Effects of Yoga Based Cardiac Rehabilitation Programme on Cardiovascular Health (Yoga-CaRe) 
A Clinical trial

Yoga Based Cardiac Rehabilitation (Yoga-CaRe) Programme Booklet

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Cardiac Rehabilitation is the process of restoring desirable levels of physical, social, and psychological functioning after the onset of cardiovascular illness. The aims of cardiac rehabilitation programmes are to optimise patient’s functioning, enhance quality of life, and minimise the risk of recurrent cardiac events. These programmes have been shown to reduce illness, improve quality of life, lower medical and social costs, and also increase economic productivity.

Yoga-CaRe programme is an innovative and structured cardiac rehabilitation programme based on Yoga, an Indian philosophy. The benefits of yoga are very similar to cardiac rehabilitation. This Programme is designed to substitute the resource intensive conventional cardiac rehabilitation to help the patients after a heart attack to get back to their normal life as quickly as possible and as healthy as possible. The programme was designed with great care by our multidisciplinary team of cardiologists, exercise physiologist, nutrition experts and yoga experts from India and all over the world.

Yoga-CaRe programme includes a series of education-exercise sessions similar to the conventional cardiac rehabilitation programme. The education sessions will cover all aspects of lifestyle changes including dietary and other behavioural changes. During the exercise sessions, the participants will be taught Health Rejuvenating Exercises, Asana (Yogic Postures), Pranayama (Breathing Control Exercises), Dhyana (Meditation) and Relaxation Practices.

We thank all the participants who are enrolled into our programme. We request all the participants to practice the programme regularly to return to a normal and healthy life.

Principal Investigators
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Heart Attack

How does the heart work?
The heart is a muscle that pumps blood around our body, delivering oxygen and other nutrients to all of our cells. The heart muscle needs its own supply of oxygen and nutrients so that it can pump blood around our body. The heart gets its blood supply from the coronary arteries (the blood vessels supplying blood to the heart), which are on the outer surface of the heart.

What is a heart attack?
When someone has a heart attack, it means there has been an abrupt stoppage of blood flow to a part of the heart due to a blockage, resulting in damage to the part of the heart muscle supplied by the affected artery (blood vessel).

What happens during a heart attack?
The symptoms of a heart attack are:

- A crushing pain, or heaviness or tightness in the chest, or
- A pain in the arm, throat, neck, jaw, back or stomach. People may also sweat; feel light-headed, sick, or short of breath. Sometimes they may become unconscious suddenly, and at times a heart attack may result in sudden death.

What causes heart attacks?
The cause of a heart attack is nearly always coronary heart disease. This is a condition where the inside of one or more of the coronary arteries becomes
narrowed because fatty deposits called atheroma have built up within the artery walls. The fatty area of atheroma in the artery wall is called a plaque. If a plaque cracks, a blood clot forms to try to repair the damaged artery wall. This blood clot can totally block the coronary artery, causing part of the heart muscle to be starved of blood. If this happens, the affected part of our heart muscle will begin to die, because it does not get oxygen. This is a heart attack. During a heart attack there is also the risk of cardiac arrest when the heart stops pumping blood, which can cut off the blood supply to the brain and result in death if it is not restored within three minutes.

**What needs to be done if someone has a heart attack?**

If someone has a heart attack, the person needs to have treatment as soon as possible. This is necessary to get the blood flowing to the damaged part of the heart muscle again as quickly as possible and to limit the amount of permanent damage to the heart.

Many people who have a heart attack need to have emergency treatment to unblock the coronary artery.

- Either the person will have a treatment called primary angioplasty (sometimes called primary PCI) which is a procedure to re-open the blocked coronary artery. (PCI stands for percutaneous coronary intervention)
- Or the person will have thrombolysis, which means receiving a ‘clot-busting’ medicine to dissolve the blood clot that is blocking the coronary artery.

For some heart attacks, thrombolysis is not suitable, so either primary angioplasty or certain other medicines are used instead.
Cardiac rehabilitation (CR) is a programme of exercise and information sessions that helps people get back to everyday life as efficiently and successfully as possible after a heart attack, heart surgery or procedure.

**Yoga-based cardiac rehabilitation (Yoga-CaRe) programme**

The Yoga-CaRe programme has been developed through a systematic process, in consultation with cardiologists, CR experts, Yoga experts and patients. Only safe, simple and acceptable Yoga is included in the programme. The programme is delivered by Yoga-CaRe programme instructors—experienced Yoga teachers with a formal training provided on the Yoga-CaRe programme. Your family or someone close to you is also invited to join you in this programme, as they may also feel anxious about your recovery.

The aim of the programme is to help you to recover and get back to as full a life as possible after a heart attack. It also aims to help promote your health and keep you well. The programme may help you to improve your physical fitness, reduce your stress and make healthy lifestyle choices, which in turn may help you to reduce the risk factors for the disease, protect your heart and reduce the risk of dying from heart disease in the future.

