



Yoga and lifestyle

LEARNING OBJECTIVES

- 3.1 **Asanas as Preventive Measures**
- 3.2 **Obesity: Procedure, Benefits and Contraindications for Vajrasana, Hastottanasana, Trikonasana, ArdhaMatsyendrasana**
- 3.3 **Diabetes: Procedure, Benefits and Contraindications for Bhujangasana, Paschimottanasana, Pavan Muktasana, ArdhaMatsyendrasana**
- 3.4 **Asthma: Procedure, Benefits and Contraindications for Sukhasana, Chakrasana, Gomukhasana, Parvatasana, Bhujangasana, Paschimottanasana, Matsyasana**
- 3.5 **Hypertension: Procedure, Benefits and Contraindications for Tadasana, Vajrasana, Pavan muktasana, Ardha Chakrasana, Bhujangasana, Shavasana**
- 3.6 **Back Pain: Procedure, Benefits and Contraindications for Tadasana, Ardha Matsyendrasana, Vakrasana, Shalabhasana, Bhujangasana**

INTRODUCTION

Yoga, the oldest-known science of self development, has been found to be the answer to modern machine age, is man's deepest need. It solves the problems of health, physical fitness and peace of mind. Yoga teaches us how to improve and control the condition of every part of our body. It also teaches us how to quiet our mind in order to attain real lasting peace. It is simple to perform and enjoyable.

These days yoga has become universal. It can be used by every one regardless of age, sex, physical condition, back ground etc. People use yoga to overcome their individual problems. Yoga can be used to correct the physical deformities of children and even elderly people. Western countries are turning to yoga because it has been proved that yoga successfully counteracts the occupational pains that every person has these days. Yoga is a means of balancing and harmonizing the body, mind and emotions.



MEANING OF YOGA

Yoga is an oldest Indian way of dealing with the fitness (physical, mental) of human body, mind and spirit. Yoga has come from Sanskrit word 'yuj' which means to unite or to join. Even though, people tend to think that yoga is a series of exercises with twisted body poses, but it is not so. Basically, it helps the individual to connect with one's inner spirit, which is essentially divine and is connected to the 'universal spirit' or 'God'. Yoga's roots are in India and sadhus (saints) used to practise yoga thousands of years ago.

Actually Yoga is a science which deals with the health of body and harmony of mind. The ultimate aim of Yoga is self identification and self perfection which comes through self purification and self realization.

According to Bhagwat Gita, yoga is defined as, "Samatvam yoga uchhayate" – means yoga is balance and harmony of the mind and body.

"Yoga Karmasu Kaushalam" – means, yoga is skill in work.

According to Shankracharya, "Yoga is withdrawal of sense organs from the worldly objects and their control through yoga".

According to Swami Digamber ji, "Yoga is a union of Atma and Parmatma".

Dictionary meaning of 'yoga', it is a set of physical and mental exercises.

IMPORTANCE OF YOGA

The modern age is the age of stress, tension and anxiety. Everybody is in a hurry. Everything is time-bound and man is running after them. This makes him tired physically and tense mentally. Most of the people are leading such life. At this juncture, yoga can be very significant for us. The following points show the importance of yoga :

- (i) **Reduces tension** : Regular practice of yoga is helpful to reduce the tension. Dharana and Dhyan are beneficial for getting peace of mind. Yoga helps to relax the body.
- (ii) **Improves concentration** : Various techniques of yoga develop the concentration to great extent and thus improves memory and mental sharpness.
- (iii) **Cleans respiratory organs** : The respiratory organs of our body can be cleaned by various yogic exercises. Neti, Dhoti, Kapala bhati etc. are such yogic exercises to keep our respiratory organs clean.
- (iv) **Controls sense organs** : Various techniques of yoga develop the ability to control the sense organs. It develops them to function properly according to the individual needs.
- (v) **Relaxes the body** : Rest and relaxation are essential for removing fatigue. Yoga relaxes the body. Shavasana and Makarasana are very beneficial for relaxation.
- (vi) **Cures various diseases** : Yoga not only prevents us from many diseases but also cures them. A large number of diseases like asthma, high blood pressure, heart problems etc. are cured by yoga.
- (vii) **Reduces obesity** : Obese people fall prey to various diseases. Yogic exercises can help in reducing obesity. By reducing mental tension through meditative asanas obesity can also be reduced.
- (viii) **Keeps the correct posture** : Nowadays postural deformities are common in individuals. If we perform yogic exercises regularly, we can keep the correct posture of body.

- (ix) **Increases flexibility** : Flexibility is very significant for every person. It makes the body movement efficient and graceful. It is also helpful in preventing sports injury. Muscles become flexible by performing Chakrasana, Dhanurasana, Halasana etc.

3.1 ASANAS AS PREVENTIVE MEASURES

ASANAS

According to *Brahmanopanishad*, "Asana is to sit in a comfortable position or posture for everlasting period."

According to *Patanjali*, "Asana means sthiram sukham aasanam" i.e., "the position which is steady and comfortable."

