

This book is very special because it is written by a practicing medical person who is well-versed in modern medicine and also in the theory and practice of yoga.

**Dr. K.P. MISRA**

Sr. Consultant Cardiologist,  
Director, Apollo Hospitals, Chennai.

I appreciate & Congratulate Dr.S.Hema for her excellent work.

**Dr. V. MOHAN.,**

M.V Diabetes Specialities Center

This book by the renowned Yogatherapist will inspire people to practice Yoga and lead a happy and healthy life.

**Robin Singh**

Indian Cricketer

A book of this kind on yogatherapy is long awaited.

**Dr. A.S. Ashok Kumar**

Yogasana Kalaimamani

# YOGA

FOR

PREVENTION & CONTROL OF

# DIABETES

**Dr. S. Hema,** M.B.B.S., Ph.D., (Y.Sc.,)



Published by : **TARA YOGA PUBLICATIONS**

(A UNIT OF INDIAN INSTITUTE OF YOGA)

25, 8th Street, Sowrashttra Nagar, Choolaimedu,  
Chennai - 600 094. India.

Phone : 9144 24833809 Cell : 9841221606

Website : [www.indianyogatherapy.net](http://www.indianyogatherapy.net)

e-mail : [drs\\_hema@hotmail.com](mailto:drs_hema@hotmail.com)

First Print : May ' 2005

Cost :

### SAFETY NOTE

Yoga Should not be considered as **replacement** for professional medical treatment. It is only an **adjuvant therapy** along with medicines, diet prescribed by physician. A thorough medical check-up and physician's recommendation are essential before starting any exercise. Yoga may do harm if done without these precautions and without guidance of a competent yogatherapist.



### BLESSINGS

Sri Sankara Bhagavadpadacharya  
Paramparagatha Moolomnaya  
His Holiness Sri Kanchi Kamakoti  
Peetadhipathi Jagadguru  
Sri Sankaracharya Swamigal  
Srimatam Samastham

No. 1, Salai Street, Kancheepuram - 631 502, Tamilnadu, India.

Dr. S. Hema in addition to being a gynaecologist and obstetrician in the field for thirty years, is also actively involved in spiritual and social service activities. She has served as a guide for many women. She is extending her services in the field of yogatherapy also.

She has proved through her books in explicit clear way asana and pranayama cures a number of ailments and aid in keeping good health. This book will prove to be a veritable treasure to everyone.

I bless Dr. Hema to continue to write many more such books so that she could serve humanity, thereby reap all Divine benefits and live long. May all be immensely benefitted by reading her treatise.

## CONTENTS

1. Blessings	1
2. Contents	2
3. Diabetes, Yoga and Me	3
4. An Insight into diabetes	5
5. Yoga & Diabetes	6
6. Advantages of yoga over other forms of exercise	9
7. Benefits of yoga in Diabetes	11
8. Precautions to be undertaken by Diabetics	12
9. What is Yoga?	13
10. Ashtanga Yoga	14
11. Important Instructions for yoga practice	15
12. Simple Asanas for diabetics	16
13. Pranayama	27
14. Meditation	28
15. Daily yoga routine	30
16. Foot Care	31
17. Normal life despite diabetes	32

## DIABETES, YOGA AND ME

We all know the importance of education in our lives, but if you have diabetes, then learning becomes a way of life. The more you know about the condition the healthier you stay.

When diabetes suddenly hit me 11 years back. I felt shocked and worried. Once I overcame the initial shock I realised that the main cause of my diabetes was the mental agony I underwent on being away from my only son, who went ahead to pursue his higher education. No amount of medicines could help me out

There is a saying that “you can leave Yoga but Yoga won’t leave you”. So then I resumed my journey along the path of Yoga that I had started fifteen years ago & stopped after a year’s practise. I was able to control my sugar. That was the beginning of a voyage of discovery.

