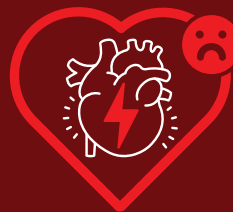


Understanding Heart Diseases



1

Cardiovascular diseases (CVDs) are known as silent killers & are leading cause of disease burden and mortality worldwide.¹

2

More than half a billion people around the world continue to be affected by CVDs.²

3

CVDs have become the leading cause of mortality & contributed to 28.1% of total deaths in India.¹

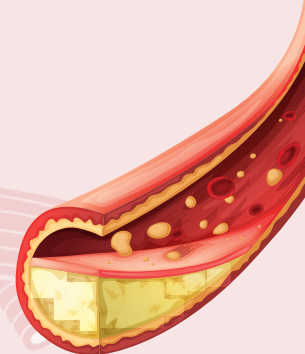
4

CVDs strike Indians a decade earlier than the western population. 50 per cent of all heart attacks in India occur in men under the age of 50.³

"Heart disease" is a general term for a variety of conditions that **affect the heart and blood vessels further leading to serious events including heart attack and death.**⁵

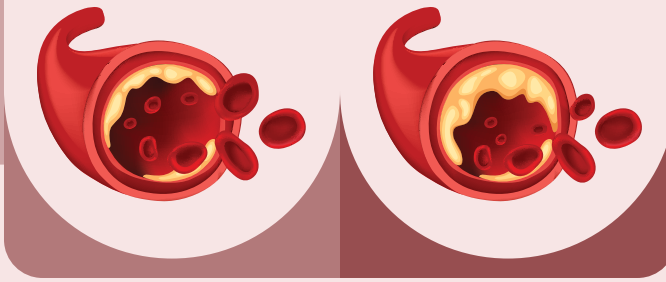
The most common cause of heart disease is atherosclerosis.⁵

Atherosclerosis is build-up of waxy substances (plaque) inside blood vessel (arteries) which restricts the normal flow of blood. When plaque builds up in the arteries, it is known as atherosclerosis.⁵



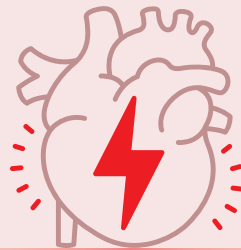


Heart Diseases can refer to a Number of Conditions



Ischemic Heart Disease (IHD)

