



## Yoga & Breast Cancer Prevention, Management, Rehabilitation



### Why Yoga?

Merits of Yoga are multitude, bringing together the body, mind, and emotion in balance to promote holistic health in a person. Most importantly, a yoga practitioner develops an understanding and subtle sensitivity of his or her own body which is invaluable in managing health and detecting health issues early. It is important to understand that yoga and modern science are complimentary. The effectiveness of yoga has been supported by scientific evidence and therefore conventional medicine and yoga need not be exclusive. They both play important roles in regaining people's health. Medical technology is necessary to make accurate diagnosis through lab tests and imaging devices. Surgical procedures have developed to save many lives. However, the fundamental understanding of health between the two methods is very different. Modern medicine focuses on relieving the symptoms of the condition, whereas the yogic concept of health tackles the root cause of the condition by creating an energy balance in the body to heal itself. The word for health in Sanskrit is **Swasthya**, meaning being rooted in one's own self. The emphasis on health in modern medicine is to rid illness through outside intervention. In contrast, the yogic method is a preventative measure against illnesses, as well as maintaining the health of all organs. It also develops mental and emotional stability which, when out of balance, affects the physical health of a person. In the case a person has an injury, surgery or chronic disease, yogic practices boost the immune system for rapid rehabilitation and recovery. Practices include natural purification and detox body maintenance methods without the use of drugs which could have negative side effects.



## **Cancer**

Cancer, also known as a **malignant tumor**, is a group of disease involving abnormal cell growth with the potential to invade or spread to other parts of the body. Not all tumors are cancerous. **Benign tumors** do not spread to other parts of the body. Cancer is made of abnormal cells replicating itself. Most people carry cell abnormality at some point, but a healthy immune system would destroy it before it can replicate itself to a detectable size of tumor. It may take up to 10 to 30 years since the appearance of the first abnormal cell before cancer can be detected.

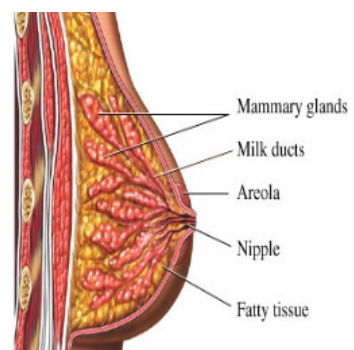
**Breast cancer** is the most common form of cancer among women worldwide, which forms in the breast tissues. 25% of cancer developed among women is breast cancer. Rate of new cases of breast cancer, especially in developed countries, are growing at an alarming rate. The good news is with early detection and medical care, survival rate is 80 to 90%. Although rare, men can also develop breast cancer.

## **Breast Anatomy**

In women, the breasts are composed of milk-producing glands (**lobules**), milk **ducts**, and connective tissue (**stroma**). Milk is produced by cells in the lobules and moves from these sacs, through the mammary ducts, to the nipple. Most breast cancers originate in mammary ducts. Blood vessels supply oxygen and nutrients to and remove waste from the cells of the breast. Lymphatic vessels collect and carry fluid and cells from the tissues of the body. Smaller lymphatic vessels merge with larger ones. Large vessels empty into grape-like clusters of lymphatic tissue called lymph nodes. The lymphatic vessels in the breast carry lymphatic fluid to a mass of lymph nodes located near the underarm.

## **Breast Cancer**

In most breast cancer cases, a malignant tumor develops first in the **breast ducts**. At this stage, it is referred to as **ductal carcinoma**, which begins in the lining of the milk ducts (thin tubes that carry milk from the lobules of the breast to the nipple). **Lobular carcinoma** is a malignant tumor which grows in the lobules (milk glands) of the breast. Cancer cells can spread by breaking away from the original tumor in the breast ducts or lobules to surrounding normal tissues and or entering the blood or lymph vessels which branch into tissues all over the body. When the cancer cell spreads to other organs in the body, the process is called **metastasis**. When the cancer cell begins to infect the surrounding breast tissues, it turns into an **invasive breast cancer**. Once



