

## Yoga teaches us to cure what need not be endured and endure what cannot be cured. ~B.K.S. Iyengar

Living with vitiligo isn't easy; in fact, it's downright difficult. We have to deal with uninvited questions, concerned stares, unsympathetic doctors, job discrimination, etc... And that's just from the outside world which, let's face it, is a lot kinder than our own thoughts about our vitiligo. We wonder what caused it. Why we got it; if it is to serve some greater purpose. We feel self-conscious. And if we didn't have a healthy self-esteem before vitiligo made its grand appearance in our life, it can quickly spiral further downward. We may even avoid social events because we're embarrassed. Many days, we obsess over finding a cure, spending hours on the internet and a lot of money on so-called "cures", which in the end leave us feeling empty and even more isolated.

The good news is that this doesn't have to be the way we live. There may not be a cure yet, but there is something you can do today to make your life fuller, bring inner peace, and potentially repigment. What am I talking about? Yoga!

Vitiligo is a condition in which circumscribed depigmented patches develop on the skin. In vitiligo the cells which produce the pigment "melanin" (melanocytes) somehow turn off, but certain treatments can trigger the cells to repigment. Although the exact cause is unknown, vitiligo is sometimes set off by severe stress. It sometimes runs in families, meaning that a genetic factor may be involved. It is also associated with autoimmune disorders.

The skin is made up of two main types of cells or "building blocks": keratinocytes and melanocytes. The keratinocytes make up the bulk of the skin. The melanocytes are the cells that make the skin color. One theory is that in people with vitiligo, the immune cells (cells which fight infection) attack the melanocytes rendering them unable to produce the needed color.

Yoga addresses vitiligo at its root level. Yoga brings about deep relaxation and rest to the body systems thereby bringing about harmony to the immune system and nervous system which mediate the autoimmune reaction, hence arresting the progression of the lesions.

Various techniques in yoga act on the mind/ body complex consequently bringing the body to its physiological base line. ASANAS (postures) helps relax the muscles, and relaxation techniques like shavasana, bring about a deep sense of rest to the over stimulated system. PRANAYAMA (breathing techniques) help in calming down the body's defense. DHYANA (meditation) brings about inner peace and poise which are essential for maintaining the homeostasis (internal environment). Vitiligo can cause a lot of distress psychologically. Yoga teaches a person to handle the psychological disturbance by concentrating on the true inner self which is limitless.

### Our 3 Areas of Focus

PRANAYAMA = Breathing techniques

ASANAS = Postures

DHYANA = Meditation

## PRANAYAMA



BREATHING

In yoga, the breath is known as prana or a universal energy that can be used to find a balance between the body-mind, the conscious/ unconscious, and the sympathetic-parasympathetic nervous system. Unlike other bodily functions, the breath is easily used to communicate between these systems; thereby making it an excellent tool to help facilitate positive change. Breathing is the only bodily function that we do both voluntarily and involuntarily. We can consciously use breathing to influence the involuntary (sympathetic nervous system) that regulates blood pressure, heart rate, circulation, digestion and many other bodily functions.

Pranayama is a yoga practice that literally means the control of life or energy. It uses breathing techniques to change subtle energies within the body for health and well-being. Breathing exercises can act as a bridge into those functions of the body of which we generally do not have conscious control.

#### An example of how life affects physiology

During times of emotional stress our sympathetic nervous system is stimulated and affects a number of physical responses. Our heart rate rises, we perspire, our muscles tense and our breathing becomes rapid and shallow. If this process happens over a long period of time, the sympathetic nervous system becomes over stimulated leading to an imbalance that can affect our physical health resulting in inflammation, high blood pressure, and muscle pain, to name a few. Consciously slowing our heart rate, decreasing perspiration, and relaxing muscles is more difficult than simply slowing and deepening breathing. The breath can be used to directly influence these stressful changes causing a direct stimulation of the parasympathetic nervous system resulting in relaxation and a reversal of the changes seen with the stimulation of the sympathetic nervous system. We can see how our bodies know to do this naturally when we take a deep breath or sigh when a stress is relieved.