There may be other benefits as well. The programme may improve your confidence and may help you return to your usual activities more quickly. It gives you the chance to ask questions or talk about any worries you may still have, which may help relieve anxiety. In group sessions, you will meet other people who have been through the same thing as you, which you may find very helpful. It may be good fun too.
The Yoga-CaRe programme has four phases

During the 1st week after your heart attack, the Yoga-CaRe programme instructor will see you on the hospital ward to give you information about your condition and the treatment you have had, about your recovery and getting back to your usual activities, and about your diet and lifestyle. This is a face-to-face individual session for around one hour.

During the 3rd week after your heart attack, the programme instructor is going to teach and supervise you- breath control exercises (pranayama) and meditation (dhyana) and relaxation practices. This is a face-to-face individual session for around 30 minutes.

During the 5th to 12th weeks after your heart attack, the programme instructor is going to teach and supervise you- health rejuvenating exercises (Svasthya vardhak kriya), yogic poses (Asana), breath control exercises (pranayama) and meditation (dhyana) and relaxation practices. There is time at the end of each session when you are encouraged to discuss any related issues. These are face-to-face group sessions for around 1 hour and 15 minutes, twice a week from the 5th to 7th week after the heart attack and then once a week from the 8th to 12th week. You are strongly encouraged to attend all these sessions, and to start practising Yoga at home during the rest of the week using our programme booklet and DVD.

Once you have completed the programme, you are strongly encouraged to maintain your dietary and lifestyle changes to keep yourself healthy and to continue practising Yoga at home almost daily using our programme booklet and DVD.
Recovery, Getting Back to Usual Activities, Diet and Lifestyle

Feelings

It is normal for you to have changing emotions after a heart attack. You may feel relieved that you have had treatment to help improve your heart condition. But you may be worried that you won’t be able to do as much as before, worried about having further heart problems, afraid of dying, or angry about having a heart attack.

All this is natural. You may feel anxious, low, bad-tempered or weepy. It is important for you to talk about these feelings with your family or friends.

The first few weeks after you leave hospital

It’s normal for you to worry or feel anxious when you leave the hospital and go home. In the next few weeks after you leave hospital, you are likely to have good days and bad days. But as time goes by, you should improve steadily and gradually feel better.

The first few days at home

For the first two or three days at home, it is best for you to take things easy. You should do about the same amount of moving around as you did just before you left hospital. To help with your recovery, each day you should try to get up, wash and dress, do some light activities such as making drinks and light snacks, and do some gentle walking.

Rest is also important for your recovery. It’s normal for you to feel tired after a heart attack. If you are feeling tired, you must rest properly by lying down, rather than just dozing in a chair.
Having one heart attack does increase the risk of having another. There are several things you can do to keep your heart healthy and reduce the risk of further heart problems. Some of you may find that life after a heart attack is better and more fulfilling than it was before.

1. Healthy balanced diet

Eating a healthy, balanced diet will help to protect your heart.

Yogic principles suggest eating tasty and easily digestible food, slowly in a pleasant environment and on-time. You should not miss your breakfast, your lunch should be moderate, and dinner should be light and at least 2 to 3 hours before you go to bed. You should at all costs avoid over eating. It is better to stop eating when your stomach is 3/4 full.

Eat plenty of fruit and vegetables

Eating a diet that includes a wide range of fruit and vegetables is good for your heart.

You should aim to eat at least five portions of a variety of fruit and vegetables a day. An adult portion is 80 grams of fresh, frozen or tinned fruit or vegetables. It is 30 grams if it is dried or 150 millilitre if you are having juice. A good guide is that a portion is about a handful.

Different fruit and vegetables contain different combinations of vitamins and minerals, so you should aim to eat a variety to get the most benefit.

Some fruits do contain more sugar than others, but this does not mean you should not eat them if you have diabetes. The total amount of carbohydrates affects blood sugar levels more than does the source of carbohydrates or whether the source is a starch or sugar.
One serving of fruit includes any one of the following:
- 1/2 medium banana
- 1/2 cup (83 grams) cubed mango
- 1 1/4 cup (190 grams) cubed watermelon
- 1 1/4 cup (180 grams) whole strawberries
- 1/3 cup (80 grams) sapodilla (chikoo)
- 3/4 cup (124 grams) cubed pineapple

You should also eat pulses (such as lentils, kidney beans and chickpeas) and wholegrain cereals (such as whole wheat, unpolished rice and oats).

**Cut down on salt**

People eat much more salt than they need. The target should be to have less than 6 grams of salt a day (that is, about one teaspoonful). This includes the salt that is contained within processed foods (such as bread), as well as the salt people add during cooking and at the table.

- You should cut down on processed foods that contain a lot of salt. The majority of the salt people eat is ‘hidden’ in processed foods. You should try to check the label of ingredients on the foods to find out which have the least salt.
- While cooking, you should add as little salt as possible. You may use extra pepper, garlic, spices or lemon juice to add flavour to your food instead.
- You should not add salt to your food at the table.

**Cut down on sugar**

You should reduce your intake of sugar even if you are not diabetic. This includes foods that are high in sugar (e.g. cakes, jams, dried fruits, soft drinks) and sugar that people add to food themselves.

You should go for the unsweetened versions of food and drinks.
If you add sugar to your tea and coffee, try gradually reducing the amount you have by half a teaspoon first so you get used to the taste before cutting it out completely.

**Cut down on saturated fats and trans fats**

To help improve your cholesterol level and protect your heart, you need to reduce the total amount of fat you eat.

