key to our vital survival mechanisms. It has the ability to observe any situations we are confronted with, assess them as either potentially dangerous or harmless by scanning its memory banks for previous similar experiences, then make an immediate decision as to whether we are in danger. If the decision is that we are in a threatened state, it sends signals to the appropriate areas of the brain and the body to take action to avoid the danger. We have seen how this happens in our study of the sympathetic nervous system. This constitutes an early warning system that is very sensitive. This sensitivity is important because it is so essential to our survival. Problems start occurring when the amygdala becomes oversensitive.

The memory banks of the amygdala constitute a storehouse of our emotional memories and the source of our feelings and reactions to life. This function has been scientifically demonstrated by observing people who have had the connections severed between the brain and the amygdala (the infamous prefrontal lobotomy). These people become devoid of feelings or memory of feelings. They do not feel emotions such as anger, fear or rage or recognize friends or family.

**The Evolution of the Amygdala**

**The reptilian brain function**

The Amygdala originally developed from our most primitive sense--the sense of smell.

The olfactory lobes contain cells that analyze odours. As the brain grew more complex, additional layers formed to enable these cells to be more sophisticated in differentiating the various types of smells. Deep sexual urges also developed in association with this olfactory function. This leads to more specific knowledge for the brain to react with in any given situation.

**The limbic system**

Mammalian evolution bought about the development of further layers to include the capacity to experience a whole new range of inputs. These included love, hate, anger, fear, panic, anxiety, and even altruism. These functions are strongly linked to the hormonal system via the hypothalamus which then secretes corticotrophin-releasing hormones (CRH) that stimulate adrenaline and cortisol to give far-reaching effects throughout the body and more deeply imprint the emotional memories and feelings into the long-term memory banks of the fascia of the body. This sets up a library file that is cross-indexed to many associated experiences with the event. This is where the memory of a distressing event goes beyond smell.

The body also remembers all the associated factors from each of the sense organs. You may be having a strong allergic reaction to a chemical in contact with your skin--such as a bee sting. The smell associated with the chemical will be remembered, as well as any other smells around at the time. You will also imprint a memory from the other sense organs. The colour of the bee, the sounds related to the experience--the sound of the buzzing or even the song playing on the radio at that particular time--the touch feeling of the bee, or even the presence of a particular person near you at the time.

You may also have an association to the theme of the book you might have been reading at the time. All these things are computed into the memory banks to be dynamically associated with the allergic reaction to the bee sting. In the future, any of these factors could set off the beginning of an allergic bee sting reaction by the amygdala unless it is overridden by the logical thinking of the cortex.

**The cortex**

Next came the powerful tools of learning and memory. The storage of these memories and learned experiences enabled life-saving decisions to be made based on recognizing smells from the past that were good or bad. (It is interesting to note the strong relationship implied here between feelings of love and hate for someone and our olfactory memory banks. We fall in love with a person or hate them instinctively because of their smell and the associations we have stored with that smell.)

The thinking brain covers this primitive reptilian brain structure. Now we could think and plan, comprehend what is sensed, coordinate appropriate action, and discriminate between events. The cortex has the ability to dampen down the primitive emotional reaction and bring about ‘civilized’ behaviour. The cortex, when functioning properly, gives us the choice to act on our feelings or to control them. (It will also stop us from having an allergic bee sting reaction to the song that was playing.)

The Amygdala would have us hit the person who is annoying us or whose smell, looks, or mannerism elicit painful associated memories from past ‘fight/flight’ reactions. The cortex rationalizes the negative connotations of hitting the person such as the social implications or other complicating factors, and stops our emotional impulse.

**The Amygdala Associations**

The amygdala has many complex linkages to the brain that are of importance to the breathwork practitioner.

One loop goes to the hypothalamus to cause the release of CRH, which constitutes the body’s primary emergency response mechanisms. (The fight/flight reaction)

Another loop is to the locus ceruleus in the reptilian brain stem, which manufactures noradrenaline and disperses it throughout the brain. This causes a marked heightening of brain reactivity--particularly in the sensory areas. This leads to deeper memory imprinting, louder warning signals, faster reactions, and more emotionally directed brain function (sympathetic response).

A third loop goes to the cortex. This is to enable us to utilise the thinking brain to logically evaluate any situation, decide what to do, and override the ‘inappropriate’ limbic reactions.

The most important thing here is that the first two loops were the first developed and are closely associated with primitive survival. This was the most important function for 98% of our evolution time. For the last 2% of our evolution, the reptilian primitive survival mechanism is less necessary and it is more beneficial for us to have the cortex in greater control. The fact remains, however, that the first two loops to the hypothalamus (fight/flight) and the reptilian/limbic brain are much shorter, and more highly developed than our links to the cortex. This has created many problems for ‘civilised’ society because the higher centres of the brain do not govern all our emotional, reactive (allergy), and sensory functions.

Whenever the sensitive Amygdala considers stimuli to be crucial (which is a value judgment not necessarily suitable for an organ schooled in the jungle), the cortex defers from the limbic and reptilian systems because of the faster loop that bypasses the thinking centre of the brain. This gives the emotional centres enormous power to influence the functioning of the entire body-mind complex beyond the rationalisation of the logical thinking mind. This can easily be seen in times of our life when we were strongly involved with an emotion and behaved in an irrational manner. In these cases the Amygdala has ‘hijacked’ the brain. The degree to which this happens can be termed our ‘emotional intelligence’.

**When Things Go Wrong**

How does the brain get ‘hi-jacked?

1. A sensory signal comes into the body in the form of a sight, smell, touch, sound, or any combination.
2. The signal travels to the thalamus, which decides whether the stimuli should be allowed any further into the brain. (The thalamus acts as a filter to the entire world’s input. If it didn’t filter out most of the sensations around us we would be overloaded beyond belief. We should also remember that if someone is acutely oversensitive to the environment, then the real culprit may be the thalamus and not the amygdala. It may be that the thalamus is not filtering correctly and needs to be treated specifically.)
3. From the thalamus the signal goes to the amygdala, which quickly processes the signal by searching through its memory bank.
4. The amygdala then decides whether the signal is an emergency by comparing to past experiences.
5. If the amygdala declares an emergency, it triggers the hypothalamus and the limbic/reptilian brain into the survival mode.
6. In the meantime, the thalamus also sent the same signal to the cortex for processing but because that pathway is slower than the pathway to the Amygdala, the survival reaction has already started before the cortex can have a say. Hence the brain has been *hijacked*, the emotions are in charge, and rational thinking is swamped.

**Stress and General Adaptation response**

**Kinds of stress**

Stressors can come from a number of different aspects of life. Stressors can come from being exposed to life threatening or dangerous situations. For example, being involved in a near car accident, having a fire break out in the house, and encountering a bear on a hike in the mountains. These types of situations are what the body was actually designed to deal with - we were meant to either stay and fight in a situation or flee the situation if possible to distance ourselves from the danger. We have discussed this in detail above.

But stressors can also be life events that aren't life threatening or dangerous. Examples here would be getting married, getting divorced, moving from one house to another, changing jobs, leaving school, giving birth to a child, experiencing the loss of a pet, and so on. These are events that generate emotional states that trigger the physiological changes in the body even though there's no need to flee or fight.

A third source of stressors comes from our on-going daily hassles in life: being stuck in traffic, having to meet deadlines, writing exams, being engaged in conflicts with family members, and so on. There seems to be no end to these types of irritations and our emotions are responsible for keeping the stress response turned on in low gear all the time until it flares up periodically throughout the day.

**Eustress and Distress**

Not all events that are considered stressors are unpleasant in nature. Getting married and having a baby (mentioned above) or receiving an award or winning a sporting match would be perceived by most people as being events to be anticipated and joyful about. This type of stressors is known as eustress (good stress) as opposed to distress (bad stress). The difference is how you perceive the situation. How the situation is perceived is based on the thoughts and belief systems that underlie the perception. If the belief system that is triggered says "this is a good thing", then the situation will elicit eustress. If the belief system that is triggered says "this is not a good thing", then the person will experience distress.

Eustress helps keep someone on their toes and helps a person perform well under pressure. An athlete taking the foul shot that could win the game, a business person making a presentation for funding, a dancer, singer, musician, or actor about to perform on stage - all benefit from experiencing eustress. When people say that humans need some level of stress in their lives to feel fully alive, this is the type of stress they are referring to. The catch is that eustress has the same effect on the body as distress. All the same chemical and physiological sequences of events occur in the body. The good news is that eustress generally occurs over a shorter time period and therefore it doesn't cause quite as much damage to cells.

**The General Adaptation Syndrome (GAS)**

If we refer back to the original work of Dr. Selye, we come across his description of the 3 stages of the stress response. He called these 3 stages the General Adaptation Syndrome.

**Stage 1 or the Alarm Reaction**

Stage 1 consists of the appearance of the stressors which causes the body to go into an alarm reaction. The thoughts and belief systems about the situation initiates an emotional reaction and the sympathetic nervous system is engaged setting off the physiological changes involved in the fight or flight reaction. Once the situation is resolved or our thoughts about the situation changes the emotions calm down, and the body's physiology eventually returns to its original state.

This type of reaction over a short duration of time allows people to perform when required, but doesn't leave any negative long term effects. If the response to a stressor is confined to Stage 1, the body is able to handle the physiological changes. The stressor appears, the body responds, the stressor disappears, and the body goes back to normal.

**Stage 2 or the Resistance Stage**

The body enters Stage 2 when it appears that there is no escape from Stage 1. In other words, when the stressor does not go away or if the thoughts about the situation remain (or even intensify), the body stays in the alarm state over a much longer time period. This stage is characterised by a person externalising the response (exploding: becoming angry or taking it out on others) or by internalising the response (imploding: developing an eating disorder, drinking too much, smoking, doing drugs, etc.). This person may also experience poor sleep patterns and get limited rest which compounds their ability to cope with the stressor. The chemicals and hormones that are released in Stage 1 to help maintain the alertness required to deal with a situation continue to be released in Stage 2, but now begin to cause cellular damage since they are not taken out of circulation.

Everyone carries physical, mental and emotional tensions as part of this stress response and everybody has a place where they store or carry these tensions. The jaw is a popular place, so are the neck and shoulders, and muscles in the back, and also in various internal organs. But often, it’s not until this tension becomes pain or it results in a breakdown that we intervene. It’s not until stress and tension or anxiety interferes with our normal activities, with our ability to succeed, or to be in relationship, do we finally take action. Unfortunately, at those times, many people simply resort to an over-the-counter drug or a prescription medication!

**Stage 3 or Stage of Exhaustion**

People drift into Stage 3 when the stressful situation is not resolved over a long period of time and it becomes a chronic stressor. This is the stage where change in personality and mood show up as the brain stops functioning properly and it starts to make errors of all kinds - anxiety or panic attacks are common. This is the stage where any cellular damage becomes observable; where the stomach problems, the headaches, chest pain, joint deterioration, allergic reactions such as eczema or asthma, chronic conditions such as fibromyalgia and any number of other symptoms start appearing. The damage can be so severe that whole body systems crash and serious illnesses appear. Death is the ultimate result when someone cannot escape from Stage 3. But the good news is that if a person finds themselves in any of the GAS stages, it is possible to reverse the process and the potential or actual physical and emotional damage.

This is where breathwork comes in!

**THE ROLE OF BREATHWORK**

Whatever your issues or problems or challenges are, there are certain ways of breathing that can trigger your symptoms or make them worse, and certain ways of breathing that will reduce or eliminate them.

It is very exciting to discover that using breathwork; you can awaken healing energies and calming forces within you. By controlling and directing your breath, you can control and direct many so called “unconscious” reactions or “involuntary” processes. Through conscious breathing you can regulate your physiological, emotional, psychological and spiritual state. There are even ways of breathing that can produce profound peace, insight, enlightenment and ecstasy!

Breathing is THE ONLY function of the autonomic nervous system that we can override consciously by thinking about it and engaging with it, and if you play with your breath, you will quickly find that you can access various energies, and you can trigger different thinking and feeling states of being.

So you have to train yourself to turn your parasympathetic side of the nervous system back on so that the body can remember how to rest and rejuvenate. You might think that this is happening when you are sleeping but so many people have disordered sleeping patterns, nightmares that trigger the stress response in sleep! Taking sleeping pills can also interfere with the body’s ability to heal itself during sleep.

You might even think that you are experiencing relaxation during a massage but we often see people that “think“ they are relaxing, but far from it- the muscles have stored the memory of this tightness- and it feels normal. The body forgets what true relaxation is!

With breathwork, you have to train yourself to trigger the relaxation response and in doing so you can adjust and regulate a host of chemical and biological factors vital to health and well-being. And so, many medical symptoms and conditions can be improved with breathwork.

Many breathing techniques can be practised that are very powerful in breaking the stress response, the underlying belief systems that create it and that facilitate an experience of profound and deep relaxation, but today let’s focus on two very simple reflexes:

**Yawning and Sighing**

**Tension can be thought of as blocked or “stuck” energy.** And it is important to realize that you can learn to breathe away your tensions. You can also learn to appreciate and support all your natural healthy breathing reflexes such as sighing and yawning. We can use these primal reflexes to our advantage, especially when our life energy becomes stuck, stagnant or stifled.

**We encourage people to yawn and sigh on purpose**. Why wait until the body demands it? We don’t do that with food. We don’t do that with sleep. We don’t wait until we are starving before we eat. We don’t wait until we are exhausted before we go to bed. So why do you wait until your body forces you to yawn or to sigh before you do it? Why not yawn and sigh for the heck of it? Because it’s fun, because it feels good, because it’s good for you! The soft animal of your body needs to breathe—loves to breathe! Why not conspire with nature on your own behalf?

When someone yawns, do you think they are bored? Tired? Rude? Uncaring? Insensitive? Uncivilized? Are you shy or embarrassed about yawning? Get over it! Most people automatically suppress or stifle their yawn in some way. We do this out of politeness, in order not to attract attention, or in order to avoid disapproval. And so, for most people, this natural healthy reflex has been stifled, inhibited, and suppressed by so much social/cultural/family conditioning.

This is just one example of how we inhibit our natural breathing. And when we inhibit our breathing, we inhibit other natural abilities. We lose our spirit and our grace.

**Yawning is yoga!** Have you ever watched a dog or a cat yawn? Watch what it does with its spine and limbs. Watch what it does with its jaw, neck, and even its pelvis and hips. You have to do those things too. When we yawn, we need to stretch and make sounds. We need to awaken and encourage these full body yawns in ourselves and others! Yawning is a powerful and vital natural reflex. Don't underestimate or overlook the power and potential of this simple natural breathing reflex. We need to set this precious reflex free. We need to let the soft animal of our body love what it loves. And in the process set our spirit free

**EXERCISE**

It's time to get seriously playful or playfully serious... about yawning.