#### The breathing process can be trained

Breathing can be trained for both positive and negative influences on health. Chronic stress can lead to a restriction of the connective and muscular tissue in the chest resulting in a decrease range of motion of the chest wall. Due to rapid more shallow breathing, the chest does not expand as much as it would with slower deeper breaths and much of the air exchange occurs at the top of the lung tissue towards the head. This results in "chest" breathing.

You can see if you are a chest breather by placing your right hand on your chest and your left hand on your abdomen. As you breathe, see which hand raises more. If your right hand raises more, you are a chest breather. If your left hand raises more, you are an abdomen breather.

Chest breathing is inefficient because the greatest amount of blood flow occurs in the lower lobes of the lungs, areas that have limited air expansion in chest breathers. Using rapid, shallow, chest breathing results in less oxygen transfer to the blood and subsequent poor delivery of nutrients to the tissues. The good news is that similar to learning to play an instrument or riding a bike, you can train the body to improve its breathing technique. With regular practice you will breathe from the abdomen most of the time, even while asleep.

# Using proper breathing techniques is one of the most beneficial things that can be done for both short and long term physical and emotional health.

Abdominal breathing is also known as diaphragmatic breathing. The diaphragm is a large muscle located between the chest and the abdomen. When it contracts it is forced downward causing the abdomen to expand. This causes a negative pressure within the chest forcing air into the lungs. The negative pressure also pulls blood into the chest improving the venous return to the heart. This leads to improved stamina in both disease and athletic activity. Like blood, the flow of lymph, which is rich in immune cells, is also improved. By expanding the lung's air pockets and improving the flow of blood and lymph, abdominal breathing also helps prevent infection of the lung and other tissues. But most of all it is an excellent tool to stimulate the relaxation response that results in less tension and an overall sense of well-being.

Abdominal breathing is just one of many breathing exercises. But it is the most important one to learn before exploring other techniques. The more it is practiced, the more natural it will become improving the body's internal rhythm.

#### DIAPHRAGMATIC (ABDOMINAL) BREATHING TECHNIQUE

Breathing exercises should be done twice a day, or whenever you find your mind dwelling on upsetting thoughts or when you are experiencing pain.

- Place one hand on your chest and the other on your abdomen. When you take a deep breath in, the hand on the abdomen should rise higher than the one on the chest. This insures that the diaphragm is pulling air into the bases of the lungs.
- After exhaling through the mouth, take a slow deep breath in through your nose imagining that you are sucking in all the air in the room and hold it for a count of 7 (or as long as you are able, not exceeding 7)
- Slowly exhale through your mouth for a count of 8. As all the air is released with relaxation, gently contract your abdominal muscles to completely evacuate the remaining air from the lungs. It is important to remember that we deepen respirations not by inhaling more air but through completely exhaling it.
- Repeat the cycle four more times for a total of 5 deep breaths and try to breathe at a rate of one breath every 10 seconds (or 6 breaths per minute). At this rate our heart rate variability increases which has a positive effect on cardiac health.

Once you feel comfortable with the above technique, you may want to incorporate words that can enhance the exercise. Examples would be to say the word to yourself, relaxation (with inhalation) and stress or anger (with exhalation). The idea being to bring in the feeling/emotion you want with inhalation and release those you don't want with exhalation.

In general, exhalation should be twice as long as inhalation. The use of the hands on the chest and abdomen are only needed to help you train your breathing. Once you feel comfortable with your ability to breathe into the abdomen, they are no longer needed.

## ASANAS



POSES

The impact of asanas on the human body system is expansive. The muscles, bones, nervous system, respiratory, circulatory, and digestive systems of the human body are greatly benefited from regular practice. The body becomes more flexible, more able to adjust to environmental changes, and the sympathetic and para-sympathetic nervous systems are brought into a state of balance.

