



THE HEART
AND STROKE
FOUNDATION
SOUTH AFRICA

Heart Awareness Month 2021: Use Heart To Connect...

Facts about Cardiovascular Disease

According to the World Health Organisation (WHO), cardiovascular disease (CVD) remains the world's number one killer, resulting in 17.9 million deaths a year. In South Africa, CVD is responsible for almost one (1) in six (6) deaths, claiming more lives than that of all cancers combined. Every day, 225 South Africans die from heart disease and strokes and is the second leading cause of mortality in the country. Moreover, with the COVID-19 pandemic individuals with non-communicable diseases, including CVD had increased vulnerability for poor health outcomes. The CEO of the Heart and Stroke Foundation, Prof Pamela Naidoo states that "Given the CVD burden in South Africa and globally, and the burden of CVD with co-existing conditions like diabetes, HIV and AIDS and so on, it is imperative that we mobilize to decrease the risk for CVD and improve the health-related quality of life of all those affected".

The key risk factors that drive the high mortality and morbidity for CVD include modifiable and non-modifiable factors. Modifiable factors include behavioural risk factors such as lack of physical activity, poor nutrition, tobacco smoking and increased alcohol consumption. Non-modifiable factors include family history and predisposition for hypertension and increased cholesterol levels. High levels of LDL (Low-density lipoprotein cholesterol) or the undesirable component in cholesterol' can lead to heart attacks and strokes.

The WHO estimated an overall raised cholesterol to be the cause of 2.6 million deaths (4.5% of total) and 29.7 million disabilities, globally. Raised total cholesterol is a major cause of disease burden in both the developed and developing world as a risk factor for ischemic heart disease and stroke.

High cholesterol is often under-recognised in South Africa, according to a March 2021 Report by Global Alliance for Patient Access (GAfPA). Given the burden of CVD, and its associated risk factors The Heart and Stroke Foundation South Africa (HSFSA) is embracing the World Heart Federation (WHF) theme "Use Heart to Connect" to encourage the public to use their knowledge and influence to ensure that their loved ones and those around them have the opportunity to live a heart-healthy life.

During Heart Awareness Month (HAM) 2021 the HSFSA will have a major focus on cholesterol. There will be four core themes, dedicating a week to each theme. In week 1 the focus will be on understanding cholesterol, in week 2 the focus will be on nutrition and CVD, in week 3 the focus will be on the relationship between nutrition, physical activity and cholesterol and finally in week 4 the focus will be on cumulative risk factors for CVD onset. HAM culminates on World Heart Day (WHD) on 29th September 2021 where we urge all South Africans to use their hearts to connect ...and make healthy behavioural choices to prevent heart-related medical conditions.

Awareness Campaigns with key stakeholders for the month of September

The Foundation will be partnering with various organizations for exciting joint campaigns for CVD prevention, detection and care. During HAM our partners include the World Heart Federation, GAFPA, SA Heart Association, Lucky Star, Dischem, Jungle Oats and the NCDs Alliance. Please visit our website (www.heartfoundation.co.za), social pages and other media to learn more about our initiatives for HAM and World Heart Day.

A Thematic Approach to HAM with an overarching focus on Cholesterol

Week 1: An Overview of Cholesterol

Explaining the nature of cholesterol

Cholesterol is a soft, fatty substance in the blood. It plays an important role in cell membranes, including repairing damaged tissues in the body, manufacturing many hormones and bile for digestion. Most of the cholesterol in the body is produced in the liver and then transported through the bloodstream to the rest of the body.

Some foods we eat from animal sources contain cholesterol, and this is referred to as dietary cholesterol. Certain foods, notably eggs, organ meats, shellfish and red meat in general contain cholesterol. However, dietary cholesterol in food does not typically make a great contribution to blood cholesterol.

High cholesterol is one of the most important risk factors for cardiovascular disease. Everyone has cholesterol in their blood but too much cholesterol increases the risk of having a heart attack or a stroke.