Practice triggering a yawn. Open your jaw and throat as you inhale and trigger the yawn. We all know how to bring on a yawn. If not, just fake it. Pretend you are yawning. And watch a real yawn come!

Yawn until your eyes water. And then yawn some more!

Give yourself a full body yawn. Open your throat and chest and belly. Stretch your arms and arch your spine. Look to the sky!

Exaggerate the yawn. Make it dramatic, theatrical! Don't cover your mouth. We are talking a big juicy Shakespearean yawn!  Stretch! Make noise! Do it again. Give yourself one yawn after another for two minutes.

How do you feel now?

Are you “buzzing”? Are your eyes watering? Are your juices flowing? Do you feel more relaxed, alive, awake, energized? What is it that has changed inside of you? Is your world brighter?

Yawn on purpose from time to time throughout the day.

**Take a sigh of relief now**. Give yourself the kind of big relaxing sigh of relief that comes after a long hectic day, when you get home to your favourite chair and you can finally relax: the kind of breath you take when all the work is done. Take a deep breath now and deliberately let it out in the form of a big pleasurable sigh of release and relief. A breath like this comes to us by itself from time to time. Do it now on purpose. Exaggerate it. Make it dramatic; make it theatrical! Notice how you feel after two or three big luxurious sighs. (For a real life adventure, try this in an elevator, in a restaurant, during a serious lecture, in court, or in church!)

**If doing a theatrical sigh of relief** or an exaggerated yawn is too big a leap for you, even in the privacy of your own home, then try this: tune into your breathing. Just look, listen, and feel. Find an aspect of your breathing that feels good or is somehow interesting. Focus on the details of your breathing and find some aspect that is organically pleasurable. Identify some sound or movement, some turning point, or a particularly interesting feeling or sensation. And then try to maximize your enjoyment of it. Deliberately take more pleasure from the simple act of conscious breathing.

**MODULE 3: THOUGHTS, BELIEFS AND EMOTIONS**

**LESSON 1: WORKING WITH EMOTIONS**

Before embarking on a journey through the landscape of emotions, it may be important to clarify at the outset the difference between “thoughts”, “feelings” and “emotions”.

A **thought** is an activity of the mind that formulates and creates an idea, opinion, memory, fantasy, plan, story line or projection into the future. When a thought occurs, it means that the mind is fixated on that activity for a particular amount of time. Thoughts can be triggered by present circumstances and are colored and directed by subconscious belief systems, memories, other thoughts, images, smells, tastes etc. Some thoughts are neutral whereas others elicit an emotional and physiological response.

It is important to differentiate between a **“thought”** and a **“feeling”**. A feeling is the **sensation** that occurs in the body as a result of the emotion. For example - you are about to go on stage to deliver a speech.

**Thought**

I’m going to fluff this up and people are going to think i’m stupid

**Behavior**

Smoking

**Belief system**

“I’m not good enough”

**Sensations**

Dry mouth, tight shoulders, increased heart rate

**Emotion**

Fear

Emotions are a fundamental part of the human experience, having a place in guiding and informing every aspect of human life from the most primal to the most evolved.

Safety, procreation, self-regulation and healing, motivation, inspiration and our interaction with our fellow human beings are all driven by emotion. Like there are primary colors, we have certain core/ primary emotions that have a certain energy frequency and a very specific purpose.

According to Chinese Medicine, the core emotions are happiness, sadness, worry, grief, anger and fear. However, there are other schools of thought that would add love, surprise and disgust to the palette of primary emotions.

It makes sense that for an emotion to qualify as ‘primary’, “natural “or “pure” it would have to

1. Have a purpose
2. Have a specific corresponding physiological response.

There has been a wealth of research done in the last few years particularly, the ground breaking work by Dr Candace Pert, to show that neuropeptides are released during different emotional states and that these chemicals are found not just in the brain, but in the immune system, endocrine system and throughout the body. So emotions previously thought to be purely psychological, can be linked to specific processes that take place throughout the body. Let’s look at each of these natural emotions and with reference to the above.

**Anger**

The primary purpose of anger is to act out against an injustice or to motivate us to change something that is not working. When we are angry, blood flows to the hands making it easier to grasp a weapon or strike out against a perpetrator, the heart rate increases and a surge of adrenaline fuels the energy necessary for action

**Fear**

The role of fear is to protect us from entering a potentially dangerous situation or to deal with a threat. When we experience true fear, the sympathetic nervous system kicks in, making us hyper alert and primed to fight, fight of flee from the situation. In his book titled “Emotional intelligence” Daniel Goleman, identifies surprise as a core emotion, but the facial expression of someone who is surprised, gives us a clue that surprise is a less intense form of fear.

**Happiness and Love**

Happiness is a state of being that offers the body a rest from the other emotions that expends a lot of energy. In this state of being, endorphins and chemicals are released that have shown to modulate healthy gene expression, strengthen the immune system, and facilitates regeneration. When are happy, it is easier to feel tenderness and love. These emotions foster human connection, harmony in relationships and society.

**Disgust**

Like fear, the emotion of disgust is protective. For example, if we see or smell something that is foul or poisonous, the curled upper lip and wrinkled nose is a primal response of the body the protect against an offensive substance- the nostrils close off to prevent poisonous fumes from entering it and the lips snarl simulating the spitting out reflex.

**Sadness and Grief**

These emotions typically create a state of “low energy” or guiding us to become more quiet and introspective and allowing us time to see and integrate the gift or lesson of the loss, but more importantly, it fosters a feeling of compassion and empathy. When we know and experience loss and suffering, we can identify with the pain of another. Sadness stretches the heart, increasing our capacity for love and compassion. The energy of sadness is close to the energy of gratitude- there is sweetness in sorrow.

Interestingly the following emotions have the same energy resonance:

Anger/determination, sadness/gratitude, fear/excitement

Based on the study of these natural emotions, we can clearly see that by virtue of the specific role of these emotions, they cannot be labelled as ‘positive ‘or ‘negative’. All natural emotions are healthy because of the role that each of them has to play in our lives.

Through time and evolution and as we moved away from nature, we became disconnected from the purpose of our pure emotion and began to judge it as good or bad , thereby striving to retain the “ permanent feeling of the “ good “ emotions and suppressing or denying the uncomfortable ones or the ones that we perceived to be negative of bad.

Charles Eisenstein expands on this concept in his book “Sacred Economics”. Eisenstein reminds us of the time of the hunter gatherers who found their gods everywhere in nature and who lived according to it laws, cycles and rhythms. There was no aspiration to rise above nature or conquer it. That aspiration arose with the domestication of plants and animals and the wild realm became separate disconnected from and judged by the domestic realm. Natural forces became threatening – something that needed to be ‘tamed’ for the good of humanity.

According to this theory, it then makes sense that natural emotions were seen as part of our wild nature” and that it was a forces that needed to be contained, suppressed and managed. As society became more complex, so did the emotions, and like colours, they began to mix and blend to form more complex emotions like shame, guilt, anxiety, frustration, devotion, contempt, amazement etc.

Conflict within ourselves and in our world, illness and disease, wars and disharmony are fed by the fact that we are living in a time when our emotions have become suppressed, layered and confused by the complexities of our belief systems, life experiences and conditioning.

Amazing research is being done by people like Candace Pert and David Spiegel to show that the ability to express emotions like anger and grief can improve survival rates in cancer patients. And these studies are clearly indicating that because emotional expression is linked to a flow of peptides in the body, chronic suppression of emotions results in a huge disturbance to the body-mind complex.

Emotion is purely ENERGY IN MOTION so when we create a blockage to the flow of emotion, and we suppress its natural movement, the stress it creates in the body through the disruption of these peptides is what leads to pain and dis-ease.

Freud was on to this even then, when he interpreted depression as “anger directed at oneself”.

Another modern day physician, Dr Sarno, has also done fascinating work on the subject of *“Narcissistic Rage*” which manifests as chronic back pain in people who show absolutely no structural defects on x ray.

Pure emotion, when it is allowed to be felt, experienced in its pure form causes a release of neuropeptides which last for no more than 2 minutes and then naturally subsides. If the “feeling” lasts longer than that, it means that the emotion is being contaminated or fed by a thought or story or belief system.

Tying into this is the research done on people who suffered or experienced a traumatic event. It was found that what differentiated those who suffered from post-traumatic stress disorder from the ones who didn’t was the experience of being able to take action in that moment, whether it meant, running away, or making an attempt to find help or assist in that situation.

So in that moment, the intense emotion was able to be channeled and moved into an action and the suppression of the emotion and the consequences thereof was prevented.

**Why is all this information relevant to the breathworker?**

Conscious connected breathing is an effective tool for promoting relaxation and awareness. Data from a wealth of research is now showing that conscious breathing has very powerful effects. Changing the rate and depth of breathing produces changes in the quantity and kinds of peptides that are released from the brainstem, allowing the peptides to diffuse quickly through the cerebrospinal fluid and restore the body’s natural balance. Many of these peptides are also natural opiates or pain killers which is why conscious breathing is such a powerful pain relieving technique.

Breathwork facilitates a level of awareness of the sensation that the emotion is creating and the moving into the sensation without judgement and attachment. Fully experiencing diving and relaxing into the sensations in the body allows space for the energy to move, flow and dissipate, preventing the buildup and accumulation of pathological stress and emotion. It allows us to practice being comfortable with intensity and eventually ecstasy.

**EXERCISE**

VIVATION

Vivation is a specific breathing method developed by Jim Leonard for integrating all human experiences into love. It is a "meditation in action” He developed The Five Elements of Vivation, in 1979, as the basis for teaching people the skill of causing integration for themselves at the feeling level. The Five Elements are the essence and definition of Vivation. They form the foundation for our knowledge of how Vivation works. They are the essential components of the skill itself.

Six Lessons from Vivation

Find a partner. Do the process!

1. Remember The Three Basic Points.

The three things to remember are the things that you actually "do" during the process. In other words, at any given moment, you are focusing on one of these three points.

1) Exploring the Subtle Changes

2) Inhaling Through the Strongest Feeling

3) Enjoying This Moment as Much as You Can

This is all about becoming more conscious of the network of feelings and sensations in your body. Every thought and every emotion has a corresponding pattern of energy that you can feel in your physical body. No matter what you are experiencing, there is a feeling somewhere in your body that is associated with that experience. Scan thorough the body and notice which feeling stands out from all the rest. Place your attention there and breathe into that place, breathe from that place, breathe with that place. Then, be aware of the subtle changes that occur from moment to moment. Deliberately generate a positive attitude. Remember the intention is toward enjoyment.

2. Circular Breathing

Breathing consciously will intensify your enjoyment dramatically. Breathing consciously helps you to trigger relaxation and dissolve negative emotions. Breathing consciously brings you more into the present moment, energizes your nervous system, and fills your body with pleasurable feelings of aliveness.

Conscious Breathing develops an 'energy level rapport' with whatever you are feeling in your body. During the process, you make use of full and fast, full and slow, and fast and shallow breathing patterns depending on what is required at any given moment. The idea is to breathe in a free and unrestricted way: an internal dance with life.

3. Complete Relaxation

This is all about learning to relax, regardless of the situation or circumstance. It is about re-programming the tendency to contract, especially in the presence of your strongest, most disturbing feelings. It is during those moments that we need to relax our body and our mind the most. This will accelerate integration and resolution of any negative material. Not only in a session, but also in daily life.

4. Awareness in Detail

Awareness is the key, not only in Vivation but every other healing modality as well. We are referring to awareness of the actual feelings and sensations that arise in the present moment. This is the first step in healing. Be constantly aware of the feelings and sensations in your body. Give priority awareness to the 'strongest feeling'. This is the outside layer of the onion peel that is surfacing to be re-integrated into our overall energy system. This feeling or sensation may be connected to an emotion, a thought or a memory. You can remember and practice this lesson during any activity or event.

5. Integration into Ecstasy

Integration can be thought of as the 'Skill of Happiness'. It is the essence of Vivation. Simply put, integration is the skill of enjoying all parts of life. This includes enjoying those things that you already enjoy even more, and enjoying the 'seemingly un-enjoyable' things a little bit more than you might expect. People normally think that to be happier means that something has to change, to get better, or be different in some way. This is not the case. The art of integration is about focusing on what is enjoyable in whatever you are experiencing, and maximizing your enjoyment of that. The skill of integration is experiencing what is, as it is, and finding a positive way to relate to it. In Vivation this is called changing 'context' or perspective. A shift happens at the body level without the need for mental understanding. When the shift happens at the feeling level of the body, the mental perspective changes automatically to one of choice, resourcefulness and empowerment.

6. Do Whatever You Do, Willingness is Enough

Lesson six is all about cultivating "willingness." You might think of this as the positive intention to "do your best" under any and all circumstances. This has two components: the willingness to feel the feeling in your body honestly, and the willingness to find some positive way of embracing it. This is the skill of allowing things to be the way they are, of giving up all resistance to 'what is'. Embrace every part of your internal and external experience. This triggers the healing process within the body and mind and awakens us to the state of oneness and wholeness.

**NOTES:**

**LESSON 2: BELIEF SYSTEMS**

**What is a belief system?**

Beliefs are imbedded thoughts, feelings ideas, patterns of thinking that we have about ourselves, others, the world**.** Beliefs become the bedrock, the foundation upon which we filter experience and know "the truth...” They are the lenses through which we relate to ourselves and the world.

Whether loving, grudging, fearful, affirming, or judging, conscious or unconscious, everyone has belief systems - EVERYONE. They are normal and part of the human experience; we need then in order to survive, to operate in the physical world.

The thought that life evolves, that marriage is sacred, that children are precious, that envy is bad, that jealousy is low frequency that love is monogamous, that love is unending- they are all beliefs.

When our beliefs are conscious- when we are aware of them, they structure our responses to life experiences; they give form to thoughts and actions. However, when our beliefs are unconscious, we react- with no thought. Life experiences become the trigger and our thoughts are filled with the words like "it makes me...”, “if only ...”, ‘they shouldn't....”, “or “it’s hard...”.

When we react ,we tend to see ourselves as the victims- life is doing this to us, to others- because of qualities "I am ugly” , “ I am stupid” , etc., or events- “I was just lucky”, “you can't trust men, the government always lies, etc. “ We often experience feelings of lack, of not being appreciated or that life is hard.

Regardless of whether you believe that yoga is transforming, that love is all there is, that what you eat determines who you are- that if you love me, you will be only with me, that you make me happy - they are all beliefs.

