

Lesson-5

Indians' Gifts to the World

I - How Yoga Heals

It has become common knowledge that yoga is good for you. Currently yoga is being used as a therapy for cancer, infertility, lung disease, multiple sclerosis, Parkinson's disease, insomnia, high blood pressure, and joint pain. Yet there is very little awareness and understanding on exactly how yoga heals, even in the yoga and medical communities. The key is to understand the relationship between stress, yoga, and disease.

Medical research estimates that as much as 90 percent of illness and disease is stress related. A few of the many diseases and conditions that have been linked to an overactive stress response include: cardio-vascular disease, depression, anxiety, some types of diabetes mellitus etc.

What we feel as stress, is the product of the sympathetic nervous system or the "fight or flight" response: an almost instantaneous surge in heart rate, cardiac output, blood pressure, sweating, shallow breathing, and metabolism, combined with a tensing of muscles. Internally, the "fight or flight" response shuts down digestion and elimination and reduces blood flow to the internal organs. For short term, this stress reaction is a good thing. The "fight or flight" response prepares us to respond to any environmental threat by fighting against it or fleeing from it. But long term, continuous exposure to stress is harmful, placing excess wear and tear on the body's systems and severely limiting the body's natural maintenance and healing abilities.

Chronic stress can lead to continuously high levels of cortisol. This hormone at normal levels helps to maintain an active, healthy body (including regulation of metabolism and blood pressure). But excessive amounts of cortisol can suppress the immune system and cause sleep disturbances, and loss of appetite. High levels of cortisol can also increase your heart rate, blood pressure and your cholesterol and triglyceride levels (risk factors for both heart attacks and strokes). The byproducts of cortisol act as sedatives, which can lead to changes in mood, especially to feelings of depression.

Fortunately, the body has a natural counterbalance to the "fight or flight" response, called the parasympathetic nervous system or the "relaxation response." The parasympathetic nervous system becomes activated when the threat or stressor has passed or ended, but it can also be consciously activated by deepening the breath and by relaxing the skeletal muscles.

When activated, the parasympathetic nervous system lowers blood pressure, heart rate and respiration (the pace of the breath). Digestion and elimination are allowed to be stimulated, and blood is free to travel to the digestive, reproductive, glandular, and immune systems - systems necessary for the promotion of long-term health. The "relaxation response" is also known as the "rest and renew stage" - when the body has the time and resources to heal the body and to respond to illness. Obviously, by increasing the frequency, time and depth of the "relaxation response" we not only allow our body to recover from illness and disease, but we also practise preventive medicine by allowing the body to perform all of its essential maintenance tasks.

Yoga's emphasis on long, deep breathing and conscious relaxation activates the parasympathetic nervous system and promotes its "rest and renew" functions. In fact, a recent study has shown yoga to decrease the level of the stress hormone cortisol in the blood. The meditative practices of yoga help to reduce the responsiveness of the mind to stressors and to lessen the intensity of the "fight or flight" response. Yoga also teaches us to see potential stressors as challenges rather than threats, enabling one to avoid the stress response entirely.

Not only does yoga's ability to activate the parasympathetic nervous system reduce stress and allow the body to heal itself, but the practice of yoga also improves the body's inherent healing abilities.

The inverting, twisting and compressing that occur in yoga postures enhance the circulation of blood and body fluids. This increase in circulation not only improves the body's ability to deliver the materials needed to allow healing to take place, but also activates the lymphatic system to maintain normal functioning of the immune system and inflammation response. Yoga postures also improve muscle strength, flexibility and range of motion, all very important for the healing and prevention of musculoskeletal disease such as arthritis and osteoporosis.

Yoga's emphasis on deep breathing combined with backbends improves lung capacity and function. Practising yoga also encourages one to lead a healthier lifestyle, through developing the self-awareness and discipline required for positive behavior modification.

While yoga provides such a strong support to the body's healing mechanisms, it is important to view yoga as an adjunct or complementary therapy, and not relied upon as the only therapy for healing diseases.