Asanas are various postures of yoga. Asanas are body positions, typically associated with the practice of Yoga. These poses help to the person to remain healthy and balanced. These help to develop concentration. By practising asana one can develop agility, balance, endurance and great vitality. They keep the body free from disease. Their real importance lies in the way they train and discipline the mind. There are various types of asanas such as corrective asanas, relaxative asanas and meditative asanas.

The Asanas can be classified into following :

1. **Dhyanatmak Asana (Meditative Asana)** : Padmasana, Siddhasana, Swastikasana, Vajrasana, Gomukhasana etc. These asanas should be practised in peaceful atmosphere. They increase the concentration power.
2. **Relaxative Asana** : Shashankasana, Shavasana, Makar asana etc. These asanas help in relaxation of physical and mental fatigue. They provide relaxation to our body and mind.
3. **Cultural or Corrective asana** : Shirsasana, Sarvang asana, Shalabh asana, Bhujang asana, Mayur asana, Paschimotanasana etc. These are very helpful in physical development. They provide efficiency to Pranayama, Pratiyahara and dharna.

Yoga lays great emphasis on asanas and pranayama to prevent illness and, more important, to preserve health. A regular routine of physical exercises, from a young age, has been shown to be of preventive value in many medical disorders like coronary, respiratory and orthopaedic problems. Asanas work on all systems of the body.

Given below are the benefits of asanas for prevention of diseases :

- (a) **Digestive System works efficiently** : Many asanas like various forward bends, backward bends, various spinal twists, inverted poses strengthen the digestive organs and muscles which support the organs. By doing asanas regularly, health of digestive system is maintained as these movements give a gentle massage to important digestive organs like liver, pancreas, spleen, ensuring proper blood flow and removing waste products effectively. The digestive system works more efficiently and constipation, indigestion also reduces.
- (b) **Circulatory System improves** : Many asanas or postures have positive effects on circulatory system. For example, Inverted postures – head stand, shoulder stand, drain the impure blood from various parts of the body and fresh blood is supplied which improves the health of these organs. Forward bends, backward bends, twists also help to improve the health of the circulatory system. Increased efficiency of blood circulatory system due to asanas helps in prevention of many diseases related to heart.

- (c) **Respiratory System become efficient** : Many asanas like Peacock Pose and Shalabhasana (Locust pose) expand the chest to the full extent which helps in strengthening the lungs. The vital capacity of lungs increases. Also, the chest increases in size and strength. By doing asanas regularly diseases like cough, cold, asthma etc can be prevented.
- (d) **Nervous and Endocrine systems strengthen**: When you perform asanas, you try to focus on breath or various body parts taking mind away from the stressful thoughts and emotions. This balances the mind resulting in calm and peaceful state. The reduced mental activity reduces cortex activity and increases dopamine secretions in the blood. This sends positive signals to the hypothalamus which then leads to more effective function of glands and hormone secretions. When the endocrine system functions properly, the whole body benefits.
- (e) **Musculoskeletal system becomes strong** : By performing asanas regularly bones, ligaments and muscles become strong. Asanas also increase the flexibility of joints and spine. Arthritis, back pain, sciatica postural deformities can be prevented by doing asanas.
- (f) **Facilitate Lymph drainage** : Lymphatic system is responsible for fighting infections and improves immunity. With the continuous contraction and relaxation of muscles and movements of organs lymph drainage is facilitated thus helps in maintain healthy lymphatic system.
- (g) **Preventing mental illness** : The different asanas have a unique way of alleviating symptoms of mental illness and boosting well-being. Yoga practice is known to improve a person's physical and mental functioning. Regular practice of yoga causes a reduction in the 'stress hormone' cortisol. It helps prevent degeneration of brain cells.

VARIOUS YOGA ASANAS

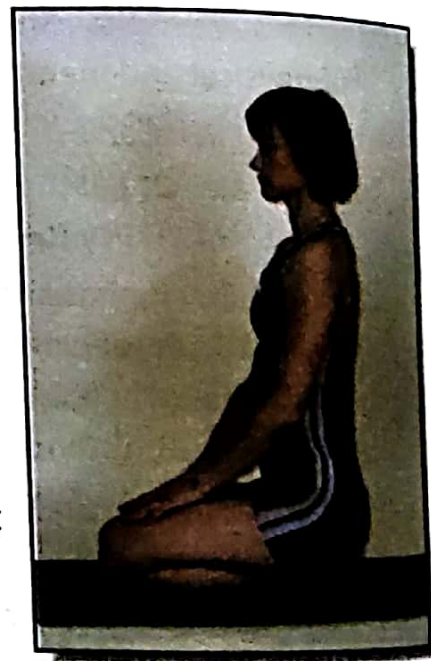
1. Vajrasana

This asana is a meditative posture. It is the only asana which can be practiced immediately after eating meals.

Procedure :

To perform the Vajrasana, following steps should be followed :

1. Sit with legs extended together, hands by the side of the body, resting on the ground.
2. Fold the left leg at the knee and place the foot under the left buttock.
3. Similarly, fold the right leg and place the foot under the right buttock.
4. Place both the heels so that the big toes overlap each other.
5. Position the buttocks in the space between the heels.
6. Keep the hands on respective knees.
7. Keep the spine erect, gaze in front or close the eyes. In the beginning you can stay for 10-15 seconds.
8. While returning to the original position, bend a little towards right side, take out your left leg and extend it.
9. Similarly, extend your right leg and keep arms on the sides of the body.
10. Return to the original position.