It is tempting to say that some beliefs are the TRUTH and some are LIES. This is the way we support our own beliefs, and discount others. If the belief system of another agrees or aligns with ours, it is valid and true. If it conflicts with ours- we discount it, dismiss it as unrealistic, not TRUE, a LIE.

Belief systems can become pathological when are they become fixed and hard wired and can manifest in physical illness, dysfunctional relationships and suffering - when we become attached, defined and identified by them. It is then that we need to be alerted to the fact that we have become separated from our essential self and we have the yearning to return to a place of peace, safety and equanimity

Working with, identifying and breaking free from belief systems and patterns is very powerful as it allows us to live from a more authentic space.

**How are belief systems/ powerful personal truths created?**

Here are several threads, or possibilities to consider:

* **Inherited from DNA**- There is research both scientific and psychological to suggest that we can literally inherit a belief: Refer to Bruce Lipton: The Biology of Belief and Bert Hellinger: Family Constellation Therapy- Love's Hidden Symmetry
* **Past life factors**—the soul carries experiences, below conscious thought from one life time to another
* **Womb experience**- babies are conscious beings and are able to while still in the womb, learn, experience emotions and develop beliefs about themselves, life and the world as either a safe or fearful place. Babies are affected by the external environment of the mother, the internal state of the mother, her reactions to world events, the biochemical balances within her body, and whether she herself is feeling safe and loved. They are also influenced by whether the conception is conscious on the part of the parents as well as the emotional bond between the mother and the father. Babies perceive through the mother, they sense and feel as one being.
* **The Birth Experience**
* **Family conditioning**
* **Religious conditioning**
* **Cultural/ Social conditioning**
* **The use of parental approval/ disapproval**
* **Specific negative experiences** that have negative or positive emotions or responses associated with them- often created by the reaction of significant others to something we do, or experience

As belief systems develop within us, they begin to filter our life experiences, further embedding themselves within us, first at an unconscious level. Then with maturation, education and a commitment to personal growth and consciousness, many of these beliefs move from unconsciousness to consciousness.

Whether conscious or unconscious, our beliefs grow, strengthen and take only from life experience those events, thoughts and feelings that support and validate their existence. When we find ourselves reacting strongly, embracing or rejecting a thought, a person, or an action quickly and intensely it is a great signal to us- that a belief system has become activated and is actively strengthening or defending itself.

Always remember- at its heart belief systems are dedicated to proving their truth; either through experiences that validate - for example a thought that includes language such as "I knew I was right", feelings of self-righteous satisfaction, or thought that dismisses e.g.: "that's so dumb", a thought that diminishes- " I was just lucky, how can he love me?” Etc. As the belief grows, it spreads its roots everywhere, in our languaging, actions and feelings- they are all connected and integrated into our belief systems. Our beliefs are vigilant, always looking to confirm, and embed even more.

When belief systems become hardwired, the brain automatically filters out and forgets any counter evidence, and carefully retains any supporting evidence for the belief .They search for agreement and support to validate their truth.

**Some of their principle unconscious strategies are:**

1. **The law of Attraction**: You will tend to attract people to you who will act according to your belief or who think or “believe like you” For example, if you believe you are ugly, you will tend to seek out or attract people who will tell you that you are ugly. . If you believe abortion is wrong- you will bond with like- minded people who agree with you.
2. **The law of Projection**: Your friend does not return your phone call- you have thoughts- he must be interested /involved with someone else, I am not important to him as I once was, she doesn't love me etc. You put onto others your own thoughts of unworthiness; your belief about yourself finds confirmation in your projection onto the actions of others.
3. **The law of Manifestation**: You set others up to act as you believe. What you focus upon you manifest- therefore when you are fearful, when you believe the world is unsafe, you find yourself only paying attention to the news that focuses upon danger, you are fearful where you walk, who approaches you- you interpret the events and actions outside of yourself in ways that support your beliefs- eg: people are selfish, no one cares, I am alone- when you hold on to these thoughts, they strengthen the beliefs, they allow no room, no possibility for another thought- I am connected, people are generous- what energy and thoughts you put into the world, are reflected back. The world and your life experiences are a mirror that reflects back to you your beliefs.

**Beliefs may be either positive or negative:**

**Examples of beliefs**

* I don't fit in,
* I must earn love, happiness etc., to deserve it.
* People are kind and generous
* The universe is abundant
* I am connected to everyone and everything
* I am alone in the world
* There is no such thing as past lives
* The people in my life circle are my soul family
* Each of us comes here with a mission, a soul purpose
* If you really knew me, you wouldn't love me
* You make me happy,
* I am only complete with you
* I am a victim of abuse
* My husband/wife/partner betrayed me

**Belief Systems are circular**:

Belief » thought » feeling » an action.

Behavior » reinforces the belief » thought » etc. The more opportunities the belief has to be activated and reinforced, the stronger it becomes, the more embedded it is and the more actively it filters future experiences.

How do belief systems manifest within us? Belief systems can manifest in positive ways- you can believe in a life of service and dedicate you to improving the lives of others, protecting the environment, creating more supportive experiences of safety and love for children. They can also manifest in more subtle, indirect and negative ways: physical illness, depression, relationship challenges as you attract and seek the rescue triangle of: victim, persecutor, rescuer, and challenges in everyday life with relationships with yourself in eating disorders, addictions, and anxiety.

**The great news!!!** You can through conscious awareness change this pattern. The change is more a form of replacement therapy combined with “belief starvation".

*"Beliefs exist as energy structures in our mental environment—our mind. Since beliefs exist as energy, they cannot be destroyed. Beliefs can only be transformed. And we do that by transferring their energy to another concept: one that serves us better, one that better allows us to achieve our goals or fulfill our desires.* **“**

You starve your belief that does not serve you by changing your thoughts, your habits- with clear intention, focus and action.

In this process, we are suggesting and inviting you to embrace a process that begins within yourself. It is very easy, as the "healer", the coach to focus upon fixing your clients. The most powerful and important work that you are invited to begin- is within yourself. We are suggesting here a focused, dedication to being this journey- first within yourself. Become the model for your clients- be able to speak from the first person- make I statements. As you begin this journey of change, your own belief systems undergo a magical transformation: some become dormant; some shrivel until they no longer have the capacity to filter and affect your life experiences. It shows, in your languaging, in your choices, in your presence. Your being-ness becomes an agent of change for yourself, your family and your relationship with life.

There are many roads, many paths to choose from. Most of these paths or roads share some common characteristics:

**1. RECOGNIZE**: A recognition or awareness of the belief

**2. DESIRE:** A desire to change the belief

**3. COMMIT:** A decision to change

**4. ACT**: Take action

**5. REPLACE**: Replace the belief system that does not serve you with one that supports you to be even more of who you truly are.

This journey is easier, when in the beginning you seek out a coach or a mentor to support you in identifying your belief systems and ways which will work for you to transform and replace them.¹

**EXERCISE**

RECOGNISE YOUR BELIEFS**:** No matter what clothes they wear.

**1. Read** the following phrases/thoughts. Indicate whether you use it or think it, whether it is voiced or unvoiced.

**2. Rate** the frequency of the thoughts

**never – 1, seldom – 2, sometimes - 3, frequently- 4**

He/she should.....

I am never going to.........

No matter how hard I try, it’s not enough

I always do my best

They don't appreciate how hard I work

I deserve more money.......

My husband/wife/partner doesn't appreciate how hard I work

My husband/wife/partner/boss is never satisfied

People on welfare should just get a job

Poor people just don't work hard enough

..........people are just lazy

Men and women can't really be friends

Pit bulls are dangerous

GMO's are dangerous to my health

Eating animals is un-ethical

They would be successful is they just worked harder

When women say no- they don't mean it.

Add phrases or thoughts that you notice within your self

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Read the following responses - indicate which ones, you use:

Rate the frequency with which you use them

**never – 1, seldom - 2, sometimes - 3, frequently - 4**

1. You make me so mad when..........

2. I would love to but.............

3. I am late because..................

4. If you loved me you would...............

5. I will do it when.................

6. If only..............................

7. add three of your own

**For the next 3 days, carry a small notebook with you everywhere.**

**Step 1**. Pick your top 2 thoughts and responses for the next 3 days your task is to write down, each time you observe yourself, thinking the phrase or thought, or through your thoughts or actions strengthening or defending your belief and what the person or situation is.

**Step 2**. At the end of 3 days review your journal- what pattern do you see. What are your "core beliefs?"

**Step 3** changing the belief: select a replacement phrase or word: for example- You identify that you experience yourself thinking: “If he loved me, he wouldn't yell at me" your belief is- that when people love you they do not yell at you. You can change your experience, and change your belief by:

1. Take a cleansing breath

2. Consciously choose:

A different thought

An affirmation

A question: such as:

What is the highest priority here?

What is he really saying here?

**NOTES:**

**LESSON 3**: **THE SUBCONSCIOUS MIND**

There are two operating systems at work in our lives at any given time:

The conscious mind is what is at work when we are in our normal waking state. It is aware of time, is responsible for learning, reasoning and making conscious choices. It is the mental activity that we are aware of. The mental activity that occurs in the conscious mind, including emotional reactions can be seen and measured by modern imaging techniques. For instance, the prefrontal cortex lights up when decision is being made, and a different part of the brain light up when one is engaging in a creative activity.

The subconscious mind on the other hand is primal, instinctive and impressionable. It is where we store every memory, sight, sounds, smell taste that we have ever experienced. It is through these experiences and through conditioning that all our beliefs are created. Although some beliefs are conscious ones and the subconscious mind is where many of these belief systems are housed (see Module 3 lesson 2).

The interesting thing is that the subconscious mind is not just in the brain but resides in every single cell in our body.

Our mind-body systems are programmable in the same way that computers are. Your mind is not your brain. The CPU chip is not the same as the memory in a computer. Your brain is a physical mass, the mind is an energy field that permeates and surrounds your whole body. Everything is energy. And every cell of your body is a programmable computer chip—capable of input, output, and memory storage.

Most of the deep impressions that occur in the subconscious occur at a very young age- some of the imprinting or hard wiring occurs even before we are born and the effects of this imprinting influences or thoughts, behaviour, addictions and biology without us even being aware of what that imprinting might be.

By the time we reach adulthood, most of this imprinting has occurred and the neural pathways set.

According to Bruce Lipton in **Biology of Belief**, the reason for this is quite interesting. Between birth and two years of age **Delta** waves in the brain predominate which facilitates the absorption of a huge amount of sensory imprinting and it is also when we are most impressionable.

Between the ages of two and six which, **Theta** waves start to dominate which also allows for deep imprinting and absorption of information. This is why kids of this age are able to able to pick new languages so quickly!

With breathwork, it’s very easy to drop into the theta state and in fact, the first re birthing centre was called Theta house!

Hypnotherapists drop patients into delta and theta state.

Subconscious beliefs are often the reason that we experience challenges manifesting our conscious desires. Will power can temporarily override a subconscious program. When the program is not re-written, little change will occur—the old pattern will most certainly return and win in the end.

As humans evolve the conscious mind sees itself as the master of instincts and desires however most of us are in fact, still asleep and the unaware servant tothe subconscious.

The conscious mind is volitional. The subconscious mind is habitual and reactive. The conscious mind sets goals and judges results. The subconscious mind, below the awareness- maintains a flowing connection to muscle movement, autonomic activities such as breathing, heart rate, digestion and production of hormones and chemicals of fight, flight, pleasure and pain**.** The conscious mind thinks abstractly. The subconscious mind reacts literally. The conscious mind is time bound—separating past and future. The subconscious mind is timeless, thoughtless and seamless- the past automatically triggering reactions in the present.

The conscious mind has limited processing capacity (about 2,000 bits per second). The subconscious mind has expanded processing capacity (about 4 billion bits per second). The conscious mind has very short term memory (about 20 seconds). The subconscious mind has very long term memory. It remembers every single thought, wish, attitude, belief, event, or experience.

The conscious mind usually holds 1-3 events in its awareness**.** The subconscious mind can process thousands of events at the same time.If your conscious mind desires a goal that is not aligned with the stored memories in the subconscious/body memory, guess which will win? The most effective and long lasting changes are created when we bring the conscious and the subconscious/body minds into alignment.

We have both conscious and subconscious beliefs. Conscious beliefs are affected by education, information, and persuasion. Subconscious beliefs are like hidden software programs and our day to day experiences areoftenautomatic printouts of those programmed beliefs. For most of us, our subconscious programs**,** determine that we spend most of our lives reacting to situations and circumstances, rather than responding to or creating them.

Most people are surprised to learn that almost all of their behavioral and thought patterns are directed by their subconscious mind, not their conscious mind. Have you noticed that you can drive a car while day-dreaming? It is estimated that as much as 99% of cognitive activity is non-conscious! -this is an example of unconscious competence.

In a way, our subconscious mind is more child-like than it is wise. We need to give it conscious instructions. We can’t depend on it for advice or understanding. When looking for advice, direction or understanding we invoke our conscious mind .We can turn to something like our ‘super-conscious’ mind for instructions and advice, and also to get confirmation about the wisdom of our conscious choices and decisions. Breathwork is the perfect tool for this.

If you have a conscious desire that you are not manifesting, then you may have a subconscious belief that is in opposition to it. If there is a conscious intention but there is difficulty in achieving it, then there may be a subconscious belief that is in conflict with it. If your conscious and subconscious minds are not aligned, then fulfilling your heart’s desire will be a constant challenge, and living your dream will be next to impossible.

Habits of thinking, habits of feeling, emotional and behavioral habits…these things can either weaken or strengthen our creative and healing abilities. For example, constant anger can causes illnesses like arthritis, heart disease, and cancer. Anger is an immune suppressant. It has been said that generating anger is like drinking poison and waiting for someone else to die!

Health issues are often (if not always) associated with our subconscious beliefs. Symptoms are messengers. We shouldn’t automatically try to kill them or eliminate them with drugs or surgery. Instead, we can learn what they are trying to teach us. We can download new potential beliefs, new software programs, for example by using affirmations, prayers and breathwork!

There is no such thing as an “incurable” disease. If you are going to doubt anything in life, doubt your own limitations! We are divine beings having a human experience. It’s time to release yourself from the self-inflicted prison of your own thinking. It’s time to clean up your subconscious mind!

You can communicate with your subconscious mind in order to rewrite outdated programs that no longer serve you, and align them with your current desires and goals and the brain actually responds to that! Recent studies have been able to demonstrate the plastic nature of the brain- and the phenomenon that occurs when we break down old beliefs to create new beliefs, thought patterns and behavior is called *neuroplasticity.*

In the practice of Breathwork we focus on changing the negative or limiting subconscious beliefs that lead to our suffering or limit our freedom and power. We clear the beliefs that block our awareness of the love, joy, peace, and pleasure in life. Breathwork involves rooting out self-sabotaging beliefs, and replacing them with self-supporting beliefs

It is important to realize that an old deep seated program is no harder to change than a new shallow one. Energy is energy, whether it’s been held in the mind for three minutes or three decades. Like a computer file: you can open it, edit it, or delete it in the same amount of time, whether it has been stored in your hard drive for ten minutes or ten years.

