

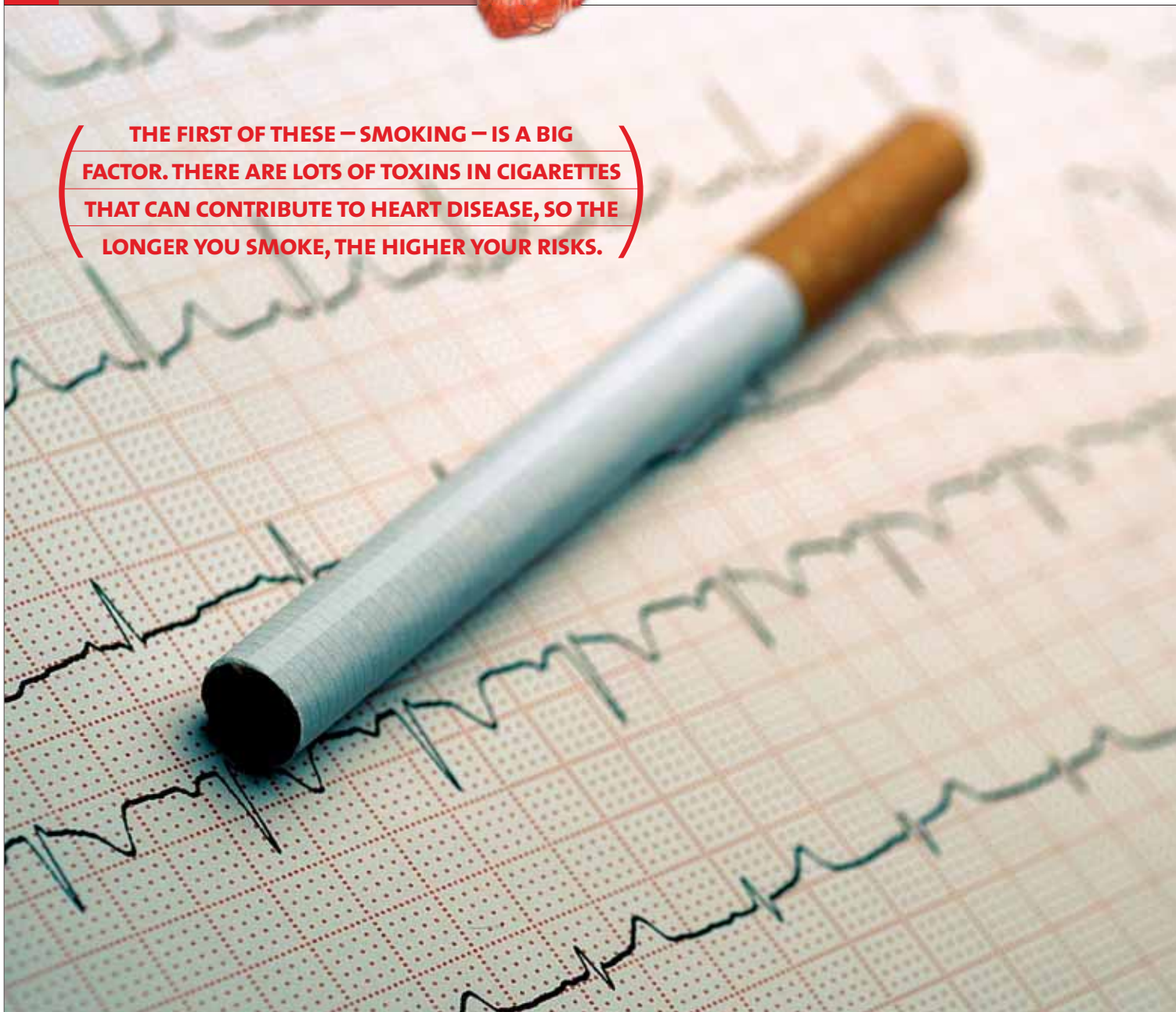


C O V E R S T O R Y





THE FIRST OF THESE – SMOKING – IS A BIG FACTOR. THERE ARE LOTS OF TOXINS IN CIGARETTES THAT CAN CONTRIBUTE TO HEART DISEASE, SO THE LONGER YOU SMOKE, THE HIGHER YOUR RISKS.