You should avoid saturated fats (which are found in ghee, butter, palm oil, coconut oil, cream and fatty meat) and trans fats. Trans fats occur naturally in small amounts in dairy foods and meat, but most of the trans fats people eat are industrially produced (found in some biscuits, cakes, pastries and deep fried foods) and by deep frying or using reheated oils.

You should use unsaturated fats in small amounts, which can be monounsaturated fats (such as olive oil, mustard oil, groundnut oil, rapeseed oil, almonds, and unsalted cashews) or polyunsaturated fats (including soya oil, sunflower oil, vegetable oil, corn oil, walnuts, sunflower and sesame seeds and oily fish). You should measure out oil with a teaspoon rather than pouring it straight from the bottle.

Oily fish provide the richest source of a particular type of omega-3 polyunsaturated fat. You can also get omega-3 from vegetable sources such as seeds and nuts and their oils such as flaxseed, rapeseed, soya and walnut.

**Vegetarian or non-vegetarian food**

Yogic principles suggest vegetarian food, but if you are non-vegetarian, you may eat fish or white meat such as chicken.

Modern medical science suggests eating two or three portions of oily fish a week after heart attack to protect your heart and live longer. One portion of oily fish is 140 grams.

You should try to avoid red meat as it can increase your blood cholesterol level.
There is some cholesterol in certain foods – for example eggs, liver, kidneys and prawns – but eating them in moderation does not usually affect your blood cholesterol level.

*Milk and dairy foods*
You should have two to three portions of milk and dairy foods a day to get the calcium your body needs.

You should go for the lower-fat versions such as foods containing semi-skimmed, 1% or skimmed milk (rather than whole or condensed milk) or low-fat yoghurts.

If you do not drink milk or eat dairy foods, it is good to use substitutes like soya milk and soya milk products (tofu), with added calcium.

*Cold/Soft drinks*
Water is the best choice, but you can include other non-alcoholic drinks during the day such as sugar-free squash or fruit juice.

Pure unsweetened fruit juices may be nutritious. You should avoid cold/soft drinks as they contain a lot of sugar and choose sugar-free alternatives instead.

*Tea and coffee*
You can include a moderate amount of tea and coffee among your drinks, but it is important that this is not your only source of fluid. Tea and coffee contain tannins which can make it harder for your body to absorb the iron from the food you eat (this may cause anaemia) and also contain caffeine, which is a stimulant. You should try to avoid drinking tea or coffee with meals to avoid anaemia and at night to get a good sleep.
2. Alcohol

Yogic principles suggest no alcohol intake. Drinking more than the sensible limits can lead to high blood pressure, damage the heart muscle, and cause liver problems and other diseases.

If you drink alcohol, it is important to keep within the sensible limits (1 to 2 pegs per day). The measurement of alcohol is shown in the image.

3. Smoking/tobacco intake

Smoking increases the risk of having a heart attack.

If you smoke, stopping smoking soon after a heart attack significantly reduces the risk of dying from a further heart attack.

If you use other forms of tobacco such as jarda, khaini, gutka and pan-masala, you must stop using them too as they are equally harmful.

4. Medicines

Medicines are an important part of your ongoing treatment and help to protect your heart and reduce the risk of future problems.

When you leave the hospital, medicines will be prescribed for you to take at home every day. Occasionally, the doctor may need to change the medicines or the dose. It is important for you to take the medicines as prescribed. You must keep an up-to-date list of the medicines you need to take, the doses, and when and how often you need to take them. If you have any questions about your medicines, you must speak to the doctor.
There is a growing interest in traditional medicines (such as Ayurveda) among people with heart conditions. Although you may find these products helpful, you should not consider them as substitutes for prescribed medication. Traditional medicines can change the way your prescribed (allopathic) drugs work. You should always check with your doctor before you take any such products. Moreover, almost none have undergone clinical trials to establish whether they are safe or effective. Many of the products are not standardised, which means that the concentration of ingredients can vary between manufacturers, so you may be taking too much. This could cause potential health risks.

5. **High blood pressure**

High blood pressure increases the risk of having a heart attack or a stroke, and over time it can cause the heart muscle to become less efficient.

If you have high blood pressure, it is essential to control it. Even a small reduction in blood pressure can lower your risk. The target is to have a blood pressure below 140/90 millimetre of mercury. Some people can control their blood pressure by losing weight, doing more physical activity, cutting down on alcohol and salt. However, many people need to take medicines too as prescribed.

6. **High blood cholesterol**

A high blood cholesterol level can increase the risk of heart disease and your risk of having further heart problems.

The most common cause of high cholesterol is having too much saturated fat in your diet.

You should aim for a total cholesterol level under 160 mg/dl and LDL cholesterol <70 mg/dl.
To help reduce your cholesterol level, you need to cut down the amount of saturated fat that you eat and take your cholesterol lowering medicine (such as statin) as prescribed.

7. Diabetes

Diabetes increases the risk of having a heart attack or a stroke. Diabetes also increases the effect of other risk factors for heart attack, such as high cholesterol levels, high blood pressure, smoking and obesity.

Doing more physical activity, eating a healthy and balanced diet, and controlling your weight and body shape, will all help to reduce the risk of developing diabetes or control your diabetes.