In breathwork, we consider difficulties are actually opportunities—opportunities to grow. AS BREATHWORKERS WE have learned that very often, the big challenge you want to get rid of may actually be the solution to a much bigger challenge. What may seem to be an inability to do one thing may actually be the ability to do (or to avoid) something else. So it may not be in your best interest to remove the challenge without realising the purpose that it serves.

**RELAXED SUBTLE ENERGY BREATHING**

Relaxation is not only a fundamental practice in Breathwork: it is a vital life skill!

In Breathwork and in life, the ability to relax and let go allows more love, peace and joy to flow through us and into our lives. When you relax, something opens. Open relaxation is an invitation for energy or spirit to naturally move, heal, uplift, and transform us.

It's one thing to be able to relax when everything seems to be going your way, when the children are healthy and happy, when all the bills are paid and you have lots of money in the bank, when you've passed your final exams, when your head is clear and your belly is full, and when everything feels right with the world.

It's quite another thing to be able to relax when the proverbial poop hits the fan! It's quite another thing to be able to relax when someone is insulting you or criticizing you, when you are upset or in pain, when you are lost or confused, or when things don't seem to be going your way. But it's at these times that relaxation, letting go, can work real magic!

How deeply can you relax? How quickly can you relax? In the face of what situations or in the middle of what circumstances can you relax? When you become tense, or when you experience a shock or a pain, or when things don't work out as you planned, how easily can you let go? How quickly and completely can you fall back into a state of ease?

Learning to relax and breathe at the same time is very important. If we struggle or use too much effort to breathe, we use up all the energy we get from the breathing, and there is no net gain. When we contract our muscles, we interfere in the circulation and absorption of subtle energy. Muscular effort eats up energy that could otherwise be used for healing or creative work.

Struggling is an unconscious habit for many people. We struggle to be born, we struggle to be understood, we struggle to be accepted and approved of. We struggle to find a partner, we struggle to pay the rent (or to make the payment on the new Porsche!), we struggle to get ahead, we struggle to overcome obstacles.

Very often (more often than you think) this struggling is totally unnecessary, and in fact it is very often the main obstacle to health, happiness, and success. Struggle is opposite of relaxation, and yet many people actually struggle to relax! (In a world where people believe that war leads to peace, what else can we expect?)

And so today we want to focus on relaxed breathing. This is a key to bringing a new level of relaxation into our lives, our relationships, our work, and all our activities.

If you are contracting muscles or using force to breathe, you will need to rest and recover after the exercise. And so the idea is to relax while you are breathing. Today, make relaxation the central aspect and main focus of your Breathwork practice.

**EXERCISE**

It's good idea to lean back in a chair to do this, and an even better idea to lay on the floor.

Start out by using a couple of big "coming home breaths." Give yourself a couple of big luxurious **sighs** of relief. (Anyone hearing those delicious soothing breaths should be jealous of your pleasure in that moment!)

Release all your joints and muscles as you release each breath. Allow everything in you to become soft and open, free and loose...

Now begin to breathe in a connected rhythm... breathing continuously into a soft open relaxed body. Breathe in and out softly without any breaks or gaps or pauses between the inhale and the exhale, or between the exhale and the inhale.

Puddle out as you are breathing! Imagine your body like ice cream melting in the sun... Imagine your body turning into a puddle on the floor...

Let the breathing be very subtle yet very conscious and deliberate. Get the feeling of the breath turning like a wheel... smooth and steady... soft and gentle... free and easy...

As you are breathing in this circular connected way (thru the mouth or nose is ok), scan through your body looking for places to soften and loosen... Inviting small muscles, large muscles, and all your joints to release and let go... again and again, each time as if it's the first time. (No matter how relaxed you are, you can always relax more!)

You want to relax until that the spaces between your cells open up, and the energy can get into all the cracks and crevices of your being. You want to relax until **that** you can feel the push and pull of energy streaming through your limbs with each breath.

Do this for ten minutes in the morning...ten minutes at night...and ten times during the day for two minutes, and you will fall into a place of peace that passes understanding!

Stretch and move before moving on to your day!

**MODULE 4: BREATH AND ENERGY**

**LESSON 1: UNDERSTANDING AND WORKING WITH ENERGY**

So far, we have examined the mechanics of breathing, we have explored the physical apparatus that gets activated with the breath. We have also studied the physiology of breathing and now have a better understanding of what occurs on a chemical level when we breathe.

In Module 3, we delved to the world of thought, emotions, belief systems and the subconscious mind and the how we can harness of the breath to work through emotions let go of habits and patterns that no longer serve us. At this stage in our study and own breathwork practice, in fact the first breathwork session, we inevitably drop into an energetic experience. The experience of energy pulsing, moving through the physical body becomes a very tangible experience. Then it makes sense then that our everyday breathing patterns influence the movement of energy through our body and that if our breathing pattern is stuck and disordered, it influences the way that energy moves and is accessible to the body.

When we can fully open the breath and re-pattern it is so that it is full, natural and flowing we can enhance the energetic experience. We can use the energy of the breath to its full healing potential, accessing vitality and creativity**.**

**So What Is This Energy?**

It is the pulse of life that permeates every living organism and sustains all living beings. It refers to that which is infinitely everywhere, the essence of vitality that fills us up and keeps us alive.

Therefore, it is important for the breathworker to understand the concept of life force energy and how it can be harnessed, utilized and channeled with breathwork. In its natural state life energy is free flowing and is readily accessible. It is our beliefs, experiences and habits that result in restriction of life force energy. There are many ancient cultures that have recognized this life force.

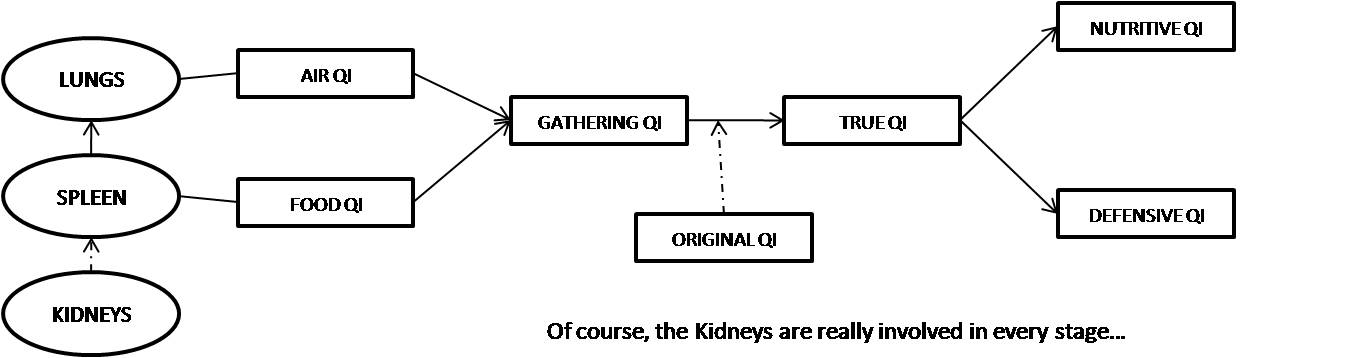
The Chinese culture has named this energy – Chi. Vedantic/Yogic philosophy calls it Prana. Hawaiian culture recognizes it as Mana. In Tibetan Buddhism it’s called Lüng and in Western philosophy it’s referred to as Vital Energy.

It interesting to examine the interpretation of this life force from different cultures and perspectives as each of them add a different layer of understanding to this concept.

**Chi**

According to Chinese medicine each individual is born with “Inborn Chi “also known as original, essential or vital Chi. This “congenital essence” is thought to be stored in the kidneys. It is believed that as we get older, this inborn chi diminishes.

However, we also have the ability to receive “acquired chi” through breathing and life essence in food.



Chinese medicine is also based on the idea that Qi carries this life force energy through pathways or channels in the body called “meridians”, each of these meridians corresponding to various organs and gland in the body. If the flow of energy gets blocked or stuck, it would manifest as pathology or dysfunction in that particular part of the body. The use of herbs, food therapy, acupuncture and breathing and movement therapy such as Qi Kung are used to open up and clear these pathways.

***Interesting info: In 1997, the US National Institute of Health issued a statement that there was no convincing evidence that” concepts such as qi are difficult to reconcile with contemporary biomedical information ”And today, ( 11 September 2012) from online medical journal Medpage , the headline is “ Acupuncture does help for chronic pain” and goes on to say“ Acupuncture provides more relief from various types of chronic pain than does usual care and should be considered a valid therapeutic option”***

Western medicine is only now starting to recognize what ancient systems of medicine have known for centuries!

Chi Gong is a very beautiful and powerful practice that involves coordinated breathing and movement as a way to cultivate and balance chi.\*

**Mana**

In Hawaiian culture, there is a similar belief of this energy force that animates living things but that can exist in objects and places and that can be harnessed for healing.

**Lüng**

In Tibetan medicine corresponds quite strongly to Ayurveda and describes “ lüng” as the essence of life itself that animates and sustains all living beings”

**Vitalism**

Vitalism became part of the theory of Western Medical philosophy whenHippocrates advocated the idea of the 4 humors. AsWestern medicine started to become more linear, it moved away from seeing the human body as a integrated whole, connected within itself a microcosm of the universe, a reflection of the greater whole that the universe is.

**Ayurveda**

Ayurveda “the science of life” is an ancient system of medicine that originated in India. It adds an interesting dimension to the understanding of this “life force” or “Prana” as it is referred to, that can be particularly useful in breathwork.

The basis of this understanding is that there are very specific currents or patterns in which energy flows in the body- in other words energy flows in specific ways to support our physiology, balance and homeostasis.

According Vedic Science, when there is more prana outside than inside the body, it makes one feel restless and anxious.

A peaceful, happy and balanced person keeps more prana within the body.

One definition of the word ‘yogi’ is one whose prana is all within his body.

Too little pranic energy within the body results in the feeling of lethargy, fatigue, a lack of motivation and drive and susceptibility to illnesses.

Physical toxins, and emotional blocks and restriction displaces prana within the body and creates an interference in the free flow of this energy through it.

According to the science of Ayurveda, there are 5 forms of pranic currents or “Vayu’s”/ flow.

* **Prana Vayu.** This is considered to be the primary pranic current that provides the basic energy that drives us in life. It is related to the taking in of energy from inhalation of air and food as well as the reception of sensory impressions and mental experiences. It is felt as the upward surge of energy that is felt when inhaling. The awareness of this energy is in the chest.
* **Apana Vayu**. This is the cleansing downward flowing current that comes with the exhalation and the elimination of waste products through all the excretory systems. Carbon dioxide is released with the exhale, physical wastes are returned to the earth to be recycled and negative energy is also transmuted by the earth. Urination, defecation, ejaculation and childbirth are all considered to be part of the apana current. When we exhale, it is also an opportunity to release old stuck patterns, seeing every new breath as a new beginning, a fresh experience.
* **Udana Vayu**: Udana literally means’ upward moving air’. This corresponds to the sound production, the production of speech and the throat chakra and is powerfully activated when vocalizing creatively. It governs the growth of the body and consciousness, enthusiasm and will.
* **Samana Vayu**: This current is centered around the solar plexus and is related to the fire element. **Samana** relates to the digestion of food and cell metabolism. It is where the umbilical cord was attached and where we first breathed before we were even born. This portal remains open energetically and is available to absorb energy. Qi Gong works with techniques to store and channel energy through this energy centre also referred to as the “hara”. On a mind level, Samana is about homogenizing and digesting life experiences, whether sensory, emotional or mental.
* **Vyana Vayu**: This is the expansion and contraction process of the body, corresponding to the distribution of energy to all parts of the body. It governs circulation on all levels- it moves nutrients and oxygen throughout the body, it keeps our emotions and thoughts circulating in the mind, imparting movement and strength.

As we breathe in, prana flows into us but is also the power behind the exhalation. Prana is transformed in the body and is involved in the metabolic, excretory and cleansing processes that occur both physically and emotionally.

So the exhalation allows the release of excess mental and emotional buildup that interferes with the free flow of prana within the body.

It is interesting to note that Pranic energy is not the same as air and the flow of breath is not the same as the flow of energy- the breath clears the way for energy to flow, easily and deeply into the body permeating through all the layers of consciousness.

I like the analogy that the yogis use of life energy as a kite. The breath being the string that influences its course, and if we breathe skilfully, in a relaxed conscious way, energy will dance and soar freely and effortlessly and the greatest power of the breath is in the allowing rather than the forcing.

If there is too much control, forcing, trying, or mind activity, it may go to a place that we didn’t intend and this may be scary and frightening.

The more we can practice the art of breathing, openly, fully and in a relaxed way, prana will guide us into alignment with universal intent and we can gently direct this energy anywhere.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Ayurvedic name** | **Direction of motion** | **Function served** | **Associated element** | **Associated chakra** |
| Prana vayu | In and Up | Nourishing | Air | Heart |
| Apana Vayu | Down | Cleansing | Earth | Root |
| Samana Vayu | At navel | Stoke digestive fire | Fire | Solar plexus |
| Udana Vayu | Up and out | Expressive | Ether | Throat |
| Vyana Vayu | Centrifugal/  centripetal | Cohering\* *\*parts logically connected* | Water | Sacral |

**Conscious Breathing and the Four Dimensions Awareness**

 In Chi Gong, there is an old saying, an ancient teaching:

***"Where consciousness goes, energy flows."***

We are using awareness here as the passive form of consciousness; the observer, the watcher. Consciousness is the active form, the doer, the initiator, that brings focus, action and analysis to any experience.

Consider consciousness as energy: intelligent creative energy. If consciousness and energy are not one and the same, then they are at least intimately connected. They are somehow inseparable. Energy: a breath-energy, spirit, life-force, prana, chi.

Now, when it comes to awareness, consciousness and energy, we can focus or direct it in four possible ways or dimensions: ***internal, external, narrow, broad***.

When we direct our attention inwardly or outwardly, or when we focus our awareness on one point, or when we expand our consciousness to include everything around us, we are also doing something with our energy.

Have you noticed that there are times when you can be so caught up in a thought, or some internal sensation or some emotion, that you are oblivious to the world around you?

Have you noticed that there are times when you are so focused on one thing in front of your eyes that everything else in the world seems to disappear?

