

# Frailty thy diagnosis

For a long time, doctors detected this condition based largely on intuition. Now there are more objective methods, says **Dana G. Smith**

According to one large 2020 review, globally, about 11 per cent of adults in their 50s qualified as frail, while 51 per cent of people 90 or older were diagnosed frail. Doctors think of frailty as a spectrum, starting with the “pre-frailty” stage. People who are pre-frail fare worse than their more robust peers, but they are in better shape than those who are fully frail.

Interest in pre-frailty has grown in recent years, in part because it is easier to intervene and improve matters at that stage. Pre-frailty also affects a much broader swath of the population — in the 2020 review, nearly half of adults 50 years and older were considered pre-frail.

There are two main methods of diagnosing frailty. One focuses on older adults’ physical abilities. It uses a series of short tests, including grip strength and walking speed, to evaluate five key traits — weakness, slowness, exhaustion, physical inactivity and unintentional weight loss. If people have three, four or five of these traits, they are diagnosed as frail; having one or two qualifies them as pre-frail.

Everyone will slow down and decline a little with age, but it’s those who rank in the bottom 20 per cent on these tests that doctors are most concerned about.

The other diagnostic framework, called the deficit accumulation model, takes a more holistic approach. A provider diagnoses frailty based on the number of health conditions a patient has, such as high blood pressure or mild cognitive impairment. The model can also include a person’s own view of their health and their ability to perform complicated everyday tasks, such as driving.

The score is presented as a decimal — the number of conditions or symptoms a person has divided by the total number of conditions or symptoms a doctor evaluated them on. A score of 0.1 to 0.24 is generally considered pre-frail and 0.25 and above is considered frail.

“The more things you have wrong with you, the more likely you are to be frail,” said Dr Kenneth Rockwood, a professor of geriatric medicine at Dalhousie University in Halifax in Canada, who developed the scale.

A general practitioner or geriatrician might administer one of these assessments to a patient starting around age 70, or earlier if they suspect the person is frail.

However, there are a few questions you can ask yourself to evaluate how you’re ageing, said Dr Linda Fried, a professor of epidemiology and medicine at Columbia University in the US. Dr Fried developed the phys-



ical frailty measure while she was a geriatrician at Johns Hopkins in Baltimore in the US.

“If you feel more at risk in your environment, if you’re feeling hesitant to go and do some of the things you used to do, it’s worth taking stock of how you’re doing,” she said.

Experts think that frailty is the result of a decline in multiple organ systems, particularly the musculoskeletal, immune and metabolic systems. At the cellular level, frailty is associated with increased inflammation, impaired mitochondrial functioning and other hallmarks of ageing.

“As we age, our physiological reserve across a number of the body systems declines naturally,” said Dr Ronan O’Caoimh, a geriatrician at Mercy University Hospital and University College Cork in Ireland.

“The more illness you experience, there is a more rapid decline in that physiological reserve. But there is an underlying natural rate that we will all have.”

Dr Fried thinks too much muscle loss may cause a domino effect that leads to frailty. As people get weaker, they also typically move slower, she said. Those combined changes can cause someone to “pare back their exercise level”. As people become less active and more deconditioned, “they actually develop more of

a sense of fatigue and low energy”, Dr Fried continued. Finally, as people consume fewer and fewer calories because their bodies are less active, they start to lose weight.

When someone is already frail, it is difficult to reverse course, so experts emphasised early intervention and prevention, ideally starting in midlife.

The experts generally agreed that the best way to stave off frailty is with strength training and aerobic conditioning. It’s also important to consume enough protein to help maintain muscle mass. According to some recommendations, older adults should aim for at least 1 to 1.2 grams of protein per kilogram a day. Staying socially active and engaged can also be helpful.

“Long before getting older, people should start maintaining their strength and muscle mass,” Dr Fried said. “It’s really important.” One reason women may be more likely to become frail is that “they start with lower strength and less muscle mass”, she added.

There is some evidence that these types of lifestyle interventions can also help improve pre-frailty or prevent further decline, Dr O’Caoimh said.

“Ageing is inevitable,” he said, “but ageing well is not inevitable.”

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