In Singapore, most heart attack cases fall into the 40 to 70 years old age group.

So what causes it?

“There are several causes, but the top few are smoking, high cholesterol, high blood pressure and diabetes. The first of these – smoking – is a big factor. There are lots of toxins in cigarettes that contribute to heart disease, so the longer you smoke, the higher your risks. For example, if you quit smoking for 10 years and did so before age 35, your risk of a heart attack when you grow older would have fallen to nearly that of a non-smoker. It never reaches normal, but stopping smoking at any age will significantly reduce ones risk,” says Dr Nair.

A person who had previously survived an attack may also be at greater risk of having another. This is due, in part, to the

already damaged heart, which affects heart rhythm, pumping action and blood circulation.

PREVENTIVE MEASURES, DIAGNOSTIC TESTS

When it comes to the heart, the old adage still applies – prevention is better than cure.

Screening is one form of prevention.

“We can perform several tests to assess CHD in patients who are at high risk or have symptoms. This will then help us in managing and monitoring the patients,” says Dr Nair.

Such tests may include any one of the following:

- ▶ **Electrocardiogram (ECG):** a test that checks for problems with the electrical activity of the heart and can give clues to indicate a number of heart problems.
- ▶ **Echocardiogram:** a test that uses sound waves to create



WHERE TO GET HELP

TAN TOCK SENG HOSPITAL (TTSH)
Clinic 2B (Cardiology Clinic)
Level 2, TTSH Medical Centre
Tel: 6357-8010 / 8011
Fax: 6357-8680



“A heart attack is a medical emergency. Every minute counts. Heart muscle cells that do not receive enough oxygen begin to die. Hence, the more time loss without treatment to restore blood flow, the greater the damage to the heart,” warns Dr Nair.

This damage can lead to irregularities in heart rhythms or even stop the heart from functioning altogether, resulting in death.

“When a person suffers a heart attack, emergency care is needed. This can include cardiopulmonary resuscitation (CPR), electrical shock (defibrillation), and other advanced care, which are only available in properly equipped hospitals. This includes emergency Coronary Angioplasty where an Interventional Cardiologist often places a stent in the blocked artery to keep it open. The most important thing is to call for help – immediately,” advises Dr Nair.

Because time is the essence in a heart attack, it is important to recognise the signs and symptoms of an occurrence.

TELL-TALE SIGNS AND WARNING BELLS

“Classical symptoms of acute myocardial infarction or heart attack include sudden chest pain (typically radiating to the left arm or left side of the neck), nausea, vomiting, shortness of breath, palpitations and cold sweats. Women may experience fewer typical symptoms than men, most commonly feeling weak, fatigue and breathlessness. Approximately one quarter of all heart attacks are silent, without chest pain or other symptoms. While pain in the chest is often the most common symptom of a heart attack, this life-threatening event can present itself in other ways,” says Dr Nair.

This is especially so if the patient suffers other medical conditions, such as diabetes.

“Coronary heart disease affects males more than females. Females are protected by their hormones until their menopause, but after that, around age 60 or so, women start to develop a risk that approaches that of men,” he says. ❖

STAYING A-LIVE

With an ageing population which experiences higher risk factors, mortality rate will continue to rise. To combat this worrying trend in Singapore, the National Healthcare Group has initiated a programme called LIVE (control of coronary risk factor initiative), with the aim of helping patients with Coronary Artery Disease (CAD) obtain optimal and holistic care for their condition.

The programme was launched in August 2005 and serves as a link between the tertiary and primary healthcare sectors by enabling family doctors to enter into partnership with hospitals for the management of patients with CAD, explains Adjunct Asst. Professor Ho Kheng Thye, Head and Senior Consultant, Cardiology Department, Tan Tock Seng Hospital.