If you have diabetes, it is very important to control your blood glucose level, cholesterol level and blood pressure.

8. Physical activity

Regular physical activity can help you with your recovery and can also help you to become independent again more quickly. It also helps to keep your heart healthy and can reduce the risk of having further heart problems.

Physical activity has other benefits too. It can help:

- lower your blood pressure
- improve your cholesterol levels
- control your weight and body shape
- reduce the risk of diabetes, or help to control diabetes
- make you feel better and boost your confidence, and
- relieve stress and anxiety.

Examples of activities recommended for the heart include walking, cycling, dancing or climbing stairs for at least 150 minutes per week in bouts of 10
minutes or longer, or 75 minutes per week of vigorous physical activity, or a combination of the two. This also includes muscle-strengthening activities performed on at least two occasions per week. It is important that you should start slowly, and gradually build up your level of activity over a period of time. You may not be able to do as much as recommended or you may be limited because of your mobility problems—such as arthritis. However, it is still important that you try to be as active as possible. Even doing a small amount of activity every day is better than doing none.

Walking is an ideal form of exercise to begin with. You should try to walk on a flat surface rather than on a hill or steep slope. It can be helpful if you go walking with a friend or relative at first. You should gradually increase the amount of walking you do over the first two or three weeks after you get out of hospital. After two or three weeks you should be able to walk longer distances. At first, it may seem very tiring for you, but this is normal and you will feel less tired as your strength and confidence return.

**Warming up and cooling down**

Whenever you do any exercise, you must start slowly for the first few minutes and build up gradually. This will prepare your muscles and heart for exercise. At the end, you must spend some time slowing down gradually and should not stop suddenly.

**Activities, exercises and sports to avoid**

If you have never done any strenuous everyday activities, exercises and sports, such as carrying very heavy objects, weight-lifting, press-ups and squash before your heart attack, then you should possibly avoid or start slowly and progress over weeks and months. If you are skilled in these activities, then the scientific evidence suggests they are safe to do.

Swimming is okay for many people, but for some people it can increase the strain on the heart. If you want to
take up swimming, it is very important that you check with your doctor first. If you used to swim regularly before your heart attack, you may eventually be able to go back to swimming. But you must check with your doctor before you start swimming again.

**Housework and gardening**

You can start doing light work in the house as soon as you feel fit and able – for example, washing up and dusting. After a few weeks you may feel well enough to do other jobs such as light gardening.

**A few Safety Tips to remember**

- You must avoid doing activity after a large meal or when it is very hot or cold or at high altitudes.
- If you are doing any activity outdoors in cold or windy weather, you must dress warmly. When it is hot, you must wear something cool, slow down your pace and keep yourself well hydrated.
- Your clothing and footwear must be comfortable and fit well.
- You should not exercise if you feel unwell, and must stop exercising and take rest if you get any pain, or feel dizzy or sick. You must carry the GTN (glyceryl trinitrate) spray or tablets with you and use them as prescribed. If the symptoms do not go away you should immediately see your doctor.

**9. Healthy weight and body shape**

Keeping close to a healthy weight and body shape will help to keep your heart healthy. It will also help to control your blood pressure and reduce the risk of developing diabetes.

You should avoid eating foods and drinks that contain a lot of fat or sugar, or are high in calories, and stay physically active.
10. Mental stress

Stressful situations can encourage people to engage in unhealthy lifestyle behaviours – such as overeating or smoking – which can be harmful to the heart.

You are encouraged to always have a positive attitude.

Information on some other important activities

1. Driving

If you have had a heart attack, you are not allowed to drive for the first month after a heart attack.

If you have had a heart attack and have had successful treatment with an angioplasty, you will be able to start driving again after one week.

If you ever get any chest pain while you are driving, you should stop driving. Once your symptoms are controlled, you may start driving again.

2. Returning to work

Most people will be able to go back to their previous job after a heart attack.

You may be able to go back to work within six weeks if your work only involves light duties. However, if you have a heavy manual job, you may not be able to return for a few months. You may ask your employer if they can give you lighter work for a while when you first go back, or if you can return to work gradually – for example, working shorter days or weeks.
3. Sex

It is understandable that you and your partner may have concerns about your sex life. However, many people with a heart condition continue to enjoy sex, and many people who have had treatment for their heart condition are able to return to their sex life. Like any other physical activity, having sex can temporarily increase the heart rate and blood pressure. This increases the work of the heart and, may temporarily give you breathlessness or chest pain. However, sex is just as safe as other equally energetic forms of physical activity or exercise. You should try to avoid sex in a stressful situation, in an uncomfortable environment or with an unfamiliar partner. To reduce the chance of having chest pain during sex, you must avoid having sex after a heavy meal and try not to be too energetic at the start of your sexual activity. You must carry the GTN spray or tablets with you and use them as prescribed.

If you have had a heart attack and are undergoing an uncomplicated recovery, you can usually start sexual activity when you feel comfortable to do so – usually after about four weeks. However, you may not feel ready after this time and may prefer to wait longer.

If you have had a heart attack and have had successful treatment with an angioplasty, you can have sex as soon as you feel you have recovered. For most people this is within a few weeks, but you may prefer to wait longer. You must take care not to put the chest wound under too much pressure.