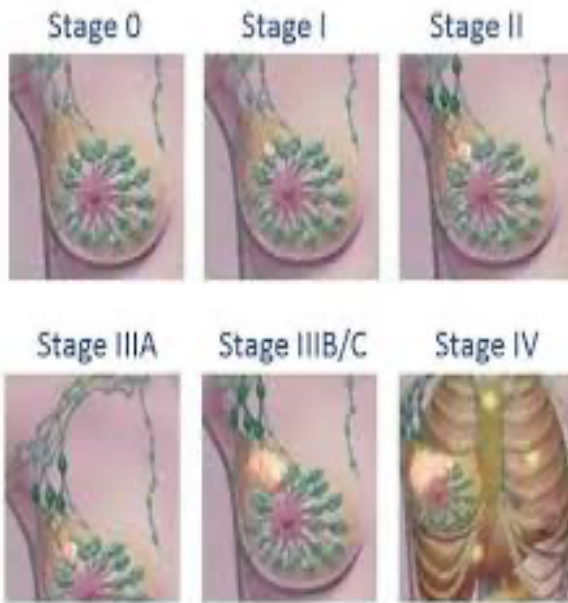


invasive, the cancer could spread to the lymph nodes and enter the **lymphatic system** and further spread to other parts of the body.

### **Breast Cancer: Signs and Symptoms**

There are several signs and symptoms which may indicate breast cancer but not conclusive without a proper medical diagnosis.

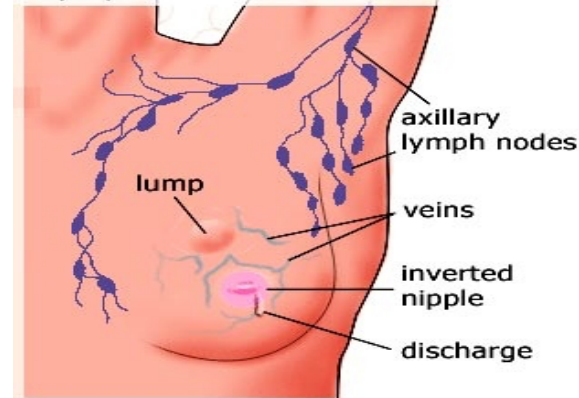
#### **Stages of Breast Cancer**



- A lump or thickening in an area of the breast.
- A change in the size or shape of a breast.
- A change in the shape of your nipple, particularly if it turns in, sinks into the breast, or has an irregular shape.
- A blood-stained discharge from the nipple.
- A rash on a nipple or surrounding area or dimpling of the skin.
- A swelling or lump, pain in your armpit.
- Itching, redness, pain in chest.

Other

#### **Symptoms of Breast Cancer**



symptoms may include prolonged coughs, unexplained weight loss and change in bowel movements. While these symptoms may indicate breast cancer, they may be caused by other conditions so it is vital to seek professional diagnosis.

### **Risk Factors**

Below is a table depicting some of many factors which increase the risk of cancer. Excessive exposure to any carcinogens is to be avoided.

<b>External / Toxins</b>	
<b>Tobacco</b>	Active & passive smoking, chewing tobacco
<b>Alcohol</b>	All types of consumption
<b>Sunlight</b>	Excessive exposure to UV radiation
<b>Pollution</b>	Including toxic pesticides & heavy metals exposure through water and wounds
<b>Ionizing Radiation</b>	X-rays & nuclear fallout



<b>Occupational Materials</b>	Asbestos, benzene, Benzedrine, formaldehyde (used in industrial manufacturers), vinyl chloride (used in plastic manufacturers)
<b>Certain Pharmaceutical Drugs</b>	Hormone replacement therapy, some cancer treatment drugs may cause cancer in other parts of the body.
<b>Some Viruses &amp; Bacteria</b>	HIV, hepatitis B & C and helicobacter pylori
<b>External / Repeated Trauma &amp; Stress</b>	
<b>Repeated scratching &amp; wounds</b>	Long term exposure to scratching or repeated wound in the same spot may cause skin cancer. The cause maybe psychological, physical, or inflicted by a third part.
<b>Genetic</b>	
<b>Inherited Genetic Mutations</b>	Although most cancers are sporadic, there are cases of genetic risks
<b>Psychological</b>	
<b>Negative Mental and Emotional States</b>	Prolonged suppression of negative emotions, feelings, insecurity, fear, and helplessness are linked to cancer growth
<b>Diet</b>	
<b>Malnutrition</b>	Deficiency of fiber, antioxidant, certain vitamins, minerals (magnesium, selenium)
<b>Excessive consumption of Soy Products</b>	High intake increases risk of breast & uterus cancer
<b>Excessive consumption of Meat and Potato Chips</b>	High intake of fried foods & foods cooked in high temperatures
<b>Excessive consumption of Preserved Foods</b>	High salt pickles
<b>Excessive consumption of Supplements</b>	Vitamin A
<b>Obesity</b>	High BMI linked to increased risk in most types of cancer

