

YOGA & SPORTS



By

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SEMESTER I

MCC 101 Yogic Sciences

Unit I – Introduction

Meaning and Definition of Yoga. Astanga Yoga: Yama, Niyama, Asana, types of asana - Pranayama, Pratyahara, Dharana, Dhyana, Samadhi, Concept of Yogic Practices; Principles of Breathing - Awareness - Relaxation, Sequence - Counter pose - Time - Place - Clothes - Bathing - Emptying the bowels - Stomach - Diet - No Straining - Age - Contra- Indication - Inverted asana - Sunbathing - suryanamaskar - Chakras - nadis

Unit II – Kriyas

Shat Kriyas- Meaning, Techniques and Benefits of Neti - Dharti - Kapalapathi- Trataka - Nauli - Basti, Bandhas: Meaning, Techniques and Benefits of JalendraBandha, Jihva, Bandha, UddiyanaBandha, MulaBandha.

Unit III – Mudras

Meaning, Techniques and Benefits of Hasta Mudras, Asamyuktahastam, Samyuktahastam, Mana Mudra, Kaya Mudra, Banda Mudra, Adhara Mudra. Meditation: Meaning, Techniques and Benefits of Meditation - Passive and active, Saguna Meditation and Nirguna Meditation.

Unit IV – Yoga and Sports

Yoga Supplemental Exercise - Yoga Compensation Exercise - Yoga Regeneration Exercise- Power Yoga. Role of Yoga in Psychological Preparation of athlete: Mental Wellbeing, Anxiety, Depression Concentration, Self Actualization. Effect of Yoga on Physiological System: Circulatory, Skeletal, Digestive, Nervous, Respiratory, Excretory System.

Unit V – Yoga for Skill Development

Yoga for skill development - yoga for performance enhancement of sports person - yoga for management of selected sports injuries - yoga for leadership - yoga for fitness and hygiene.

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Yoga

Definition of Yoga

The word Yoga has been derived from the Sanskrit word “ **YUG** ” which means to **join** or **to Unite**.

Yoga is the Union of the **Individual soul** with the Absolute or **Divine Soul**.

Yoga also means the **unification** of physical, mental, intellectual and spiritual aspects of human being.

Yoga is the science of development of a **Person's Consciousness**.

Yoga regeneration exercise

How Yoga Helps To Rejuvenate Your Body and Mind

- 1) Reduces Stress and Anxiety**
- 2) Nourishes the Circulatory System**
- 3) Relaxes the Nervous System**
- 4) Tones the Body's Muscles**
- 5) Makes the Body and Mind Flexible**

Reduces Stress and Anxiety

Yoga — the term comes with the sensation of a relaxing exercise

Stress is the cause of all destructive processing happening within the body,

in fact presence of stress spikes up the catabolic (destructive) activities inside the body which lead to early ageing.

The practitioner learns to respond differently to the stressors

As the elimination system of the body loses its potency with ageing the toxins remain lingering within the body systems affecting their efficiencies.

Yoga for staying young help cleanse the body of these toxins.



Nourishes the Circulatory System

yoga is promoting the flow of blood throughout the human body system.

Yoga asanas make sure each and every part of the body receives a substantial amount of blood.

Blood flow brings energy to the body and one feels highly rejuvenated.

The practitioner learns the mind calms down and the issue of high blood pressure gets healed.



Relaxes the Nervous System

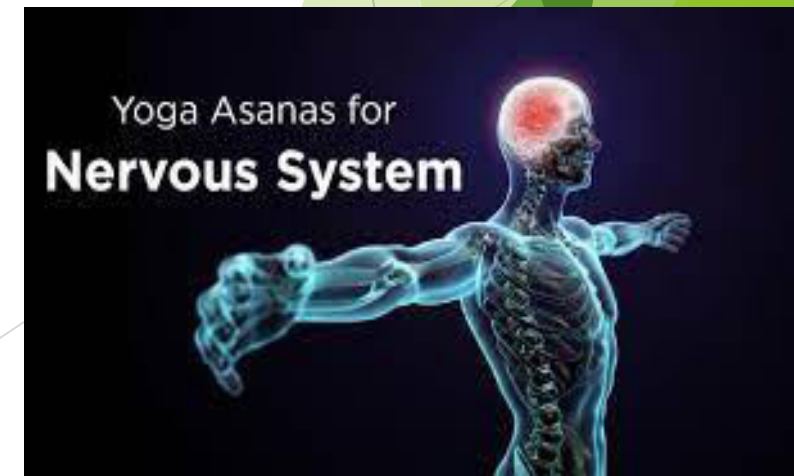
Yoga is one of the most effective restorative exercises on the planet.

The ancient science helps the nervous system relax so that the whole body remains refreshed.

Various poses free the muscles from their tensed state.

Yoga relaxes the body and strengthens the nervous system to help you face stressful situations quite easily.

The deep breathing and meditation which controls your sympathetic nervous system (the fight or flight response that keeps your body cued up) as well as the parasympathetic nervous system (this tells you to chill out). so when your body is calming down, your brain gets the message that all is well.



