



Dil Hai Hindustani

Genetic factors increase the risk of heart disease among Indians, says a new study

IT IS WELL KNOWN THAT Indians are three times as likely to suffer from heart disease as compared to other communities. So far, lifestyle has taken the blame. However, a new study by the University of Maryland Medical Center (umm) indicates that genetic factors could be responsible for Indians having high levels of triglycerides and low levels of HDL or good cholesterol, factors that help determine the health of the heart.

"We found that a genetic abnormality in triglyceride regulation appears to be common among Asian Indians," says Dr Michael Miller of umm, Baltimore, head of the research team which studied blood and DNA samples taken from 1 00 persons of Indian origin who had gathered for a Diwali celebration in Northern Virginia in 1997. "The abnormality prevents blood fats from being broken down effectively and as a result, triglycerides may accumulate to dangerously high levels," Miller said.

According to Minakshi Khatta, Certified Registered Nurse Practitioner and a member of Miller's team, most persons in the November 1997 sampling "were first generation immigrants to the US, predominantly from

stressed that it remains to be seen whether this gene or genetic alteration may be more likely in one part of the country or another. "All I can say right now is that it doesn't matter whether you are from northern or southern India," he said.

The reasons for this alteration are not as yet known. Seventy per cent of the volunteers tested were found to share the same abnormality. Among the group, 33 per cent had a family history of heart disease while 20 per cent had diabetes, which could be because the abnormality also affects insulin regulation. For Miller and his team, the next step is to evaluate the impact of the abnormality in certain communities within India, and determine how influential changes in diet can be.

Miller's interest in HDL and triglycerides began in the mid-'80s and his colleagues at Johns Hopkins were the first group to show that "the low HDL was predictive of now events". National guidelines were subsequently revised in 1993 to include HDL testing.

In the early 1990s, after reading an editorial by Dr Enas A. Enas, director of the Coronary Artery Disease in

INDIAN INTEREST: Khatta and Miller were part of the ground-breaking research team

Asian Indians have a problem of low HDL and elevated triglycerides, Miller decided "to further investigate". In the mid-'90s, "we got interested in the genetics of low HDL and triglycerides," the doctor concluded.

Enas says Miller's research "is a very valuable study". Enas was the first physician to publicly address and scientifically prove the higher rate of coronary artery disease (CAD) in Asian Indians in the US. He feels vindicated by Miller's research and says, "It is very important from a practical point of view. Indians do have a genetic predisposition to heart disease."

However, Enas stressed that "genetics does not come with the implication that

HEART OF THE MATTER

- The risk of heart disease is 2-4 times higher in Indians than in other communities.
- The risk is 5-10 times higher in Indians under 40.
- In the US, the risk of heart disease is 2.5 per cent, in New Delhi, the risk is 10 per cent, in Kerala, the risk is 14 per cent.
- In rural India, the risk of heart disease is 2 times higher than in the US while in urban India, the risk is 4 times higher than in the US

(Figures from the CADI Research Foundation, Lisle, Illinois.)

the trigger. We have to be doubly vigilant, but we can control it if we are." Adds Miller: "The abnormality exists not in the actual coding region (of the gene) but in a region that's involved in the regulation of it. We think that's why diet may be very influential."

Lifestyle choices, therefore, cannot be ignored. According to Washington D.C. cardiologist, Satish Jyani, prevention is still the best cure. "The best thing to do is recognize early what we are, and take care of ourselves", says Jyani, associate professor of Medicine at George Washington University Hospital. He recommends awareness and early diagnosis, reducing animal protein and free fatty acid intake, no smoking, exercising regularly, having a lipid profile done so that abnormalities can be treated, and being aware of all treatment options.

-Kaumudi Maratha