### **Modern Therapy**

Conventional medicine treats cancer by removing the cancer growth either through surgery and or in combination with chemotherapy, radiation therapy and hormone therapy. All these therapies target cancerous cells from developing again. Drugs administered in chemotherapy are strong and have



negative side effects on the body such as nausea, vomiting, loss of appetite, diarrhea, acidity, indigestion, fatigue, weakness, insomnia, hair loss and pigmentation of skin. In radiation therapy, ionizing radiation is directed to the cancer affected and surrounding areas, thus the patient must withstand the effects of radiation such as pain, nausea, fatigue, weakness, insomnia, hair loss and pigmentation of skin, though minimized with new technology. The estrogen in the blood affects some types of breast cancers to grow. Strong anti-estrogen drugs are given to these patients which may reduce the risk of breast cancer coming back but, unfortunately, the drug increases the risk of uterus cancer. A modern therapy may be successful in combating the specific cancerous cells but it is harmful to the body as a whole.

### **Understanding of Disease: Yoga vs. Science**

Yoga attributes causes of physical, mental, and emotional diseases to the lack of flow of energy, **Prana**, in the body. In order to keep a good flow of pranic energy in the body, asana (postures), pranayama (breathing) and relaxation practices are done regularly to prevent diseases, maintain health and rehabilitate when injuries and illnesses do occur. Lamarck's Theory of Inheritance of Acquired Characteristics best supports the Yogic philosophy. Part of Lamarck's theory states the lack of use of any specific organ would weaken it or lose its function. In other words, if body parts are not used, then energy does not flow to those areas and thus become susceptible to diseases.

### **Yogic View**

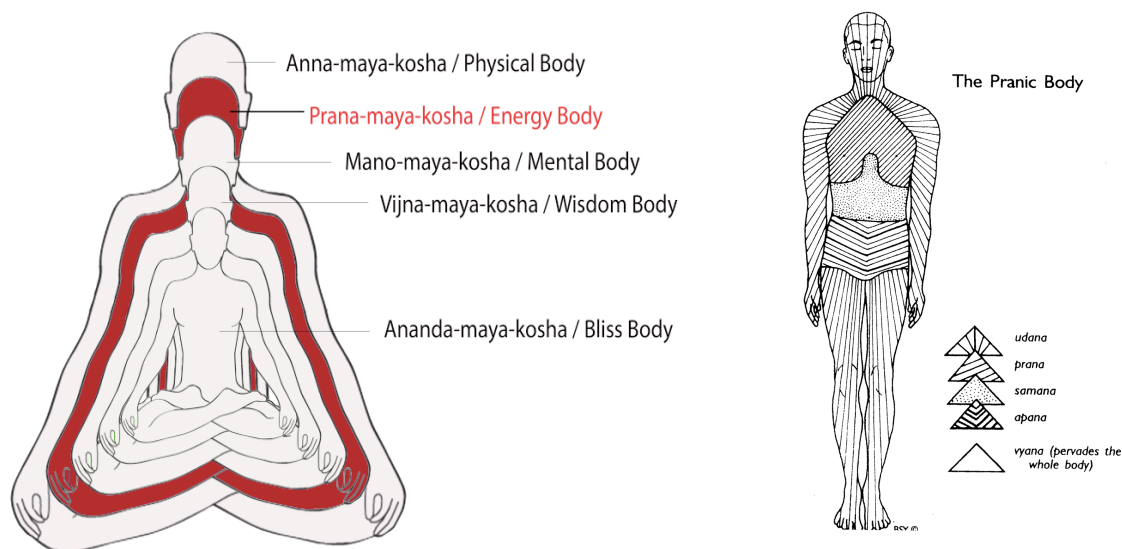
The Yogic view of risks of breast cancer is not only on the physical level but also on a multi-layer understanding of the human personality. Yoga philosophy perceives the human personality to possess 5 fields called Kosha. The **Annamaya Kosha**, translated as the food level, represents the physical level of the human existence. At the physical level, it is believed that relatives who suffer from cancer, such as ovarian cancer, prior to reaching old age is an indication that other members of the family are at risk. Early onset of menarche, late menopause, advanced age for first pregnancy, and or nulliparity (never having given birth) are putting women at higher risk of breast cancer. The **Pranayama Kosha** is the energy level of a person. People who suffer from breast cancer experience blockages of the pranic flow and chronic depletion of prana in the chest region. As a result of the poor energy flow, four of the **chakras**, energy centers in the body (**anahata**: heart, **vishuddhi**: throat, **swadhisthana**: sacral and **mooladhara**: root) are affected thus compromising the efficient flow and use of energy. Also, blockage of the energy channel, **ida nadi**, often associated with the sympathetic nervous system, and the left **swara** (controlled breathing through the left nostril) indicates a potential risk of breast cancer. At the **Manomaya Kosha** level, the mental field, recurring brooding fixation on entertainment and sexuality, suppression of maternal instinct and neglect from parents and society