Tones the Body's Muscles

There are a number of yoga poses that are highly dynamic in nature. These exercises are known for their ability to tone various muscles of the body

No matter your level of fitness, yoga will leave your body feeling capable, powerful, and strong. To help you get started on your journey to a leaner, toner body,



Makes the Body and Mind Flexible

Flexibility is again a major contributor to a rejuvenated body and mind.

The more flexible you are, the better your life is expected to be. Be it the flexibility of the physical body or the mental aspect, the ancient science of yoga will certainly help you in both ways.

Yoga's mental exercises such as Mantra Yoga, Meditation, etc. nourish the brain to face distinct situations and take swift actions. All these traits are related to inner revitalization. When you enjoy your life unhindered, there are more chances of being a happy soul.



Power Yoga

Power yoga means practicing Astanga yoga With more powerful breathing techniques

Power yoga is considered to be a very athletic form of yoga with postures that are physical, fiery and powerful

Ashtanga is a very dynamic and athletic form of hatha yoga



Difference between Power Yoga and Yoga

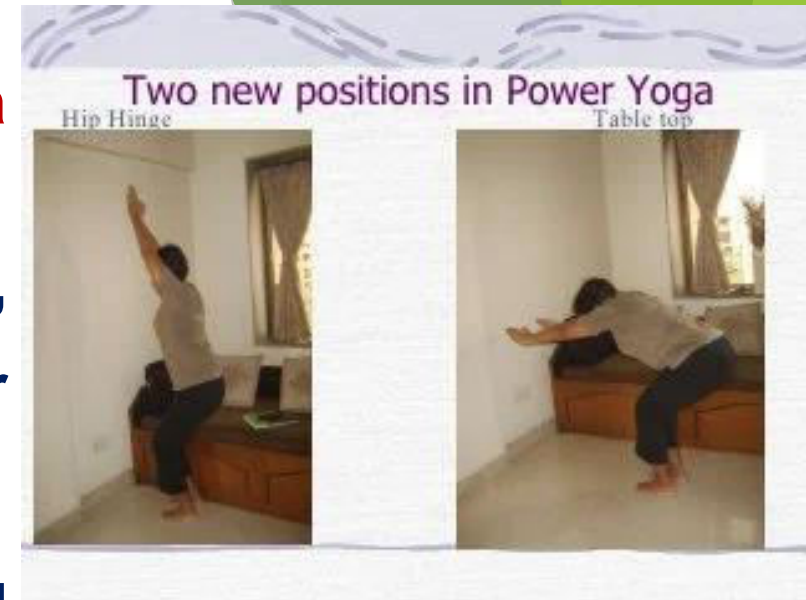
Main difference is the breath With each movement, In & out of a posture, is a prescribed inhalation or exhalation

Power Yoga includes asanas, exercises and followed by a stretch – this entire set is typically known as an Exercise Module

Power Yoga basically consists of Surya Namaskar In which two new challenging positions

Surya Namaskar

Two new positions in Power Yoga Hip Hinge, Table top



Surya Namaskar in Power Yoga

In the various Surya Namaskar position in Power Yoga

We are doing strength and functional training

Thus it is a combination of cardio and strengthening exercises



A Typical Module

Power Yoga Module

A module consists of

- Warm up
- Surya Namaskar Exercises
- Move fluidly from one posture to another
- Cool down



Why warm up?

- ✓ **Warm up is done generally to familiarize the body to the exercise**
- ✓ **It assists in preventing injury**
- ✓ **It improves person's level of performance and accelerates the recovery process needed before and after the training**



What is warm up?

- ✓ **Warm up basically consists of stretches**
- ✓ **Stretches start from the toes and gradually progresses upwards**
- ✓ **For example for toe stretch it is holding in point & flex position**
- ❖ **Calf stretch stand up on the toes**
- ❖ **Ankle rotation**
- ❖ **Shoulder stretch**
- ❖ **Neck rotation**



Benefits of warm up

- ✓ **Direct physical effects**
- ❖ **Release of adrenaline (gets your body ready)**
- ❖ **Increase of temperature in the muscles**
- ❖ **Increase of muscle metabolism**



Yoga postures

5 kinds of postures

- **Standing, Seated, Twisted, Inverted and Supine or Prone**
- **These poses have accumulative effect on the body and so it is important they are practiced in the right order**
- **Start with standing posture, seated posture are introduced next, followed by twist then inversions, prone and supine are done at the end of the practice session which should always be closed with relaxation**



Advantages of the postures...1

- ❑ **Standing asanas build a strong foundation**
- ❑ **Help to develop strength, stamina and determination**
- ❑ **Example – Tadasana, Tree pose, Warrior 1,2 & 3, Extended triangle pose**



Advantages of the postures...2

- ❑ **Seated asanas** improve flexibility of the hips, knees and ankles
- ❑ Reduce tension in the diaphragm and throat making breathing smoother
- ❑ Example – Dandasana, Full forward bending, Head to knee pose
- Forward bends are beneficial for a good night sleep