#### Let's get specific

The human body consists of two central parts called the trunk and the head. Attached to the trunk at its upper corners are the arms and at its lower corners are the legs. The arms are termed the upper extremities and the legs are known as the lower extremities. Bones, the hardest parts of the human body, form the framework of the physical structure and they support the softer parts of the body, such as muscles, which are attached to it. It also offers effective protection to some other parts of the human organism. For instance, some of the bones are arranged in such a way that they give protection to the brain, the spinal cord, the heart and the lungs. The skeleton, its joints and muscles are exercised through asanas that leads to the proper development of the bones and strengthens them with the passage of time.

The joints are moved through the full range of motion while performing asanas; this encourages mobility and eases pressure. The stretching of the joints also causes the secretion of a lubricant called Synovial Fluid. This fluid is released into the joints that keep them supple, as well as removing waste products.

The cardiovascular system of the human body includes the heart and its arteries. Yoga Asanas being isometric, rely on holding muscle tension for a short period of time. This improves cardiovascular fitness and circulation. Many surveys show that regular yoga practice may help the blood pressure to normalize.

The digestive system consumes food, digests it to extract energy and nutrients, and expels the remaining waste. The digestive system is approximately 6.5 meters (20 feet) long and consists of the upper and lower gastro intestinal tracts.

Yoga Asanas effect in improved blood circulation and the massaging effect of surrounding muscles and this speeds up a sluggish digestion. Even if the most nourishing food is consumed, it still has to be digested and assimilated properly, and the toxins have to be eliminated efficiently. As we age, the digestive system functions with gradually reducing efficiency. The regular practice of asanas thus result in an improved blood and nerve supply to the digestive and eliminative systems, which in time will get them functioning at peak efficiency. The stomach lifts while asanas massage the digestive organs, as well as contracting and stretching them.

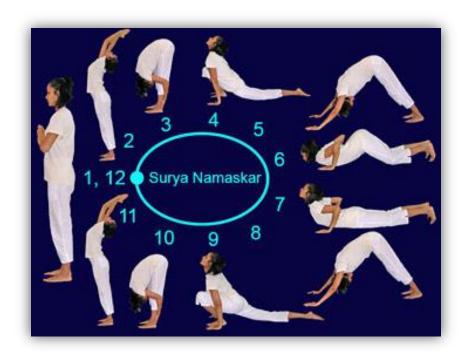
The nervous system is a network of specialized cells that communicate information about an organism's surroundings and itself. It processes this information and causes reactions in other parts of the body as well. It is made of neurons and other specialized cells called glial cells that help in the function of the neurons. The nervous system is divided broadly into two categories, the peripheral nervous system and the central nervous system. Neurons generate and pass impulses between and within the two systems. The peripheral nervous system is composed of sensory neurons, and the neurons that connect them to the nerve cord, spinal cord and brain making up the central nervous system. In response to stimuli, sensory neurons generate and spread signals to the central nervous system, which then conducts signals back to the muscles and glands.

Since the nerves from the spine reach to all of the organs and glands of the body, a healthy spine obviously plays an important role in vitality and renovation. In fact, the spine is more critical to the well-being than the brain, since the brain is well sheltered by the cranium.

The endocrine system is a system of glands that involve the release of extra cellular signaling molecules known as hormones. The endocrine system is active in regulating metabolism, growth, development and puberty, tissue function, and also plays a part in determining mood. Asanas keep the mind calm and at ease. The endocrine system is an information signal system much like the nervous system. It mainly uses blood vessels as information channels. Glands located in many regions of the body, release chemical messengers called hormones into the bloodstream. Even if one gland is not working, a noticeable loss of health can be experienced. Yoga asanas regulate and control the secretion of hormones from all glands in the body.

There are specific asanas that cure the ailments from the root. ASANAS, PRANA YAMA and MEDITATION TECHNIQUES, when performed in a chronological manner with a specific purpose, prove to be much more effective.

#### **SUN SALUTATION**



Sun Salutation is a series of 12 postures performed in a single, graceful flow. Each movement is coordinated with the breath. Inhale as you extend or stretch, and exhale as you fold or contract. The Sun Salutation builds strength and increases flexibility. Different styles of yoga perform the Sun Saluation with their own variations. However, the flow presented below covers core steps used in most styles. For the series below, a single round consists of two complete sequences: one for the right side of the body and the other for the left.