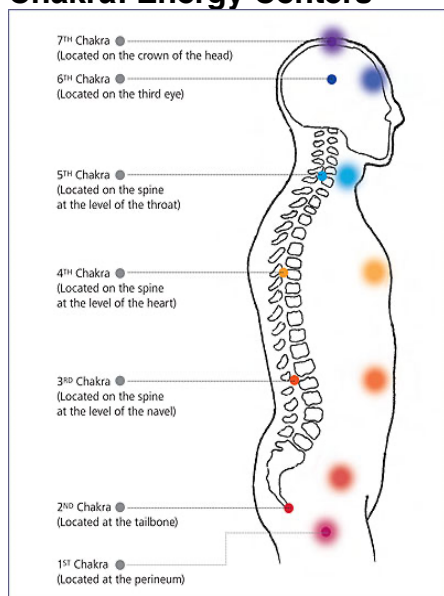


resulting in negative self-image, guilt and fear are attributed to risks of breast cancer. Also aggressive tendencies in character may suppress creativity and positivity in a person which may manifest as diseases.

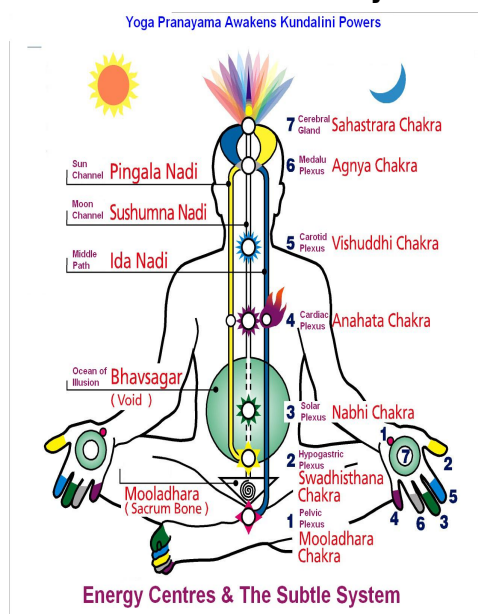
## Kosha: Energy Fields



## Chakra: Energy Centers



## Nadis: Nervous System





## **Is Yoga Scientific and Based on Research?**

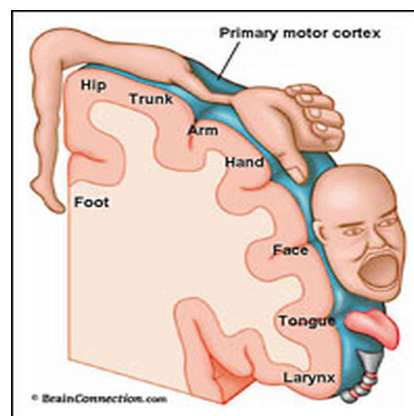
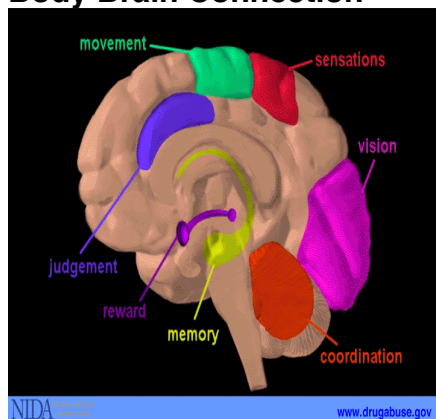
Yoga is over 5,000 years old and is still relevant today in bringing health and balance between the body, mind and spirit. Scientific advancement is now catching up to be able to empirically verify the effectiveness of this ancient wisdom.