Advantages of the postures...3

Twist or Twisted asanas extend and rotate the spine and torso

- ❑ **Good for relieving back ache and stiffness in the neck and shoulders**
- ❑ **Internal organs are stimulated – aiding in digestion**
- ❑ **Example – Trikonasana, Artha Matsyendrasana,**



Advantages of the postures...4

Inverted asanas revitalize the entire body system, Any pose in which your heart is higher from the ground than your head is considered as inversion asana

- ❑ **Brain is nourished by the blood that flows towards it**
- ❑ **Example – Lying down angle posture, Shoulder stand, Head stand (Sirasana)**



Advantages of the postures...5

- ❑ **Supine or prone asanas stretch the abdomen and increase flexibility in the spine and hips**
- ❑ **Some are restful while others strengthen the arms and legs**

Example

- **Supine – Reclining hero pose, Prone leg stretch**
- **Prone - Bow pose, Bhujangasana**



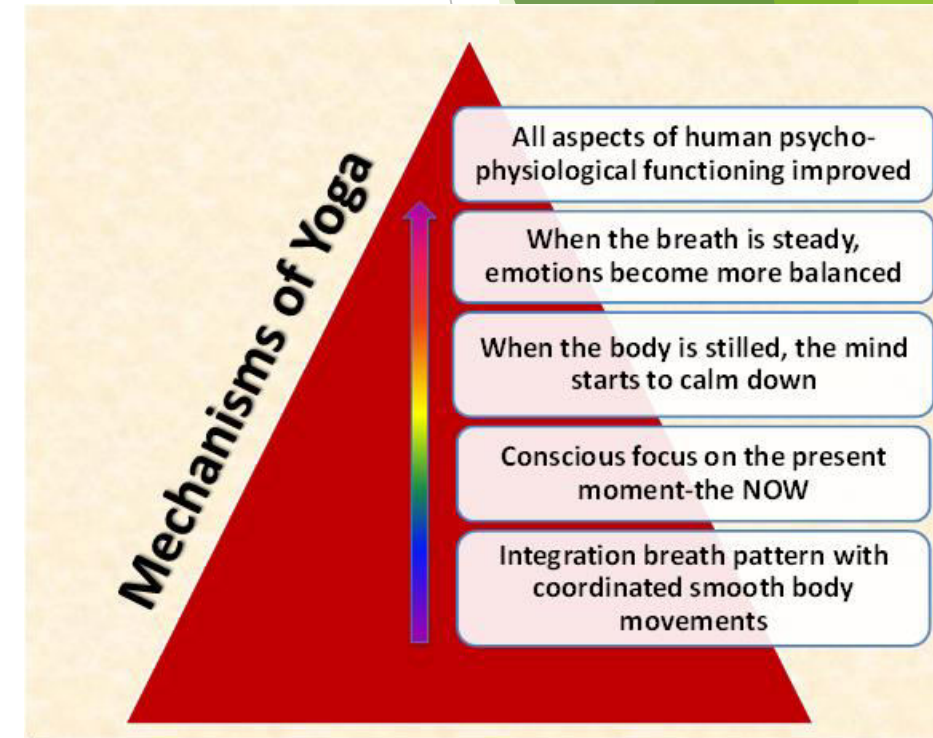
Benefits of Power Yoga

- ❖ **Power yoga bolsters flexibility, stamina and strength**
- ❖ **Improves concentration**
- ❖ **Releases tension**
- ❖ **Develops good and proper posture**
- ❖ **Tones the body**
- ❖ **Bodily toxins are removed from the system**



Role of yoga in psychological preparation of Athlete

- ❖ Through the practice of yoga an athlete can develop his mental health, physical health and empowerment
- ❖ strengthen the power of concentration
- ❖ strengthen the mind-body connection,
- ❖ bring calmness and relaxation to mind,
- ❖ enhance self-confidence,
- ❖ strengthen self-discipline and self-resolve,
- ❖ reduce stress / anxiety and
- ❖ increase vitality and energy throughout the body
- ❖ yoga has extensive benefits and can help us to be a more **balanced, relaxed, focused, efficient and effective Sports person.**



How Yoga can significantly enhance their performance.

- ▶ **what is required to play a sport**
- ▶ **develop the basic skills**
- ▶ **continually train the body**
- ▶ **considerable time, energy and commitment to practice**
- ▶ **Having a body that is flexible, strong and controlled**
- ▶ **endurance or stamina for the required duration**
- ▶ **focus and concentrate with confidence**
- ▶ **“sporting skills require the attainment of deep focus”,**
- ▶ **distractions and adverse conditions ‘score the goal’ or ‘serve the ball’ at the critical match point or deal with crowds**
- ▶ **Yoga is the application of physical postures, control of breath, purification and relaxation of mind / body**



How Yoga can significantly enhance their performance.

- ▶ bringing greater unity and balance to the mind and body
- ▶ Pranayama and breathing techniques prescribed in Yoga enables a person to focus on breath and helps to calm and still the mind and cultivate concentration ability
- ▶ Being able to hold a posture with steadiness,
- ▶ Through asana the functioning and efficiency of internal organs is improved
- ▶ Yoga is able to mobilize joints,
- ▶ stretch tissues and ligaments,
- ▶ tone muscles,
- ▶ bring flexibility to the spine
- ▶ strengthen internal organs
- ▶ yoga is beneficial to a professional athlete as it enables them strengthen their concentration ability,



Mental wellbeing

Mental wellbeing is an integral part of our overall health. Mental wellbeing, in general, is the state of thriving in various areas of life, such as in relationships, at work, play, and more, despite ups and downs.



