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Frailty in seniors linked to social, economic factors

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Older adults from lower-income groups – who are single and have no formal education – tend to suffer from physical frailty. But good nutrition, physical activity and cognitive stimulation can help reverse the tide, according to two studies by the National University of Singapore (NUS), which were released yesterday.

The correlation between socio-economic factors and frailty emerged from a frailty study of 1,685 respondents, which was conducted as part of the Singapore Longitudinal Ageing Studies (SLAS).

The SLAS itself has followed about 3,000 Singapore residents aged 55 and above since 2003.

The frailty study, which is ongoing, found that 5 per cent of the 1,685 respondents were physically frail while 44 per cent showed symptoms of frailty and 51 per cent were robust.

It also found that 41.1 per cent of the frail lived in one- to two-room public housing. In contrast, 16.7 per cent of the robust were living in such housing types.

Similarly, 34.4 per cent of the frail had no formal education compared to 15.1 per cent among the robust and 52.2 per cent of the frail were either single, divorced, or widowed, compared to 29 per cent among the robust.

Associate Professor Ng Tze Pin, who led both studies, suggested that this phenomenon could be because these seniors were less able to afford nutritional food, less able to decide for themselves what is nutritional and less likely to be eating enough to prevent malnutrition which could cause frailty.

"Eating is a social event and you are more likely to eat more when you're with others rather than alone," said Prof Ng explaining why single, divorced or widowed elderly were likely not eating enough.

Frailty is a geriatric syndrome where organ function is below a healthy level. Key organs such as the heart, kidneys and lungs start to function below optimal levels and result in reduced resistance to stress, and increased vulnerability to adverse outcomes such as falls.

Prof Ng said the main causes of frailty are malnutrition, chronic diseases, a sedentary lifestyle, and obesity. Key symptoms include muscle degeneration and weakness, slowness, exhaustion and reduced physical activity, he added.

The second study by a different NUS team examined 250 elderly people above 65.

It found that those who adopted a regimen of good nutrition, physical activity and cognitive stimulation were less frail than those who did not. In mild cases, their frailty could even be reversed.

Those who fulfilled only one factor, such as eating well but not exercising regularly, did not fare as well as people who managed all three.

The study, which was conducted from 2010 to 2013 and was first published in 2015 in the American Journal of Medicine, determined that a healthy diet for elderly people is one that has sufficient calories and protein.

Prof Ng explained that with old age the body becomes less effective in converting amino acids into muscle, causing the elderly to be more susceptible to muscle degeneration. One way to slow down this degeneration would be to consume enough protein.

According to the Health Promotion Board (HPB), the recommended daily allowance of protein for males above 60 is 68g and that for females above 60, is 58g.

This would be equivalent to at least two portions of 120g chicken breast fillets, based on estimates of nutritional value on HPB's website.

Another way to slow down this degeneration would be to exercise regularly with a focus on muscle-building exercises such as squats that build up muscle and strength in the lower limbs and other weight-lifting exercises.

Mental exercises that increase attention and memory retention, such as mahjong and sudoku, could also help increase mobility, the study has found.

Prof Ng said that even walking is a cognitive activity as it requires an individual to process various sensory stimuli and make decisions based on them. For example, recognising and reacting to potential dangers when crossing roads.

Prof Ng, who is in the department of psychological medicine at the NUS Yong Loo Lin School of Medicine, said his research team is currently working with the Geriatric Education and Research Institute and voluntary welfare organisations to develop and implement screening for frailty as well as interventions for at-risk elderly.

"Frailty is not an inevitable part of ageing, and with the right intervention, we can reduce the number of elderly who need to seek treatment for this syndrome," said Prof Ng.

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