## **How Yoga Works**

Yoga works on four personality levels, the physical, mental, energy and intellectual. This allows getting to the root cause of diseases to create a healing body and to prevent its reoccurrence. Physical Yoga practices encourage blood and energy flow, improve efficiency and boost immunity of all various organs. It creates space between organs and restores elasticity and flexibility in the body to allow smooth energy flow. Breathing practices purifies the blood, cells, lymph, nerves and manage the mind. Yoga Nidra and meditation practices relax the mind and the body so that healing may take place. Detox practices cleans internal organs to improve their functions. In conjunction with these yoga practices, conventional medical treatments would be more effective and promote rapid healing to take place.

In very simple terms, yoga works through maintaining a healthy spine. There are 7 chakras, energy centers, located along the spine, starting from the root chakra at the base of the spine going up to the crown chakra at the top of the head. Keeping the spine flexible and lengthened allows for unobstructed energy flow throughout all seven chakras. The spine also acts as a bridge between the brain to the body. The brain is the “inner spine” and the spine is the “outer brain.” The brain controls all organs and parts of the body. Movement, coordination, sensations, vision, and all cognitive skills would not be possible without maintaining a healthy brain. Yogic practices work on all parts of the body while placing most importance on the spine. By doing so, the body brain connection is reinforced and stimulates the brain cells to function optimally.

## **Body Brain Connection**





## **Physical Practices (Asana) and their Benefits**

Physical practices are beneficial in promoting blood and energy circulation and promote internal respiration in cells. They also remove blockage from joints, nerves, lymph nodes and energy centers. Toxins are drained out of the body and improve efficiency and quality of cell, tissues and organs. Consequently, effectiveness of medication is greatly improved and promotes faster healing.

The following physical practices are particularly beneficial in the prevention, management and rehabilitation of breast cancer.

**Pawanmuktasana (PM) Series 1,2 and 3**, therapeutic yogic asana practices divided into 3 groups, allows practitioners of all physical aptitudes, to benefit from its healing properties. The word pawanmuktasana is composed of three Sanskrit words, which put together, means the posture releases air. **PM1 is a sequence of anti-rheumatic asanas** to remove stiffness from the joints through rotational movements. Co-ordination between bones, muscles, joints, and ligaments improves so that they work naturally and spontaneously. Problems in the knee joints, hip joints, ankle joints, shoulder joints and wrist joints can all be remedied by these asanas, which minimize the injuries of different joints. **PM2 is a sequence of anti-gastric asanas** focusing on removing excess intestinal gas and strengthens the abdominal muscles and organs and builds stamina. They improve the digestive system, thus promoting proper functioning of other systems of the body. **PM3 is a sequence of energy release asanas**, improving the energy flow within the body, and breaks the neuromuscular knots, especially in the pelvic region where energy tends to stagnate. They are very important for the removal of stress from the lower back and pelvic region and are particularly useful for women, because they strengthen the reproductive system and help to relieve menstrual symptoms. All PM series are effective in improving the elasticity of muscles in the area of focus, allowing healthy circulation of blood and energy and setting forth a powerful healing force.

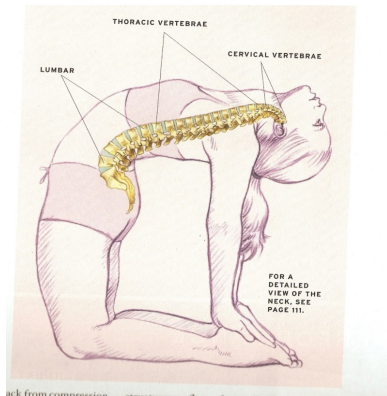
**Backward bending asana** opens up the chest area increases elasticity in the lungs while promoting energy flow to the area by bringing awareness to the area.