Anxiety

Definition

Anxiety is the vague form of fear which involves bodily responses or stress reactions



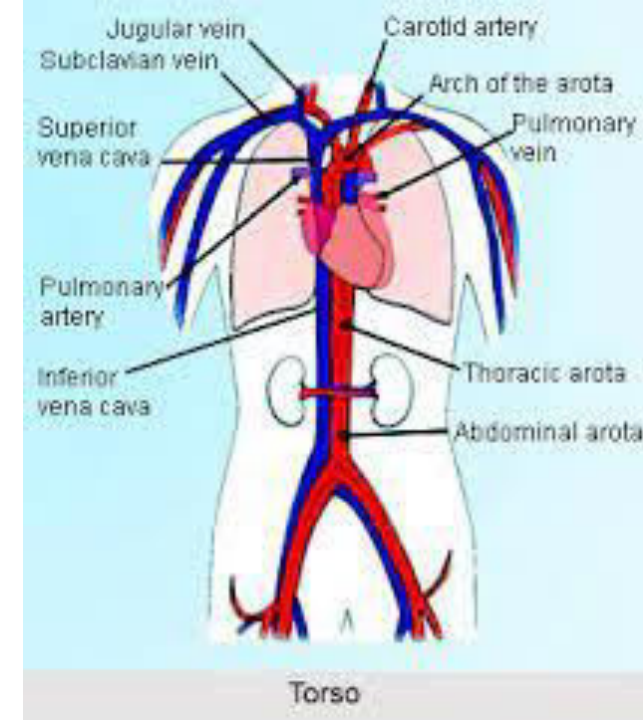
Effect of yoga on Physiological System:

- ▶ Improved general health, posture, muscle tone, sleep, immunity and pain tolerance•
- ▶ Weight normalizes
- ▶ Stable autonomic nervous system•
- ▶ Increased cardio-respiratory efficiency,
- ▶ musculoskeletal flexibility, range of joint movement,
- ▶ physical endurance, strength and energy levels •
- ▶ Decreased HR,BP,RR and
- ▶ Normalizes GIT and endocrine function(Gastrointestinal) (hormonal regulation of digestion)



Effect of yoga on Circulatory System:

- ▶ Yoga exercise helps to prevent various circulatory ailments and illnesses such as high blood pressure, shallow breathing, muscle tension and coronary heart disease.
- ▶ Our findings suggest that specific poses of Yoga directly benefit and enhance the circulation of blood and body fluids throughout the body.
- ▶ The different organs of the body are also positively impacted due to the effective flow circulation to the various parts.
- ▶ reduces the causes of hypertension heart attack or stroke
- ▶ effects of short term (15 days) regular pranayama and meditation practice on cardiovascular functions (reduction in resting pulse rate, systolic blood pressure, diastolic blood pressure, and mean arterial blood pressure)