“Patients admitted to Alexandra Hospital, Tan Tock Seng Hospital and National University Hospital for heart attacks are invited to join the LIVE programme. Under this programme, patients are managed by specialists, case managers and nurses at the wards and Specialist Outpatient Clinics (SOCs) according to a set of standardised clinical protocols,” explains Ms Rujia Ali Shahul Hameed, Principal Case Manager of the LIVE programme.

According to her, the key objective is to control patients’ cholesterol and blood pressure levels as both are important risk factors of heart attacks.

“Controlling both cholesterol status and blood pressure will reduce the chance of patients having another heart attack by 30 to 40 per cent over the next 5 years,” she says, adding that a related aim is to reduce further hospitalisations and re-admissions.

Case managers like Ms Rujia track their patients periodically, making sure that they are following up with

their medications and keeping to recommended diet regimes.

“Since we put these patients on their recommended medication, 100 per cent of all patients should hit the ideal cholesterol target within a year of enrolling in the programme,” says Ms Rujia.

To date, there are about 7,000 patients in LIVE, with a yearly addition of between 1,200 and 1,800. Of these, around 60 per cent suffer from high cholesterol, 45 per cent from hypertension and 40 per cent from diabetes.

“The average age of our patients is about 60 years old, but we have patients in their 20s, too,” shares Ms Rujia.

While most patients are eager to get well, some lapse into their bad old habits once the immediate danger seems over. This is precisely where LIVE case managers can help – by gently bringing them back into the fold.

“Old habits die hard, especially with older folks who have lived their whole lives being used to certain food. For example, curry and coconut milk are staples for our Malay patients, as is ghee to our Indian patients. These are ingredients that contribute to high cholesterol, so we try to convince them to use alternatives,” explains Ms Rujia.

One common myth about dietary change is that it would lead to feeling weak.

“Some patients who are obese fear that restricting their diet will make them feel weak, or that taking their favourite food away from them at an advanced age takes the joy out of living. These are challenges that we take in our stride,” confides Ms Rujia.

The programme has been successful so far with a relapse rate of less than 5 per cent.

MATTERS OF THE HEART

The verdict is out – one in every three Singaporean deaths each year is due to heart disease or stroke. Indeed, where matters of the heart are concerned, the numbers paint a scary picture.

“H

Heart disease is the leading cause of death in most countries, including Singapore. It is a term that includes several specific heart conditions, the most common of which is coronary heart disease, which can lead to heart attacks,” says Dr Dinesh Nair, Consultant, Interventional Cardiologist and Director of Tan Tock Seng Hospital’s Coronary Care Unit.

According to him, there are about 5,600 cases of heart attacks each year, and that’s 5,600 too many.

Located in the left part of the chest behind the breastbone and between the lungs, the heart of an average person pumps about 7,200 litres of blood daily at a rate of approximately 5 litres per minute. As explained by Dr Nair “The human heart provides a continuous blood flow through each cycle and is one of the most vital organs in the entire human body. It is divided into four chambers. The upper two chambers are called the right and left atria, and two lower chambers are called the right and left ventricles. Normally the right ventricle pumps

de-oxygenated blood into the lungs and the left ventricle pumps oxygenated blood to the various organs. Doctors commonly refer the right atrium and right ventricle together as the right heart and the left atrium and ventricle as the left heart.”

PROBLEMS OF THE HEART

One of the most common types of heart disease is called coronary heart disease (CHD).

“CHD occurs when the coronary arteries that supply blood to the heart muscle becomes hardened and narrowed due to progressive plaque build-up,” explains Dr Nair.

This plaque is made up of a mixture of fatty substances including cholesterol and other lipids. A build-up of plaque is dangerous as it reduces or blocks blood flow and oxygen supply to the heart. “This can cause angina, which is pain in the chest when the heart muscle is not getting enough blood. Cholesterol plaque rupture can cause blood clot formation and subsequently a heart attack,” says Dr Nair. ❖

a moving picture to study the function and structure of the heart. The picture involves no radiation exposure and is much more detailed than a plain X-Ray image.