Immediately I took up a decision that I should I acquire skills in this ancient art and developed my

knowledge more intensively by learning from many schools of yoga in and around the city and across the country.

I started Indian Institute of Yoga in 1993 where patients are treated for various problems.

I was encouraged and supported by Dr.A. Pannerselvam an eminent diabetologist of Chennai & Secretary to the Diabetologists Association of India who referred lots of diabetics for yogatherapy. We have together conducted many special camps, treated thousands of diabetes over the past 10 years successfully and come out with a book in Tamil about our experiences. All our endeavours were supported by Dr. V. Seshiah, Senior most diabetologist of Chennai BC Roy award winner.

*Life is a game, Play it.*

*Life is a dream, Realise it.*

*Life is a challenge, Meet it.*

*Life is Love, Share it.*



*Start the day with Love.*

*Spend the day with Love.*

*Fill the day with Love.*

*End the day with Love*

- Bhagwan Sri Sathya Sai Baba

## AN INSIGHT INTO DIABETES

It is the most common metabolic disorder worldwide. Normal level of blood sugar is 80 to 120mg %. In diabetes it is more than 180mg% 2 hours after food.

**Types 1 (IDDM) :** This type of Diabetes is Insulin dependent and develops before 40 years of age.

**Types 2 (NIDDM) :** This type of Diabetes is non-insulin dependent and develops after 40 years and this is more common.

**Symptoms** are excessive thirst, hunger, sweating and urination.

**Causes for the diabetes :** Either insulin is not at all secreted by the Pancreas or insulin is not sufficient to cater to the body needs.

**Complications** are 1. Heart attack, 2. Retinopathy, 3. Neuropathy, 4. Skin Infection, 5. Kidney failure, 6. Arthritis, etc. If the blood sugar is controlled all these can be avoided.

## YOGA AND DIABETES

### Reasons for increase in number of diabetic patients in the recent past :-

1. Incorrect food habits (soft drinks, junk food etc.)
2. Lack of exercise.
3. Mental stress and strain caused by the mechanized modern world.

### How to prevent diabetes :-

1. Maintenance of body weight.
2. Regular exercises.
3. Avoiding high calorie food.

Yoga takes care of all the above three factors.

Ancient Indian medicinal system, Ayurveda, the philosophy of which also encompasses yoga, considers diabetes as a psychosomatic disorder with causative factors being sedentary habits, physical emotional and mental stress.

Yoga postures were developed thousands of years ago in India and were designed to assist man to counteract the effects of living a life far different from the one we were designed to live by nature.

All the asanas and breathing techniques meant to treat diabetes, are known to influence in the following ways :-

1. Direct influence on pancreatic secretion by rejuvenation of the pancreatic cells, through alternate abdominal contraction and relaxation.
2. Reduction in blood sugar due to muscular exercise involved in the asanas.
3. Yoga changes one's attitude towards life by developing mental relaxation and balance.
4. Reducing the activity of autonomic nervous system.
5. Reducing the weight of the individual.
6. Providing will power to follow the strict diet regimen required.



7. Yoga gets the blood going to all the extremities right to the last cell of the little toe flushing with good, fresh, healthy blood, which has been well oxygenated with the deep yoga breathing. In addition, the nerves in our extremities are supplied with fresh blood and are thoroughly stretched in doing the postures.

Although yoga may not have the potential to “cure” diabetes, it can complement the lifestyle changes necessary to keep diabetic symptoms in check, and it can help a diabetic feel more in control of their health and well-being.

Consumption of daily doses of medicines can be drastically reduced and eventually stopped by the continuous practice of yoga. This is a scientifically proved fact. But this is no reason to assume that we have been completely cured of diabetes and sit back. It is essential to check the blood sugar level periodically, once in 15 days initially, and later once in a month. If the blood sugar level is above the 140-160 mg %, consult the doctor immediately.