Loss of sex drive is not uncommon after illness. Some men may experience impotence (the inability to get or keep an erection). This may be the result of emotional stress. Sometimes it can be the result of taking certain medicines such as beta-blockers which can affect your sex drive. It may also be the result of circulation problems or diabetes. Impotence is a common problem, so if you are having difficulties, you may talk to your doctor about it. You should be cautious about taking drugs such as Viagra since it may interfere with your other heart medication. You must check with your doctor beforehand.
Yoga Practice

Points to Remember

• Ideally, the place of practice at home must be clean, quiet, airy and spacious, at a comfortable temperature and with access to drinking water and a telephone.

• You are recommended to wear loose fitting and comfortable clothing that is appropriate to the weather while practicing Yoga.

• You are recommended to Practice yoga before meals.

• For safety reasons, you should not try to practice any other Yoga, apart from those in our programme booklet and DVD.

• You are encouraged to start practising Yoga poses slowly and gently, and you will gradually achieve perfection over the weeks. It is very important that you work within your limits, especially if you have never practised Yoga before. You must not practise Yoga poses which are physically uncomfortable to you. If you find any Yoga pose physically uncomfortable, you should come out of that pose.

• Yoga practice generally involves standing, sitting and lying down poses. However, if you are not able to sit or lie down because of problems such as arthritis, you may use a chair, pillows, or pads to practise Yoga.

• If you feel unwell, you should not practice Yoga. If you start feeling unwell while practicing Yoga, you must stop and take a rest. If needed, you should use your GTN spray or tablets as prescribed. If the symptoms do not go away, you must contact your doctor and your Yoga-CaRe programme instructor.

• Do not hold your breath (kumbhak) while practising Yoga.
## Structure of a Yoga-Care session

Each session will last for approximately 1 hour and 15 minutes with the time split as follows:

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<tr>
<th>Section</th>
<th>Composition</th>
<th>Duration</th>
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<tbody>
<tr>
<td>Health rejuvenating exercises</td>
<td>Shoulder, chest and abdomen exercises (3 minutes each) – total of 9 exercises</td>
<td>10 minutes</td>
</tr>
<tr>
<td>Yogic poses</td>
<td>2 core poses and 1 elective pose from each group (standing, sitting, lying) – total of 9 poses</td>
<td>25 minutes</td>
</tr>
<tr>
<td>Breath control exercises</td>
<td>2 core and 1 elective exercise (5 minutes each) – total of 3 exercises</td>
<td>15 minutes</td>
</tr>
<tr>
<td>Meditation and relaxation practices</td>
<td>2 core and 1 elective practice (5 minutes each) – total of 3 practices</td>
<td>15 minutes</td>
</tr>
<tr>
<td>Discussion</td>
<td>Question and answer session with the Yoga-Care instructor to address any queries arising</td>
<td>10 minutes</td>
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Health Rejuvenating Exercises
(Svasthya Vardhak Kriya)

The following health rejuvenating exercises should be practised at the beginning of each session for a total duration of around 10 minutes. Each set of exercises (shoulder, chest and abdomen) should be practised for about 3 minutes.

1. **Shoulder exercises**

1. **Technique 1:** Stand erect. Keep your arms by your sides, with your fists closed. While inhaling, raise your shoulders up. While exhaling, bring them down. Repeat this four times.

2. **Technique 2:** Stand erect. Keep your arms by your sides, with your fists closed. Rotate your shoulders from back to front, and then from front to back. Repeat this four times.

3. **Technique 3:** Stand erect. Bend your arms with fingers touching the shoulders. While inhaling, rotate your arms from forward to backward. While exhaling, rotate them from backward to forward. Repeat this four times.

![Technique 1](image1)
![Technique 2](image2)
![Technique 3](image3)
2. Chest exercises

1. **Technique 1:** Stand erect. Bend your arms. Bring your palms to the chest, with middle fingers meeting at the middle of your chest. While inhaling, extend the left arm. While exhaling, bring your arm back to the initial position. While inhaling, extend the right arm. While exhaling, bring your arm back to the initial position. While inhaling, extend both the arms. While exhaling, bring both arms back to the initial position. Repeat this sequence four times.

2. **Technique 2:** Stand erect. Keep your arms in front of the thighs. While inhaling, raise your left arm to touch the ear. While exhaling, bring the arm down. While inhaling, raise your right arm to touch the ear. While exhaling, bring the arm down. While inhaling, raise both the arms to touch your ears. While exhaling, bring the arms down. Repeat this sequence four times.
3. **Abdomen exercises**

1. **Technique 1:** Stand erect. Look straight ahead and become fully aware of your breath. Place your hands on the abdomen. On slow inhalation, feel the navel going out. On slow exhalation, feel the navel going in. Repeat this four times.

2. **Technique 2:** Stand erect. Look straight ahead and become fully aware of your breath. Place your hands on the abdomen. On quick inhalation, feel the navel going out. On quick exhalation, you should feel the navel going in. Repeat this four times.

3. **Technique 3:** Stand erect. Look ahead at the ground about 200 centimetres in front of your toes. Become fully aware of your breath. Place your hands on the abdomen. Inhale and exhale quickly. Repeat this four times.