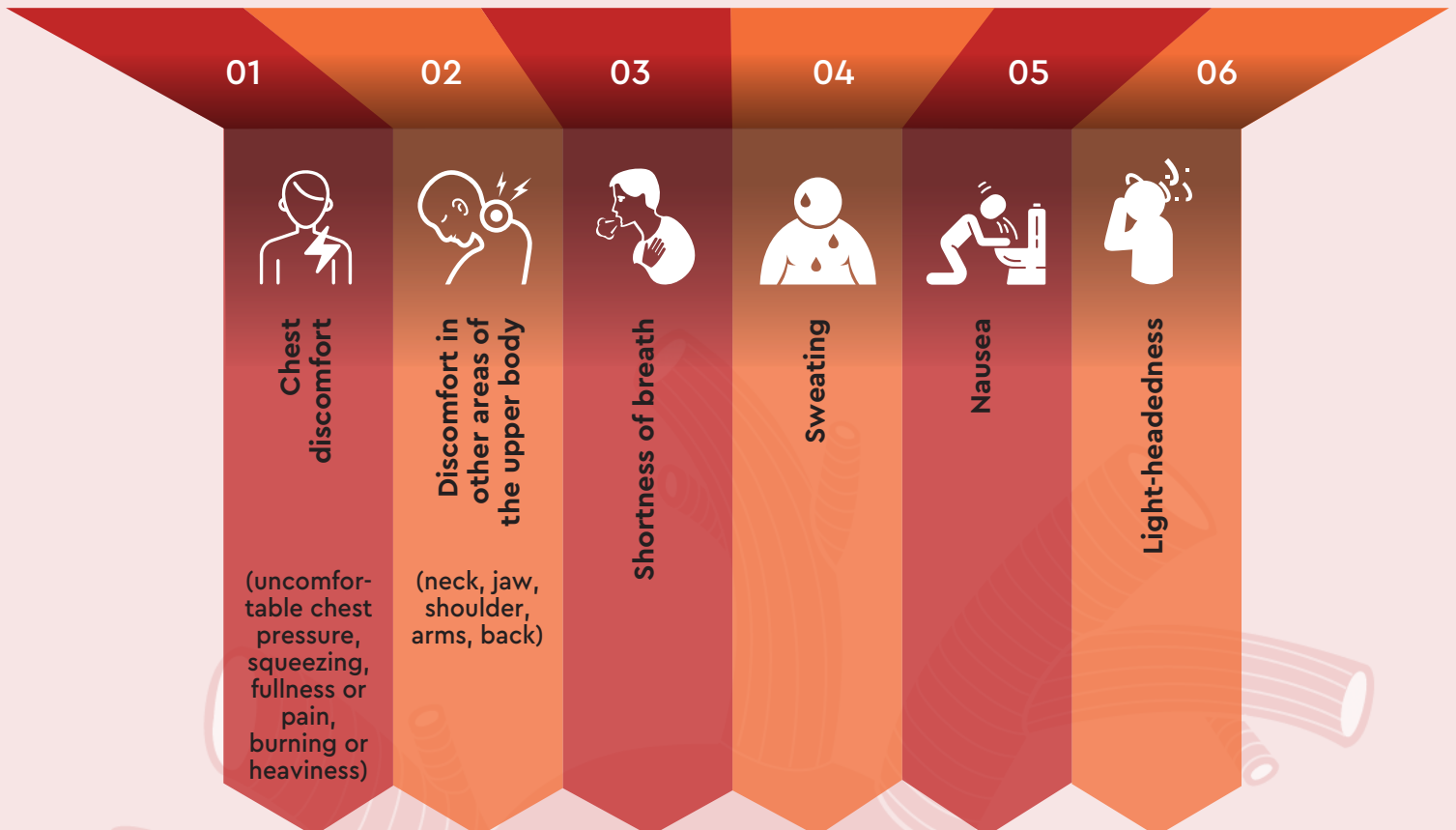
is the term given to heart problems caused by narrowed heart arteries which further affects the blood flow to the heart. This can ultimately lead to heart attack.⁶



Heart Attack

Commonly known as a myocardial infarction. It occurs when the blood flow to the heart suddenly stops due to presence of clot in the arteries supplying blood to the heart.⁷

The warning signs of heart attack are:⁷



Angina



Angina is a symptom of chest pain caused by reduced blood flow to the heart. It is a symptom of underlying heart disease. The pain also may occur in the shoulders or arms.

Other symptoms includes:^{5,7}



Dizziness



Numbness and pain on the left arm



Shortness of breath

There are different types of angina:⁴



Stable angina

This often occurs during exercise or emotional stress when the heart rate and blood pressure increase, and the heart muscle needs more oxygen.



Unstable angina

This occurs while one may be resting or sleeping, or with little physical exertion. It often comes as a surprise. Unstable angina can lead to a heart attack and it should be treated as an emergency.

Atrial Fibrillation



In atrial fibrillation, the heart's two small upper chambers don't beat the way they should. Instead of beating in a normal pattern, they beat irregularly and too fast. Consequently, heart cannot pump blood well and can leads to clot formation.⁹

Heart Failure



Heart failure, sometimes known as congestive heart failure—occurs when the heart is unable to pump enough blood to meet the body's needs.