Have you noticed that you can also be so caught up in the world around you that you can forget about your inner world?  A pain in one part of our body can cause us to forget that the rest of our body actually feels quite fine. And we can become so caught up in our thinking that we can forget we even have a body.

The ability to focus on one thing and not be distracted by anything else is very important in life. And the ability to let go of a narrow focus or a single belief, and to expand our consciousness to include everything else is equally important.

Have you noticed that advertisers and news media, scam artists and street hustlers, and also people with pure and loving intentions, as well as the unconscious habits of your own system, are forces that can control and direct your energy and awareness?

In the course of life, there are times when we need to shift our awareness from the external to the internal (and vice-versa). And there are times when we need to gather our scattered energies and to focus our attention like a laser beam (and vice-versa).

*That's where Conscious Breathing comes in!*

We can use our breath to harness our energy and to direct our consciousness in these four ways or dimensions. Every breath offers us an opportunity to take control of our life-force: to consciously focus our awareness or re-direct our energy.

When you breathe, you can send energy to a single organ, muscle, joint, or any particular part of the body. When you breathe, you can also distribute energy equally to all parts of you, to every cell of your body.

Conscious Breathing can anchor and centre us in our body; it can also be used to expand beyond the borders of our skin. We can use the breath to transcend the ego and the emotional mind, to experience some amazing states of consciousness and some sublime spiritual dimensions.

In the next few lessons, I will be inviting you to use your breath to explore some of these creative possibilities...

**EXERCISE**

Find a comfortable position and take a few coming home breaths as you relax completely.

First begin to tune into your breathing, simply watching and observing the breath.

Now begin to activate conscious connected breathing cycle through the mouth and see if you can tune into and identify the 5 currents of energy/pranic currents.

Journal your experience of tuning into and identifying the 5 currents of energy.

What do you observe? Identify which currents were stronger, which were weaker, describe!

Let's start this spiritual journey into consciousness and energy with a very simple, basic, yet powerful tantric breathing technique or meditation.

We are going to use the breath to fill ourselves, to draw everything and everyone in the world into the inner-most core of our being.

And we are going to use the breath to empty ourselves of all that is within us, to pour every bit of ourselves out into the world.

Breathing in, taking everything and everyone into yourself...

Filling yourself with all that exists around you.

Breathing out, giving yourself to everyone and everything...

Emptying yourself of all that exists within you.

Breathing in, merging everything and everyone with yourself.

Breathing out, merging yourself with everything and everyone.

Take your time with this "cosmic breathing."

Let the breaths be long and slow...

Be total. Put your whole being into the exercise.

Put real feeling and passion into the meditation!

Arch and curl your spine with each breath...

Use your arms and hands to express...

Close your eyes and visualize...

NOTE: Some breathers find that the universe flows into them and that they are filled during the exhale; and they feel they are expanding and that they empty themselves out during the inhale.

Experiment with it. Do what feels natural. Do what comes easiest to you.

Journal your experiences of the Tantra Breath.

*In the end, as in the beginning, All is One!* *We All exist in the One, and the One exists in us All!*

**LESSON 2: BREATH AND KUNDALINI ENERGY**

In the last lesson, we explored the concept of prana, the life force energy that permeates through all living things. We became aware of how to experience this life force even more deeply through the awareness of our breath and breathing consciously.

In this lesson, we will look more closely at how this life force is organised and how it moves within us.

As we have seen different cultures and philosophies have worked with and identified energy pathways. Most ancient cultures in some way recognize a primal life force/creative life force that moves in the universe. These cultures and philosophies also share a belief that this force universal creative force/ transformative power can be awakened through specific spiritual practices. This lesson focuses upon kundalini energy- an energetic and spiritual pathway and practice that connects the energy within to the divine energy that moves through the universe by specific practices that incorporate breathwork, yoga, chanting and mantras to activate and achieve energetic transformation and union with the divine.

According to tantric philosophy, this life force is called “Kundalini energy” and is symbolized by a sleeping serpent with 3 and a half coils. When this energy is awakened, the symbolic snake or Shakti energy which is the feminine creative force uncoils and moves upward through the energy pathway in the centre of the spine, piercing through all the chakras where it meets and unites with the male divine energy which resides at the crown chakra at the top of the head.

This is the divine union of the feminine and masculine energy which resides within each individual. It is said that enlightenment is experienced when this union occurs.

For some, this awakening happens spontaneously, while performing ordinary activities.

For others it occurs with certain spiritual practices as described above

One can also feel this energy rising up in a breathwork session and is often experienced as a sexual energy that stirs up from the pelvis.

In Kundalini energy and sexual energy is one and the same- being the energy of the creative force- and when it is harnessed and channeled it can move up to the higher chakras – opening the heart centre and compassion. Many people however, get stuck in the lower chakras andfocuses upon expressing this energy in a purely sexual way, losing the opportunity to transform sexuality into spirituality.

For most others on the spiritual path, this upward ascent of Kundalini energy occurs gradually, as we raise our consciousness from survival through to self actualization. We will talk more about this in the next lesson on the Chakras.

*“ When Kundalini is uncoiled, she will force her way upward, bursting through barriers to stir up feelings, emotion creativity and to give life “*

*“She shatters the established order with her thrust towards evolution”*

* Rudolph Ballantine , Radical Healing

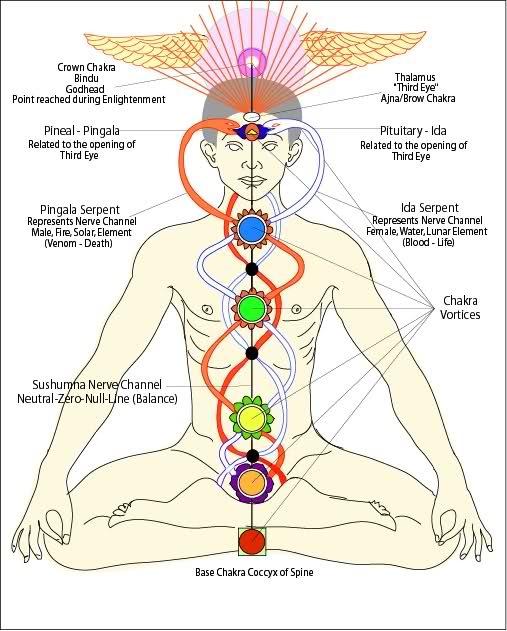
For a long time in the West, Kundalini energy, chakras and energy pathways were vague, esoteric concepts.

Now there are very exciting and ground breaking studies been done to validate the existence of the Kundalini experience and to measure it effects through certain parameters such as Cellular energy levels, immune responses, psychological and emotional health, neurological changes in the brain, genetic transformation and expression of extraordinary abilities.

One such study was done in 2011 in Banglalore India at the Sri Nityanananda Mission

Read more about it here. [www.nithyananda.org](http://www.nithyananda.org)> Articles

**NOTES:**



**A symbolic representation of kundalini energy**



**The symbol of medicine**

Can you see any similarities between these two images?

One symbolizing the Kundalini energy and the other is the symbol of medicine?

**Breathwork and Kundalini energy**

How is the Kundalini energy relevant to breathwork?

I am sure that kundalini energy is activated in most conscious connected breathwork session, especially in experienced breathers.

As a breathworker, it is important to be comfortable with and to relax into all the feelings and sensations that occur as this ultra-potent living electricity moves through you, activating, healing and transforming every level of being on a consciousness level and down to each physical cell.

The natural and free movement of this energy through you creates the opportunity for you to experience your divine nature and the divine collective soul or ocean of love- this is the highest goal of tantra.

*Tantra is the science of seeing, feeling, knowing the infinite in and through the finite. -* Yoga and Kriya

It is also important to recognize and work with Kundalini energy in your clients. When clients fear the energy that gets activated with the breath, and tighten up in an attempt to contain it, it builds up and can be experienced as pain.

During the session you can support your client to relax and feel safe - remind them it is just a feeling, that all feelings are welcome. Encourage them to surrender and breathe- into the feeling, the place.

**EXERCISE**

At the base of your torso is what is called the "PC Muscle." That's the muscle you use when you want to hold back your urine...when you need to control the urge to pee.

Locating this muscle, isolating it, and consciously tensing and relaxing this muscle while you breathe is an ancient tantra technique. It is a way to raise your sexual energy and to awaken "kundalini."

A basic tantric exercise is to tense the pc muscle and draw sexual energy up to your heart while you inhale; then relax the pc muscle and send that energy as love and light out through your heart while you exhale.

Practice this technique and notice the feelings and sensations that arise.

Are you able to really fall into the experience?

Where do you feel resistance?

Write down your experience while doing this technique

Are you becoming aware of any belief systems within yourself as you were reading through this lesson and practicing this technique?

Write them down.

A breath technique that also activates the kundalini energy and the pc muscle and the 2nd chakra is to do reverse respiration, contracting the abdomen on the inhale, and consciously raising the breath to the heart chakra and then exhale, sending the breath down and out and expanding the abdomen and the pelvis.

Which technique works better for you?

**NOTES:**

**LESSON 3: IDA PINGALA AND PRACTICE OF SHIVAGAMA**

In module 4 we are exploring a way to describe and frame the nature of "the life force" that moves within us from the inside out , the currents through which it moves through our bodies and how to access this" life force" with the breath.

In Lesson One, we explored this concept of prana in depth. In Lesson Two we looked at the primary current of Kundalini energy or primal life force that moves through the spine.

Now we extend our understanding as we look further to the two additional currents of energy that also originate at the base of the spine. These two currents move up to the brain, balancing the left and right sides of the brain and thus the feminine and masculine aspects of self.

The right channel is called Pingala. It originates from the base of the spine and moves up to the right nostril. Pingala is connected to the sun and masculine energy and activates the left side of the brain which is the more logical side. Thus, when there is more flow of energy through this channel, we feel more energized, active, and warm; and would be more prone to anger outbursts.

The left channel known as Ida – is connected to lunar energy. It has the same origin as Pingala at the base of the spine and moves up through the body to meet the left nostril, activating the right brain and the feminine, creative, reflective and cooling aspects of our nature.

Nature has its own flowing rhythms and cycles, day and night, the lunar cycle and the seasonal cycles. As natural beings our physiological processes are also ruled by many rhythms and cycles.

Think of all the rhythms that make up our physiology- our heartbeat for one is driven by our autonomic nervous system. It quickens in times of excitement, stress and activity. It naturally slows down when we’re relaxed and at ease.

The natural rhythm of the breath also flows with the inhalation and exhalation. The flow of cerebrospinal fluid through the spine is interestingly enough also connected to the flow of the breath.

Think of the sleep wake cycle or the circadian rhythm tied in to the rising and setting of the sun and the menstrual cycle which is connected to the 28 day lunar cycle. Our physiology also adapts with the changing of the seasons.

What is even more fascinating is the shorter 2 hour biorhythm which creates a shift between the left and right hemispheres of the brain, so we are constantly moving between being more creative and more linear every two hours!

Like the breath this 2 hour shifting bio rhythm is both automatic and conscious. It seems that this automatic shifting is triggered by the change in nostril dominance. A dominance that can be effected by bringing conscious awareness and focus to this pattern.

You will notice that at any given time, one nostril will feel more open than the other, which means that one side the brain is more dominant.

In general the when the left nostril is more open, the right brain would probably be more active and you may be more open to creative ideas and feel more emotionally vulnerable. The whole system seems cooler and quieter.

When the right nostril is more open, the left hemisphere is dominant – which means thinking is more logical and strategic and the metabolic rate is higher. There is predominance of fire or solar energy in the body. It would be a good time for strenuous work, writing, debating etc.

At certain times the breath flows through both nostrils equally. This is when the pendulum is in the middle and your consciousness is most integrated. It’s when we tend to retreat deep within even if it’s for a few seconds. It would be a good time to check in on your inner state, to take a few long conscious breaths or to practice breath suspension. Many people unconsciously reach for a cigarette, coffee, sweet or other stimulant drug at this time. There are hypnotists who have been known to step in and choose this moment to induce a trance.

The practice of Swara yoga or Shivagama explores the nasal breath pattern in amazing depth and detail and gives very explicit information on how the flow of the breath reconfigures energy patterns within it so that certain activities can be coordinated with it and vice versa they activate left and right nostril breathing to match and support certain activities.

They advise us to change our nostril dominance at the first sign of physical, emotional or psychological imbalance.

For example, to fight a fever, they would block the dominant nostril with a cotton ball until the body temperature returns to normal. To recover from hard work, they would advise lying on your right side and breathing through your left nostril. To clear an uncomfortable emotional state, they would suggest blocking the dominant nostril and breathing through the congested nostril for 10- 15 minutes.

If you are a feeling hungry, check which nostril feels closed. If the right nostril is closed, you are probably not really hungry and in fact, you are probably thirsty! When you are truly hungry, the right nostril should be fully open, the digestive fire should be strong and you are able to digest your meal far better.

**Techniques**

These are various techniques that can be used to open up the opposite nostril:

* Lie on your side with the closed nostril up: after some time it should open.
* Sit with the arm of the open side over the back of a chair, or with the arm and chest pressed against it. The pressure in the area of the armpit of the open side will tend to open the opposite nostril.
* Stimulate the inside of the closed nostril with a tissue or neti pot.
* Concentrate on the sensation of air against the inside of the closed nostril. Accentuating awareness will bring that side more into play.
* Create thought characteristics of the opposite side. E.g. think of the hot sun, and masculine energy to bring the right breath into dominance and cool water and the moon for the left.

**Practical applications:**

These are Kriya Yoga techniques taught by Yogi Bhajan

* When you feel tired, sit up with a straight spine, and block your left nostril with the thumb of your left hand, keeping your other fingers pointing straight up like antennae. Take 26 long deep and complete breaths through the right nostril. Then inhale and relax.
* When you are feeling anxious or nervous, sit with a straight spine and block the right nostril with the thumb of the right hand. Take 26 long deep and complete breaths through the left nostril. Then inhale and relax.
* To deal with an “ out of control “ mind or runaway thinking, sit straight, close off your right nostril with your right thumb and inhale deeply through your left nostril. Exhale completely through your mouth. Do this for 6 minutes to quiet your mind.
* To overcome compulsive eating or for assistance during fasting, sit with spine straight, block the right nostril with the right thumb. Breathe in a long deep slow inhale through the left nostril. Hold the breath for as long as feels comfortable. Then exhale through the left nostril and hold the breath out for as long as you held it in. Do this for 31 minutes.

**EXERCISE**

ALTERNATE NOSTRIL BREATHING

This basic Pranayama exercise involves using the thumb and ring finger of your right hand to alternatively block your right and left nostril. Most people like to rest their index finger and middle finger in forehead between the eyebrows. (Over the ‘third eye’)

Notice that you put the exhale first, which means you first empty your lungs and all the channels before drawing in a new breath.