Benefits :

1. It is a meditative posture and helps in concentration.
2. It improves our digestive system.
3. It strengthens muscles of thighs and calf.
4. It decreases postural defects.
5. It improves memory power.
6. It reduces mental stress.
7. It provides relief from piles.
8. It prevents hernia.
9. It increases the strength of pelvic muscles.
10. It helps in reducing hip fat.

Precautions :

1. In the final posture spine must be straight.
2. Heels should be outside and buttocks should be resting on the heels.
3. Do not bend forward or backward while sitting in this asana.

Contraindications :

1. Those suffering from chronic knee pain should not practise Vajrasana.
2. Those suffering from spinal column problems should not perform vajrasana.
3. Those having difficulty in movement should perform the asana with care.

2. Hastottanasana

Hastottanasana is made up of three words – hasta, uttana and asana. Hasta means 'arms'; uttana means 'stretched up' and asana means 'posture'. In this posture, the arms are stretched upwards, so that is why it is called Hastottanasana.

Procedure :

To perform Hastottansana, following steps should be followed:

1. Stand erect on the ground with both feet together.
2. Inhale slowly and raise both arms over the head.
3. With palms facing up, interlock your fingers.
4. Exhale and bend from the waist towards the right side. Maintain this position comfortably for 5-10 seconds.
5. Inhale and come to the centre.
6. Repeat it from left side as well.

Benefits :

1. It relaxes the whole body.
2. It relieves the muscle pain in neck, shoulders and arms.



Precautions :

1. Bend from the waist only and as much as possible.
2. Maintain the final posture with normal breathing.
3. Do not bend the knees while turning sideward.
4. Avoid leaning forward or backward while performing this asana.
5. Do not bend beyond capacity.

Contraindications :

1. Avoid performing this asana in case of severe backache, diarrhoea, migraine.
2. Avoid trikonasana if you have cervical spondylosis.

4. ArdhaMatsyendrasana

Ardhamatsyendrasana is a milder version of the Matsyendrasana. This asana was named after Yogi Matsyendranath. Ardha means 'half'. The original Matsyendrasana being difficult to perform, its easier version called Ardhamatsyendrasana is generally practised. In Ardhamatsyendrasana, the spine is given the maximum lateral twist.

Procedure :

To perform ardhmatsyendrasana the following steps should be performed :

1. Sit on the ground and extend the legs in front.
2. Bend the knee of the left leg, place left foot close to the right buttock, heel should touch the side of hip and the left knee should touch the ground.
3. Bend the right knee; and place right foot on the ground near outside of the left knee. Toes of the right foot should face forward.
4. Place left arm over right knee in such a way that it covers outside of the right knee. Hold the right foot or ankle with left hand. The right knee should be close to the left armpit.
5. Bend the right arm from the elbow and take it behind and encircle the waist as much as possible as if trying to touch the naval.
6. Turn the head towards the right side and try to look behind over the shoulder.
7. Stay in this position for 5-10 seconds.
8. To come back, bring your head to the centre. Bring the right arm in the front. In the same way, bring the left arm, right leg and left leg in the starting position. Repeat it on the other side.

Benefits :

1. It stimulates liver, spleen and pancreas and helps regulate their functioning.
2. It is beneficial for intestines too.
3. It is beneficial for free movements of the shoulders.
4. It rejuvenates the nerves around the navel.
5. It is helpful for persons suffering from diabetes mellitus and lower back pain.
6. It strengthens the spinal column and muscles of the back.



7. It is helpful in treating cervical spondylitis, bronchitis, constipation, sinusitis, menstrual disorders and urinary tract disorders.

Precautions :

1. Twist the spine with support of the arm.
2. Toes of the foot kept near the outside of knee should be facing forward.
3. The outside edge of the foot which is kept near the buttock should touch the floor.
4. Sitting straight in this asana is important.
5. While twisting the spine, simultaneously move the arm, trunk and head.
6. Do not give jerk to the spine.

Contraindications :

1. Person suffering from peptic ulcer, hernia and severe arthritis should not perform this asana.
2. Person with sciatica or slipped disk should be cautious and seek expert advice.
3. Pregnant women should not perform this asana.