4. **Technique 4:** Stand erect. Look straight ahead. Keep your hands on the waist, with thumbs in front and other fingers at the back. Bend 30 degrees forward. Inhale and exhale quickly. Repeat this four times. Inhale and return to your initial position. Exhale.

**Note:** Initially, you may feel fatigued and sleepy, but this will go away with practice.
Yogic Poses (Asana)

The following poses should be practised for around 25 minutes. At each session, please select 2 core and 1 elective pose (total 3) from each of the three groups (standing, sitting and lying) – a total of 9 poses. Two-sided poses (right and left) should be practised for about 3 minutes (1.5 minutes on each side), and central-positioned poses are to be practised for about 1.5 minutes.

(A) STANDING POSES

a. Core poses

1. Kati-chakrasana (Waist wheel pose)

   **Technique:** Stand erect with your feet about shoulder width apart. Knees should be straight. Place your right hand on the left shoulder, and your left hand behind resting on the left waist. Inhale. While exhaling, rotate your trunk and head towards the left side as much as possible. Do not bend your neck backwards or forwards. Maintain the final position for about 10 seconds to 1 minute, depending on your capacity. Inhale. While exhaling, return to your initial position. Relax. Repeat this on the opposite side.

2. Tadasana (Palm tree pose)

   **Technique:** Stand erect with your feet about 15 centimetres apart. Raise your arms to the shoulder level. Then, further raise your arms to the ears and simultaneously raise your heels. Interlock your fingers on the top.

   Stretch the whole body as much as possible. Maintain the final position for about 10 seconds to 1 minute, depending on your capacity. Come back in the reverse order. Initially, you may find balancing on your toes difficult, but you will achieve this with practice.
Precaution: If you are suffering from varicose veins, dizziness, a slipped disc or if you find balancing difficult, you should not practise this asana.

3. Urdhva-hastottanasana (Up stretched arms pose)

**Technique:** Stand erect with your feet about 15 centimetres apart. Interlock your fingers and raise the arms. Look straight ahead. Drop down to the left, bending from the waist. Try to get as low as possible so that your arms are parallel to the floor. Maintain the final position for about 10 seconds to 1 minute, depending on your capacity. Come back to the centre. Repeat this on the opposite side.

**b. Elective poses**

1. Ardhakati-Chakrasana (Lateral arc pose)

**Technique:** Stand erect with your feet slightly apart. Keep your hands on the sides of your respective thighs with fingers close together. Look straight ahead. While inhaling, raise the right arm to the shoulder level with your palm inward. Then, turn your palm upward, raise your hand and bring the inside of your upper arm close to the right ear. While exhaling, bend your trunk, head and right hand sideways to the left. While bending, slide the left palm down your left thigh until it reaches the left knee. Maintain the final position for about 10 seconds to 1 minute, depending on your capacity. While inhaling, return back till the right hand comes straight above the head. While exhaling, lower the right arm to the side, turn the palm inward at the shoulder level and bring the hand further down. Repeat this on the opposite side.
2. Trikonasana (Triangle pose)

**Technique:** Stand erect with your feet 100 centimetres apart. Raise your arms sideways to the shoulder level. Slowly lean to the right, and try to bring your right hand close to the right toe. Your arms should be in one straight line. Your left hand should point upward. Turn the head upward and gaze at your left hand. Maintain the final position for about 10 seconds to 1 minute, depending on your capacity. Come back in the reverse order. Repeat this on the opposite side.

(B) SITTING POSES

a. Core poses

1. Gomukhasana (Cow face pose)

**Technique:** Sit with both legs straight in front. Bend the right leg and keep it below the left leg. Place the right heel by the side of your left hip. Bend the left leg and place the left heel by the side of your right hip. Adjust your knees so that they are directly one above the other. Place the left hand behind your back, and the right hand above your shoulder. Bend your right hand at the elbow, and reach for the left hand fingers. Interlock your left and right hand fingers. If you are not able to interlock your fingers, keep your hands at the back. Keep your back and neck straight. Look forward and close your eyes. Maintain the final position for about 10 seconds to 1 minute, depending on your capacity. Come back in the reverse order. Repeat this on the opposite side.

**Precautions:** If you have pain in your legs and hands which restricts the movement of leg and hand joints, you should not practice this asana.
2. Janushirsasana (Head on the knee pose)

**Technique:** Sit with both legs straight in front. Bend your right leg at the knee and bring your right heel against the left groin. While inhaling, raise your arms. While exhaling, move forward and try to hold the left foot with your hands. If you are not able to hold the left foot, try to hold your left ankle. Maintain the final position for about 10 seconds to 1 minute, depending on your capacity. While returning to your initial position, raise your hands on inhalation and bring them down on exhalation. Repeat this on the opposite side.