▶ **Cardiac stress test:** a test that indirectly reflects blood flow to the heart during physical. By comparing to the blood flow during rest, the test reflects imbalances of blood flow to the heart muscle.

▶ **Cardiac catheterization:** the insertion of a narrow, straw-like plastic tube into a chamber or vessel of the heart. This includes a test called an angiogram, where dye is injected through the catheter into the coronary arteries. The doctor can then take an x-ray to see the flow of blood through the heart and check for blockages. Angioplasty (including placement of a stent) can then be performed if deemed necessary.

“Heart disease can be prevented. All of us should take responsibility for our own hearts. We need to control the risk factors now that we know what they are. Diet and exercise, for example, will go a long way,” he says.

Since what one eats can contribute significantly to one’s risk, following a healthy and balanced diet is critical in protecting oneself against heart problems. This means limiting fat intake, eating less cholesterol-rich food, monitoring salt content, consuming enough dietary fibre and avoiding excessive alcohol consumption.

Diet aside, exercise plays a big part in keeping the heart healthy.

“Exercise helps to maintain one’s weight within a healthy range lowers the blood sugar levels and improve cardiovascular fitness. A person who is physically active is less likely to develop heart disease,” says Dr Nair.

He warns, however, against being a “weekend warrior”.

“Exercising does not mean doing nothing for five days, then playing three hours of soccer on Saturdays. Regular exercise cuts your risks, but the risk of a heart attack actually increases during extremely vigorous and unaccustomed exercise. So condition your heart slowly and don’t overstrain,” he cautions.

In general, one is recommended to do 20 to 30 minutes of aerobics about three to five times a week. For those who are older, exercise is also a good form of weight management, which can help keep other diseases at bay.

“People who are overweight or obese are more likely to develop cardiovascular disease as well as diabetes. They are also at greater risk of having other contributory factors for heart disease such as hypertension and high cholesterol. If your Body Mass Index (BMI) exceeds the healthy weight range for a person of your height, weight management, is advisable,” says Dr Nair.

In fact, losing just 10 per cent of one’s current weight can significantly reduce his or her chances of developing weight-related coronary risk factors.

“At the end of the day, I think most of us know what we can do to keep our hearts healthy and strong. What’s important is that we take the correct steps towards this,” reflects Dr Nair. +

➤ HOW TO HAVE A HEART-FRIENDLY DIET

Healthy meals need not be boring meals and loving the heart doesn’t mean one has to survive on a diet completely devoid of fat.

In fact, having a heart-friendly diet could be as easy as merely substituting one good food for another. Eating fresh salmon baked in olive oil, for example, as opposed to fried fish.

Some food such as liver, kidney, prawns and eggs contain more dietary cholesterol than others, while food like butter, cream and fatty meats are high in saturates. The latter contributes to LDL or “bad” cholesterol, so it is important to eat fewer of them.

Apart from eating less of unhealthy food, it is also important to eat more of healthy ones. More helpings of food high in dietary fibre and omega 3, for example, is good for the heart.

Most fibre-rich foods such as wholemeal bread or brown rice are low in fat but packed with vitamins and minerals. In fact, some studies have shown that women who ate around three servings of wholegrain foods a day were 30 per cent less likely to suffer from heart disease.

Many fruits and vegetables are also packed with antioxidants, which help to protect against heart disease. Blueberries, for example, are great for appetizers or desserts.

Antioxidant vitamins such as beta-carotene and vitamins C and E work their magic by ‘mopping up’ harmful free radicals, which can cause oxidation of LDL cholesterol – a problem that potentially speeds up the process of the narrowing of arteries.

The trick is to eat about five servings of different fruits and vegetables a day, and the more colours you go for, the greater variety of nutrients you’ll get.

So go ahead, mix and match, have fun with your food and keep your heart bubbling in good health!