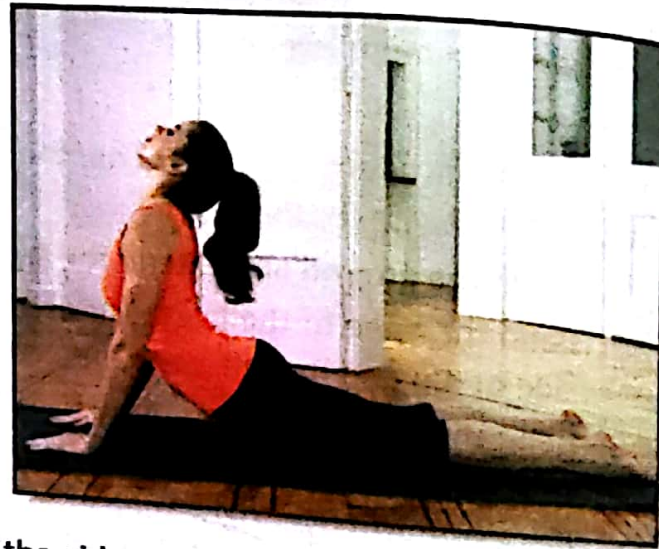
5. Bhujangasana

Bhujangasana comprises of two words - bhujanga and asana. In Sanskrit, bhujanga means cobra (snake) and asana means posture. In the final stage of this asana, the body resembles the shape of a hooded snake, therefore the posture is called Bhujangasana.

Procedure :

To perform Bhujangasana, following steps should be followed :

1. Lie on the ground on your stomach with forehead touching the floor; legs together, hands by the side of thighs.
2. Fold the arms at elbows and place the palms by the side of the shoulders, with tips of the fingers not crossing the shoulder line.
3. Inhaling, slowly raise the head first, then neck and after that shoulders. Shoulders should be shrugged backwards.
4. Raise the trunk up to the navel region. Raise the chin as high as possible.
5. Eyes should gaze upward.
6. Maintain this position for 5 -10 seconds or as long as comfortable.
7. To come back, bring down the upper part of naval region, then chest, then shoulders, then chin and head in the last.
8. Place the forehead on the ground and arms along the body, hands by sides of the thighs. Relax.
9. Repeat this asana 3 to 5 times.



Benefits :

1. It helps to make spinal column flexible.
2. It solves digestive problems.

5. It strengthens abdominal and back muscles.
6. It increases the tone of muscles of arms and legs.
7. It helps to stretch the lower back.

Precautions :

1. It causes pressure and contraction at the lower abdomen, hence should be practised carefully.
2. Knees should be together while pressing against the chest.
3. Don't shake the body and avoid jerky movement.
4. Avoid bending the head if suffering from spondylitis.

Contraindications :

1. Avoid performing this asana if suffering from severe back pain, migraine or abdominal injuries.
2. Avoid this asana if you have had abdominal surgery recently.
3. Pregnant women should avoid this asana.

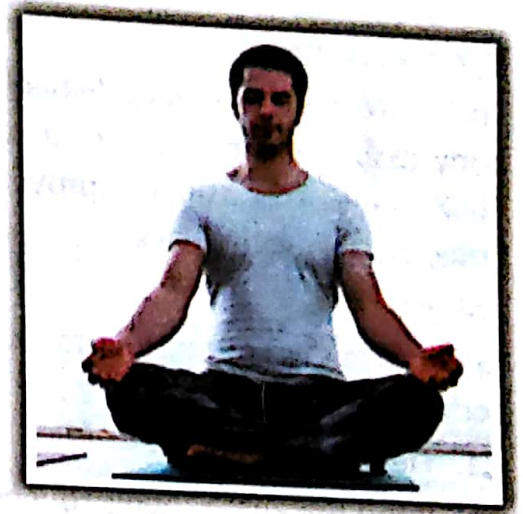
8. Sukhasana

In Sanskrit the word "Sukham" means "delight" or "bliss" and "asana" means 'posture'. This asana is basically a relaxing pose. One can perform this asana in the most comfortable and easy manner. This is basically concentration pose. This requires patience. This asana is one of the easiest asanas.

Procedure :

To perform Sukhasana the following steps should be performed :

1. Sit on the mat with legs stretched out in front.
2. Bend the right leg at the knee and place the foot under the left thigh. Use the hands to do this.
3. Now bend the left leg and place the left foot under the right leg.
4. Keep the body balanced and easily erect.
5. Extend the arms so that the wrists rest on the knees, palms turned upward.
6. The tips of the thumbs should touch the tips of the index fingers, with other fingers lying straight.



Benefits :

1. It stretches and lengthens your spine.
2. Broadens your collarbones and chest.
3. It calms your mind.
4. Enhance your condition of peacefulness and serenity.
5. Kick out anxiety, stress and mental tiredness.
6. It helps in improving body posture.
7. It helps in reducing fatigue.
8. It strengthens your back.
9. It stretches your ankles and knees.
10. It gives gentle massage to your knees, calf muscles and your thighs also.
11. It provides relaxation to body and mind.