Heart failure signs and symptoms may include:⁸



Shortness of breath due to fluid surrounding the lungs



Sudden weight gain

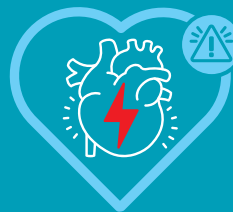


Swelling in the legs, ankles and feet

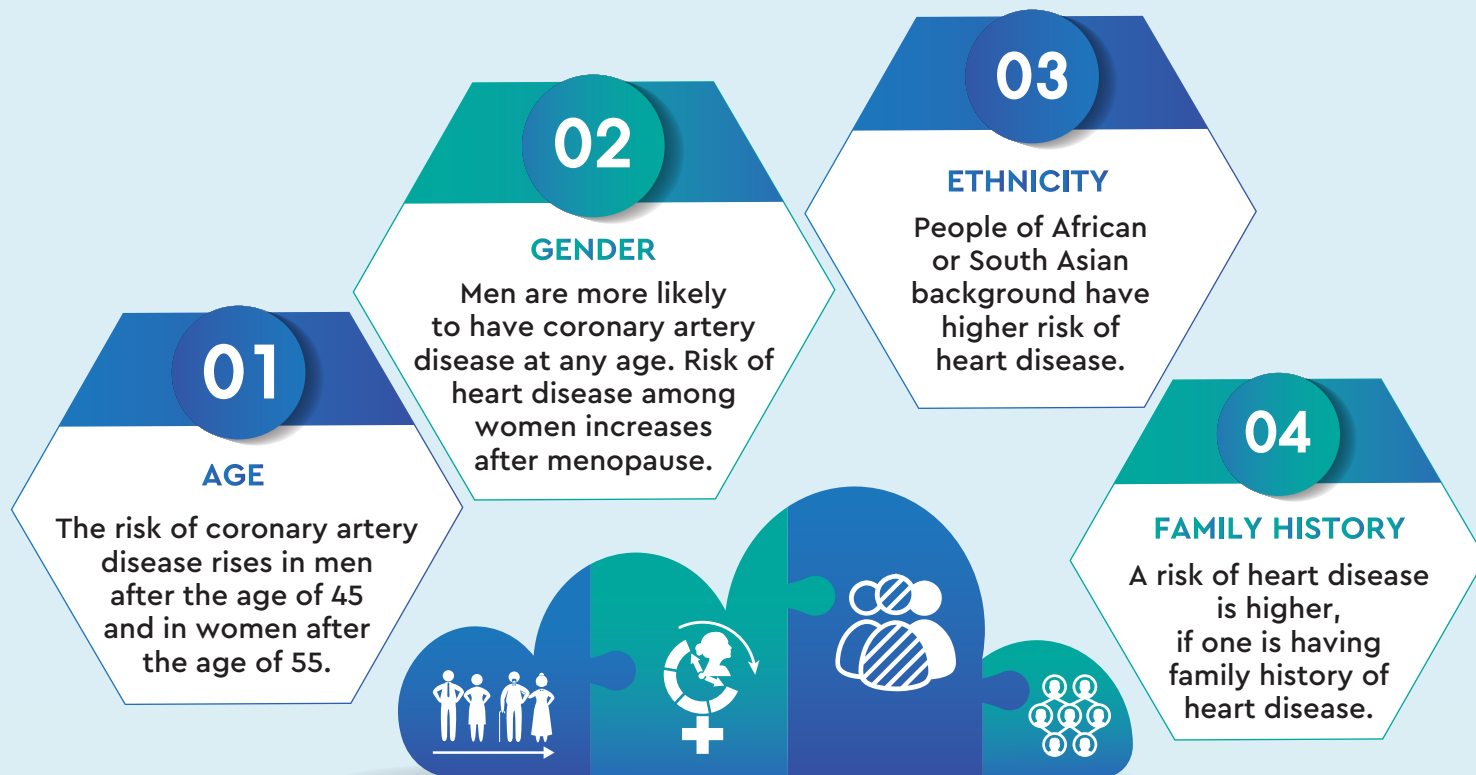
Fatigue and weakness



Risk Factors of Getting Heart Disease



Although there is no single cause for any one heart condition, risk factors for heart disease are conditions or habits that increases the chances of getting one. Some risk factors for heart disease are beyond control, such as:¹⁰