**Precaution:** If you are suffering from a slipped disc or any lower back issue, you should not practise this asana.

3. Vakrasana (Twisted pose)

**Technique:** Sit with both legs straight in front. Bend your right leg and place your right foot next to the left knee. Keep the spine straight and twist your waist towards the right side. Keep your right palm behind the spine. Look behind. Bring the left arm near to your right knee and hold the right big toe. If you are not able to hold your toe, hold your right knee. Maintain the final position for about 10 seconds to 1 minute, depending on your capacity. Come back in the reverse order. Repeat this on the opposite side.
b. Elective poses

1. Ardha-padmasana (Half lotus pose)

   **Technique:** Sit with both legs straight in front. Fold the left leg and place the left foot on top of your right thigh. Without straining, try to place the heel of your left leg as near as possible to the abdomen. Fold your right leg. Adjust your body to a comfortable position. Keep your back, neck and head straight. Place the hands on your knees. Close your eyes and relax your body. Maintain the final position for about 10 seconds to 1 minute, depending on your capacity. Come back to your initial position. Repeat this on the opposite side.

2. Vajrasana (Adamant pose)

   **Technique:** Sit with both legs straight in front. Fold your right leg and place the right heel under the right buttock. Similarly, place the left heel under the left buttock. Place the hands on your knees. Relax your arms and the whole body. Maintain the final position for about 10 seconds to 1 minute, depending on your capacity. Come back to your initial position.

   **Precautions:** If you have knee osteoarthritis or stiffness in joints, you should not practise this asana.
(C) LYING POSES

a. Core poses

1. Ekapadottanasana (One-leg raise pose)

**Technique:** Lie in the supine position. Bring the feet together. Keep your palms close to the thighs. While inhaling, raise your right leg to make an angle of 60 degrees with the ground, slightly bending your right knee. You may hold your thigh with your hands or use a towel to support your leg. Maintain the final position for about 10 seconds to 1 minute, depending on your capacity. Feel the strain in your legs and your abdomen. Do not tense your neck or face at all. While exhaling, bring your leg down to the initial position. Repeat this on the opposite side.

2. Naukasana (Boat pose)

**Technique:** Lie in the supine position. Bring the feet together. Keep your hands by the side of your body, and your palms on the ground. Bring your heels close to your hips. Raise your right leg to make an angle of 60 degrees with the ground. Hold the right leg with your right hand. Raise your left leg to make an angle of 60 degrees with the ground. Hold the left leg with your left hand. Gently raise your head, neck and trunk. Maintain the final position for about 10 seconds to 1 minute, depending on your capacity. Come out of this pose before you feel any pain in your abdomen. Come back in the reverse order.

**Precaution:** If you have any lower back issue, you should not practise this asana.
3. Ardha-pavanamuktasana (Wind releasing pose)

**Technique:** Lie in the supine position. Bring the feet together. Bend your right leg, and bring the thigh and knee as near as possible to the chest. The other leg should remain straight. Place your hands over the knee and interlock your fingers. Gently pull the knee nearer to the chest. Keep your back and head on the floor. Maintain the final position for about 10 seconds to 1 minute, depending on your capacity. Come back to your initial position. Repeat this on the opposite side.

*b. Elective poses*

1. Markatasana (Monkey pose)

**Technique:** Lie in the supine position. Bring the feet together. Stretch your arms to the sides. Keep your palms up. Fold your legs and keep them near your hips. Turn your knees towards the right side, and rest your right knee on the ground, your left knee on your right knee, and your left ankle on your right ankle. Keep your shoulders on the floor. Gently turn your neck to the left side. Maintain the final position for about 10 seconds to 1 minute, depending on your capacity. Come back to your initial position. Repeat this on the opposite side.
2. Merudandhasana (Spinal cord pose)

*Technique:* Take the supine pose. Bring the feet together. Stretch your arms to the sides. Keep your palms down. Bend your right leg, place the right foot on your left knee. Gently twist the spine. Try to drop your right knee on the opposite side floor as much as possible. Keep your shoulders on the floor. Gently turn your neck to the right side. Maintain the final position for about 10 seconds to 1 minute, depending on your capacity. Come back to your initial position. Repeat this on the opposite side.
Breath Control Exercises  
(Pranayama)

The following breath control exercises should be practised for around 15 minutes. At each session, please select 2 core and 1 elective breath control exercise (total 3 exercises) and practise them for about 5 minutes each.

(A) CORE BREATH CONTROL EXERCISES

1. Anulom vilom/Nadishodhana pranayama  
(without kumbhak) (Alternate nostril breathing)

*Technique:* Sit in any comfortable pose or on a chair with your spine erect. Fold the index and middle fingers of your right hand. Close your eyes. Use your thumb and ring finger to practice this pranayama. Close the right nostril with your thumb. Inhale slowly and completely through your left nostril. Close the left nostril with your ring finger. Open your right nostril, and exhale slowly and completely through it. Inhale through the right nostril. Close the right nostril with your thumb. Open your left nostril, and exhale slowly and completely through it. Try to keep the time of exhalation longer than inhalation. This constitutes one round of Nadhishodhana. Continue this practice for five minutes.

2. Bhramari pranayama (Bee breathing)

*Technique:* Sit in any comfortable pose or on a chair with your spine erect. Close your ears with your respective thumbs. Place your index fingers at the top of your eyebrows, close your eyes with your middle fingers, place your ring fingers on the sides of your nose, and your little fingers on the corners of your lips. Press all these points softly. Inhale deeply through your nose. Keep the mouth closed. Breathe out slowly
producing a long continuous humming sound like a bee. Exhalation should be slow and long. Continue this practice for five minutes.