## ADVANTAGES OF YOGA OVER OTHER FORMS OF EXERCISE FOR DIABETICS

1. Age is no bar to practice yoga.
2. Yoga can be practiced despite of illness (including heart ailments).
3. Yoga is never dangerous to life.
4. There is no need for assistance.
5. It can be practiced indoors.
6. Yoga is restful and controls the nervous system unlike other forms of exercise, which may cause its agitation.
7. It reduces hunger, unlike other systems of exercise, which induce hunger.
8. It is inexpensive.
9. It can be practiced anywhere, anytime.
10. Blood pressure is reduced.
11. There is less expenditure of energy.
12. Yoga provides relaxation to the heart muscles by releasing its stiffness, while other forms of exercise increase the strain on an already strained heart of a diabetic patient.

13. Peace of mind is achieved only through the practice of yoga, which is not provided in the other systems of exercise.
14. The body relaxes and gets refreshed. Other systems of exercise cause tiredness of the body.
15. Yoga strengthens the inner organs.
16. Muscles relax and cause increased blood flow. In other systems of exercise, muscles become stiff.
17. Yoga causes weight loss, while other systems of exercise cause increase in weight due to strengthening of muscles.
18. The body does not get hurt which is imperative for those affected by diabetes.
19. Yoga also results in the strengthening of the bones.
20. As there is not much sweating, there is no electrolyte imbalance, or strain on the kidneys.
21. Yoga can even be practiced by those who have undergone by-pass surgery or kidney transplants.

## **BENEFITS OF YOGA IN DIABETES**

1. Those practicing yoga from their childhood have lesser possibility of acquiring diabetes.
2. In type I, the amount of insulin required gradually starts decreasing.
3. In type 2, Level of sugar in the blood is reduced.
4. The dosage of medicines can be reduced.
5. Obesity can be prevented.
6. Yoga helps to change th fast-pacing lifestyle.
7. There is inner peace. Rest, relaxation and a sound sleep become possible.
8. Yoga provides the will power to resist the food which are harmful.
9. Resistance of the body is increased which prevents other diseases.
10. As BP is reduced, paralysis is avoided.
11. It strengthens kidneys, nervous system, lungs, heart and digestive organs so that the complications involving these organs can be avoided.

## PRECAUTIONS TO BE UNDERTAKEN BY DIABETIC PATIENTS BEFORE STARTING YOGA

1. If the blood sugar level is high (more than 200mg %) it should be brought down according to the doctor's advice and then only yoga is to be practised.
2. The asanas should be learnt only in the presence of a trained yoga therapist.
3. Do not practice yoga on an empty stomach. If done so, the blood sugar level may drastically decrease. The patient must consume coffee, tea or milk and then practice yoga giving a break of half an hour.
4. Always keep in store some sweet or sugar or glucose to be consumed in case of emergencies.
5. If there is increased palpitation, sweating or giddiness, take a spoon of sugar and take rest in the savasana position. This implies that there has been a drastic decrease in blood sugar level. Consult the doctor.

## WHAT IS YOGA

A recent definition of Health by W.H.O. is "a state of complete physical, mental, social and spiritual well-being and not merely absence of diseases or infirmity". It is only yoga, the most ancient sacred tradition known to humanity which can show the way to perfect health, perfect mind control and perfect peace with one's self, the world and nature. Its roots go back at least 5000 years, far longer than any other religion or spiritual path. It is India's greatest gift to mankind.

The great sage Patanjali who was born in 200 BC systematized the science of yoga which till then was being handed down by word of mouth from one generation to another. The word Yoga is derived from the sanskrit root "yuj" which means to "join", or "merge". The practice of Yoga integrates the body with the mind and the mind with the soul.

"Yoga is integration and harmony between head, heart and hands". Yoga is a science and an art. It can be practiced by all irrespective of race, colour, caste, creed, sex and age.



## ASHTANGA YOGA

Out of various types of yoga Hatha Yoga is the best known and most widely practised yoga in the world. It was systematised by the great sage Patanjali.