However, several health conditions and lifestyle choices can raise the risk of heart issues. These are also called as modifiable risk factors.^{9,10}

01



PHYSICAL INACTIVITY

Not getting enough exercise can cause heart diseases and diabetes

SMOKING, CHEWING TOBACCO AND DRINKING ALCOHOL

- Smoking and tobacco decreases oxygen in the blood and makes the heart work harder.
- It also increases blood pressure, body weight and risk of getting heart disease



02

03



STRESS

- Most commonly reported "trigger" for a heart attack
- Also increases cholesterol and blood pressure.

UNHEALTHY DIET AND NUTRITION

What you eat (and how much) can affect other controllable risk factors, such as cholesterol, blood pressure, diabetes and body weight



04

05



OBESITY

Being overweight (BMI=23-24.9) or obese (BMI= ≥ 25) also increases the risk of heart disease and chances of developing other major risk factors

HIGH BLOOD SUGAR

- Increases plaque buildup and atherosclerosis that raises the risk of high blood pressure, stroke and heart attack.
- Prediabetes=fasting blood glucose level of 100-125 mg/dL
- Diabetes=fasting blood glucose level is 126 mg/dL or higher



06

07



HIGH BLOOD PRESSURE

- Significantly increases risk of getting heart disease
- High blood pressure readings is $\geq 140/90$ mmHg

HIGH BLOOD CHOLESTEROL

- Cholesterol is a waxy, fat-like substance made by the liver or found in certain foods. Liver makes enough cholesterol for body's needs, but most often it is obtained from the foods we eat. If we take more cholesterol than the body can use, the extra cholesterol can build up in the walls of the arteries, including those of the heart.¹¹



08

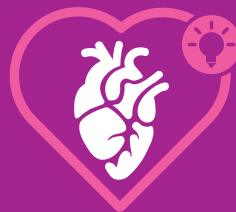
There are two main types of blood cholesterol:¹¹

1. LDL (low-density lipoprotein) cholesterol, is considered to be "bad" cholesterol because it can cause plaque buildup in the arteries.
2. HDL (high-density lipoprotein) cholesterol, is considered to be "good" cholesterol because higher levels provide some protection against heart disease.

Triglycerides also contribute to high cholesterol¹¹

- Triglycerides are the most common type of fat in the body.
- They come from food, and body also makes them. They store excess energy from diet.
- A high triglyceride level combined with high LDL (bad) cholesterol or low HDL (good) cholesterol is linked with fatty buildups within the artery walls.

Tips to Keep Your Heart Healthy



Adopt a healthy lifestyle¹⁰



EAT HEALTHY

The foods you eat affect your health.

A healthy diet can help one to reduce three major risk factors for heart disease



Eat Plenty of Vegetables, Fruit and Whole grains¹²

Fruits and vegetables are some of the best heart-healthy foods. These foods have been proved to help prevent heart disease because they contain a variety of vitamins and minerals, as well as fibre and antioxidants.



Brown rice, wholemeal pasta, grainy bread, and oats are examples of wholegrain meals. These meals include a lot of fibre and can help lower the cholesterol.

Simply switching from refined grains like white bread and white rice to wholegrain equivalents can improve the diet.

Eat More Fiber

Eating an increased amount of fiber can reduce the blood pressure and its further heart complications. Fruits, vegetables & whole grains are good source of fiber. Many breakfast cereals are excellent sources of dietary fiber such as oatmeal, bran shredded wheat, and puffed wheat.¹³

Recommended amount
of dietary fiber

▶ 20 to 35 grams of fiber/day¹³



Include Healthy Low Fats and Oils¹²

One should cut back on foods that are high in saturated (unhealthy) fat, and cholesterol. Different types of fats can impact your health differently—healthy fats can help protect your heart, and unhealthy fats can increase the risk of developing heart disease.