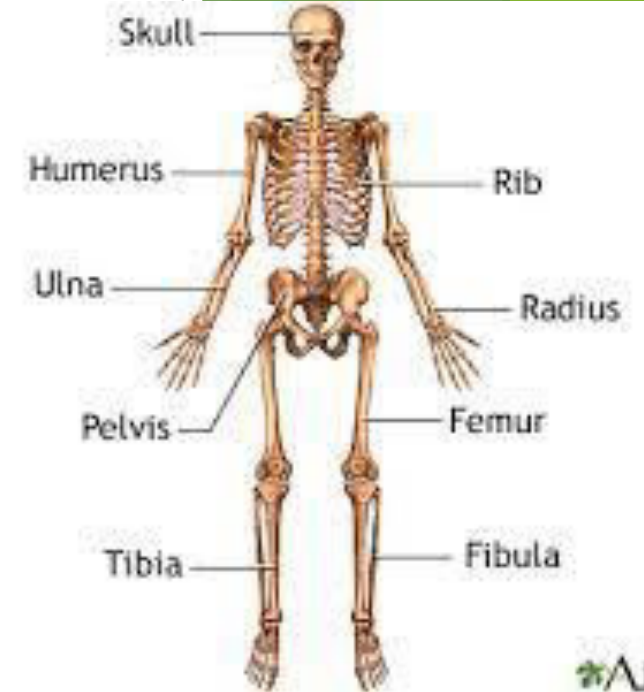
YOGA FOR CIRCULATION

DOWN DOG

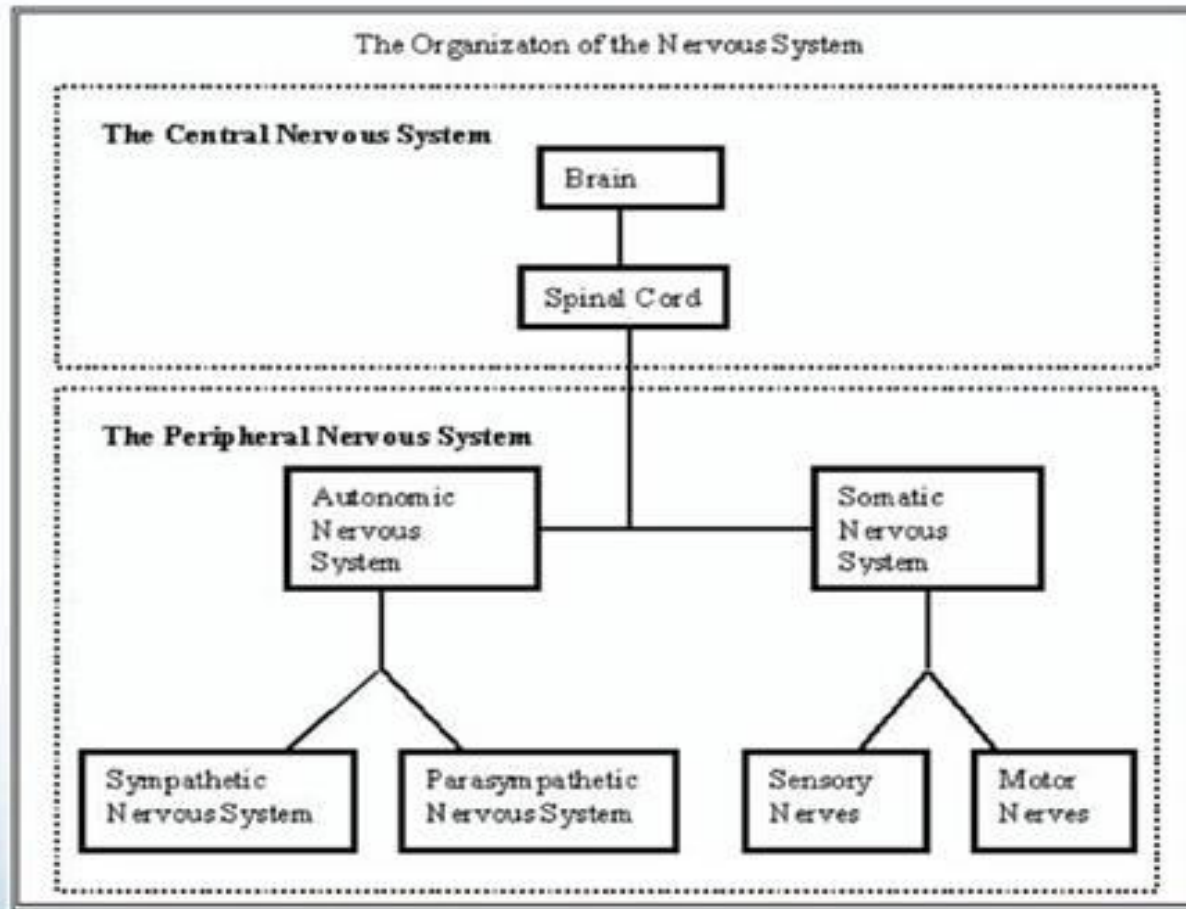


Effect of yoga on Skeletal System:

- ▶ **yoga increases lubrication within the joints, ligaments and tendons**
- ▶ **Yoga help to correct and balance the roles that the joints, ligaments and tendons play together, in providing the support that the body's limbs need to function properly.**
- ▶ **Yoga poses provide relief to stiff and damaged joints.**
- ▶ **Yoga's controlled movements and gentle pressures reach deep into troubled joints.**
- ▶ **The controlled stretches in conjunction with deep breathing exercises relax and release the muscles that have seized up around the joints to protect them.**