#### **Step-by-step guide to Sun Salutation:**

#### 1. Mountain



Begin by standing in Mountain pose, feet about hip width apart, hands either by your sides or in prayer position. Take several deep breaths.

#### 2. Hands up



On your next inhale, in one sweeping movement, raise your arms up overhead and gently arch back as far as feels comfortable and safe.

#### 3. Head to knees



As you exhale, bend forward, bending the knees if necessary, and bring your hands to rest beside your feet.

#### 4. Lunge



Inhale and step the right leg back

#### 5. Plank



Exhale and step the left leg back into plank position. Hold the position and inhale.

#### 6. Stick



Exhale and lower yourself as if coming down from a pushup. Only your hands and feet should touch the floor.

#### **Step-by-step guide to Sun Salutation (cont.):**

#### 7. Upward Dog



Inhale and stretch forward and up, bending at the waist. Use your arms to lift your torso, but only bend back as far as feels comfortable and safe.

Thighs off floor. It's okay to keep your arms bent at the elbow.

8. Downward dog



Exhale, lift from the hips and push back and up.

9. Lunge



Inhale and step the right foot forward.

#### 10. Head to knees



Exhale, bring the left foot forward and step into head-to-knee position.

11. Hands up



Inhale and rise slowly while keeping arms extended.

12. Mountain



Exhale, and in a slow, sweeping motion, lower your arms to the sides. End by bringing your hands up into prayer position. Repeat the sequence, stepping with the left leg.

## DHYANA



**MEDITATION** 

To give meditation a try, sit comfortably, set a timer for 10 minutes, and explore one of the following strategies. And consider yourself forewarned: Meditation is a delightfully simple practice, but that doesn't mean it's easy!

JUST SIT. Commit to doing nothing more than sitting quietly and watching what happens. Don't pick up the phone, don't answer the doorbell, don't add another item to your to-do list. Just sit and observe the thoughts that arise and pass through your mind. You will likely be surprised by how difficult it is to sit quietly for 10 minutes. In the process, though, you may learn something important about the qualities of the restless mind and the ever-changing nature of life.

LISTEN TO THE SOUNDS OF LIFE. Close your eyes and tune in to the sounds percolating both within and around you. Open your ears and adopt a receptive attitude. At first, you'll likely hear only the most obvious noises, but over time, you'll discover new layers of sounds that you had previously tuned out. Challenge yourself to observe what you hear without clinging to it or resisting it. Notice how the world feels more alive as your awareness of the present deepens.

PRACTICE BARE ATTENTION. Notice the raw sensations of the present moment—feelings of warmth and coolness, hardness and softness, pressure and ease. Which parts of your body are in contact with the earth? How does the shape of the body shift with each inhalation and exhalation? How does your experience change over time? Cultivating an awareness of the present moment will foster a more serene and attentive mind, one that is able to settle into the here and now.

FOLLOW THE BREATH. Attach your mind to the breath. While you're breathing in, note that you're breathing in, and while you're breathing out, focus on the exhalation. Don't manipulate the breath in any way; simply watch it with your mind's eye, just as you would follow a tennis ball bouncing from one side of the court to the other during a particularly engrossing match. When you find that your mind has strayed, as it inevitably will, gently refocus it on the breath and begin again.

USE A MANTRA. Choose a favorite word, phrase, prayer, or fragment of a poem, and repeat it slowly and softly. Let its rhythm and meaning lull you into a quiet, contemplative state of ease. When you notice that your mind has wandered off to other thoughts, simply redirect it back toward the words you've chosen as your touchstone and rededicate your awareness to them.

PRACTICE KINDNESS. As you sit quietly, focus your inner attention on someone you know who might benefit from an extra dose of kindness and care. In your mind's eye, send this person love, happiness, and well-being. Soften your skin, open the floodgates of your heart, and let gentle goodwill pour forth.

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