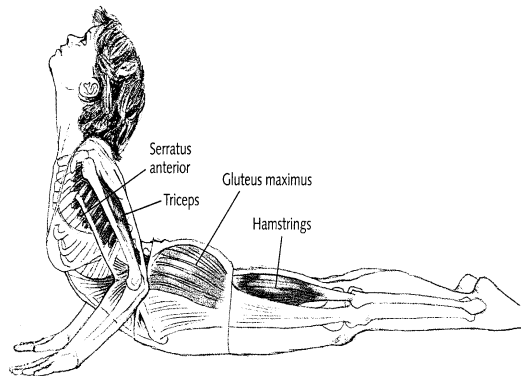


DIVINE YOGA

## Ustrasana (Camel Pose)

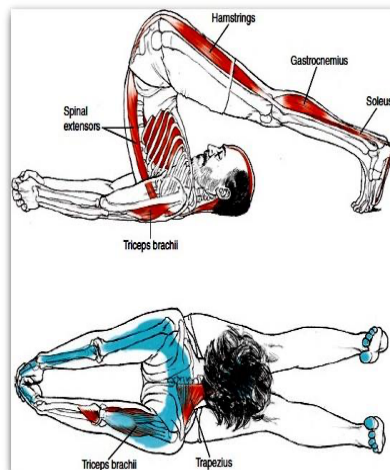
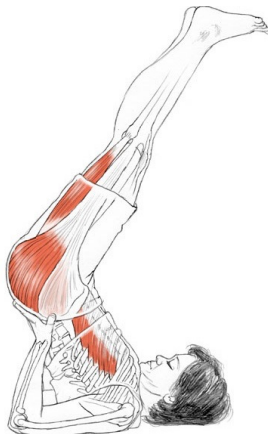


## Bhujangasana (Cobra Pose)



**Forward bending asana** stretches and stimulates internal abdominal organs as well as lengthens the back muscles.

**Inverted asanas** revitalize and relaxes abdominal organs.



**Spinal twisting and stretch asanas** promote natural secretion of hormones and burning of excess abdominal fat.





**Balance asanas** develops patience and acceptance.

### **Breathing Practices (Pranayama) and their Benefits**

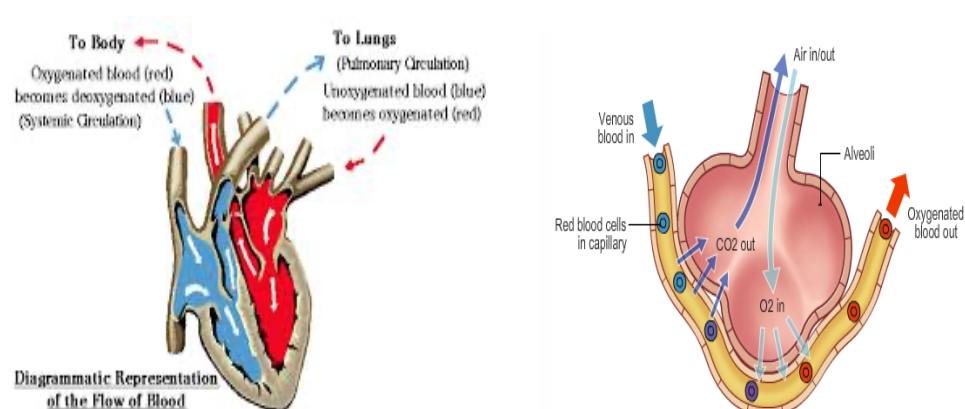
The breath is a carrier of energy, prana, to every cell in the body and therefore an essential part of daily practices. Pranayama done with awareness increases the oxygen level in the body and boosts our physical and mental performance. The following are three essential breathing practices to purify the blood and to increase energy while relaxing the body and the mind.

**Heating pranayama** such as dog breathing is beneficial in increasing vitality and releasing toxins in the body.

**Cooling pranayama** helps to reduce heat and normalize body temperature. Slowly breathing in through the teeth and breathing out through the nostrils is very effective.

**Tranquilizing pranayama** gives deep relaxation to the brain. Contract the throat pit and inhale slowly through the nostrils and allowing the air to do down the throat passage, making a soft snoring sound. Exhale through the throat pit and nostrils.

**Balancing pranayama** is the most important breathing practice which cleanses nerves and cells and balances the two sides of the brain and the energy passages. Slow alternate nose breathing is the most effective practice which can be practiced even by those who are ill in bed.



### **Yoga Nidra & Meditation**

Yoga Nidra, a focused relaxation practice, and meditation are most powerful medium to relax deeply and rehabilitate the body and mind. By relaxing the



body, the efficiency of medication is improved and rapid healing takes place. On an emotional level, the practices remove fear, insecurity and develop an acceptance of self and the challenges of life. As a result, the practitioner is able to better manage their mental and emotional states and improve focus and creativity thus increases productivity.

### **Detox Practices**

Detox practices purifies the body and promotes a self-healing body. The four-detox practices listed below enhance prevention against diseases and rehabilitation. However, it is vital that correct techniques are first learned from a qualified yoga teacher.