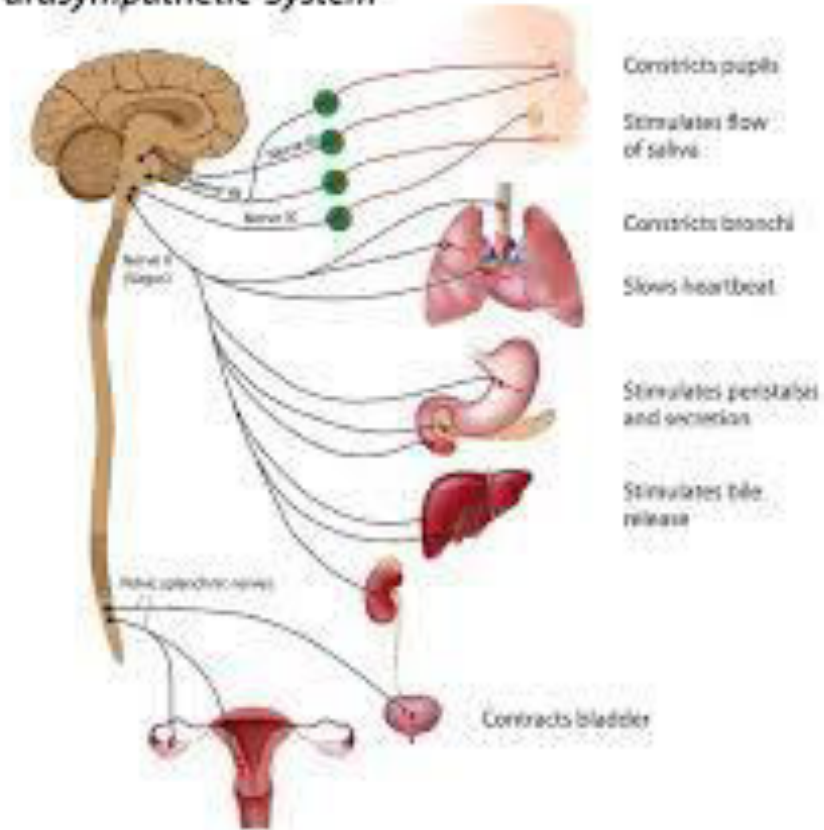
The Nervous System Divisions



Effect of yoga on Nervous system:

- ▶ Physiological changes to the nervous system
- ▶ Stimulation of the Vagus nerve through breathing practices
- ▶ Activation of the Parasympathetic NS (Yoga plays an important role in reducing stress, **reducing sympathetic activity** **increasing parasympathetic activity**, decreasing blood pressure, improving sense of well-being, and decreasing anxiety levels)
- ▶ Induction of the relaxation response
- ▶ Yoga practices repetition which rewires deeply embedded physical, psychological, or emotional patterns

Parasympathetic System



Yoga Asanas for
Nervous System



Effect of yoga on Nervous system:

- ▶ Meditation observation of behavior patterns
- ▶ Change, and cognitive learning, becomes realized
- ▶ Yoga Sutras “When after a moment of stability, the mind ceases its fluctuation and remains naturally quiet, it begins its transformation to stability”
- ▶ Meditation Turning mind to positive qualities
- ▶ Positive qualities become dominant
- ▶ Negative qualities become dormant, weakened
- ▶ Negative reactions (fear, anger, anxiety, resentment) that trigger the sympathetic NS less likely to occur awareness – self-observation - repetition

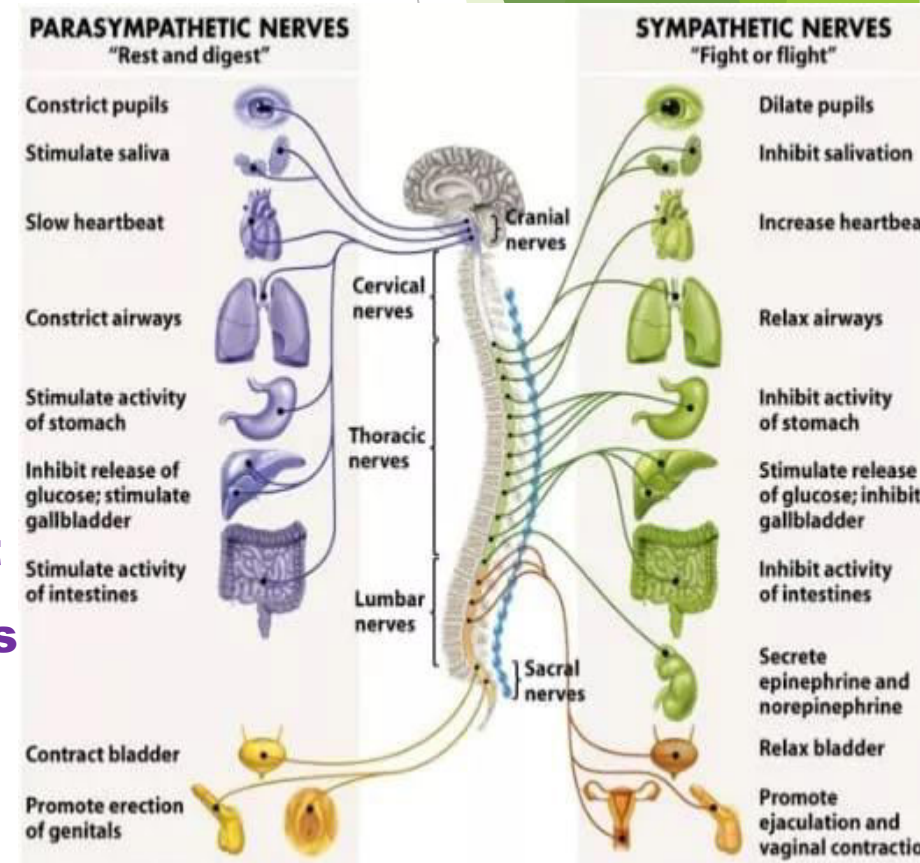
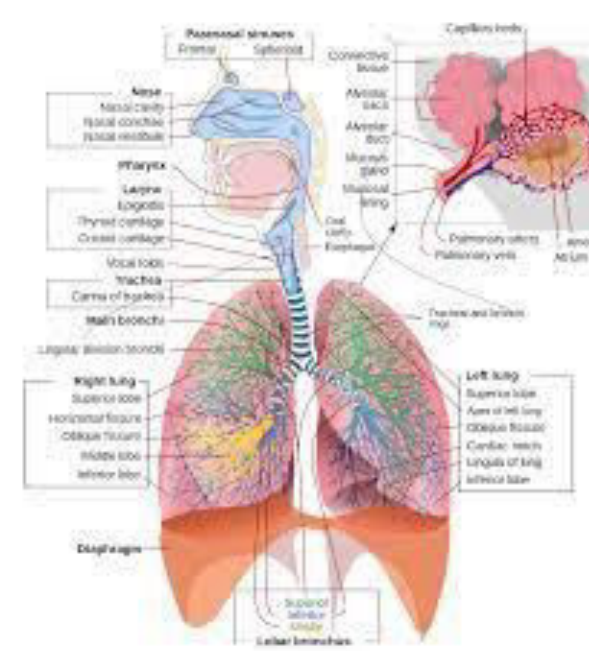