Block your right nostril with your right thumb finger, then exhale and inhale one breath through the left nostril.

Switch

Block the left nostril with your right ring finger, exhale and inhale through your right nostril.

Switch

Block the right nostril with the thumb; exhale and inhale through the left nostril.

Switch

Practice alternate nostril breathing in this way for 10 minutes.

You can breathe according to any regular rhythm or pace that you find comfortable. Make your exhales and inhales as long or short, or as fast or slow as you like.

Two traditional pranayama rhythms or counts are:

Exhale 4, hold 2, inhale 4, hold 2, exhale 4, hold 2, inhale 4, hold 2 etc.

Exhale 4, hold 4, inhale 4, hold 4, exhale 4, hold 4, inhale 4, hold 4, etc.

**NOTES:**

**MODULE 5: APPLICATIONS OF BREATHWORK**

**LESSON 1: THERAPEUTIC BREATHWORK AND BODY THEMES**

**Release techniques and neuroscience Hypotheses for Six Major Breathing patterns**

From the Transformations Breathwork Training Program by Jim Morningstar

In the first seven years of life, we go through a series of six developmental stages that are influenced by neurological changes and environmental patterns. How we experience our primary relationships with our caregivers and our interaction with our environment will provides certain distinct templates in our physical body, psychological makeup and breathing patterns.

Depending on our experiences at each stage, the body theme can either be adaptive in its formation (integrated) or dysfunctional in its persistence in later life.

For most, one stage will stand out in relation to our body patterns, relationships and the way we breathe.

By bringing our awareness to these patterns, we can adapt the way we work with our clients and use specific releasing techniques for different holding patterns related to developmental stages.

Transformational breathwork focuses more active breathing pattern release cognitive and emotional blockages by activating the sympathetic nervous system to release holding patterns and blockages related to a difficult experience during any of the developmental stages.

Connected breathing pattern activates a slightly altered state of consciousness, opening the client up to release the holding pattern and trauma that the body is holding and to integrated a healthy pattern of wholeness.

The facilitator’s role is to

* Find the gift that lays beneath the wounding
* unlocks doors of potential
* teach full and free breathing
* provide the feeling of safety for exploration
* emotional and spiritual integration
* translate the feeling state for a satisfying and purposeful life

**6 Body Types:**

1. The Schizoid
2. Empathic nurturer
3. Inspirational Leader
4. Steadfast Supporter
5. Gender Balance
6. Energetic Grounded

1 +2 have problems with the inhale, can’t take in the full complement of life energy

3+4 have challenges on the exhale, releasing and letting go

5+6 have problems with inhale and exhale integration, balancing yin and yang

**Theme 1: The Psychic Sensitive**

**Safety versus danger in the Body and World**

This stage develops both pre and postnatally. The body is adapting to the prenatal environment by either developing a sense of ease and flow or constriction in response to the level of threat.

By the age of six weeks the amygdala is already active and creating its neural connections based on the feeling of safety provided by the primary caregivers. At this stage, the autonomic nervous system is still developing and is not able to fully regulate the impulses from the amygdala.

If the infant is experiencing hostility from a caregiver, the experience of stress mediated by the amygdala becomes unregulated and can lead to a habituated fear response later in life.

Depending on the adaptation to this developmental stage, the individual either develops a healthy fear response, gets stuck in a permanent fight/flight/freeze mode or will “split” or dissociate.

**Basic Belief:** “The world is not a safe place”, “If I’m independent I’ll be lonely”

Compensatory belief: “I’m a free spirit unattached to the material world”

**Personality:** They have a sensitive, artistic, intuitive nature developed as a response to an unsafe world.

**Posture:** body disjointed, frozen, unfocused, fragile, delicate, frozen chest

**Breathing** **pattern**: minimal breathing, difficulty inhaling. Under stress, they split off

**Area of focus in breathwork:**

* unlock frozen chest
* support feeling of safety and comfort in body and emotions
* free breathing mechanism
* ground in physical, encourage feeling of sensations
* open up the inhale without trying to force or control
* re inforce the “right to be” with affirmations
* allow safety to feel and express anger
* integrate safety and sensitivity
* build up safety, trust and confidence slowly at a rate that’s comfortable
* encourage expression of anger and boundary setting

**Theme 2: The Empathic Nurturer/ Rescuer**

**Abundance vs Deprivation and Abandonment**

This pattern is formed in the first year of life as the midbrain (limbic system) matures.

Develops as a response to the emotional connection to others.

If the caregiver does not offer basic emotional needs, the infants don’t internalize care. In a case of chronic neglect, the infant develops a flight/flight/freeze response.

**Basic Belief: “**I’ll never have enough”.

Compensatory belief: “If I love enough, I will be loved “

**Personality:** There’s a constant need to please others. Feeling responsible for the wellbeing of others at their own expense. Difficulty setting boundaries.

**Posture:** collapsed chest, pelvis tilted forward, knees locked

**Breathing Pattern:** difficulty taking in full inhale and taking in the source of life energy within

**Area of Focus in Breathwork:**

* Bring breath into chest gradually
* increase energy in legs
* coach breathing to expand capacity
* encourage sharing of empathic qualities from a place of choice rather than fear.
* self-support

Affirmation: “I am the source of my own energy”

“My needs are sacred”

**Theme 3: Inspirational Leader**

**Harmony vs Overpowering control**

This stage develops between the ages of 1- 3 years and is predominantly formed through the experience of control.

**Basic Belief:** “My independence is a threat, I am controlled out of others’ fear rather than for my safety”

Compensatory belief: “I command resources rather than control them”

**Personality:** Charismatic with great ideas at the expense of avoidance of feelings. Under stress they try to control by ring above or manipulate seductively. Greatest fear is collapsing, guarded. Can’t be nurtured or vulnerable.

**Posture:**  upper body big, strong and developed.

**Breathing Pattern:** difficulty with exhale

**Area of focus in Breathwork:**

* bring upward energy down
* encourage complete exhalation/letting go/surrender
* support caring strength rather than power and control
* move from tyrannical control to loving leadership
* As a breathworker, don’t get caught in power struggle with the client.
* You can’t force someone to surrender

**Theme 4: Steadfast Supporter**

**Freedom of Expression Vs Shame**

This stage develops between the ages of 3-4. This is when a child learns to model their emotional responses and the nerve development becomes more differentiated to develop a deep sense of guilt and shame around expression. This could be triggered by the need to please a parent figure. They become a pressure cooker of feelings.

**Basic Belief:** “No one appreciates me”

Holding in is life’s theme

**Personality:** Unable to express feelings

They tend to be very loyal, stick with things and tend to be martyrs. When they feel unappreciated, they tend to get passive aggressive

**Posture:** “squashed”. Thick neck, large body, overdeveloped muscles

**Breathing pattern:** Difficulty exhaling

**Area of focus in breathwork:**

* Support a greater sense of daily ease and pleasure
* complete exhalation
* support letting go safely and pleasurably
* support expression of anger without being passive aggressive
* avoid pleasing others at their own expense, be more assertive with feelings
* contact creative spirit
* acceptance of strengths
* allow accessing positive support
* learning to accept feelings as a source of nurturance

**Theme 5: Gender Balanced**

**Sexual Integration vs Role confusion**

This is a fear based theme in response to the questions that arise about life around the age of 5. It is related to the question of: “How do I safely express myself as a male or female”?

The dysfunctional patterns exposes fear of rejection and punishment related to expression of sexual identity.

**Breathing pattern:** imbalance of inhale and exhale

**Areas of focus in breathwork:**

* balance inhale and exhale
* Release jaw and pelvis
* Encourage belly breathing
* in females encourage safety with feminine vulnerability and more cooperative relationships with male authority

**Theme 6: Energetic Grounded**

**Intimacy vs Betrayal**

This neurological stage happens from 6-7 years of age. A holding pattern will occur at this stage if there is a betrayal or disappointment with intimate relationships. Rejection is experienced around sexual needs and a split occurs between the heart and genitals.

**Basic belief: “**I’m not going to be hurt again”, I’m not going to suffer emotional or sexual rejection again.

Compensatory belief: “I’m a loving person that no one understands”

**Personality:** holds love back from past hurt. Difficulty in loving and being sexually attracted to the same person. Engages in high risk activities in an attempt to feel alive. Under stress they can express anger

**Posture:** armor around torso region, bright eyes

**Breathing pattern:** Imbalance of inhale and exhale. Breathing is aggressive

**Areas of focus in breathwork:**

* integrate inhale and exhale
* unite love and sexuality
* free pelvis
* connect head, heart and sexuality
* surrender to love

**LESSON 2: BREATHING FOR SPECIFIC MEDICAL CONDITIONS**

* Hypertension
* Obesity
* Fatigue
* Asthma
* Pain

Breathwork is a process that is an integral part of many religious, meditative and performance traditions. From the Vedic traditions of India, through the martial art and meditative practices of the Far East such as Zen, Qigong and the Buddhism of China and Tibet to the new age practices of the West, breath is an honored and integral portal through which the practitioner can embrace empowerment and change. Whether you participate in Yoga, are certified in Jin Shin Jyutsu, massage or other forms of energy work or desire to incorporate integrative health practices for yourself and/or your clients, Breathwork offers support and opportunity for each practitioner and client to begin the journey to “heal thy self”.

This module is a discussion of breathing techniques for specific conditions to promote physical and emotional health. The discussion includes a naming of the specific medical/emotional condition and a discussion of the physiological process and how conscious breathing affects the manifestation of these conditions. As a practitioner, these conditions and techniques are important for you to be familiar with, to practice and to master so that you may be an even more effective coach and a resource for your clients.

In this module, we look specifically at the most common health conditions that you may encounter with a client. You may find that in some cases, a breathwork program is all that the client needs to support their own healing. In other cases, in might be a key aspect in the integrated management approach of their illness or condition. It could be the final missing piece to bring it all together, or the spark that creates an explosion of healing and growth.

**BLOOD PRESSURE**

The heart has been designed as a physiological pump delivering blood and oxygen to every tissue of the body through the arterial system which branches from thick arteries right down to the tiniest microscopic capillaries. The force generated by the contraction of the heart is part of what generates the optimum pressure that facilitates this delivery.

Maintaining this homeostasis and ideal blood pressure involves the dynamic interplay of many other physiological systems, hormones and chemicals.

Looking at a typical blood pressure measurement, you will notice two figures, for example

124/87. The top figure is the “systolic” pressure which measures the force with which the heart contracts and the bottom figure represents the “diastolic” pressure which is indicative of the resistance within the blood vessel.

The nature of an artery is that it is quite elastic and pliable and the resistance within the artery is basically a measure of how contracted or dilated the vessel is. For example, when the muscle fibres in an artery shorten, the diameter is reduced and pressure within the vessel increases. The opposite is also true. So, if the artery dilates, the pressure is less.

Arteries are naturally elastic and responsive to chemical, physiological and emotional changes when they are healthy. However with the aging process, the arteries become harder, narrower, more calcified and less compliant which is the reason that the baseline blood pressure increases with age.

The lining of the arteries is rich with chemical receptors, nerves and pressure receptors, which all play a role in maintaining an optimum blood pressure through heart contractility and arterial tone.

**Factors that influence blood pressure.**

* Hyperventilation. If a person is chronically hyperventilating or over-breathing, the carbon dioxide levels in the blood fall, and the smooth muscle in the artery walls contract, making them narrower which would in turn cause the blood pressure to rise.

Over-breathing 🡪 Decreased CO2🡪 arteries contract🡪 BP increases

* Stress causing sympathetic overdrive – the stress hormones such as adrenaline increase heart contractility and arterial tone, which raises BP.

However it is interesting to note that the autonomic nervous system has no effect on the arteries in the brain, which is almost entirely determined by the levels of CO2 in the blood.

* Chemical – Substances such as caffeine can have quite a big impact on blood pressure acutely
* Chronic hypertension - Hardening of arteries – as mentioned above, this is due to stiffening of the arteries and calcification
* Medical conditions - there are various other medical conditions beyond the scope of this manual, e.g. renal disease and various neurological conditions that can cause hypertension.

**HYPERTENSION (High Blood Pressure)**

As has been alluded to above, blood pressure is susceptible to so many influences and can fluctuate from moment to moment. That’s the reason that the diagnosis of hypertension is only made after a few consistently high readings.

Often people who experience moderately high blood pressure have no symptoms, which is often why hypertension is called the “silent killer”.

However, if a client complains of chronic headaches, dizziness, fatigue or confusion, vision problems, chest pain, difficulty breathing, irregular heartbeat, blood in the urine and pounding in the chest, neck, or ears, ensure that their BP gets checked.

All clients who have hypertension (acute and chronic) can benefit from breathwork.

There are specific techniques that work particularly well. In fact it’s quire rewarding to do a pre and post breathwork session BP reading, as it makes the power and efficacy of breathwork very tangible.

**Techniques:**

The rule of thumb with all techniques to lower BP is “low and slow”. That is to encourage and train breather to take longer, slower and fuller and more gentle breaths that are generated and directed low into the belly. Try to bring the breathing into the therapeutic zone (6 to 8 breaths per minute).

The following exercise is recommended by Dennis Lewis author of ‘Free your breath, Free your Life’:

Inhale through your nose for 4 counts, hold your breath for 7 counts and exhale through your mouth for 8 counts. When you exhale, put the tip of your tongue where the upper front teeth and palate meet and exhale as though you are blowing out a candle.

Start off with 4 complete breaths and work up to a set of eight. Keep the mouth, tongue, chest, back and belly as relaxed as possible.

**HYPOTENSION (Low Blood Pressure)**

As mentioned above, it is necessary for the body to maintain a certain pressure in the arteries in order to deliver adequate amounts of oxygen right to the peripheries.

Therefore it would make sense that if this was compromised, symptoms of acute hypotension would be cold hands and feet, tiredness, dizziness.

As a breathworker, these are the most likely situations where you would encounter low BP:

* Orthostatic hypotension – this happens commonly especially in elderly people where there is a rapid fall in blood pressure when standing up too quickly from a lying position.
* Often females who have a small structure tend to have a BP reading on the low side
* Burnout. A low BP could be a sign of late stage adrenal fatigue.

**Techniques:**

Focus the breath high: between the nipple line and the collar bones.

Breath Holding: Holding your breath either at the top of the inhale or the bottom of the exhale.

Rapid Breathing: Kaphalabathi or breath of fire.

**EXCESSIVE WEIGHT/OBESITY**

Obesity and its associative eating patterns is a complex condition and like any health condition is associated with behavioral, emotional and genetic factors. Often the emotional factors include feelings of stress, shame, guilt, low self-esteem, depression and anxiety and as a breathworker it would be helpful to be mindful of this when working with clients.

