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Six-month study into preventing diabetes

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Compared to Chinese, Malays, Caucasians and other races, Indians – mainly due to a complex interplay of genetic and environmental factors – have a higher risk of being afflicted with diabetes and cardiometabolic disease.

This makes them more vulnerable to becoming severely ill with the Covid-19 virus – especially if they have pre-existing medical conditions, such as heart disease, hypertension and obesity.

"Research indicates that middle-aged adults with type 2 diabetes have a disproportionately increased risk of death due to Covid-19," said Dr Jeannie Tay, a senior research fellow at the Singapore Institute for Clinical Sciences (SICS), A*Star.

"When people with diabetes develop a viral infection, it can be harder to treat due to fluctuations in blood glucose levels. Covid-19 can also destroy pancreatic beta cells which leads to impairment of insulin secretion."

Led by Dr Tay and Prof Johan Eriksson, SICS initiated a six-month Asian Indian Prediabetes Study (AIPS) last year to better understand the effect of different diets and lifestyle interventions on prevention and treatment of diabetes and obesity, which are leading causes of morbidity and mortality in Singapore.

"There is a lack of evidence-based dietary and exercise recommendations for treating prediabetes and promoting health benefits in Asians, in particular Indians, who are more insulin-resistant and have a greater risk of developing diabetes compared to other races," said Dr Tay.

Financial adviser Cynthia George before (left) she participated in the Asian Indian Prediabetes Study; (right) after losing 9kg. PHOTO: SINGAPORE INSTITUTE FOR CLINICAL SCIENCES

The study is being conducted in collaboration with scientists and clinicians from a range of disciplines and various research institutes in Singapore and overseas, including the National University of Singapore, National University Hospital, Singapore Bioimaging Consortium, Singapore Institute of Food and Biotechnology Innovation, Fitness First Singapore and Almond Board of California.

Seventeen men and women joined the study, which started after the circuit breaker phase 2 last year. Aged between 33 and 49, they were overweight (Body Mass Index 25-35).

A two-hour oral glucose tolerance test indicated that all 17 had prediabetes. Importantly, they showed strong risk factors for diabetes – such as family history, obesity and low physical activity. Some of them even had blood glucose levels in the diabetes range. It meant they would become diabetic if nothing is done.

Ms Cynthia George, 38, a financial adviser who participated in the study, said: "Even though I was struggling with my weight for more than 12 years, I was surprised when I discovered I was prediabetic at the AIPS screening as I thought I was physically active.

"Over the past three months, the monitoring by the AIPS dietitian has helped me be more mindful of any indulgences. I have lost about 9kg and hopefully I can get within the normal BMI range by the end of this study."

The study, SICS researchers hope, will draw attention to the importance of early screening and raise awareness about diet and lifestyle strategies to prevent diabetes.

"Prediabetes is a window of opportunity to intervene and prevent diabetes and we would like to reach out to more Indian men and women who might benefit from participating in the study," said Dr Tay.

"It will be a six-month diet and exercise, weight-loss intervention research study."

Participants can register at https://-form.gov.sg/#!/5e4f6a0287faa30011008e47. For more information, e-mail hd.research@sics.a-star.edu.sg or call 6601-1972.

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