Figure 45-20 Biological Science, 2/e
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Effect of yoga on Respiratory System:

- ▶ The respiratory system connected with the whole body and supplies oxygen to every cell.
- ▶ It includes lungs, nose, mouth, sinuses and all the passages through the body which transport oxygen through the blood
- ▶ yoga exhibits a powerful and profound effect on the respiratory system. With 'Pranayama' breathing exercise in yoga
- ▶ you can increase your intake of oxygen up to five times
- ▶ The more oxygen rich blood to brain, heart, lungs and digestive organs will enable these organs work better
- ▶ deep breathing can help you to improve the flow of your lymph system thereby helping the body to get rid of toxins.
- ▶ The regular practice of breathing exercises can sort out me problems in respiratory system like sinus, asthma, hay fever, shortness of breath and allergies.



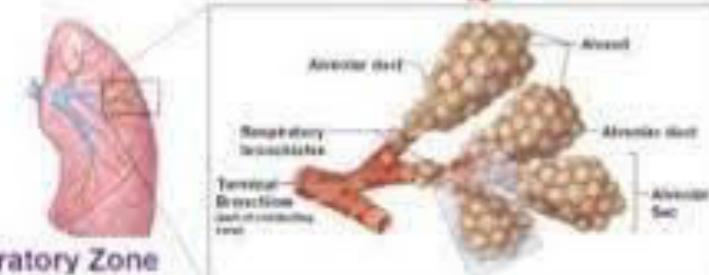
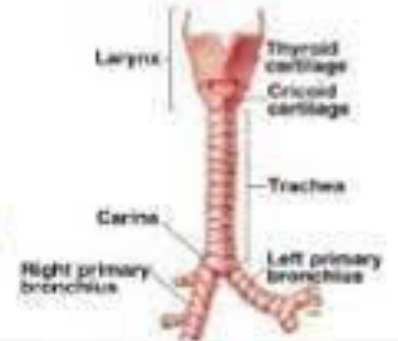
Effect of yoga on Respiratory System:

- ▶ Physical yoga poses that support the respiratory system in doing its work by expanding the lungs and giving them space to breath
- ▶ Yoga asana such as backbends and some standing postures open up chest region not only relax the tight muscles that area but also one begins to use areas of the lungs which had formerly consisted of 'dead space' due to bad posture, emotional tension and environmental factors
- ▶ By doing inverted postures, circulation throughout the body is radically altered and areas above the heart receive on increased supply of blood due to the effect of gravity.

Conducting zone:

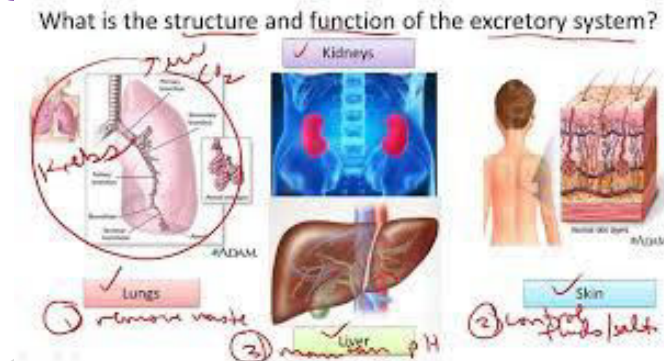
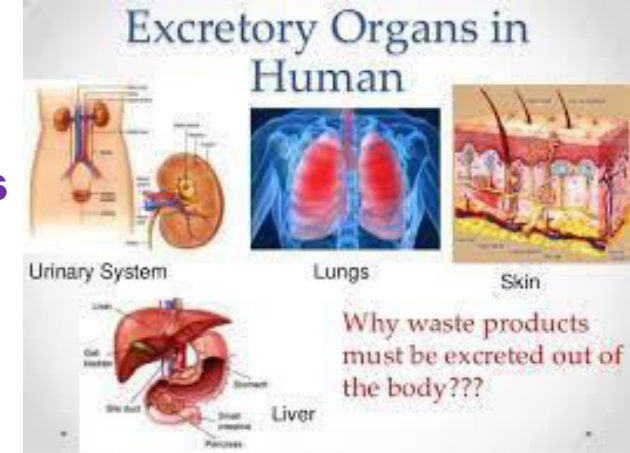
All the structures air passes through before reaching the respiratory zone.