-Timothy Burgin

About the Lesson

Timothy Burgin is the founder and Executive Director of Yogabasics.com, a certified and well known yoga instructor, acupuncturist, designer and writer. He received yoga teaching training and created an online resource guide for yoga students and people in general as well as for the whole world. He continues with his objective of teaching yoga, pranayama and meditation with devotion to render selfless service to the world at large.

'How Yoga Heals' highlights the immense benefits of practising yoga with its different postures (asanas). breathing techniques (pranayam) and meditation exercise (dhyana). Yoga is presented as an effective and versatile way of healthy life to release the stress and to cure a number of severe health problems. Yoga employs an extensive holistic approach that concentrates on peace, bliss, good health, harmony and all round fitness. Timothy Burgin commends the scientific role of Indian Yoga by creating a link between yoga and stress and disease. The American yoga expert here describes an ancient Indian way of healthy life style based on Yoga System and acknowledges it as a precious gift to the rest of the world in the modern unhealthy environment.

GLOSSARY:

therapy (n)	- the treatment of a physical problem or an illness
multiple sclerosis(n)	- a disease of the nervous system that gets worse over a period of time with loss of feeling and loss of control of movement and speech, abnormal hardening of body tissues
Parkinson's disease(n)	- a disease of the nervous system that gets worse over a period of time and causes the muscles to become weak and the arms and legs to shake
insomnia (n)	- the condition of being unable to sleep(,)lessness
cardio-vascular (n)	- connected with the heart and the blood vessels
surge (n)	- sudden increase in the amount or number of something
metabolism (n)	- the chemical process in living things that changes food, etc. into energy and materials for growth
cortisol(n)	- a hormone resulting from chronic stress
suppress (v)	- to put an end (often by force)
sedatives (n)	- drugs that make somebody go to sleep or make them feel calm and relaxed (causing sleep).

stimulated (v)	- made something develop or became more active, made somebody excited
lymphatic system (n)	- the system by which a clear liquid containing white blood cells that helps to clean the tissues of the body and helps to prevent infections from spreading
osteoporosis (n)	- a condition in which the bones become weak and are easily broken
adjunct (n)	- a thing that is added or attached to something larger or more important

ACTIVITY 1 : COMPREHENSION:

A. Say whether the following statements are True or False. Write 'T' for true and 'F' for false.

1. According to the author very few people know that yoga is good for them.
2. According to medical research about 90% of human diseases are stress related.
3. Stress is produced by sympathetic nervous system.
4. Short term stress reaction is considered as good.
5. Continuous exposure to stress is harmful.
6. The body does not have any counter balance to the "fight or flight" response.
7. A recent study has shown yoga to decrease the level of cortisol in blood.
8. Yoga is able to reduce stress and allow the body to heal itself.
9. Practising yoga encourages a healthier life style.
10. Yoga supports body's healing mechanism.

B. Answer the following questions in about 20-30 words each.

1. For what diseases can yoga be a therapy?
2. Which diseases are caused by stress?
3. What is the reaction of our body in the 'fight or flight' system?
4. Write the main hazards of stress.
5. Why is cortisol good for our body?
6. Describe the impact of the high level of cortisol on our health.
7. How can parasympathetic nervous system be activated?
8. What is the result of 'rest or renew' in our body?
9. What is important for the promotion of long term health?
10. Describe the main components of yoga practice?
11. What does the practice of yoga encourage?

C. Answer the following questions in about 60-80 words each:

1. Explain the relationship between stress and diseases.

2. What do you understand by sympathetic nervous system? How does it function?
3. Mention the benefits of yoga as discussed in the lesson.