Choose foods with high amounts of healthy fats such as avocados, olives, nuts and seeds

Use healthy oils for cooking, for example, olive, canola, sunflower, peanut and soybean oil. These foods can help lower the cholesterol.

Have a more Fish, Poultry, and Nuts^{12,13}



Some protein-rich foods are better choices than others. The best options are plant-based proteins like beans, chickpeas, lentils, nuts and seeds, as well as fish and seafood. These foods have been shown to reduce the risk of developing heart disease.

Eggs and poultry are also protein-rich foods that can be enjoyed as part of a heart-healthy eating pattern. Eating more fish can help to lower blood pressure, especially when combined with weight loss.

Cut down on Salt/Sodium

Eating too much salt can lead to high blood pressure which is a risk factor for heart disease. Thus, controlling salt intake is important. Use herbs and spices to flavour foods instead of salt.¹²



BE PHYSICALLY ACTIVE

Exercise helps in:¹⁴



Control weight

Improves quality of life and relieves stress



Reduces high BP, high cholesterol, high sugar and its complications

Aerobic Exercise

Cardio or aerobic exercise can help lower the blood pressure, helps to maintain body weight and make heart stronger.

It includes moderate and vigorous intensity exercises^{10,14}

Examples of moderate intensity exercises²³



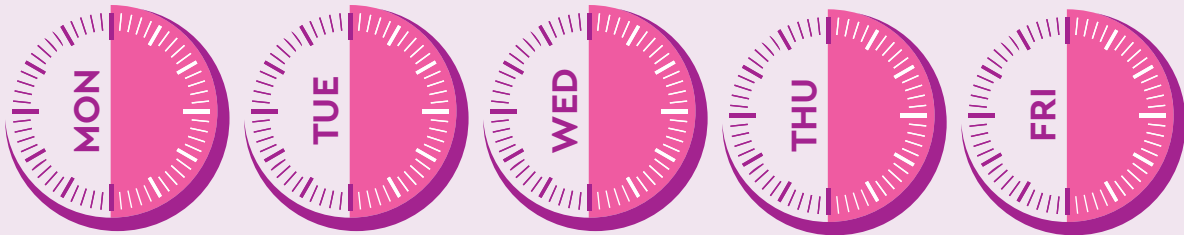
Examples of vigorous intensity exercises²³



Recommendation for overall cardiovascular health¹⁴

At least

**30 minutes of moderate-intensity aerobic activity a day,
5 days per week for a total of 150 minutes**



OR

At least

**25 minutes of vigorous-intensity aerobic activity a day,
3 days per week for a total of 75 minutes**



REDUCE STRESS WITH YOGA AND MEDITATION

Yoga is a mind-body activity that involves moving through a series of body poses and breathing exercises that can improve strength, flexibility, balance and relaxation.

Benefits of Yoga on heart health includes:¹⁵

Offset the
emotional
stress

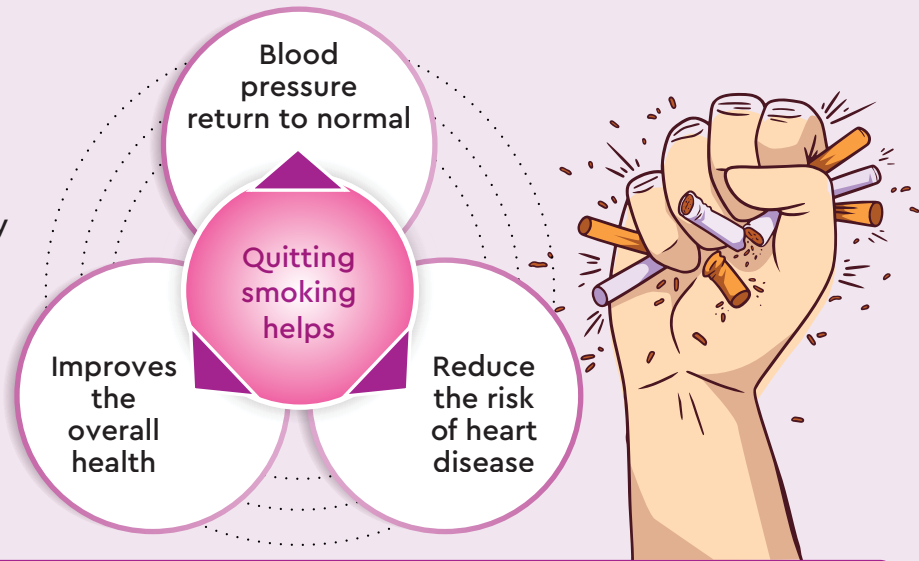
Help lower
blood pressure,
blood cholesterol
and blood sugar
levels, as well as
heart rate