**The eight limbs of Hatha Yoga are :**

**Yama :** 1. Non-violence. 2. Truth. 3. Non-Stealing. 4. Self-control. 5. Non-accumulation of needless wealth.

**Niyama :** 1. Cleanliness and purity. 2. Satisfaction and contentment. 3. Austerity, ability to bear hardship. 4. Self-study. 5. Faith in God.

**Asana** - Postures

**Pranayama** - Control of breath and bio-energy.

**Pratyahara** - Withdrawal of the sense organs from the objects of sense.

**Dharana** - Intense concentration for developing inner vision

**Dhyana** - Meditation, uninterrupted and deep concentration for prolonged period

**Samadhi** - The goal of Yoga, a true sense of communion and peace.

## IMPORTANT INSTRUCTIONS FOR YOGA PRACTISE

1. This should be done in a well-ventilated place.
2. Practise on a rug, mat or blanket.
3. Bladder should be emptied and bowels should be evacuated.
4. Asanas should be done on an empty stomach.
5. It can be done four hours after a heavy meal.
6. Wear loose, minimum clothes.
7. Keep mouth closed. Breathe through the nose.
8. The mind must be calm and undisturbed.
9. If you are tired, practise the relaxation first.
10. Ladies should not do *Asanas* during periods.
11. Close your eyes while doing *Asanas*.
12. Do not wear spectacles or loose ornaments.
13. Avoid strain. Start by practising lightly.
14. Patients who have undergone any type of surgery must avoid *asanas* for six months.
15. Learn yoga only from a qualified *Guru*.

## ARDHA PADMASANA

### ARDHA PADMASANA (Half Lotus Pose)

Sit with the legs straight in front of the body. Bend one leg and place the sole of the foot under opposite thigh. Bend the other leg and place the foot on top of the opposite thigh. Without straining, try to place the upper heel as near as possible to the abdomen. The head neck and spine should be kept straight.



1. This is a good posture for *pranayama* and meditation.
2. Cures Leg Pain & Back Pain.
3. Increases flexibility of the spine and the legs.

## SHAVASANA

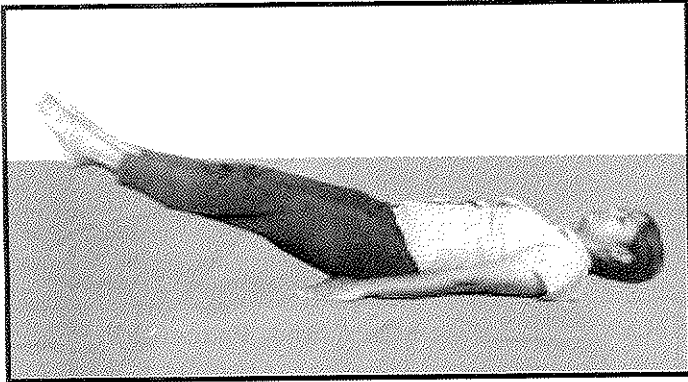


### SHAVASANA (Shanthi Asana, Peaceful Pose)

Lie on the back face upwards. Keep the legs stretched out and two feet apart. Arms should be kept by the sides a little away from the chest, palms facing upwards. Close the eyes. Keep the body motionless. Keep the mind fixed on the abdominal breathing. Breathe deeply. The abdomen should balloon out while you inhale and should get flattened while you exhale. There is no time limit for this *asana*. This can be performed according to time available.