ACTIVITY 2 : VOCABULARY:

You have read about the hormone called Cortisol in your lesson. Given below is a list of important hormones secreted by human body. Study the following list of hormones and gather the required information about them from the internet to acquaint yourself with the tissues producing them and their impact on human body :

Name of hormone	Name of tissue producing it	Its effect on human body
1. Triiodothyroxin (T3)		
2. Thyroxin (T4)		
3. Leukotrienes (LT)		
4. Thromboxane (TXA2)		
5. Amylin (IAPP)		
Armyloid		
Polypeptide		
6. Adiponectin (Acrp30)		
7. Adrenocorticotrophic hormone (or corticotrophin) (ACTH)		
8. Antidiuretic hormone (ADH)		
9. Atrial - notriuretic peptide (or antriopeptin) ANP		
10. Calcitonin (CT)		
11. Cortistatin (CORT)		
12. Glucagon (GCG)		
13. Insulin (INS)		
14. Leptin		
15. Oxytoxin (OXT)		
16. Thyroid-stimulating hormone (or thyrotropin) (TSH)		

ACTIVITY 3: SPEECH ACTIVITY

Write short speeches on each of the following for discussion in your class:

- (i) Food Adulteration

- (ii) Impact of Internet culture
- (iii) Importance of Games and Sports

ACTIVITY 4: COMPOSITION:

1. As the head boy of your school, draft a notice informing all the students about the celebration of 'International Yoga Day'.
 2. Write a letter to the Chairman of Board of Secondary Education Rajasthan, Ajmer to prescribe 'Yoga' as a compulsory subject in curriculum.
 3. Write a job application to the DEO, Jaipur for the post of Yoga instructor including your resume.
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II - Purity is Power

"Purity is Strength" - Swami Vivekananda

We want purity - pure food, pure water, pure air. We long for pure surroundings. We yearn for pure heart and pure love. We prefer pure environment and pure society. We are fond of purity because purity promotes health. Impurities are injurious to health. Purity provides peace of mind. Impurities impair the mind. Both for bodily health and mental health, we need purity. We do require environmental purity for overall health.

Purity of body is physical health. Purity of speech is unsullied truth. Purity of heart is unselfish love. Purity of thought is righteous reason. Purity of mind is wholesome peace. Purity of action is sincere and unselfish service. Purity of society is harmonious unity. Purity of environment is soul-elevating serenity.

In the Mahabharata, there is an interesting episode to illustrate the nature of purity. The Pandavas and Kauravas were Drona's disciples. They were once summoned by the preceptor Drona for a test. The eldest of the Pandavas, Yudhishtira, was asked to bring one bad person from the society. The eldest of the Kauravas, Duryodhana, was asked to fetch one good person from the same society in Hasthinapura. After a thorough search, both the cousins returned empty-handed. The pure minded Yudhishtira found everyone to be pious and pure. The impure mind of Duryodhana found everyone to be evil and impure. As is the mind, so is the vision.

Purity of mind makes our vision, words and deeds pure. It has also the power to purify people. Evil has no place in the presence of purity. Nor can it face purity, as darkness cannot face the sun. It only gets changed into purity. Fools who come to scoff remain to pray in the presence of purity. Villains who come to harm stand in adoration in the presence of purity. Murderers become votaries of peace in the presence of purity.

Pavaharibaba was a saint. He was pure and pious. He lived a very simple life. One day, when he was asleep, a thief entered his dwelling place and took away the vessel containing food. The saint woke up and saw the running thief. Immediately he picked up the remaining two vessels containing boiled vegetables and curd and ran after him. The thief stopped and the saint approached him with all purity of love and said, "Child, the food is insufficient for you. You may have this also. Please sit and eat without any hurry. The thief was wonder-struck by the affectionate words of the pure soul. There was a change in him. He prostrated himself before the saint. Without

being pure at heart, if anybody imitates the saint, the result would be different. The thief might only give a blow and take away the vessels. The test of genuine purity is in its metamorphosing ability.

