

Some diabetics at more risk of muscle loss

Those with kidney disease 2½ times more likely to lose muscle mass, function: Study

Timothy Goh

A new study has found that those with diabetic nephropathy, also known as diabetic kidney disease, are 2½ times more likely to develop sarcopenia, or loss of muscle mass and function, than diabetics who do not have kidney disease.

Conducted by SingHealth Polyclinics in collaboration with Duke-NUS Medical School and shared with *The Straits Times* on Monday, the study also found that 58 per cent of the elderly with Type 2 diabetes had pre-sarcopenia and sarcopenia.

Sarcopenia is an age-related condition that can lead to adverse health outcomes such as physical disability, frailty and increased fall risk, particularly in the elderly.

Pre-sarcopenia is characterised by low muscle mass without an impact on muscle strength or physical performance.

Adjunct Associate Professor Tan Ngiap Chuan, SingHealth Polyclinics' director of research, said 10 per cent of the elderly here spend the last 10 years of their lives with some form of disability, largely due to musculoskeletal disorders and often underpinned by sarcopenia.

Prof Tan, who is the study's lead investigator, said: "With (Singapore's) rapidly ageing population,

the prevalence of sarcopenia is expected to rise.

"Understanding the magnitude of sarcopenia and its associated mitigating factors will help to prevent further deterioration of muscle strength and function from this disease."

The study involved 792 patients aged 60 to 89 from Pasir Ris Polyclinic, more than 380 of whom had Type 2 diabetes.

It started in 2017 and is ongoing. Patients were tested for sarcopenia using a hand-grip strength test, a gait speed test and a measure of muscle mass.

A questionnaire was also given to patients to obtain their medical and nutritional history.

It was found that 28 per cent of the Type 2 diabetes patients had sarcopenia, while 30 per cent of them had pre-sarcopenia.

Prof Tan said that around 53 per cent of those with Type 2 diabetes are at risk of developing this disease, which involves damage to the tubes in the kidneys.

This results in proteins leaking into the kidneys but not being reabsorbed, leading to them being passed out through urine and lost from the body.

As proteins are the building blocks of muscles, this, in turn, causes a drop in body muscle mass, said Dr Fung Foo Yin, house officer



SingHealth Polyclinics clinical research coordinator Ng Chiat Eng measuring the walking speed of Mr Abdul Samad, 76, during a demonstration of sarcopenia assessment methods on Monday.
ST PHOTO: MARCELLIN LOPEZ

at Ng Teng Fong General Hospital, who was involved in the study.

"Therefore, it's important to control diabetes so as to preserve your kidney's function and hopefully maintain your body's muscle mass," she said.

Those with diabetes can manage their condition by keeping active,

losing weight, avoiding smoking and alcohol, and picking healthier food choices.

As patients grow older, however, some of them tend to cut down on their protein intake or eat fewer meals, said Prof Tan.

Ms Lim Siew Choo, senior dietitian at SingHealth Polyclinics, said

that for those at risk of sarcopenia or who already have the condition, there is a need to consume sources of protein – at least one palm-size portion of meat per meal for lunch and dinner. She added that some patients may also need to consume supplements, such as protein powder, as prescribed by a dietitian.

Prof Tan said those at risk of or living with sarcopenia should also engage in a combination of cardio and resistance exercises on a daily basis. "A balanced diet and regular exercise will improve diabetes control and promote kidney health."

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