Useful tool
in helping
smokers quit



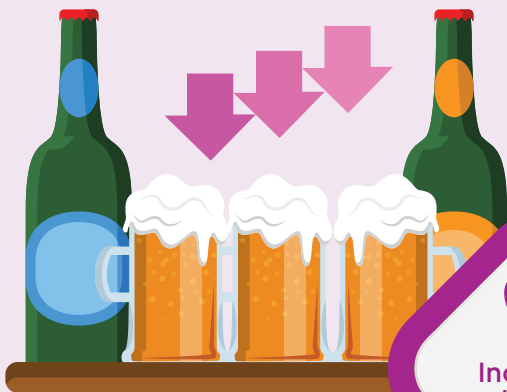
QUIT SMOKING¹⁰

Each cigarette increases the blood pressure for many minutes after consumption.



Can help people live longer than people who never quit smoking

LIMIT THE AMOUNT OF ALCOHOL



Drinking an excessive amount of alcohol increases the risk of developing heart disease.⁶

Harmful use of alcohol could:¹⁶



Living with Heart Disease



MANAGE YOUR EMOTIONS, THOUGHTS AND BEHAVIORS

Heart disease doesn't affect only the body—it can also affect your emotions and relationships with others. It's no surprise that many people feel scared, stressed, confused and overwhelmed after a heart attack or heart failure.

One can become more involved in the world around you.

Try the following tips:^{10,17}

01 Keep
doing things you enjoy

02 Reach out to loved ones

03 Have a realistic expectations

04 Take time to relax

05 Take control
of stress

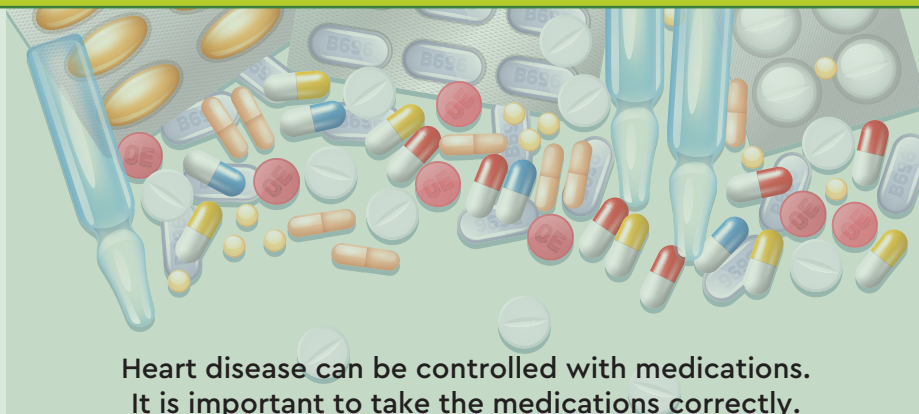
Being aware of yourself and the choices you make is the first step in dealing with stress.

Keep these simple ideas in mind:

- Slow down
- Keep calm
- Be positive
- Take it easy
- Enjoy life
- Have fun
- Breathe
- Relax
- Go outside
- Meditate



COMPLY WITH THE PRESCRIBED MEDICINES



Heart disease can be controlled with medications.
It is important to take the medications correctly.

