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Effects of Yogic Practices and Vedic Meditation on Physiological Parameters

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Abstract:

The present article indicated that Yoga and Vedic meditations affects every aspect of the body. Yoga is a physical posture and meditation is breathing exercises that improves muscle strength, flexibility, blood circulation and oxygen uptake as well as hormonal function. Various researcher found that there were considerable health benefits, including improved cognition, respiration, reduced cardiovascular risk, control BMI, blood pressure, and diabetes through Yogic Practices and Vedic Meditation. Yogic Practices and Vedic Meditation brings better about neuro-effector communication, improves strength of the body, increases the optimum functioning of all organ-systems (immunity Endocrine system, joint disorders and Excretory system etc.), increases resistance against stress and diseases and brings tranquility, balance, positive attitude and equanimity in the practitioner which makes them lead a purposeful and healthier life.

Keywords: Yoga, system, organ, Health, Obesity, Vedic Meditation.

Introduction:

Yoga is a neuropsychological discipline for achieving union and harmony between our mind, body and soul and the ultimate union of our individual consciousness with universal consciousness. And the word Pranayama is derived from two Sanskrit words, namely prana, meaning life force and ayama meaning prolongation.

Vedic meditation comes from the Veda, the ancient Indian body of knowledge. The Veda is the origin of yoga, meditation and Ayurvedic medicine and is the basis of all Eastern philosophy. During class, you learn a mantra - a simple, meaningless sound - that you repeat silently. The mantra calms

the mind and brings you to a steady state. As your mind settles down, your body begins to rest more deeply than it does with sleep. You come out of meditation feeling clear, refreshed, and ready to commit. By nature, Vedic meditation is always natural and effortless. You just need to sit on a chair and close your eyes for about 20 minutes in the morning and it can repeat in the evening.

Popularity of Yoga is not only in India but all over the globe. In India, the most widely practiced disciplines are hatha yoga, raja yoga, jnana yoga, integrative yoga, karma yoga, bhakti yoga, mantra yoga, kundalini yoga, sahaja yoga, laya yoga and many others. Hatha yoga includes the practice of asanas, pranayama and kriyas. Patanjali developed Ashtanga yoga around 900 BC. It is already proved that Vedic meditation and Yogic exercises directly effects on human being i.e., various systems and organs. In this paper we will discuss about Effects of yogasana and Vedic meditation on various physiological parameters.

Effects of Yogasana on Physiological Basis:

Truly, the act of Yogasanas has been professed to improve adaptability, strength, and equilibrium; to ease pressure and uneasiness, and to decrease the manifestations of lower back torment. Cases have been made about advantageous impacts on explicit conditions, for example, asthma, chronic obstructive pulmonary disease, and diabetes.

(i) Recovery of muscle cells of pancreas because of stomach extending during yoga practice increase glucose metabolism in peripheral tissues, liver and adipose tissue by an enzymatic process.

(ii) Yogasanas improve respiration, energy, vitality and maintaining a balanced metabolism.

(iii) Muscular relaxation, development and improved blood supply to muscles might enhance insulin receptor expression on muscles causing increased glucose uptake by muscles and reducing blood sugar.

(iv) **Yoga improved lipid levels which could bedue to increased hepatic lipase, lipoprotein lipase**, the glucose signal and the improvement in insulin sensitivity.

Nervous system:

The nervous system is an essential construction that influences portions of the body from the organs to the muscles. A balanced nervous system is the thing that empowers one to stay prudent in unpleasant circumstances. Neurons are the cells that make up the framework, with stringy hairs joined to the phone layer which empowers every phone to send motivations to nerves.

By improving blood flow, facilitating muscle strain and the zeroing in the brain on the breath, Asanas join to ease the nervous system. Long haul benefits incorporate decreased stress and uneasiness levels, and expanded sensations of quiet and prosperity. The headstand causes an expansion available for use to the cerebrum, which animates the brain's nerve cells. This outcomes in expanded imperativeness and improved cerebrum working.

Practicing yoga can bring improvement in the task which requires selective attention,

concentration, visual scanning abilities, and a repetitive motor response like reversal ability, eye-hand co-ordination, speed and accuracy. It can reduce sympathetic activity with a reduction in heart rate, skin conductance, oxygen consumption and increased respiratory volume, thereby protecting against ischemic heart disease and myocardial infarction or death of heart tissue.