1. This gives total relaxation to the body.
2. It reduces BP and Pulse rate.

## ARDHA HALASANA

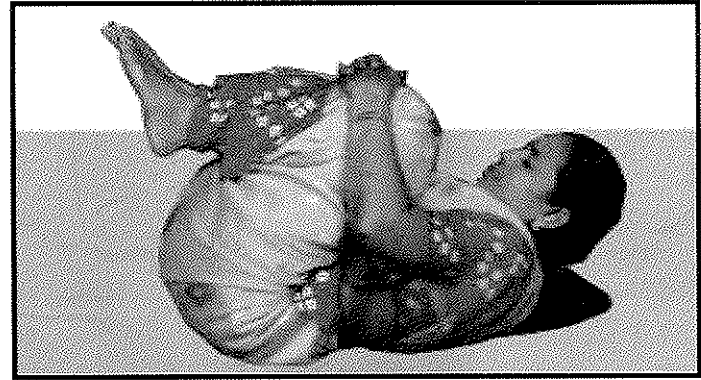


**ARDHA HALASANA (Half Plough Pose)**

Lie on the back with feet together. Keep the arms close to the body, palms facing downward. Now Raise both the legs together one foot above the ground without bending the knees. Remain in this position for 15 seconds and bring the legs back to the ground.

1. Relieves ankle, knee and thigh pain.
2. Reduces excess fat in the abdomen.
3. Controls blood sugar.

## PAVANAMUKTHASANA

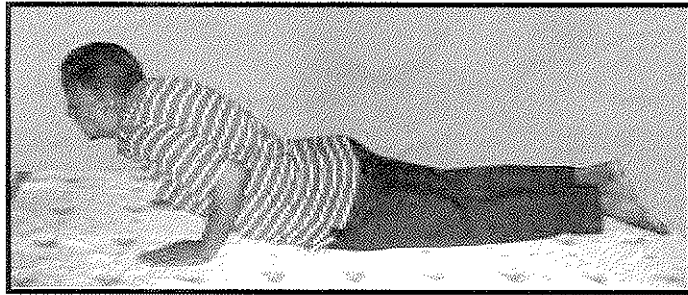


**PAVANAMUKTHASANA (Gas releasing Pose)**

Bend both the legs at the knees. Make a fingerlock with the hands and place it a little below the knees. Bring the thighs close to the chest. Raise the head it near the knees. Remain in this posture for 15 seconds. Then bring the legs and head down to the normal position.

1. This regulates movement of air in the body.
2. Constipation is relieved.

## BHUJANGASANA

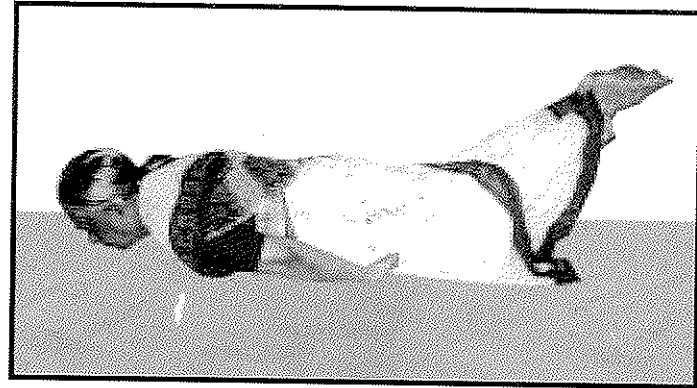


### BHUJANGASANA (Cobra Pose)

Lie on the abdomen, keeping the legs together, chin touching the floor and the soles facing up. Keep the hands near shoulder bent at elbows close to the body. Now raise the head first and then the upper portion of the trunk slowly, just as the cobra raises its hood, till the navel portion is about to leave the ground. Keep the body below navel straight in touch with the ground. Remain in this position for 15 seconds.