High blood cholesterol levels can slowly cause a build-up of cholesterol and other waste products in the inner linings of arteries.

If left undiagnosed and untreated, it can eventually form plaques, the thick hard deposits that can narrow arteries and make them less flexible, causing *atherosclerosis*. If a clot forms and blocks a narrowed artery that feeds the heart or brain, it can result in a heart attack or stroke.

According to CEO Professor Pamela Naidoo, "the HSFSA would like to see screening and management guidelines used consistently across South Africa in order to reduce the burden of this risk factor."

LDL, HDL cholesterol and its measurement

Cholesterol that is transported from the liver to the rest of the body is carried in transporters called low-density lipoproteins, commonly known as LDL. The LDL can block the walls of the blood vessels (arteries) and disrupt the blood flow. High levels of LDL cholesterol are associated with heart diseases and strokes and are often called 'bad cholesterol.'

A different transporter, called high-density lipoprotein or HDL, collects cholesterol from the rest of the body and the blood vessels and returns it to the liver. HDL 'cleans' the blood vessels of cholesterol and is therefore commonly referred to as 'good' cholesterol, as it carries the bad cholesterol out of the blood vessels (arteries).

Blood cholesterol tests consist of LDL and HDL readings, in addition to a triglyceride test. This test is a measure of the amount of fat that is being transported in the blood, which could be from fatty food that was recently eaten, or from fat production in the liver. High fasting levels of triglycerides in the blood increases the risk of heart diseases and strokes.

Signs and symptoms of raised cholesterol

"Most people with high cholesterol feel perfectly healthy and there are usually no warning signs. The only way of knowing is to have a blood test" says Dana Govender, Health Promotions Manager. For accurate results, fast from food and liquids for a minimum of 8 hours before the test. If a total cholesterol level is high, it is important to know which type of cholesterol is high.

Table Normal cholesterol levels (HSFSA)

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|-----------------------------|--|
| Total cholesterol | LESS than 5 mmol/L |
| LDL cholesterol level | LESS than 3 mmol/L |
| HDL cholesterol levels | MORE than 1.2 mmol/L for women or 1.0 mmol/L for men |
| Fasting triglyceride levels | LESS than 1.7 mmol/L |

Week 2: Nutrition and Cholesterol

Recommended Dietary changes for high total or LDL cholesterol

Choose healthier fats: Hayley Cimring, Nutrition Team Leader recommends “cutting down on unhealthy sources of fats high in saturated and trans fats which can raise cholesterol levels. These can be found in foods such as fatty and processed meats, chicken skin, butter, cream and hard cheeses, coconut or palm oil, pies, pastries, biscuits, crackers, fast foods and deep-fried potato or slap chips. Replace these with healthier fats rich in mono- and polyunsaturated fats such as plant oils, peanut butter, nuts and seeds, avocado and fatty fish.”

Eat high fibre foods. Soluble fibre especially helps to lower cholesterol levels and can be found in foods such as oats, lentils, beans, vegetables and fruit.

Add plant sterols or stanols. When used as part of a healthy diet, plant sterols or stanols can help to lower cholesterol levels by up to 10-15% by reducing the absorption of cholesterol in the small intestine. This could be provided by sterol-enriched foods such as Flora pro-active.

Recommended Dietary changes for high triglyceride levels

- Reduce total carbohydrate intake, especially refined carbohydrates like white bread, white rice, pastries, sweets and biscuits.
- Limit added sugars such as sweets, chocolates, sweetened soft drinks, fruit juices, flavoured water and sweetened dairy products.
- Choose foods high in omega 3 fats, especially naturally oily fish such as sardines, pilchards, mackerel and salmon, which should be eaten at least twice a week.
- Reduce intake of saturated fat and replace this with sources of mono- and polyunsaturated fats such as avocado, olive oil, nuts and seeds. Saturated fat intake can also be reduced by opting for leaner meat options and removing excess fats on foods before cooking, e.g. skin of the chicken.
- Practise healthier cooking methods such as steaming, grilling or baking instead of deep-frying which makes use of high amounts of oil at a given time.