Try to follow some tips:¹⁰

01

Take your
medicine as
prescribed
by your
doctor



02

Do not
skip doses
of your
medicines,
even when
you feel
good



03

Keep a
list of your
medicines
at home
and in
your
wallet



04

Don't run
out of
medicine



05

Inform the
doctor if
you have
allergies
or side
effects



06

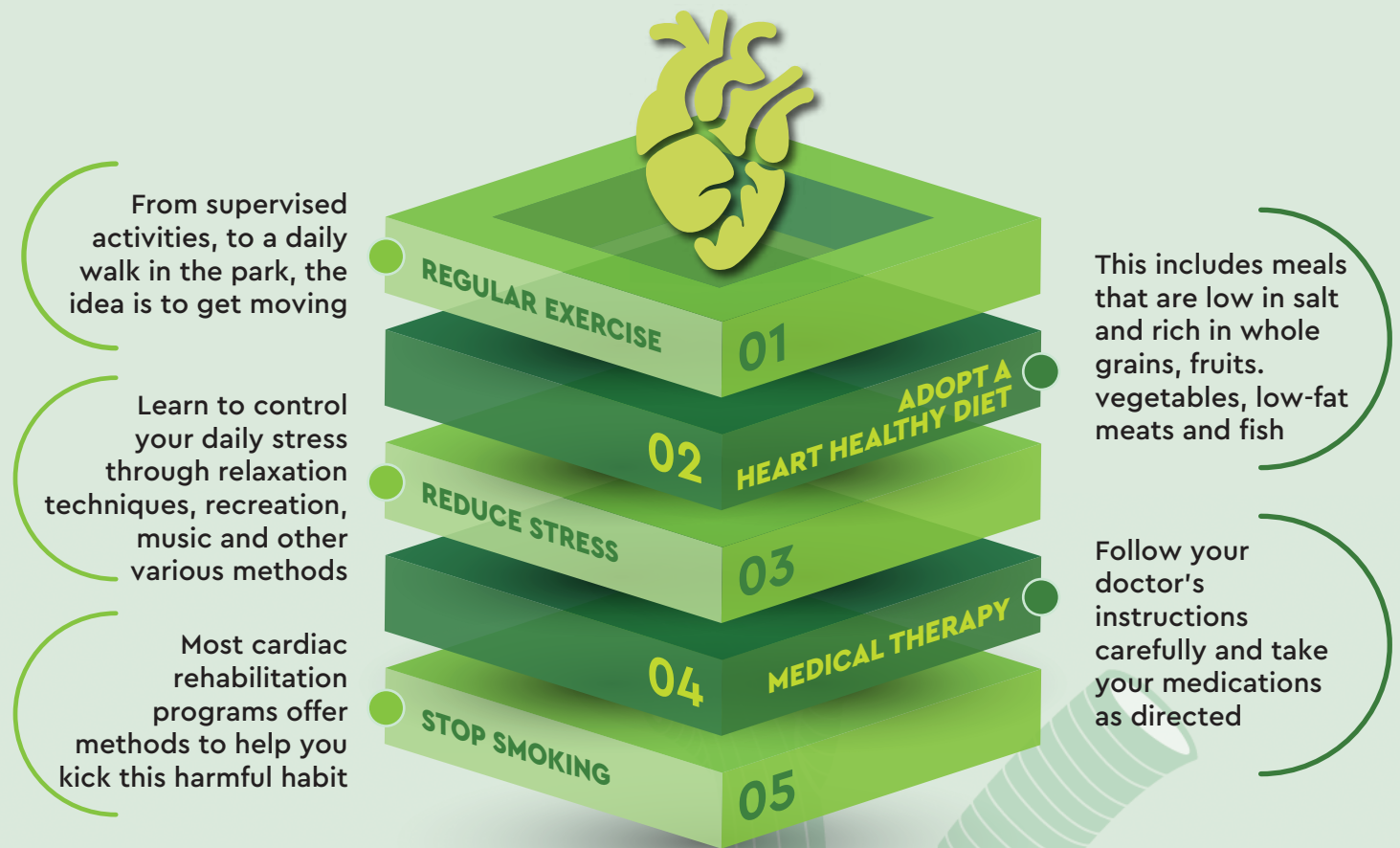
Don't stop
any medicine
without
consulting
your doctor