3. Ujjayi pranayama (Loud breathing)

*Technique:* Sit in any comfortable pose or on a chair with your spine erect. Keep your hands on the knees. Close your eyes. Try to contract the inside of your throat after bending the neck a little. Inhale slowly through both the nostrils, producing a hissing sound in such a way that its touch is felt from the throat to the chest. Exhale gently through both the nostrils. Continue this practice for five minutes.

(B) ELECTIVE BREATH CONTROL EXERCISES

1. Sitali pranayama (Tongue hissing)

*Technique:* Sit in any comfortable pose or on a chair with your spine erect. Keep your hands on the knees. Close your eyes. Roll the tongue into a “U” shape, with the tip just outside of your lips. Inhale deeply through the rolled tongue. Exhale slowly through both the nostrils. Continue this practice for five minutes.

2. Sitkari pranayama (Teeth hissing)

*Technique:* Sit in any comfortable pose or on a chair with your spine erect. Keep your hands on the knees. Close your eyes. Fold the tongue so that the tip of your tongue touches the upper palate. You may keep the two rows of teeth in contact. Inhale through your mouth with a hissing sound. Exhale slowly through both the nostrils. Continue this practice for five minutes.
Meditation (Dhyana) and Relaxation Practices

The following meditation and relaxation practices should be performed for around 15 minutes every day. At each session, please select 2 core and 1 elective meditation and relaxation practice (total 3) and practice each one for about 5 minutes in a darkened room.

(A) CORE MEDITATION AND RELAXATION PRACTICES

1. Chanting

**Technique:** Sit in any comfortable pose or on a chair with your spine erect. Keep your hands on the knees. Close your eyes. Relax your body. Inhale slowly and deeply through your nose. While exhaling, chant “M” loudly and prolonged with lips closed. A deep, long, continuous and steady sound should vibrate all over the body. Do not push your breath beyond the comfort point. Continue this practice for five minutes.

2. Mindfulness meditation

**Technique:** Sit in any comfortable pose or on a chair with your spine erect. Keep your hands on the knees. Close your eyes. Relax your body. Concentrate and feel - “The blockage in the arteries of my heart is opening. The blood circulation is getting normal”. Continue this practice for five minutes.
3. Shavasana (Relaxation training)

**Technique:** Lie in the supine position. Keep your spine and neck straight, without any stiffness. Close your eyes.

Focus your complete attention on each part of your body one by one. Allow that particular part to relax, and feel it getting relaxed.

Relax your right big toe, then relax your other right toes, right sole, right heel, right ankle, right calf muscle, right knee, right thigh and right buttock. Now, relax your left big toe, then relax your other left toes, left sole, left heel, left ankle, left calf muscle, left knee, left thigh and left buttock. Relax your legs completely.

Relax your lower back, then relax your middle back, upper back, lower abdomen, upper abdomen and chest. Relax your trunk completely.

Relax your right hand fingers, then relax your right palm, right wrist, right forearm, right elbow, right arm and right shoulder. Now, relax your left hand fingers, then relax your left palm, left wrist, left forearm, left elbow, left arm and left shoulder. Relax your arms completely.

Relax your neck, throat, chin, jaws, lips, tongue, mouth, cheeks, nose, eyes, ears, temples, forehead and scalp. Relax your neck and head completely.

Perceive your whole body, and feel it physically and mentally relaxed. If there is stiffness in any part of your body, then relax that particular part. Feel that your whole body is completely relaxed. Maintain this state for a few minutes.

To finish this meditation and relaxation practice, each and every part of your body needs to be charged with positive energy- start with your legs, then move on to the back of your trunk, abdomen, chest, arms, neck, face and scalp. Feel your body get completely energized. Take three long breaths. Turn to your right side, put your right elbow below your neck and slowly sit up. Practise this meditation and relaxation for five minutes.
(B) ELECTIVE MEDITATION AND RELAXATION PRACTICES

1. Dirghasvasa preksha (Perception of deep breathing)

**Technique:** Lie in the supine position. Keep your spine and neck straight, without any stiffness. Close your eyes. Relax all the muscles of your body and let them become limp.

Regulate your breathing and make it slow, deep and rhythmic. Inhalation and exhalation should be performed knowingly. Exclude all thoughts and sensations. If you find yourself getting distracted, gently return your attention to your breath.

Focus your attention on the navel, and become fully aware of the expansion of your abdomen with inhalation and contraction of your abdomen with exhalation. Continue this for a few minutes.

Now, shift your attention from the navel and focus it on the junction of your nostrils. Each and every inhalation and exhalation needs to be perceived, that is, each and every breath needs to be watched and felt. Continue this for a few minutes.

To finish this meditation and relaxation, take three long breaths. Turn to your right side, put your right elbow below your neck and slowly sit up. Practice this meditation and relaxation technique for five minutes.

2. Antaranga trataka (Internal concentrated gazing)

**Technique:** Sit in any comfortable pose or on a chair with your spine erect. Keep your hands on the knees. Close your eyes. Relax your body. Try to visualise a point of light such as a full moon in the dark sky. Concentrate on the object. Try to see the object clearly and steadily in the dark space, in front of your closed eyes. Continue this practice for five minutes.


# Our Team

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