**Nasal cleansing (*Neti*)** is done by slowly pouring saline solution in one nostril at a time while tilting the head so that water comes out from the other nostril. This keeps the nasal passages and sinus unblocked and promotes easy breathing.

Esophagus & lung cleansing (*Kunjla*) washes out impurities and mucus from these areas and opens up the lungs. Large quantities of water are consumed then regurgitated.

**Intestine Cleansing (*Varisara-Dhauti Shankha Prakshalana*)** gives a thorough washing out of the intestine. Follow a repetition of drinking a large glass of lukewarm saline water with lemon, followed by a sequence of few simple asanas. Repeat the process up to 8 to 10 times or until the contents of the bowel is purged.

**Eye Cleansing (*Trataka*)** is a natural eye purification detox practice. Blinkless gazing of a candle flame causes the eyes to tear up and self-cleanse.

### **Beneficial Diet**

Making good choices in our diet are another component to creating a self-healing body. A healthy diet boosts the immune system and helps to maintain regular bowel movements while providing nourishment. According to Yogic philosophy, the following foods and drinks are recommended;

**Vegetables** high in **vitamin C** and **fiber** such as cabbage, cauliflower, broccoli and lycopene rich tomatoes and watermelon.

**Legumes, nuts seeds, seaweeds,** and other **sea vegetables**

**Whole grains** and other **high fiber foods** and **fruits**

**Poultry** and **untreated small fish**

Foods naturally **high in calcium**, such as yogurt, and **folate**, such as garlic. Plenty of **water**, especially **lukewarm water with lemon** consumed first thing in the morning.



**Ginger** and **turmeric**, **Basil** leaf and **neem** leaf or paste.

**Baking soda** diluted in water is particularly beneficial during recovery from cancer.

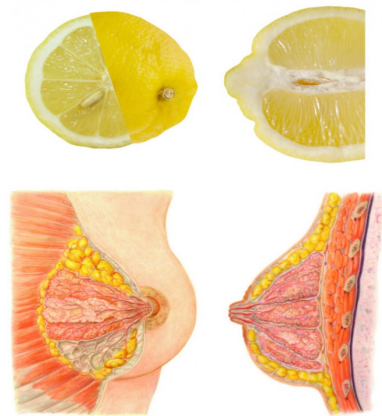
**Guyabana** (custard apple) is said to be more effective against cancer than chemotherapy.

### **Fasting**

If you are healthy and not pregnant, a once a week fast gives the digestive organs relaxation and promotes better metabolism. A good way to start is to only consume liquids on a chosen day of the week without eating solid foods. Drink water and fresh juices which will keep you hydrated and give some fuel for energy.

### **Shape of Organs and Fruits & Vegetables**

Ayurvedic view makes a correlation of the shape of fruits and vegetables to body and organ parts and the benefits the foods bring to the corresponding organs. For example, the shape of a lemon is associated with the contour of a woman's breast and the consumption of lemon is salubrious for the health of breasts. The acidity of the lemon induces a balanced alkaline state in the body. Other examples are shape of a grape, which is compared to the lungs and apple to the heart.



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### **Mantra Chanting**

Mantra chanting is an essential part of yoga practice which conducts healing through vibration to the entire personality. It develops positivity in our character and boosts the immune system in our bodies. The true value of mantras lies in its rhythmic vibrational quality when it is recited and balances all levels of personality (**koshas**) and energy centers (**chakras**) at a cellular level. In the Aum mantra, Aum is the seed sound (**bija**), also referred to as the “hymn of the universe” which is the auditory expression of creation. Physicists have scientifically proven that everything in the universe is made up of vibrational energy fields at the quantum level, including us humans. If this is the case, then the vibrational sounds of the mantra can positively align our energies. It also generates more alpha, gamma and theta waves in our brain which have relaxing and healing effects. Reciting the Mahamrityunjaya Mantra, one of the main universal mantras, is particularly powerful for healing.



### **Regular Practice for a Balanced and Healing Self**

A daily practice of the following yoga practices will help to prevent, maintain, and rehabilitate health. Yoga is a way of life and requires dedication and resolve. ***Yoga practitioners take charge of his or her own health rather than pass on the responsibility to a conventional doctor.***

**Mantra chanting** (Aum, Mahamrityunjaya)

Integrated physical (**Asana**) practices

Breathing (**Pranayama**) practices according to need

**Yoga Nidra**

Simple **meditation**

Regular **detox practices** under a guidance of a teacher

Moderate and balanced **diet and fasting.**