CARDIAC REHABILITATION

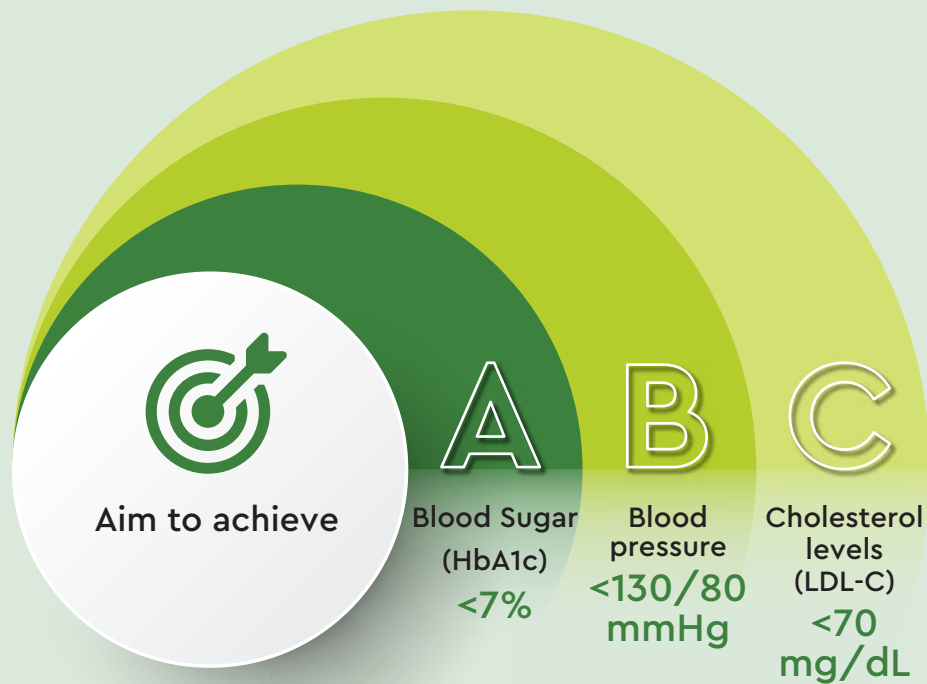
Cardiac rehabilitation is a medically supervised program designed to improve the cardiovascular health. Cardiac rehabilitation is recommended by health care professional for patients having specific heart complications and is not for all patients. It can be suggested if one has experienced heart attack, heart failure, or undergone angioplasty / heart surgery.

Cardiac rehabilitation programs typically consist of the following 5 components^{10,18}



CHASE YOUR HEART HEALTH GOALS^{19,20}

Chase your goals for making your heart health under good control.



Goals may be different for each person • Ask your doctor what your goal should be

MAKE EMERGENCY PLAN^{19,20,21}

Being the family or caregiver for a person with heart disease can be a challenge. As a caregiver, a reasonable goal would be

- To help your loved one remain stable when the heart disease is under good control.
- To recognize the signs that things might be spinning out of control, so that early medical intervention might be called in to get things back on track.

Call your doctor immediately
if a person again experiences
any of the symptoms¹⁷



FIRST HOUR AFTER HEART ATTACK—GOLDEN HOUR²²



After heart attack, first 60–90 minutes are extremely critical. So, it's called the "golden hour".

It is essential to get appropriate treatment during golden hour which is possible in hospital settings only.

Thus, if the patient has any sign or symptom of heart attack, make sure to take the patient to hospital as soon as possible.

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