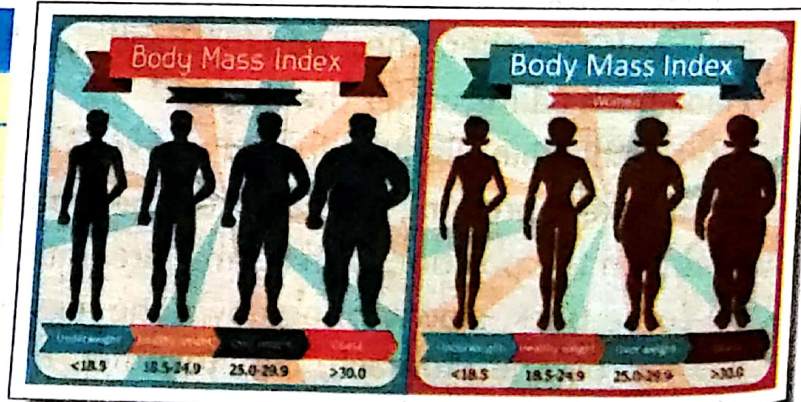
3.2

OBESITY PROCEDURE, BENEFITS AND CONTRAINDICATIONS FOR VAJRASANA, HASTOTTANASANA, TRIKONASANA, ARDHAMATSYENDRASANA

Obesity is defined as abnormal or excessive fat accumulation that may impair health. Obesity is a medical condition when the body of a person contains 20% or more fat as compared to ideal weight.

According to WHO, $BMI = \frac{\text{Weight (in kg)}}{[\text{Height (in metres)}]^2}$

Classification	BMI
Underweight	< 18.5
Normal Weight	18.5 - 24.9
Over Weight	25.0 - 29.9
Class I Obesity	30.0 - 34.9
Class II Obesity	35.0 - 39.9
Class III Obesity	40.0



Obesity is defined as abnormal or excessive fat accumulation that presents a risk to health.
BMI is less than 18.5, the person is in the underweight category.
BMI is between 18.5 and 24.9, the person is in the normal weight category.
BMI is 25 to 29.9, the person is in the overweight category.
BMI is 30 or higher; the person is in the obese category.

Causes of Obesity :

Various causes of obesity are given below:

- 1. Imbalance between calories intake and calories expended :** The fundamental cause of obesity and overweight is an imbalance between calories consumed and calories expended. Calorie intake means the calories you get from the food and beverages you consume. Calorie expenditure means the calories you burn for basic body functions and during physical activity. When your calorie intake is more than the expenditure you end up gaining weight.
- 2. Lack of physical activity :** Lack of physical activity is another important factor related to obesity. Many people have jobs that involve sitting at a desk for most of the day. They also rely on their cars, rather than walking or cycling. For relaxation, many people tend to watch TV, browse the internet or play computer games, and rarely take regular exercise.
- 3. Genetics :** There are some rare genetic conditions that can cause obesity. Certain genetic traits inherited from parents can affect hormones which cause obesity. A person is more likely to be obese if one or both parents are obese.
- 4. Poor diet :** Obesity doesn't happen overnight. It develops gradually over time, as a result of poor diet and lifestyle choices, such as eating large amounts of processed or fast food – that's high in fat and sugar, eating out a lot, eating larger portions than you need, drinking too many sugary drinks etc lead to obesity.
- 5. Psychological Factors :** Obesity and mental health are two medical conditions often said to be closely related. A person's mental well being can have a direct impact on their weight. Under stress circumstances, individuals may be prompted to eat by their emotions rather than actual feelings of hunger. This type of behaviour is often referred to 'emotional eating' which can lead to obesity.

Risk Factors of Obesity :

Raised BMI is a major risk factor for non-communicable diseases such as cardiovascular diseases (mainly heart disease and stroke), diabetes ; musculoskeletal disorders (especially osteoarthritis – a highly disabling degenerative disease of the joints);some cancers.

The risk for these non-communicable diseases increases, with increases in BMI.

Childhood obesity is associated with a higher chance of obesity, premature death and disability in adulthood. But in addition to increased future risks, obese children experience breathing difficulties, increased risk of fractures, hypertension, early markers of cardiovascular disease, insulin resistance and psychological effects.

Note :

The Asanas asked under this topic have been discussed in this chapter. Please refer to the various Yoga Asanas Topic.

Diabetes mellitus or diabetes is a condition that prevents your body from properly using the energy from the food you eat. It is a condition in which blood glucose, or blood sugar, levels are too high. Diabetes occurs in one of the following situations:

- The pancreas (an organ behind your stomach) produces little insulin or no insulin at all. Insulin is a naturally occurring hormone, produced by the beta cells of the pancreas, which helps the body use sugar for energy.
- The pancreas makes insulin, but the insulin made does not work as it should. This condition is called insulin resistance.

Our body is made up of millions of cells. To make energy, the cells need food in a very simple form. When we eat or drink, much of our food is broken down into a simple sugar called glucose. Glucose provides the energy our body needs for daily activities. The blood vessels and blood transport sugar from where it is either taken in (the stomach) or manufactured (in the liver) to the cells where it is used (muscles) or where it is stored (fat). Sugar cannot go into the cells by itself. The pancreas releases insulin into the blood, which serves as the helper, or the "key," that lets sugar into the cells for use as energy. When sugar leaves the bloodstream and enters the cells, the blood sugar level is lowered. Without insulin, sugar cannot get into the body's cells for use as energy. This causes sugar to rise. Too much sugar in the blood is called "hyperglycemia" (high blood sugar).

Diabetes can be classified into following types :

Type 1, where there is no production of insulin and

Type 2, where the pancreas does not produce enough insulin.