Once upon a time, one particular rishi called Gautama did tapasya to obtain certain powers. For several days, months and years he observed rigorous austerities. He did not eat or drink; he stood on a single foot; he controlled the senses; he meditated on the chosen deity. One day in the morning he went to the river for a holy dip. On the bank of the river there was a tree. The branches of the tree were outstretching towards the river. A crane was seated among the branches. When Gautama was in neck-deep water facing towards the sun with an austere mind the droppings of the crane fell on his head. He felt disturbed, annoyed. He looked at the bird with anger. The next moment the bird fell dead. The rishi was happy because he had obtained the power to kill a bird by his very gaze. After a while, he went to the nearby village for food. He stood before a house and sought alms from the housewife. She was busy doing her domestic chores. Gautama waited for a few minutes. He was annoyed with her for the delay in responding to his call for 'bhiksha'. The lady came, looked at him gently and said, "Sir, I am not a crane to be killed by your stare. Sorry for the delay. I was serving my husband and feeding my children. Please accept the food". The rishi was shocked. He could not know how she was able to learn about the crane which died only a short while ago. The lady further said, "Sir don't be surprised. I am a humble housewife. If you want to know more about tapasya and the attainment of powers, please go to a particular person, whose address I shall give". Saying so, she gave him the address. Humbled and crestfallen, the rishi went as directed. It was a greater shock to him to see the particular person to be an ordinary, simple man. The moment the rishi was seen, the man said, "Holy Sir, welcome. I know about the crane's death and that housewife's advice. Please wait a little and I shall soon take you home. Later, at home the rishi was surprised to see the man delaying him further. He was busily engaged in serving his parents. He did not seem to have read any scriptures, nor did he observe any austerities. But he was bright with purity, purity of mind. In his presence, the rishi was completely transformed.

His pride of tapasaya disappeared. He turned modest. He became pure without anger, ill-will or haughtiness. He who is sincere in service, faithful in doing duties and loving without selfishness is pure. The power of purity is very high and priceless.

The elements of Nature have the ability to purify not only things but also beings as well. Man makes use of the elements to purify his body. Very often, for want of proper and pure environment many a gem remains hidden in sands, and many a flower withers away unseen in thorns. Sometimes insufficient and improper training spoils the inborn traits of virtue. Even if the inborn nature is a little impure, we can purify it and make it perfect through nurture. Dogs in the street are dirty with dirty

habits. But a well brought up dog is not only clean, but behaves very methodically and decently. Man does inherit the traits of animals. But through training he becomes man. Through samskaras and Nature, the impure legacy from the animals is washed off and the latent purity in man is made to shine.

Parrots speak, if trained. They can imitate human speech. Two parrots were brought up by two people: one was a hunter, the other a scholar. They both trained their pets in speech. The first parrot brought up by the hunter spoke words of harshness. Its expressions were crude, rude and uncivilized. The second bird had acquired softness in speech. It spoke with refinement and culture. The first one learnt the vulgar slang of the cruel hunter and his customers. The latter was quick in repeating the kind words of affectionate welcome and farewell in the scholar's house. Both the parrots were brothers born to the same mother bird. But on account of the bringing up and the atmosphere available around, their expressions and behavior differed very greatly. It is not enough, if we are born pure. We should also be brought up in a pure atmosphere among the cultured people. Else, the inborn purity will wither away or will get eclipsed by the contaminating time and place of impure environment.

- Prof. Dr. K. Subrahmanyam

About the Lesson:

Prof. Dr. K Subrahmanyam, one of the most well known and influential Indian writers has served as the principal of Vivekananda College, Tiruvedagam (West), Madurai and the National Defence Academy, Pune. Most of his writings have an ethical flavour of our Epics and Puranas. Two of his well known books are 'Mahaveer Sri Hanuman' and 'Vibhooti Vivekananda'.

In 'Purity is Power' Dr. K. Subrahmanyam elaborates the various aspects of purity with illustration from some ancient Indian epics and stories related ethical values and cultural heritage. The author discusses the supremacy of forgiveness, courtesy, politeness, mercy, benevolence, congenial company and purity of heart that enable us to purify our soul and transform even the most ferocious natures. He also focuses on the fact that faithful performance of duty and prompt good doing acts are the sources of the greatest virtue and purity.

