

life

C MORE THAN OKAY
Kim Soo-hyun
returns to the
small screen
C7

TRUE GRIT
Hailee Steinfeld
steps up on
new EP
C8



Are you a senior with low muscle mass?

Avoid losing muscle mass by including resistance or weight exercises and ensuring sufficient protein intake. PHOTO: ISTOCKPHOTO

A Singapore study shows seniors who have a normal nutritional status are also at risk of having low muscle mass, which may compromise their ability to fight infections



Amrita Kaur

One in five Singaporeans above 65 has low muscle mass, according to the first phase of a two-part study done by Changi General Hospital (CGH), SingHealth Polyclinics and healthcare company Abbott.

The loss of muscle mass and strength is referred to as sarcopenia – a disease associated with ageing that can impact the body's immune system.

Although ageing is the main cause of sarcopenia, other factors such as a sedentary lifestyle, poor nutrition and certain medical conditions like heart disease can also lead to the loss of muscle mass.

Symptoms may include a decrease in muscle size, weakness, loss of stamina and loss of endurance. The condition affects balance, the way a person moves and his ability to perform daily tasks.

The first phase of the study started in 2017 and was carried out here on 400 community-dwelling seniors – 183 men and 217 women.

It investigated the body composition, nutritional biomarkers and associated factors with low muscle mass in physically able seniors with a normal nutritional status.

A normal nutritional status means that a person is not underweight, has not experienced weight loss in the past three to six months, has no acute illnesses and has had normal nutritional intake over the past five days.

Among the findings that were published in a peer-reviewed journal PLOS One in October last year, researchers said the prevalence of low muscle mass was higher in women at 24.9 per cent compared with men at 15.5 per cent.

The study showed that seniors above the age of 65 have a 13 per cent higher chance of having low muscle mass each time they turn a year older.

Abbott's nutrition divisional vice-president, scientific and medical affairs, Dr Low Yen Ling, said the loss of muscle mass can happen to everyone.

"Muscle loss can begin in the 40s and increases considerably with age. On average, adults lose up to 8 per cent of their muscle per decade starting at age 40. That rate can double after the age of 70. Illness, injury or lack of nutrition can further accelerate muscle loss," said Dr Low, co-author of the first phase of the study.

Though it has been reported that proper nutrition is essential to treat sarcopenia and may prevent or delay the condition, new findings from the study suggest that normally nourished seniors are also at risk of having lower muscle mass.

Adjunct assistant professor Samuel Chew, who is a senior consultant at CGH's department of geriatric medicine, said most other studies suggest that muscle mass loss is limited to people who are malnourished.

"However, the findings of our study show that the prevalence of low muscle mass in normally nourished seniors is significant as well," said Dr Chew, principal investigator of the study.

The high prevalence of low muscle mass among seniors with normal nutritional status shows how important it is for them to be aware

1 in 5

Singaporeans above the age of 65 has low muscle mass

8%

That is the average amount of muscle an adult loses each decade, starting at age 40

Muscles are a major storage site for amino acids used by the body during a trauma or infection. Hence, low muscle mass, coupled with inadequate protein intake, may affect the body's response to an injury or infection.



ADJUNCT ASSISTANT PROFESSOR SAMUEL CHEW, senior consultant at Changi General Hospital's department of geriatric medicine

of their muscle mass status in order to maintain muscle health.

To best determine muscle health, people can work with their healthcare providers to perform simple tests, such as the Malnutrition Universal Screening Tool and the Bioelectrical Impedance Analysis.

Adjunct associate professor Tan Ngiap Chuan, a family physician and director of research at SingHealth Polyclinics, said: "Healthcare professionals should take note of these results and encourage patients to consider early screening of their muscle mass and adopt a lifestyle that incorporates physical activity and the right diet, including optimal levels of protein."

Food rich in protein helps to make new cells, maintains bone health and keeps muscles healthy. They include chicken breast, fish, tofu, beans, nuts and eggs.

Dr Low said those above the age of 65 require more dietary protein to help maintain their muscles.

"Some seniors experience a decreased appetite or have problems chewing meat, which can hinder their protein intake, so making sure they consume enough protein is important," she added.

Dr Chew said seniors can maintain muscle mass with physical activity and proper nutrition.

"The key to avoid losing muscle mass is to include resistance or weight exercises and sufficient protein. This not only improves one's muscle health, but also contributes positively to bone health and nutritional status."

Strong muscles, he added, are associated with the regulation of the immune system.

Citing studies, Dr Chew said that muscles produce and release compounds which play an important role in the proliferation, activation and distribution of some immune cells.

"While additional research is needed, there is data that suggests loss of muscle mass is associated with compromised immunity and infections," he said.

"Muscles are a major storage site for amino acids used by the body during a trauma or infection. Hence, low muscle mass, coupled with inadequate protein intake, may affect the body's response to an injury or infection."

Given the evidence linking muscle to the immune system, maintaining or improving muscle health should be a priority, said Dr Chew.

Other nutrients that support muscle health or the immune system include zinc and vitamins A, C, D and E.

Vitamin D, in particular, plays an important role in the normal functioning and strength of muscles. Sources of vitamin D include salmon, mackerel, tuna, sardine, shiitake mushroom and egg yolk.

Dr Chew said: "Oral nutritional supplements can be helpful for those who are unable to meet these requirements through their usual diet, as they are nutrient-dense and easy to consume, so people can get important nutrients, regardless of their appetite."

He advised seniors to do resistance exercises such as lifting light weights, one-leg stands, squats, heel raises and lunges.

Simple household chores such as cooking, carrying groceries or watering the garden can also maintain muscle strength.

Dr Chew said: "I advocate sit-to-stand exercises on a daily basis for geriatric patients. It is important to make these exercises a habit. Support from the carer and family is essential for this to be successful."

The second phase of the study involves 811 community-dwelling seniors aged 65 and above who are at risk of malnutrition.

It will investigate the impact of oral nutritional supplement intake on health outcomes and physical ability. The results from this study are expected to be ready by October.

amritak@sph.com.sg

SIX SIMPLE EXERCISES FOR SENIORS on C5