Type 3, Gestational diabetes, which occurs during pregnancy but may resolve after the baby is delivered. Common symptoms include frequent urination, tiredness, blurred vision, excessive weight loss or gain, numbness in hands and feet, delayed healing of wounds etc.

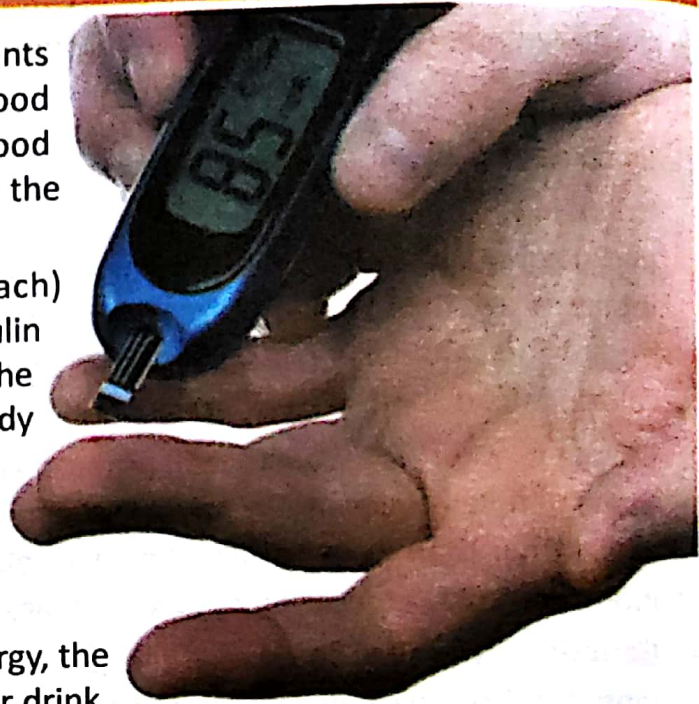
Causes

Causes of type 1 diabetes

In this type, our immune system, which normally fights harmful bacteria or viruses, attacks and destroys our insulin-producing cells in the pancreas. This leaves us with little or no insulin. Instead of being transported into our cells, sugar builds up in our bloodstream.

Causes of pre-diabetes and type 2 diabetes

In pre-diabetes and in type 2 diabetes, our cells become resistant to the action of insulin, and our pancreas is unable to make enough insulin to overcome this resistance. Instead of moving into our cells where it's needed for energy, sugar builds up in your bloodstream.



Causes of gestational diabetes

During pregnancy, the placenta produces hormones to sustain pregnancy. These hormones make cells more resistant to insulin. Pancreas responds by producing enough extra insulin to overcome this resistance. But sometimes pancreas can't keep up. When this happens, too little glucose gets into cells and too much stays in blood, resulting in gestational diabetes.

Risk Factors

Risk factors for diabetes depend on the type of diabetes.

Risk factors for type 1 diabetes

Factors that may signal an increased risk of type 1 diabetes include:

1. **Family history** : Risk increases if a parent or sibling has type 1 diabetes.
2. **Environmental factors** : Circumstances such as exposure to a viral illness likely play some role in type 1 diabetes.
3. **The presence of damaging immune system cells (autoantibodies)** : Sometimes family members of people with type 1 diabetes are tested for the presence of diabetes autoantibodies. If you have these autoantibodies, you have an increased risk of developing type 1 diabetes.
4. **Geography** : Certain countries, such as Finland and Sweden, have higher rates of type 1 diabetes.

Risk factors for prediabetes and type 2 diabetes

Certain factors that increase the risks are:

1. **Weight** : The more fatty tissues you have, the more resistant your cells become to insulin.
2. **Inactivity**: The less active you are, the greater your risk. Physical activity helps you control your weight, uses up glucose as energy and makes your cells more sensitive to insulin.
3. **Family history**: Your risk increases if a parent or sibling has type 2 diabetes.
4. **Age**: Risk increases as you get older.

Risk factors for gestational diabetes

Any pregnant woman can develop gestational diabetes, but some women are at greater risk than are others. Risk factors for gestational diabetes include:

1. **Age**: Women older than age 25 are at increased risk.
2. **Family or personal history**: Your risk increases if you have prediabetes — a precursor to type 2 diabetes — or if a close family member, such as a parent or sibling, has type 2 diabetes. You're also at greater risk if you had gestational diabetes during a previous pregnancy, if you delivered a very large baby or if you had an unexplained stillbirth.
3. **Weight** : Being overweight before pregnancy increases your risk.

Note :

The Asanas asked under this topic have been discussed in this chapter. Please refer to the various Yoga Asanas Topic.

ASTHMA PROCEDURE, BENEFITS & CONTRAINDICATIONS FOR SUKHASANA, CHAKRASANA, GOMUKHASANA, PARVATASANA, BHUJANGASANA, PASCHIMOTTANASANA, MATSYASANA

Asthma is a common lung condition that causes ^{erual} occasional breathing difficulties. Asthma is caused by swelling (inflammation) of the breathing tubes that carry air in and out of the lungs. This makes the tubes highly sensitive, so they temporarily narrow.

It may occur randomly or after exposure to a trigger.