GLOSSARY:

yearn (v)	-	want, desire
impair (v)	-	spoil, to make worse

unsullied (adj.)	-	unspoiled, pure
elevating (adj.)	-	promoting, encouraging, uplifting
serenity (n)	-	peace
scoff (v)	-	mock, make fun of
votaries (n)	-	followers, lovers, devotees
prostrated (v)	-	bowed down, lay down to worship
rigorous (adj.)	-	strict, hard, with a lot of attention
austerities (n)	-	strictness and seriousness in behavior, a life of severe or strict moral discipline
attainment (n)	-	achievement
crestfallen (adj.)	-	sad and disappointed
nurture (v)	-	care, encouragement, support
legacy (n)	-	inheritance
latent (adj.)	-	unnoticed, lying hidden
vulgar (adj.)	-	not polite, rude, immoral
eclipsed (v)	-	disappeared, seemed dull, hid
contaminating (v)	-	making dirty, adulterating

ACTIVITY 1: COMPREHENSION:

A. Say whether the following statements are True or False. Write 'T' for true and 'F' for false:

1. Environmental purity is needed for total health.
2. Purity of society brings about harmony and unity.
3. Drona never summoned the Pandavas and Kauravas for any test.
4. Yudhishthara found everyone to be pious and pure.
5. Purity has the power to transform even the villains and murderers.
6. Pavaharibaba offered the rest of the food also to the thief.
7. Proud Gautam was humbled by the purity of a simple house-wife and an ordinary man.
8. Nurturing can change the behavior of human beings as well as animals.

B. Answer the following questions in about 20-30 words each:

1. In which areas do we need purity?
2. Write the importance of purity of environment.
3. What different tasks were assigned to Yudhishthira and Duryodhana?
4. "Child, the food is insufficient for you. You may have this also." What does

this statement suggest about Pavaharibaba's attitude?

5. How did the thief react when Paraharibaba offered him more food?
6. Mention the manner of Gautam's tapasya.
7. "I was serving my husband and feeding my children". What does this statement suggest about the lady's attitude towards duty?
8. The man was bright with purity. How does the author bring this out?
9. How was Gautam's ego purified?
10. who is pure according to the author ?
11. What is the importance of pure atmosphere?

C. Answer the following questions in about 60-80 words each:

1. What are the merits of purity?
2. "As is the mind, so is the vision." Explain it with reference to the Mahabharata episode cited by the writer.
3. Describe the significance of the crane episode.
4. Why are Samskaras important in our life?
5. How does bringing up make all the difference in shaping lives? Illustrate with the help of the parrots' episode.
6. Justify the title of the lesson, 'Purity is Power'.

ACTIVITY 2: VOCABULARY:

Rewrite each of the following sentences correctly replacing the word(s) in bold letters by the word given in brackets:

1. We yearn **for pure** heart (purity).
1.
2. Impurities **are injurious** to health (injury).
2.
3. Purity provides peace **of mind** (mental.)
3.
4. He was **busily** serving his parents (busy).
4.
5. But a well brought up dog is not only clean but also behaves **very methodically and decently** (method, decency).
5.
6. He was **pious** (piety).
6.

ACTIVITY 3: SPEECH ACTIVITY:

1. Give a short speech on each of the following in your school assembly:
(i) Work is Worship (ii) Handsome is that Handsome Does
(iii) A Healthy Body has a Healthy Mind

ACTIVITY 4: COMPOSITION:

1. Write a letter to the editor of The Hindustan Times commenting on "The influence of T.V. and internet on Students."
 2. You wish to join the Indian Army. Write a letter to the editor of The Hindu praising the illustrious history and tradition of the Indian Army.
 3. Write a short article for your school magazine on spiritualism and ethical values in ancient India.
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