The emotional aspect of obesity has a huge impact on the stress levels and the physiological manifestations of stress in the body which in turn has an effect on breathing patterns. People who are overweight or obese often have stuck or disordered breathing patterns as an effect of the weight itself and a stuck diaphragm. This may manifest in shortness of breath (chronic hyperventilation or under-breathing).

When someone is in a chronic state of stress or sympathetic overdrive, it can have an impact on weight in the following ways:

* The blood supply is directed away from the digestive organs – as a result, food cannot be digested, assimilated and absorbed properly, which in turn leads to heartburn, food intolerances and IBS.
* A high level of cortisol depresses the immune system, making us more susceptible to recurrent infections, chronic illness and cancer.
* High levels of cortisol also will cause a chain reaction of consequences in the endocrine system: high cortisol 🡪 low thyroid hormone (depressed metabolic rate) 🡪 insulin resistance 🡪 high cholesterol 🡪 high risk for metabolic syndrome!
* Chronic stress causes chronic hypoxia and an inflammatory state of the tissue.
* Over 70% of the population tested to date shows a deficiency of carbon dioxide in their system from “blowing off” too much CO2: a condition known as ***chronic hyperventilation***. Over-breathing means that the rate of ventilation is in excess of what is required by the rate of production of CO2 by the tissues. This CO2 deficit causes the micro vessels to constrict, so that even though one is huffing and puffing, the vital supply of oxygen to your cells and tissues is reduced - a condition known as ***chronic hypoxia****.*
* Hypoxia also occurs when we go into “freeze” mode and we stop breathing, ‘forget to breathe‘ or do not engage much of our lung capacity when we breathe.

Conscious breathwork is an invaluable support for any holistic weight loss program.

By restoring natural patterns of breathing and using specific breathing techniques, we can:

* Break the stress response and activate the parasympathetic response. The body then goes into rest and heal mode.
* Increase the metabolic rate by improving cellular oxygenation.
* Balance and optimize the body’s physiology by balancing the whole endocrines
* Restore natural sleep patterns
* Reduce the need for anti-depressants, painkillers etc. that have detrimental side effects
* Increase oxygenation in the body, and reduce acidity and inflammation
* Exercise the diaphragm so that with each breath the abdominal organs get massaged and the heart gets massaged too. Amazing research is being done by the Heart Math institute that show that there is more electrical activity around the heart than in the brain and that by changing the energy field around the heart through breathing, we can effect changes in our neural pathways in the brain and break addictive patterns.
* Use breath to facilitate greater body awareness and as a tool to slow down and listen to the signals of the body.
* Find ways to channel and deal with feelings and emotions instead of suppressing them with food

Considerations when working with weight management:

* Be mindful of the comfort of the client - e.g. they might not be comfortable lying flat on their back - use props and pillows ensuring the clients’ comfort
* Begin the sessions by working with simple breath awareness exercises
* Bring awareness to belly breathing and work with the diaphragm
* Build up to a full session of CCB
* Other helpful techniques: breath of fire or Kaphalabati is a useful technique here. Because it involves the active use of the abdominal muscles, clients often build up a good sweat and feel like they’ve had a good workout!
* Encourage your clients to use the breath to deal with cravings, to eat mindfully and to deal with stress and anxiety

**FATIGUE**

**Breathing for Energy**

Of all of the symptoms that present to doctors, fatigue is probably the most common.

Every person has at some time in their lives experienced fatigue, which can be described as a feeling of low energy, lethargy and listlessness.

The rhythm of life should be a balance between rest and activity, but our way of life seldom allows for that. However, it is important to determine whether it is related to lifestyle or whether it is a symptom of something more serious.

**Causes of Fatigue**

Related to lifestyle

* Stress and burnout
* Unhealthy diet - skipping meals, eating junk food etc.
* Dehydration
* Poor sleep hygiene
* Lack of exercise

Emotional

* Grief
* Depression
* Heartache
* Anxiety

Medical condition

* Chronic fatigue syndrome
* Fibromyalgia
* Anemia
* Hypothyroidism
* Systemic candidiasis
* Cancer
* Diabetes
* Renal or cardiac disease
* Viral infection

Medication

* Chemotherapy
* Antihistamines
* Anti-hypertensives
* Antibiotics

The breath is a powerful tool when dealing with fatigue, The key is to open to the breath as a source of energy and as a tool for letting go of whatever it is that is preventing them from accessing their authentic energy.

**Technique:**

The conscious connected breath is a powerful way to use the breath to access energy:

* Work with bringing awareness to the solar plexus - visualize and inhale into your own source of energy or “individual sun” and exhaling as you send this energy to the whole body. Lying the position of the “5 pointed star” might be helpful here.
* Work with getting clients to stand barefoot on the grass and to breathe Earth energy up through the soles of the feet
* Work the techniques described in the previous module of energy.

**ADRENALISED VS AUTHENTIC ENERGY - AN INTEGRATED GUIDE TO ENERGY MANAGEMENT**.

For anyone that is invested in understanding energy management to maximize peak performance and prevent “burnout”, it is imperative that a broader perspective is created within the context of “energy”. How do we feel it, use it and channel it effectively?

What is the difference between “adrenalized” energy that leads one down the path to burnout, cynicism and emotional exhaustion versus “authentic energy” which is the path to vigor, engagement, optimum personal and professional performance?

Most of us are running on the energy fueled by the hormones that the body produces in response to stress or a busy and active mind. This “wired” feeling might be experienced as a high-energy state, however if not understood and managed effectively, can cause serious physiological imbalances ultimately leading to burnout and chronic illness.

Authentic energy on the other hand is fueled by inspiration, supported by emotional intelligence and living with greater awareness. This creates a feeling of relaxed mental focus and is the path to health and peak performance.

**10 Tools for managing energy:**

1. **Breath as the Bridge**

* The role of sighing and yawning
* Aim is to re-pattern the breath so that it is fuller bigger deeper
* Optimizing oxygenation and breaking the stress cycle

1. **Eating for sustainable energy and Mindfulness within meals**

* Breakfast imperative
* Slow release low GI food
* Healthy snacks in between
* Small meal at night
* Ayurvedic eating principles

1. **Hydration**

* Water – ideal amount is 20mls/ kg of body weight

1. **Greening up – green tea, wheatgrass shots, salads**

* Can hydrate this way too. Anything green fuels authentic energy
* Chlorophyll

1. **The Science of Sleep**

* At least 6 - 8 hours
* Wind down technology free routine before bed

1. **Natural Rhythms and Cycles**

* Sunlight
* Living with the seasons etc.

1. **Exercise for your type**

* Certain high energy exercises can fuel adrenalized energy.
* Balance with slow stretching exercises that support mind-body awareness and mindfulness, like yoga, Tai chi and Chi Kung

1. **Managing emotions**

* emotional intelligence

1. **Supplement Support**

* Adaptogenics (herbs/vitamins and minerals that support and strengthen the adrenal glands and that help to balance stress hormones e.g. ashwaganda and ginseng)
* Vitamin B
* On advice of health practitioner

1. **Time in Nature**



© Dr Ela Manga

**ASTHMA**

Asthma is a chronic respiratory condition characterized by narrowing or spasm of the small and medium sized airways in the lungs.

There are various forms of asthma which may be triggered by allergies, colds, exercise, certain medication such as aspirin, stress etc. Some emotional states such as laughing, crying, yelling and distress may in fact trigger the onset of the symptoms.

Robert Fried, Author of “Breathe well, Be well”, sees asthma as a “pulmonary migraine” as many of the same things that trigger migraines including certain foods can also trigger asthma. Symptoms may include wheezing, tightness of the chest and coughing. Usually the symptoms are worse at night.

The airways are characterized by

* Inflammation
* Narrowing/spasm of the airways
* Mucous production

An experience of having an asthma attack can be a terrifying experience and often people having an asthma attack panic and hyperventilate in an attempt to alleviate the feeling of air hunger. This may exacerbate the symptoms – as the fast breathing causes the blowing off of too much Carbon dioxide which causes even more spasm of the airways.

You might notice that asthmatics have very typical breathing pattern - breaths that are uneven, rapid and shallow with the exhale much shorter in comparison to the inhale.

**Breath tips for asthmatics:**

**The Buteyko Method**

Work with techniques to build up the CO2 in the blood, thereby dilating the vessels that carry oxygen saturated blood to the cells. This is the theory that is behind the Buteyko method. According to Buteyko practitioners, this breathing method has a 90% success rate in reducing the reliance on asthma medication.

This technique involves breathing out fully and then trying to breathe out a little more by training the diaphragm and abdominal muscles to aid a more complete exhalation - so it feels like the belly button is drawn in toward the spine.

Hold the exhalation as long as possible, and then inhale gently and slowly.

Then breathe normally for a while, and then go through the process again.

Increase the controlled pause after the exhale by 1-2 seconds a week until they can tolerate 45 seconds.

Basically you teach them to under-breathe by teaching them to tolerate and relax with the symptoms of air hunger.

Other techniques that create tolerance for air hunger:

Breathing through a straw and playing with the straw - using the inhale to pick up objects,

Using the exhale to move objects. As breath capacity increases using a pea shooter to blow a heavier object/pick up a heavier object (These are great activities for small children)

Pinch the nose: enough to create a very small passage for breathing

**PAIN**

These techniques are useful for acute pain, e.g. migraine headaches or chronic pain.

**The techniques:**

**Breath meditation**

This can be done in a two-step practice

**Step 1**

Breathing in through the nose...

Drawing or sweeping fatigue/pain/or whatever on the inhale

Exhaling (throwing/dumping it out through the mouth)

**Step 2**

Breathing in light/love/healthy pink cells, etc. into the area just swept/cleaned

Exhaling and feeling the cleanliness and purity and pleasure

Then back to Step 1

Nature abhors a vacuum, so after a cleansing breath, visualize a re-filling of the empty cleaned space with new fresh healthy cells

**Vivation type breathing**

It is human nature to move away from a painful experience – and we do this by either suppressing the pain or avoiding it. However, often by doing so, we drive the pain even deeper and in an attempt to “lock down” the area of pain or prevent it from spreading, we tense up around it, which often exacerbates the pain even more.

This is typically what happens with someone who is experiencing a headache.

In this situation, the breathing technique that is often helpful is the Vivation technique (see module 3)

Become aware of all the details of the pain - the location, intensity, and quality. Seeing the pain as shape or colour.

Now send the inhalation like an arrow into the centre of the pain and with the exhale, relax around the area of the pain – so that it spreads and dissipates with every breath.

**NOTES:**

**LESSON 3: PRACTICAL APPLICATIONS OF BREATHWORK FOR EVERYDAY LIFE**

Energy Mastery implies that we are able to consciously call on and use our breathing to support everything that we are meeting throughout the day. The more we do this, the more the breath is re-patterning unconsciously so that it is optimized.

**Getting out of bed breath:**

Charge the Body by deeply stretching into it and sighing the breath out. Do this 3 times

Charge the Mind by inhaling for a count of 5 and exhaling for a count of 5

Charge the Heart by letting the breaths settle in the heart area and imagine that on the inhale you are breathing in compassion for yourself and on the exhale you are expressing gratitude for a new day.

**Shower Breath:**

Tune into your breath as you turn the tap and watch how the breath changes as you experience the warm water washing over you. If you have the guts, turn on the cold water for a few seconds before you step out and see if you can keep your breath steady and moving.

**Traffic breath:**

Stopping at a red traffic light is a good opportunity to so some cleansing breaths or simply just tune into your breath.

If you are stuck in traffic, use the breath to scan your body, noticing where you are holding tension.

Put on some relaxing music, exhale as you relax tension in your jaw, back of the neck and shoulders. Move your head back so that it touches the headrest.

As soon as you notice tension building up in your body, return to this breath.

**Treadmill breath**

When I'm on the treadmill at the gym, use it as an opportunity to work my way through the chakras by breathing an affirmation for each chakra.

**Your day at work:**

**Listening breath:**

Use your breath as a listening tool and to deepen your listening. Notice what happens to your breathing when you are triggered by something someone has said, our want to interject.

Feel your breath connecting you to your core, just underneath your ribcage, then quieten the breath use the breath to listen from the heart.

When it is your opportunity to speak, feel like you are using the breaths to power your voice.

**Presentation Breath:**

Use the high energy state and use your breaths to channel it.

Use the inhale to charge up, feel it fill your confidence centre, and chance your posture to reflect confidence.

**Boredom breath:**

Turn your breath and use the opportunity to practice a mindfulness technique. Feel your feet on the floor. Feel the breath in your belly. Become the watcher of your thoughts, judgements and the nature of the mind wandering. Keep returning to the feeling of your breath in your belly.

**Queue management breath:**

When you are in the midst of a crowd, you are waiting and there is nothing you can do about it, it’s easy to get impatient and irritable, but it’s a wonderful opportunity to affect change in the world without anyone knowing.

Centre the breath in the heart, expand the inhales as your breath compassion to the people in front of you. Exhale as you extend compassion to all the people behind you.

Do this a few times and then reverse, inhale compassion to those behind you and exhale compassion for those in front of you.

**Headache breath**:

Breathe deeply into the epicenter of the pain and exhale softly and deeply and relax the muscles around the tension.

Do this for a few minutes and watch how the sensation moves and shifts.

**Busy mind breath:**

3 cleansing breaths.

5 minutes of breathing in for 6 secs, exhaling for 6 secs

End with some breath awareness

**Insomnia breath:**

This is a technique recommended by Andrew Weil for insomnia

Breathe in for a count of 4, hold for a count of 7, exhale for a count of 8

**LESSON 4: BREATH AND THE NEUROBIOLOGY OF CHANGE**

“Until you make the unconscious conscious, it will direct your life and you will call it fate.” - C. G. Jung

We have reached a point in our evolutionary process where we have a deep and innate desire to grow and expand our consciousness. We are all in the process of gravitating towards a state of wholeness, a felt sense of contentment, energy, wellbeing and skill to consciously navigate the challenges of life. Each of us has our own unique sense of what is needed to achieve this feeling. For some of us, it could be something practical like getting a degree or moving to the coast, for others it may be about creating a more healthy lifestyle or becoming more ‘mindful’.

Imagine what it would be like if we were able to immediately act on our intentions and arrive at the place in a flash? We would probably miss out on an entire process of discovery. We would deny ourselves the opportunity of experiencing the exciting, mysterious and undiscovered world of what I call the GAP. When it is not seen in this way, the GAP is the treacherous landscape that exists between our intentions and our actions or what we believe we should shift or change in our lives in order to grow, improve and feel whole versus the action that is required to create that shift.