1. It makes lungs and heart strong.
2. Reduces abdominal fat.
3. Back ache is relieved.

## SALABHASANA



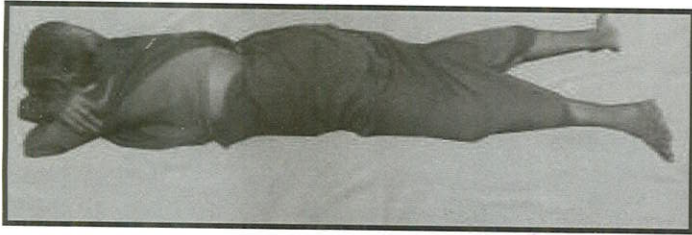
### SALABHASANA (Locust Pose)

Lie down on the abdomen. Keep your fists under the waist. Let the chin rest on the floor. Then raise both the legs tightly stretched as high as possible without bending the knees. Remain in this position for 15 seconds. Bring the legs down slowly.

1. It controls blood sugar.
2. This prevents and cures kidney problems.
3. It cures diseases of uterus and ovary.



## MAKARASANA

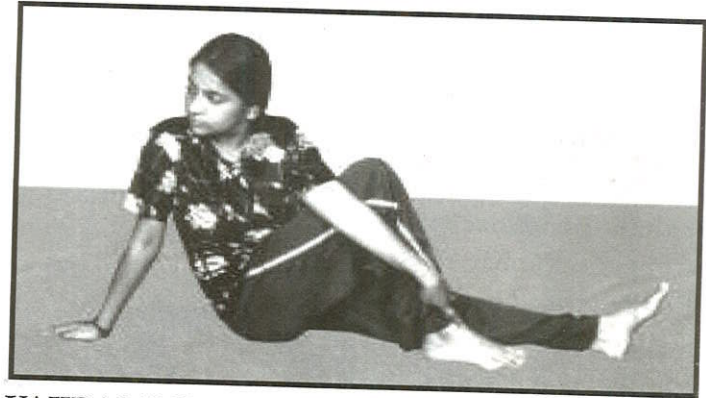


### MAKARASANA (Crocodile Pose)

Lie on the abdomen. Keep the legs wide apart. Bring the arms forward and keep the left palm on right shoulder and right palm below the left armpit. Rest the head in between the hands and close the eyes. Concentrate on abdominal breathing.

1. It gives relaxation to all parts of the body.
2. It increases the lungs capacity and oxygen intake.
3. It gives relief for Asthma, bronchitis and other lung disorders.
4. It improves concentration.
5. Useful to those whose spine is injured.

## VAKRASANA



### VAKRASANA (Spinal Twist)

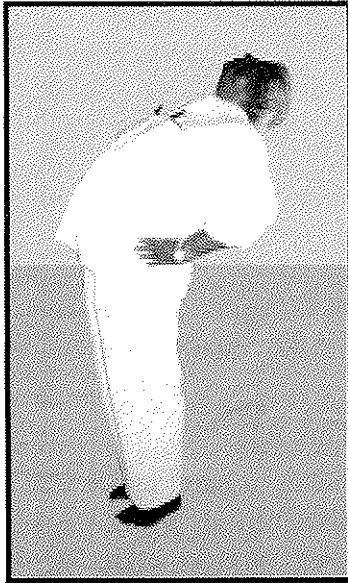
Sit erect and stretch both the legs forward. Bend the right leg and keep it close to the left knee. Bring the right hand backwards and rest it on the floor in a straight line. Bring the left hand from outwards and hold the right ankle. Twist the body right side and lift the head slightly upwards. Remain in this position for 30 seconds. Repeat the same on the left side.

1. It controls blood sugar.
2. Strengthens vertebral column and nervous system.

## ARDHA CHAKRASANA

### ARDHA CHAKRASANA (Half-wheel Pose)

Stand erect with legs together. Support the back at the waist by the palms. Bend backwards from the lumbar region. Bend the head backwards, stretching the muscles of the neck. Knees should not bend. Remain in this position for 20 seconds. Slowly come back to normal position.