Respiratory system:

The respiratory system includes the lungs, larynx, pharynx, and trachea. It is responsible for providing oxygen and removing carbon dioxide from the body. It also helps us to talk or speak. Oxygen is our source of life. The oxygen supplied by our respiratory system is used by the hundreds of billions of cells that make up our bodies, especially the brain. Maintains body health, purifies blood, improves oxygen absorption, strengthens lungs and heart, regulates blood pressure, regulates nervous system, supports healing processes and therapies, increases ability to fight infection.

Cardiovascular system:

Many surveys show that regular yoga practice can help normalize blood pressure. For example, the stomach lifts the diaphragm, thereby massaging the heart from below. This strengthens the heart muscle, leading to better circulation and less risk of heart disease.

An international study has shown beneficial effects of regular practice of pranayama and short-term meditation (15 days) on cardiovascular function (decrease in resting heart rate, systolic blood pressure, diastolic blood pressure and mean arterial pressure) independent of age, sex and BMI in normal healthy subjects.

Gentler forms of yoga will lower your blood pressure because they allow blood to flow evenly throughout your body while you focus on your breathing. People with hypertension can greatly benefit from yoga, as hatha yoga can lower your heart rate, blood pressure, and cholesterol. Power yoga is a great form of cardiovascular conditioning, helping to strengthen the core muscles while keeping blood and oxygen circulating throughout the body.

Muscular system:

The yoga asanas have the effect of strengthening and toning the muscular system of the human body. Muscles become stronger and more toned if yoga asanas are practiced regularly. The asanas reduce belly and waist fat. All organs and cells of the body become active, thus increasing immunity against disease. The yoga asanas are treated for muscle diseases and arthritis.

The Endocrine System:

The endocrine system plays an important role in our body as it acts as a principle of homeostasis, immobile for the proper balance of chemicals and other substances in our body and functioning properly. harmonizes and coordinates all the various processes of the body and the oxygen system. The endocrine system mainly consists of the adrenal cortex, the pituitary gland, the hypothalamus, the pancreas, the thyroid gland, the parathyroid glands, and the testes or ovaries.

Hormones are chemical messengers that travel through our circulatory system to other parts of the body to control and regulate body processes like growth, temperature control, hydration. Some of the hormonal problems that both men and women face are hormonal imbalances, underactive or overactive thyroid, increased cortisol levels, insulin deficiency or resistance, and early menopause. Poses like Sirsasana, the forward bend increases blood flow to the brain, which improves brain and hypothalamus function while improving pituitary and pineal gland function. Poses like Halasana and Shoulder Stand improve thyroid and parathyroid gland function. Poses like Setu Bandhasana and Bhujangasana stimulate the testicles and ovaries.

Excretory System:

Disorders of the excretory system are caused by a poor diet, including excessive consumption of protein, first foods and alcohol. Regular yoga practice brings the internal imbalances of the body back to normal and helps to rejuvenate the working level of the systems.

Diabetes and Obesity:

A comparison of yoga practice with physical exercise showed that six months of yoga practice reduced fasting blood sugar, lipid levels, markers of oxidative stress, while physical exercise also reduced sugar levels, fasting blood sugar levels but with few other beneficial effects.

Yoga works on all aspects of obesity or overweight (physical, emotional and mental). Regular yoga practice and a controlled lifestyle will reduce obesity. Yoga is suitable for all ages and helps control mind and behavior. Yoga has a distinct effect on obesity of a permanent nature compared with other obesity reduction techniques.

Not exercising and eating processed foods:

Diabetes, commonly known as diabetes mellitus, describes a group of metabolic diseases in which a person has high blood sugar (blood sugar), either due to insufficient insulin production, or because the body's cells do not respond properly to insulin, or both. Patients with high blood sugar will often experience polyuria (frequent urination), they become increasingly thirsty (frequent urination) and hungry (polyuria).

An observational study involving long-time yoga practitioners found that long-term and consistent practice of Hatha yoga in a non-probability sample of women over 5 years of age was linearly associated with an immediate lower BMI even after hours of non-yoga practice and processed foods.

Immunity system:

Scientists in a yoga trial looked at the immune system's response by measuring blood or saliva levels of circulating anti-inflammatory markers such as cytokines, a type of protein known as C-reactive protein. (CRP), as well as immune cell counts, antibodies, and gene expression markers in immune cells. Yoga reduces proinflammatory markers, with the clearest evidence of a reduction in a

cytokine called IL1beta. There are mixed but promising results for other types of proinflammatory markers.