Common asthma triggers include:

- allergies – to house dust mites, animal fur or pollen, for example
- smoke, pollution and cold air
- exercise
- infections like colds or flu

The symptoms can sometimes get temporarily worse. This is known as an asthma attack.

The main symptoms of asthma are:

- wheezing (a whistling sound when breathing)
- breathlessness
- a tight chest, which may feel like a band is tightening around it
- coughing



Causes

Asthma is caused due to a combination of environmental and genetic (inherited) factors.

Exposure to various irritants and substances that trigger allergies (allergens) can trigger signs and symptoms of asthma. Asthma triggers are different from person to person and can include:

1. Airborne substances, such as pollen, dust mites, mold spores, pet dander or particles of cockroach waste.
2. Respiratory infections, such as the common cold.
3. Physical activity (exercise-induced asthma).
4. Cold air.
5. Air pollutants and irritants, such as smoke.
6. Certain medications, including beta blockers, aspirin, ibuprofen (Advil, Motrin IB, others) and naproxen (Aleve).
7. Strong emotions and stress.
8. Sulfites and preservatives added to some types of foods and beverages, including shrimp, dried fruit, processed potatoes, beer and wine.
9. Gastroesophageal reflux disease (GERD), a condition in which stomach acids back up into your throat.

Risk factors

A number of factors are thought to increase your chances of developing asthma. These include:

1. Having a blood relative (such as a parent or sibling) with asthma.
2. Having another allergic condition, such as atopic dermatitis or allergic rhinitis (hay fever).
3. Being overweight.

4. Being a smoker.
5. Exposure to second-hand smoke.
6. Exposure to exhaust fumes or other types of pollution.
7. Exposure to occupational triggers, such as chemicals used in farming, hairdressing and manufacturing.

Prevention of Asthma

Prevention of asthma is mainly initiated by avoiding the triggers of asthma. Methods of its prevention are described below :

1. **By using air conditioners** : The windows of the air conditioned houses are mainly closed and this reduces the entry of airborne pollens that can cause asthma.
2. **Keep Your Surroundings Clean** : Minimize dust in the house and at working places. For example; Removing carpeting and installing hardwood can reduce the dust. Use of mask while cleaning can also prevent asthma.
3. **Know your asthma triggers and minimize contact with them** : Avoiding your triggers is the best way to reduce your need for medicines and to prevent asthma episodes. Observe and note down the factors which trigger asthma and try to avoid them.
4. **Take your asthma medicines as prescribed** : Take your asthma medicines regularly as prescribed by the physician. This will also help in preventing recurrent asthma attacks.

Note :

The Asanas asked under this topic have been discussed in this chapter. Please refer to the various Yoga Asanas Topic.

3.5

HYPERTENSION PROCEDURE, BENEFITS AND CONTRAINDICATIONS FOR TADASANA, VAJRASANA, PAVANMUKTASANA, ARDHA CHAKRASANA, BHUJANGASANA, SHAVASANA

Blood pressure is the force of our blood pushing against the walls of our arteries. Each time our heart beats, it pumps blood into the arteries. Our blood pressure is highest when our heart beats, pumping the blood. This is called systolic pressure. When our heart is at rest, between beats, our blood pressure falls. This is called diastolic pressure. Blood pressure is measured in mm/Hg.

A reading of 120/80 is normal blood pressure. 140/90 or higher is high blood pressure. *When the blood pressure becomes abnormally high it is called hypertension.*

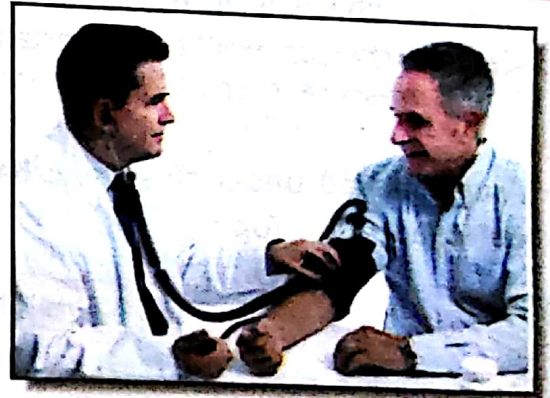
High blood pressure usually has no symptoms, but it can cause serious problems such as stroke, heart failure, heart attack and kidney failure.

Types of High Blood Pressure

There are two types of high blood pressure :

Primary (essential) hypertension : For most adults, there's no identifiable cause of high blood pressure. This type of high blood pressure, called primary (essential) hypertension, tends to develop gradually over many years.

Secondary hypertension : Some people have high blood pressure caused by an underlying condition. This type of high blood pressure, called secondary hypertension, tends to appear suddenly and cause higher blood pressure than does primary hypertension.