Mouth, nose, pharynx, trachea, glottis, larynx, bronchi.



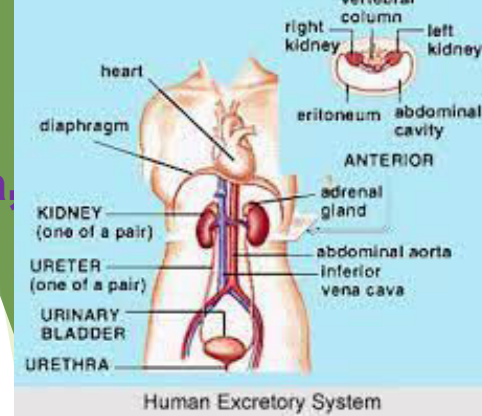
Effect of yoga on Excretory system:

- ▶ The process of excretion of the waste matter from the body involves four organs are responsible, they are kidneys, intestine, skin and lungs.
- ▶ Kidneys excrete and waste matter through the urine, intestine through the stool, skin through the perspiration and lungs through the exhaled air.
- ▶ The imbalance of human excretory system arises due to the improper diet including excessive protein consumption, non vegetarian foods and alcohol.
- ▶ The instability of the excretory system can be removed by the practice of yoga.
- ▶ Regular exercise of yoga makes the internal imbalance of the body to come to normalcy and it helps to rejuvenate the working level of the systems.



Effect of yoga on Excretory system:

- ▶ Some yogas like Makarasana, Suptapavanamuktasana, Pavanamuktasana, Agnisara asana, Utkatasana, Nauli, Uttanamudukasana. Basti is also helpful to cure problems with excretory system.
- ▶ Practice of asana, pranayama and kriyas (cleansing techniques) can keep the internal organs healthy, particularly improving the overall function of the kidneys.
- ▶ Asanas like gentle twist and backbends contracts and massages the kidneys. The practice enables and activates the efficient function of the kidneys.
- ▶ Practice of pranayama like Nadi Sodhana, Anuloma-Viloma can control and balance the nervous system and relieve the mind from stress.
- ▶ Kriyas are great cleansing techniques to remove the toxins out of the body. By purifying the entire system, one feels light and blood is cleansed by the flow of the prana to every single cell of the body.



Psychological effects of meditation:

- ▶ **Improved relations at home & at work•**
- ▶ **Able to see the larger picture in a given situation•**
- ▶ **Helps ignore petty issues•**
- ▶ **Increased ability to solve complex problems•**
- ▶ **Purifies your character•**
- ▶ **Develop will power•**
- ▶ **react more quickly and more effectively to a stressful event.•**
- ▶ **increases one's perceptual ability and motor performance•**
- ▶ **higher intelligence growth rate•**
- ▶ **Increased job satisfaction**

Psychological effects of meditation:

- ▶ **decrease in potential mental illness**
- ▶ **Better, more sociable behaviour•**
- ▶ **Less aggressiveness•**
- ▶ **Helps in quitting smoking, alcohol addiction•**
- ▶ **Require less time to fall asleep, helps cure insomnia**

Spiritual Benefits of meditation:

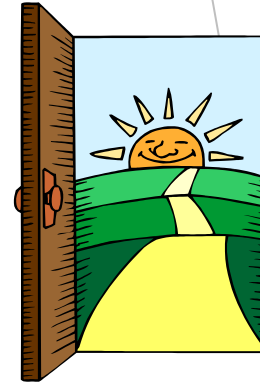
- ▶ **Helps keep things in perspective•**
- ▶ **Provides peace of mind, happiness•**
- ▶ **Helps you discover your purpose•**
- ▶ **Increased compassion•**
- ▶ **Growing wisdom•**
- ▶ **Deeper understanding of yourself and others•**
- ▶ **Brings body, mind, spirit in harmony•**
- ▶ **Deeper Level of spiritual relaxation•**
- ▶ **Increased acceptance of oneself•**
- ▶ **helps learn forgiveness**

Spiritual Benefits of meditation:

- ▶ **Changes attitude toward life•**
- ▶ **Creates a deeper relationship with your God•**
- ▶ **Attain enlightenment•**
- ▶ **Helps living in the present moment•**
- ▶ **Creates a widening, deepening capacity for love•**
- ▶ **Discovery of the power and consciousness beyond the ego**

Psychological effects of meditation:

- ▶ It gives you the feeling of being “Centered”.
- ▶ It keeps you in the “now” or present moment.
- ▶ anxiety decreases
- ▶ emotional stability improves
- ▶ creativity increases
- ▶ happiness increases
- ▶ intuition develops
- ▶ gain clarity and peace of mind
- ▶ mental agility increases
- ▶ relaxes the mind
- ▶ Better memory and retention



Spiritual effects of meditation:

- ▶ Meditation is “listening to yourself” and praying is “talking to God”.



- ▶ When listening to yourself, you connect with the “real you”.

Spiritual effects of meditation:

- ▶ The fruit of Prayer..... is Faith
 - ▶ The fruit of Faith.....is love
 - ▶ The fruit of Loveis Service
- Mother Teresa