In another study, practicing yoga in pulmonary tuberculosis patients improved the body's immunity and the effect of anti-tuberculosis drugs, thereby improving sputum culture, X-ray, and survival. Forced (FVC), weight gain, and symptoms. The yoga poses twist and compress the organs, helping to massage and rejuvenate the immune organs.

Effects of Vedic Meditation on Physiological Basis:

The pandemic of stress we are facing has caused many of our digestive systems to call for help - IBS, cramps, bloating, acid reflux, food intolerances, constipation - peptic ulcers is anyone there? Digestion uses a lot of energy and when the body goes into a stress response, it shuts down our digestive activity to switch the energy to survival mode. Vedic meditation appears to influence by modulating the activity of the ascending reticular activation system and thus also interacting with the autonomic centers of the brain stem, thereby influencing respiratory and metabolic parameters.

Oxygen Metabolism and Respiration:

Herbert Benson (1975) noted that who were able to lower their systolic blood pressure during exercise sessions reported that they had to resort to relaxing thoughts to achieve the desired results. Vedic meditation was able to reduce their oxygen metabolism by 12% on average, a much larger decrease than during sleep. It turns out that during Vedic sessions, can take advantage of restorative relaxation more than sleep, in terms of reducing cortisol (stress hormone) and the 3 objective measures of rest (breathing, production, energy production, lactic acid and skin conductivity).

Tissue Metabolism:

Jevning, (1992) in his study mention that changes in organs, tissues and cells during meditation has become more popular in recent years, mainly with people who meditate for long periods of time in 30–40-minute sessions. He also finds that decrease in lactate concentrations in the arteries. A 20% increase in phenylalanine levels was found in another study (Jevning, 1977), compared with insignificant changes in blood levels of 12 other amino acids.

Blood Flow:

Jevning, et al. mentioned in their study that(1978) By practicing Vedic meditation, digestion is improved in a number of ways: it restores the body to optimal functioning and balance, rebalances the biochemicals used in digestion, restores blood flow to the intestinal tract, and repair cells and tissues (damaged). It has been hypothesized that the decrease in blood flow in the kidneys (kidneys) and liver (liver) during meditation is due to increased blood flow demands in the muscles, skin or brain.

Wallace, et al. (1983) found A decrease in systolic blood pressure was observed during experimental sessions for long-term. practitioners may feel reduction in blood pressure, as noted

above, that is associated with a reduced risk of cardiovascular disease.

Endocrine, Hormones, and Neurotransmitters:

There is ample evidence for the effects of meditation on adrenocortical activity, reduction of cortisol and ACTH (Bevan 1980, Jevning, et.al 1978, Kamei et.al 2000, Michaels et.al 1979, Subrahmanyam et.al 1980, Sudsuang et.al1991). Evidence suggests that cortisol, thyroid-stimulating hormone (TSH), and growth hormone secretion are reduced by meditation (McLean et.al 1994). Recent research has explored the effects of meditation on beta-endorphin and corticotrophin release levels.

Cerebral Blood Flow and Neuroactivity:

In a research paper, it was mentioned that neither liver nor kidney blood flow was decreased during meditation, with skeletal muscle and skin blood flow unchanged. It's no surprise considering the sheer amount of noise and clutter that our nervous systems have to deal with on a daily basis - city life, social media updates, mobile and computer screens, children's voices and their cries. In this state, they can no longer detect the subtle energy and information traveling through the realm of consciousness, and many of us are unable to connect with our perception. The power of Vedic mantras helps to de-energize the nervous system, freeing it from noise and clutter, and allowing our innate intuition to flourish.

Conclusion:

The present article indicated that Yoga and Vedic meditations affects every aspect of the body. It brings better about neuro-effector communication, improves strength of the body, increases the optimum functioning of all organ-systems, increases resistance against stress and diseases and brings tranquility, balance, positive attitude and equanimity in the practitioner which makes them lead a purposeful and healthier life.

Though the current research article in sighting the Physiological basis underlying the effects of yogasanas, pranayama's and Vedic meditations were limited. Further research can be done on the effects of yoga on different organ systems would be invaluable.

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