Risk Factors

High blood pressure has many risk factors, including :

1. **Age** : The risk of high blood pressure increases with age. Through early middle age, or about age 45, high blood pressure is more common in men. Women are more likely to develop high blood pressure after age 65.
2. **Family history**: High blood pressure tends to run in families.
3. **Being overweight or obese**: The more you weigh the more blood you need to supply oxygen and nutrients to your tissues. As the volume of blood circulated through your blood vessels increases, so does the pressure on your artery walls.
4. **Not being physically active**: People who are inactive tend to have higher heart rates. The higher your heart rate, the harder your heart must work with each contraction and the stronger the force on your arteries. Lack of physical activity also increases the risk of being overweight.
5. **Using tobacco**: Not only does smoking or chewing tobacco immediately raise your blood pressure temporarily, but the chemicals in tobacco can damage the lining of your artery walls. This can cause your arteries to narrow, increasing your blood pressure. Second-hand smoke also can increase your blood pressure.
6. **Too much salt (sodium) in your diet**: Too much sodium in your diet can cause your body to retain fluid, which increases blood pressure.
7. **Too little potassium in your diet**: Potassium helps balance the amount of sodium in your cells. If you don't get enough potassium in your diet or retain enough potassium, you may accumulate too much sodium in your blood.
8. **Too little vitamin D in your diet**: It's uncertain if having too little vitamin D in your diet can lead to high blood pressure. Vitamin D may affect an enzyme produced by your kidneys that affects your blood pressure.
9. **Drinking too much alcohol**: Over time, heavy drinking can affect your blood pressure.
10. **Stress**: High levels of stress can lead to a temporary increase in blood pressure.
11. **Certain chronic conditions**: Certain chronic conditions also may increase your risk of high blood pressure, such as kidney disease, diabetes and sleep apnea.

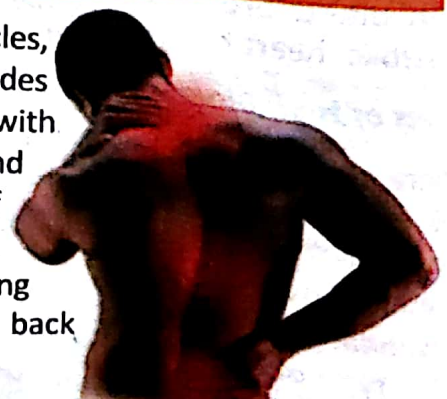
Note :

The Asanas asked under this topic have been discussed in this chapter. Please refer to the various Yoga Asanas Topic.

3.6

BACK PAIN PROCEDURE, BENEFITS AND CONTRAINDICATIONS FOR TADASANA, ARDHA MATSYENDRASANA, VAKRASANA, SHALABHASANA, BHUJANGASANA

Back pain is a pain felt in the back that usually originates from the muscles, nerves, bones, joints or other structures in the spine. Back pain includes lower back pain, middle back pain, upper back pain or low back pain with sciatica. Nerve and muscular problems, degenerative disc disease, and arthritis can result in back pain. Main causes of back pain are lack of physical activities, lack of flexibility, excessive pressure on back etc. General reasons for back pain are sitting or standing for long hours, sitting or standing in an incorrect posture, lack of exercise, obesity and weak back muscles.



Signs and symptoms of back pain may include

1. Muscle ache.
2. Shooting or stabbing pain.
3. Pain that radiates down your leg.
4. Limited flexibility or range of motion of the back.

Causes

Back pain can come on suddenly and last less than six weeks (acute), which may be caused by a fall or heavy lifting. Back pain that lasts more than three months (chronic) is less common than acute pain. Main causes of back pain are:

1. **Muscle or ligament strain** : Repeated heavy lifting or a sudden awkward movement may strain back muscles and spinal ligaments. If you're in poor physical condition, constant strain on your back may cause painful muscle spasms.
2. **Bulging or ruptured Discs** : Discs act as cushions between the bones (vertebrae) in your spine. The soft material inside a disc can bulge or rupture and press on a nerve. However, you can have a bulging or ruptured disk without back pain. Disc disease is often found incidentally when you undergo spine X-rays for some other reason.
3. **Arthritis** : Osteoarthritis can affect the lower back. In some cases arthritis in the spine can lead to a narrowing of the space around the spinal cord, a condition called spinal stenosis.
4. **Skeletal irregularities** : Back pain can occur if your spine curves abnormally. Scoliosis, a condition in which your spine curves to the side, also may lead to back pain, but generally only if the scoliosis is severe.
5. **Osteoporosis** : Your spine's vertebrae can develop compression fractures if your bones become porous and brittle.

Risk factors

Anyone can develop back pain, even children and teens. Research has yet to prove what contributes to back pain. However, these factors might put you at greater risk of developing back pain:

1. **Age** : Back pain is more common as you get older, starting around age 30 or 40.
2. **Lack of exercise** : Weak, unused muscles in your back might lead to back pain.
3. **Excess weight** : Carrying too much weight puts extra stress on your back.
4. **Diseases** : Some types of arthritis and cancer can contribute to back pain.
5. **Improper lifting** : Using your back instead of your legs while lifting weight can lead to back pain.
6. **Psychological conditions** : People prone to depression and anxiety appear to have a greater risk of back pain.
7. **Smoking** : This can keep your body from delivering enough nutrients to the discs in your back.

Note :

The Asanas asked under this topic have been discussed in this chapter. Please refer to the various Yoga Asanas Topic.

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