Week 3: Physical Activity, Nutrition and Cholesterol

One way exercise and nutrition can help lower cholesterol is by helping with weight loss or weight maintenance. Being overweight tends to increase the amount of low-density lipoprotein (LDL) in the blood, the kind of lipoprotein that's been linked to heart disease. Health benefits occur with being physically active for at least 150 minutes a week e.g. 30 minutes, five times a week, and by doing moderate- to vigorous-intensity aerobic physical activity. This helps to increase 'good' HDL cholesterol levels and reduce high triglyceride levels. And there are many options: brisk walking, swimming or bicycling. Doing some physical activity is better than doing nothing at all, for example taking the stairs instead of the lift.

Week 4: Cumulative Risks for CVD Onset

Cholesterol is one of the most important risk factors for cardiovascular disease. In the current health environment having heart disease can increase the likelihood of being severely ill from COVID-19 and conversely there are known cases of individuals who have had a severe infection from SARS COV 2 and resultant heart ailments. Having severe illness from COVID-19 may lead to hospitalization and even death

Risk factors for high cholesterol

- Eating too much saturated fat.
- Medical conditions such as an underactive thyroid gland or chronic kidney failure.
- Family history: If a parent or a grandparent had high cholesterol, this trait can be inherited. Some people have naturally very high blood cholesterol levels, due to a rare hereditary condition called familial hypercholesterolaemia (FH). If one family member is diagnosed with FH, it is vitally important that all members of the family have a full fasting lipogram done to test if they also have FH.
- Physical inactivity.
- Being overweight or obese, especially around the waist increases the chances of abnormal cholesterol levels.
- People with type 2 diabetes or metabolic syndrome often have low HDL cholesterol levels and elevated triglyceride levels.
- Drinking too much alcohol.
- Smoking and tobacco use. Be smoke-free. Quit smoking and avoid second-hand smoke. This will help in particular for low HDL levels.

CVD and the Foundation's Endorsement programmes

Heart Mark and Diabetes South Africa

The Heart Mark endorsement programme is part of ongoing efforts by the Foundation to reduce the number of deaths in South Africa from preventable heart disease and strokes. The endorsement programme forms part of a health-enabling environment offering you a tool that makes choosing healthier foods easier. The Heart Mark is not a diet. It's a guaranteed way to buy food lower in salt, lower in sugar, lower in saturated fats and higher in fibre. This makes it the best choice for you and your family and the smartest way to keep a healthy and balanced diet. Remember, choosing healthy foods goes hand in hand with physical activity and other good lifestyle choices.

The DSA endorsement logo is managed by the HSFSa. The DSA logo is easily recognisable and was developed for consumers who are diagnosed with the condition. . People living with diabetes do not need special 'diabetic' foods, but should be eating normal healthy foods that are low in sugar, salt, refined carbohydrates, and saturated fat.

The DSA food criteria points out these foods that are suitable for people with diabetes to include as part of their diet. It is based on the South African Diabetes treatment guidelines and uses strict criteria for added sugar and where applicable, the glycaemic index (GI) to identify healthier options. The logo helps people with diabetes to choose foods easily and with confidence, knowing it will help them manage their diabetes.

Using the Foundation's Mobile Clinic for health promotion and disease prevention

The HSFSa launched its first mobile clinic in April 2021 to provide essential preventative health screenings to mainly underserved communities. The high-tech mobile clinic was made possible with the grant funding awarded by the National Lotteries Commission. Our mission is to travel to hard to reach and nearby communities that lack the means to access basic screening and healthcare.

"Individuals will be specifically educated and informed on the importance of knowing their numbers by testing their blood pressure, blood sugar levels, cholesterol and body mass index (BMI)", explained by our CEO, Professor Pamela Naidoo. Moreover, they will be made to understand how important it is to know your familial history for medical conditions and the relationship between family history and behavioural risk factors, says our CEO.

For more information contact the HSFSa head office: 021 422 1586 or heart@heartfoundation.co.za.