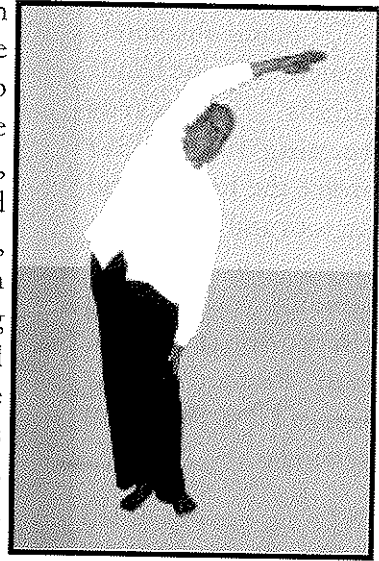


1. This removes excessive fat.
2. Relieves hip pain and Back pain.
3. Makes the spine flexible.

## ARDHAKATTI CHAKRASANA

### ARDHAKATTI CHAKRASANA

Stand erect with feet close together. Raise the right arm sideways up above the head until the arm touches the ear, palm facing left. Bend slowly on to the left side, keep the left palm down as far as possible along the left leg. Raised hand should not bend at the elbow. Remain in this position for 20 seconds and come back to normal position. Repeat the same on the left side, by bending towards the right.



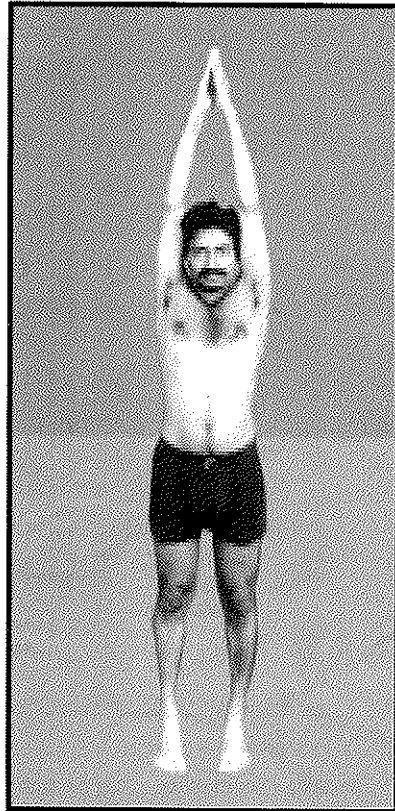
1. This improves liver function.
2. It keeps spine healthy.
3. Fat in the hip region is removed.

## TOLASANA

### TOLASANA

Stand absolutely straight. Lift the hands slowly upwards keeping it together above the head. Stand on toes and stretch the body. In the beginning, you can take the support of the wall. Remain in this position for 10 seconds.

1. Lungs get expanded and more oxygen is taken in.
2. Pain in the legs and heels get cured.



## PRANAYAMA

*Prana* means breath, life, vitality, or cosmic energy. *Ayama* means control. Thus pranayama means control of the vital force by regulated breathing. Just as bathing is necessary for purification of body, Pranayama is essential for purification of mind.

### Physiology of Pranayama :

It reduces the respiratory rate, basal metabolic rate and heart rate. It increases the oxygen uptake. Complete neuro-physiological relaxation occurs. This rest is far superior to sleep.

### Precautions :

1. *Pranayama* should be practised only with the proper guidance of a competent *Guru*.
2. *Pranayama* should be practised only after mastery over *asanas* is achieved. Stop the practise if you feel giddy.
3. Those suffering from heart complaints, high blood pressure and with very weak lungs should never practise *kumbhaka*.

## MEDITATION

It is the seventh limb of yoga.

### Physiological effects of Meditation

It is scientifically proved by clinical parameters that Meditation is useful in acquiring a healthy long life.

1. The Heart rate, Respiratory rate, Metabolic rate, and Blood pressure is reduced.
2. Heart diseases are prevented and cured.
3. Reduces mental tension.
4. Stabilises biological rhythm.
5. Strengthens mind - body co-ordination.
6. Right and left cerebral hemispheres show better co-ordination.
7. Body is able to cope-up in stressful condition.
8. Muscle tension is reduced.
9. Lowers blood lactate and plasma cortisol.
10. Increases galvanic skin resistance.

