

## **A Guide to Heart Health and a Healthy Lifestyle for People of Indian Origin**

Sandhya Malhotra M.D.

Cardiovascular disease is the most common cause of death worldwide. There is an extremely high incidence and prevalence of coronary heart disease in people of South Asian origin. In a review of comparative research studies from 1966 to 2005, it has been found that the prevalence of heart disease among people of South Asian origin is greater than that of Caucasians. The Southall study from UK not only documents a higher rate of myocardial infarction among South Asians but shows that more than half of the myocardial infarctions in Asian Indian men occur in those who are less than fifty years old. Furthermore, the mortality from coronary heart disease in both men and women of Indian origin is nearly 50% greater than in the general population. Also, an analysis of 1.2 million Canadian deaths noted increased cardiovascular related mortality in immigrant South Asians compared to those of European descent. Alarming, the incidence of heart disease has been increasing in India and in the South Asian immigrant population. There are several reasons why people of Indian origin are more prone to developing cardiovascular disease. Therefore, it is essential for people from the Indian Diaspora to understand the risk factors that uniquely affect them and to develop meaningful ways to address these risks.

There are a number of well-known factors that increase the risk of developing cardiovascular disease such as smoking, diabetes, hypertension, hyperlipidaemia, and obesity. In addition, scientists have recently discovered a genetic mutation that causes a five times increase in the risk of developing coronary artery disease. This genetic mutation, which is found in 4% of the people of South Asian origin, causes abnormalities in the structure of the heart muscle and leads to myocardial infarctions at an early age. There is also a strong genetic association for developing diabetes mellitus and components of the metabolic syndrome which are known to markedly increase the morbidity and mortality from cardiovascular disease. There is an increased prevalence of diabetes, insulin resistance, abdominal obesity, and abnormal lipid levels among South Asians. The risk of type 2 diabetes occurring in people of South Asian origin is three to six times greater than in people of European descent. In UK alone, South Asian men older than 50 years have a one in four chance of suffering from diabetes. Diabetes also develops a decade earlier in South Asians versus the white population. Furthermore, research studies have documented increased insulin resistance in South Asian babies.

Since risk factors such as genetics cannot be altered presently, it is important for people of Indian origin to educate themselves and gain a better understanding of the underlying medical problems they have. It is vital that South Asians become proactive in managing their health. They need to be aware of their family history. They need to visit a physician regularly and undergo routine screening tests. They have to be informed and not be afraid to ask questions. They should ask themselves, “What are my BMI (body mass index), blood pressure, cholesterol, lipid profile and fasting blood glucose levels? If my tests are abnormal, what can I do to optimize my health? If I am placed on medications, do I know what its side effects are?” They

should learn the symptoms of heart disease, since early intervention often prevents serious complications.

Other factors which have contributed towards increasing heart disease among South Asians include a sedentary lifestyle, high consumption of a diet rich in fatty acids, a decreasing intake of fruits and vegetables, and an increasing rate of smoking. Cigarette smoking's deleterious effect on a person's health is well known. Increasing levels of physical inactivity in urban India and in migrant populations has led to an increase in childhood obesity, adults with central obesity and diabetes. In the Southall study, investigators estimated that 66% of the increase in heart disease in South Asian men was due to an increase in insulin resistance. In another study evaluating risk factors for coronary artery disease among South Asian and American premenopausal women, South Asian women had a greater consumption of a fatty diet, increased abdominal fat and a lower level of physical exercise compared to American women. The South Asian women also had higher plasma concentrations of total cholesterol, triglycerides and insulin levels.

Risk factors such as smoking can be modified by lifestyle changes and early intervention. Smoking cessation is crucial in reducing the risk of heart disease. Another important change that can be made is in a person's diet. In the national family heart study of nearly 4500 subjects, investigators found an inverse relationship between a higher intake of fruits and vegetables and plasma LDL concentrations. This link was noted in all the subjects regardless of their other risk factors. Incorporating an exercise regimen into a person's daily routine is equally important. In a prospective study 480 Indian patients were placed on a fat modified diet, a daily consumption of 400grams of fruits, legumes and vegetables, and a regimen of moderate physical exercise. Researchers observed a decrease in abdominal obesity, plasma concentrations of triglycerides, total cholesterol and LDL levels in the patients. In addition, there was a marked reduction in the number of adverse cardiac events and total mortality.

It is important for people of Indian origin to stop, reflect and ask themselves, "What did I eat today? Did I serve myself 'heart disease' on a plate? Which is better for my health; a broccoli *pakora* or steamed broccoli, a *parathi* or a *roti*, *dal makhani* or plain *dal*? What do the words '*malai*' and '*makhani*' mean?" Although vegetarian diets are considered to be healthier, not all vegetarian food is heart healthy. The style of cooking greatly impacts its nutritional value, salt and calorie content. It is ironic that in the process of urbanization and migration South Asian people often forget their roots and heritage. Created by their ancestors, the yoga way of living is essentially a balanced way of living and has been passionately embraced by the west. Yoga promotes harmony between the mind, intellect and body. The yoga diet is a balanced meal with emphasis on nuts, fruits, vegetables, and grains being consumed in a manner in which they retain their nutritional content. Portion size is controlled and larger meals are eaten earlier in the day. Yoga places an emphasis on daily exercise and stress reduction. South Asian people can control their risk for heart disease by making positive changes in their lifestyle and by seeking early treatment for their medical problems.