The GAP is the black hole of our psyche. It’s the place we fear most. The GAP feels insurmountable and treacherous. We avoid it, deny its existence and try to find ways around it. In the process a great conflict and struggle ensues, leaving us frustrated and asking big questions of “Why can’t I….. ?” or “why do I always do this to myself?”. We blame ourselves, feel guilty, try harder and so the GAP feels even wider.

THE GAP

Old Neural Pathway

Behavior, Thoughts, Emotions, Beliefs

Fear

INTENTION ACTION

Closing the Gap and the 7 Steps of Change

1. Excuses

2. Blocks

3. Awareness

4. Taking Action

5. Crossroads

6. Practice

7. Shift

Through 20 years of working with people who have been floundering in “The GAP”, including myself, I have identified a certain pattern that this process has.

When we are able to bring our full awareness to where we are on this “gap grid”, we can more easily guide ourselves forward along the path and have great fun along the way.

Step 1: Excuses

While the intention or desire exists to instigate change, many excuses will be made as to why the action cannot be taken. These excuses usually appear as very valid. The most common excuse is that “there’s no time.” Other elaborate excuses will also be found, drawing on spiritual concepts, a recent article or a past experience. The entire database of information that is held in the brain will be called on to design the excuse that validates and justifies the procrastination, addiction or pattern of behaviour.

“I’ll start on Monday”, “It’s not the right time”, “I’m just being in the moment”, “I’m listening to my body”. “I need to do X first, before I do Y“ are some of the common things we say to ourselves.

At this point in the process, the motivation for change may be externally driven. For example, a doctor has advised that you should start exercising and should lose weight because you have insulin resistance. Mostly we stay stuck here because this old “way”, behavior or thinking pattern has been so deeply entrenched that our entire neurological circuitry and biology have adapted to this way of being. Recent research in the field of psychoneuroimmunology has firmly established the scientific relationship between mind and body. The physical body becomes a reflection of deeply held thoughts and belief systems through the emotional chemistry. The cells become primed to receive the chemicals that are released in response to stress and anxiety and literally become hungry for more. Any threat of changing the status quo will result in a revolt from the shadow armies in the gap as their land is up against an “invader”.

There is a very real neurological and biological basis for why we stay in a state of ‘comfortable misery’.

Step 2: Blocks

The energy and desire to move forward is mustered up but we still come up against some big obstacles that seem out of the field of our influence. Somehow things ‘happen’ that prevent change from being made. Common examples are cars breaking down, being stuck in traffic, sustaining an injury or bad weather. A block is really a cleverly disguised excuse that is blamed on someone or something else. The ‘block’ seems like the ‘universe’s’ way of preventing the change and relieves us of the responsibility of making the change.

This makes sense from a quantum physics perspective where physical objects, thoughts and emotions are merely waves of energy vibrating at different frequencies. Fear and subconscious belief systems resonate at a frequencies that will draw the experiences and situations with a similar vibration. In other words, we attract what we fear. Like attracts like, and so the cycle gets perpetuated.

This is where many of us halt the process of closing the gap and the old entrenched neural circuitry takes over as the operating system. Behaviour and body trigger emotion which feed thoughts which reinforce the belief systems. The old tired rusty wheel keeps turning.

Step 3: Awareness

This is the major crossroads on the path that will determine whether the change will actually be made.

At this point, there is an opportunity to create an inward shift that arises from the NON JUDGEMENTAL ACCEPTANCE of the old pattern. There is a recognition of the old programming, habits and patterns and what has given rise to them. There is a deep acknowledgement of the fear and a surrender to the opposing forces that stand and protect the territory of the GAP.

At this juncture, as the white flag is raised, an alignment occurs between the desire to change our most deeply held authentic value systems. The shift is made from being motivated to being inspired. There is a willingness to stand at the top of the cliff and get a bird’s eye view of this undiscovered interior territory and ask the questions: What got me here? What is my greatest fear? What will this change really mean? Where does this desire to change come from? What’s the alternative? What will I give up or lose as I make this change? What does failure mean? Is this choice in alignment with my most deeply value systems?

This is the first choice point.

Courage, acceptance, self-compassion and support are required as preparation for the further journey inward.

Step 4: Taking Action

As we begin to close the gap, we arrive at the point where our intention aligns with our internal state and value system. There is a real and genuine attempt to take the action steps of change.

As the new skill set is being learned, neurons begin to spark up different connections and a new neural circuitry is created in the frontal lobe of the brain, the seat of choice and self-awareness. This is usually experienced as quite exhilarating but sometimes scary as new territory is being discovered. It is easy and natural to want to retreat to what is familiar and it is important to be vigilant and mindful of how and when the old behaviour shows up.

And guaranteed the old behaviour will creep in as soon as the guard is dropped and we might find ourselves at step 1 or 2 again. “This is taking too long”, “This is too hard”, “It’s not working” is what we will say to ourselves.

This is a normal part of the process. Remember that the new pattern has just been fired up, but the old circuitry is still deeply entrenched.

It is at this juncture that we make an inspired and deep commitment to ourselves and gather the support, encouragement and guidance of those who we trust and who have our best interest at heart, whether that is a friend, coach or mentor.

Step 5: Crossroads

The baby steps lead us to the crossroads or another major choice point.

The journey has begun but the old circuits and the old ‘self’ feels threatened and begins it fight for survival. The new circuitry is being entrenched through the new thoughts, feelings and actions. The cells are no longer receiving their fix of ‘feel bad’ hormones and will begin to pick fights with the new self. If we engage these battles, the conscious brain and the old subconscious being will begin a full scale war. It feels easier at this point to throw in the towel than to continue.

Be aware that this is not a linear process, rather, it is akin to walking a labyrinth. As we head toward the centre, we can feel as if we are moving away from it. It is easy to feel despondent and default back to the old circuitry. The key to entrenching the new pathway, is to keep catching the old behavior and gently guide ourselves back.

Once again, courage, support and re-alignment with value systems are required here.

Step 6: Practice

Like learning any new skill, the process of change requires perseverance, practice, commitment to self. More than that it requires patience and support. It is interesting to see here how the “old” way of operating will sneak into this process. If we are perfectionists we might want to do this process “perfectly” or if we are needing validation, we constantly seek validation that we are doing well. Without judgement, it is helpful to watch these feeble attempts and let them simply pass through with full awareness and compassion. “Nerves that fire together wire together” so the more the skill, habits, behaviour, feelings and emotions are practised, the more deeply the neural pathways will be entrenched. In response, new receptors become switched on and primed on the surface of the cells and the physical body begins to transform. In my 15 years’ experience of working with the mind body connection I have hundreds of examples of people who have healed their physical ailments and completely changed their relationship to life and themselves by working through this process.

Step 7: The Shift

The new neural pathways have become deeply embedded. The entire body-mind system has become rewired to create a new habit or way of living and being. This is the “new normal”.

The software of the subconscious mind has been re programmed. While the “old program“ will probably rear its head every now and again, it passes quickly as the new default program sets in. This however requires constant awareness and vigilance. By now, the skill of mindfulness has become more finely tuned.

**The breath as the guide and the tool**

As we travel along this journey, we require a navigation system, support, fuel and some tools along the way. In both my personal journey and as a guide to this process, the breath is the one constant tool on which I draw.

The breath is a program that is always running in the background and it kicks in without us even being aware of it. It is a great gift of life that we take for granted. In every moment, the breath is at work to maintain balance, homeostasis and energy. But like the cells in our body that get primed to the stress hormones, the pattern of our breathing also adapts to a particular mode of operating. For example, if we have developed the habit of living in an adrenalised mode or slouching over a desk the breath will correspond accordingly.

If we tend to have defensive patterns and tend to keep people at arm’s length, it will show up in the breathing pattern. If we find it difficult to trust ourselves and trust life, be sure that the breathing pattern will reveal that. Often it’s the pattern of breathing that will reflect a way of being that may not have revealed itself to the conscious mind yet.

When we turn our attention to the breath, we can start to begin our journey inwards. Simply by watching the breath we can move to the next step of being the observer and watcher of our experience. It allows us to create a gap to close the gap. Now the breath becomes a core skill to develop mindfulness. And so the journey begins.

While there are thousands of breathing techniques that all facilitate different feelings and experiences, the most radical, powerful and transformative breathing technique that I have been taught and that I use every single day personally and with my patients is a technique called “Conscious Connected Breathing. “When I was first taught this technique by Breathwork Master, Dan Brulé a few years ago, he said that he believed that it was the most powerful breathing technique on the planet. Five years and hundreds of breathwork sessions later I can safely say that I agree.

It is a simple technique that involves breathing in a certain rhythm in a connected way for a prolonged period of time. This breathing pattern of a long active inhale and passive soft and complete exhalation reflects the pattern of the new. The active inhale reflects action while the passive exhale reflects surrender. It is the skill of relaxing through the intensity that sparks up the new pathway. A conscious connected session is like a fast track through all 7 steps all in one session.

Usually as the intensity of the energy builds through the session, the stress or sympathetic response kicks in as the body and mind reads a “high demand situation”. At this point in the process, we have an opportunity to practice mindfulness, to watch without reacting. Instead we can practice taking the next steps by continuing to breathe in the same connected way. A new neural network begins to light up, as we spark up the ability to relax through discomfort. More than that we are practicing perseverance, determination and courage. This technique that bridges the gap between intensity and relaxation firmly reinforces the new pathway. Staying awake to the sensations you experience lights up the left prefrontal cortex, the seat of conscious awareness and shuts down the activity in the parts of the brain that regulates stress. Eventually, the body and mind become one and the body’s innate wisdom takes over. The body and mind wake up to your essential self and the battle is over. The gap is closed.

Of course the journey continues as we keep evolving and growing and arriving at new frontiers within ourselves, but with the help of the breath we are able to navigate it in a different way. Because we have switched on the magic of the breath we use the breath in different ways depending on the landscape. When we feel stuck, even taking a breath is an action that propels us forward. Whether we are walking through a field or climbing a mountain, the breath can be harnessed to get across the gaps with comfort, ease and grace.

**REFERENCES:**

Kaminoff, L. 2007. *Yoga Anatomy.* Human Kinetics. USA

Veltheim, J. 2006. The BodyTalk System. Module 4(7) manual. Fifth edition. IBA. USA

Brule, Dan. Breath energy exercises. Article

Dan Brulé on line breathing course

A Discussion on Stressby Sylvia Muiznieks, SrCBI, JrVP

The Amygdala by Dr. John Veltheim

Candace Pert *Molecules of Emotion*. Sydney Simon & Schuster 1997

Daniel Goleman *Emotional Intelligence* London Bloomsbury 1996

*Alternative Medicine the Definitive guide*, Berkley, Celestial Arts 2002

Charles Eisentsein *Sacred economics* North Atlantic Books 2012-06-03

Radical Healing, Rudolph Ballentine MD, Harmony Books, New York ,1999

The Secret of Prana, David Frawley, from Yoga International Nov 1997

Tantra, the Art of Sacred Sexuality as a Gateway to Ascension by Claudia Molina Basteris(Dec 8, 2012)

Fried ,R, Ph.D, *Breathe Well, Be Well - A program to Relieve Stress, Anxiety, Asthma, Migraine and Other Disorders for Better Health* John Wiley and Sons, Inc., 1999

Adams, Case, *Breathing to Heal*- The Science of Healthy Respiration, Logical books, 2012

*Appendices:*

Appendix 1

*Summary of breathing techniques*

1. Breath awareness. Get into the habit of observing your breath. You will notice that as soon as you become aware of how you are breathing, you will automatically become aware of your posture, your thoughts, your reactions, habits and patterns. Somehow, as soon as you bring awareness to your breathing, it will automatically adapt, open up and slow down. Use every opportunity to become aware of your breathing; when you are walking, going to the loo or are sitting in traffic. Notice how you are breathing as you are reading this. Tune into you breathing when you are in a meeting or being provoked in a confrontation. Listen to your breath when you are feeling confused, irritated, angry, sad, worried.
2. Yawn. Enjoy your yawns and stretch into them as often as you can. Encourage others to do the same. Notice the tendency to suppress the yawns and override this by inviting more air into your yawns.
3. Stop and sigh. Use the sigh as a recovery loop, a meaningful pause, as a moment to stop, reflect, let go and tap into natural energy. Do this as often as possible, between e mails, phone calls, at traffic lights, before and after meals, whenever! Every time you sigh, you are in fact “coming home” to yourself and giving yourself a mini energy boost.
4. The 6-9 breath. This is a great calming breath and a good technique to use when you are feeling overwhelmed, stressed or anxious. You can also use this technique in the evenings as part of your wind down routine. This is how it works. Lie down or sit in a comfortable position. Deepen and slow down the inhalation, breathing through all three breathing spaces and filling you lungs completely for a count of 6. Exhale very slowly and completely for a count of 9. Continue for 5- 10 minutes.
5. Power breath. This is a slightly more advanced and very powerful technique. It is very energizing and relaxing at the same time. It is also known as “20 connected breaths.” This one involves using your mouth to breathe. Take a long deep slow inhalation filling your lungs right to the top. Imagine that you are sucking the breath through a thick straw. Let the exhale drop out like a sigh of relief. Keep breathing in this way with no gaps or pauses between the breaths 20 times. Let every fifth breath be a longer one. Begin each morning with this technique and practice this at least three times during the day for a power boost.
6. 365 Formula Use this practice formula:  
   3 times per day   
   6 breaths per minute   
   5 minutes duration

Make your in-breaths and your out-breaths last for 5 seconds each. There is an imperceptible pause between inhales and exhales. In this way, you create heart coherence and heart resonance.

Sit straight and strong, but relaxed and at ease. It’s easier to breathe fully and freely, and to create heart coherence if you are sitting or standing upright.

Create a conscious intention before each session. Stated it as an affirmation, an assertion, a command or a prayer. For example: “I am strengthening my ability to survive and thrive till I’m a hundred and five!” Or, “May every breath make me stronger, healthier, and more alive!”

Appendix 2

Recommended Reading

Free Your Breath, Free Your Life by Dennis Lewis

Heart Coherence 365: A guide to long lasting heart Coherence by David O’Hare

Breathe well, Be Well by Robert Fried

Breathing to Heal: The Science of Healthy Respiration by Case Adams

Light on Pranayama by BKS Iyengar

Power Pranayama by Dr Renu Mahtani

Full Catastrophe Living by Jon Kabbat Zinn

Eastern Body, Western Mind by Anodea Judith

Biology of Belief by Bruce Lipton

Evolve your Brain by Joe Dispenza

**Websites**:

[www.breathmastery.com](http://www.breathmastery.com)

www.jimmorningstar.com

www.drelamanga.com