## GUIDE TO MEDITATION

Dhyana should be performed enthusiastically, with full faith and care, and strictly according to the disciplines laid down.

Sit in a clean place, in a position most comfortable for you. The head, neck and trunk should be in straight line. Do not shake the body. Keep it as firm as a rock. Breathe slowly and deeply. Close your eyes and concentrate gently at the space between two eyebrows. By means of mental message the whole body from head to toes should be relaxed. Then to keep you attention focussed chant any *mantra*. (your favourite name with om added). Meditate like this for at least 10 minutes. Then open the eyes slowly. Your meditation is now complete and you are ready to resume your daily life with greatest energy. Best time is early morning as soon as you wake up and also another 10 minutes just before retiring at night.

It is better to have a separate meditation room to avoid any interruption. Never miss meditation. Be regular and systematic.



## DAILY YOGA ROUTINE & RECOMMENDATIONS

Yogatherapist decides the regimen according to the health condition of the individual. Young people can do more difficult Asanas. For old and fat people simple yogic exercise is enough.

It is enough if a diabetic performs Asanas for 10 minutes, Pranayama for 5 Minutes and Dhyana for 10 minutes. Dhyana can also be done after Dinner for 10 minutes.

Taking the medicines and monitoring glucose levels are very important. However after several weeks one may be able to reduce such dosages.

### LOW SUGAR SYMPTOMS

Sometimes blood sugar may fall very low due to poor intake of food, illness or excessive work. This is called low sugar (hypoglycemia). The symptoms are palpitation, hunger, sweating, giddiness, dim vision etc. Sugar or glucose or chocolate or sweets to be given immediately.

## FOOT CARE FOR DIABETICS

Most common cause of amputation of lower limbs is diabetes. The number of limbs lost due to diabetes is more than limbs lost in both the World Wars. Following tips on footcare will definitely prevent amputations :-

1. Avoid walking bare foot even indoors.
2. Wear the right foot wear.
3. Use only cotton socks.
4. Don't attempt 'bathroom surgery' for corns.
5. Extra care should be taken while cutting nails.
6. Apply vegetable oil to prevent dryness of skin.
7. Wash the foot with clean water not too hot & not too cold.
8. Avoid Smoking.
9. Do not use strong ointments.
10. Foot must be inspected daily & medical attention is to be sought when there is slight change in it.
11. Walking & Yoga improve the blood supply to the legs.

## LEARN TO LIVE A NORMAL LIFE DESPITE DIABETES

I usually start and end my classes with the message "**Learn to Live**". Yoga teaches us the art of living. It helps us to accept life, to live in the present, to keep smiling, to be pure, to do good to others and to attain spiritual clamness.

*And Finally...*

"An ounce of practise is worth several tons of theory". May all of us practise yoga and be benefitted immensely by it with the Divine Grace and learn to live a happy, healthy and harmonius life despite diabetes.

In fact, diabetics because they take better care of themselves live longer and are healthier than less health-conscious non-diabetics who wreck their health through wrong habits and ignorance.

*Dr. Jayadeva Yogendra*

This Book gives the knowledge and reassurance you need to live a fulfilled happy and healthy life.

*Dr. V. Seshiah,*  
Senior Diabetologist.Chennai

Dr. Hema has dedicated herself to spread the message of yoga. Being a doctor by profession her approach is scientific and methodical.

*Dr. H.V. Hande,*  
Former Health Minister & Director, Hande Hospital

The speciality of the book is that the **Asanas** have been demonstrated by the patients who had been benefitted by yoga.

*Padmarsri, Nalli Kuppusami Chettiar*  
Industrialist

Having Studied modern medicine and also yoga,Dr.Hema is a fit person to attempt this difficult task which she has done well.

*Dr. A. Pannerselvam*  
Secretary, Diabetes Association of India.