

Commentary

Rethinking ageing: It's not about just adding years to life, but adding life to years



William Hwang

When my father turned 90 this year, we wished him “长命百岁” (*chang ming bai sui* – “May you live a long life of a hundred years”), “身体健康” (*shen ti jian kang* – “Good health”), and “寿比南山” (*shou bi nan shan* – “May your longevity be as great as the southern mountains”). These traditional blessings reflect a universal aspiration: not just to live longer, but to live well.

Today, Singapore ranks among the world's most rapidly ageing populations. Living past 100 years old is no longer the stuff of science fiction, or traditional Chinese best wishes. We are living well into our 80s, with women living longer than men.

Recent debates over raising the retirement age and extending working years are, therefore, not merely policy discussions, but fundamental questions about how we define a productive, meaningful life.

IS AGEING A DISEASE?

There has been considerable debate over whether ageing should be considered a disease. Some advocates, such as David Sinclair, a professor at Harvard University, argue that doing so would drive research, funding, and intervention. Others worry this approach goes too far.

To me, age is just a number. A healthy 100-year-old should not be considered diseased simply because of his or her age. However, if we define ageing as progressive biological deterioration and loss of function, then someone at 50 suffering multiple age-related deteriorations could reasonably be seen as having an “ageing disease”.

When we examine ageing through the lens of biology rather than chronology, the picture becomes clearer.

In Singapore, this biological and functional view of ageing increasingly guides research and translation efforts.

At the Regenerative Medicine Institute, Singapore (REMEDI), where I serve as co-director, we focus on understanding and intervening in the cellular and tissue processes that determine whether people age with

strength, resilience, or decline. The distinction is crucial.

For example, when cardiovascular deterioration manifests as cardiovascular weakness or heart failure, we recognise this as an age-related disease. Similarly, sarcopenia, characterised by a significant loss of muscle mass and strength with age, is increasingly treated as a condition requiring intervention when it becomes functionally limiting and clinically meaningful.

Seen this way, ageing is not a single disease, but a collection of biological processes that progressively impair function.

THE LONGEVITY MEDICINE WE ALREADY HAVE

We already use biological markers to identify risks early to intervene before irreversible harm occurs. High blood pressure signals stroke and heart disease risk. Abnormal cholesterol predicts cardiovascular complications. Elevated blood glucose warns of diabetes and its devastating complications.

Looking ahead, we will identify many more biological markers of ageing and decline. This is not speculative science.

In Singapore, multidisciplinary teams are studying biomarkers such as telomere dynamics, cellular senescence, stem cell reserve, immune ageing, and frailty indices – work that bridges laboratory discovery and real-world clinical applications. Much of this translational work is aimed at disease prevention and not just prediction.

Many people ask whether there is a “magic pill” that can help us live longer. I think it already exists. In fact, we have not one, but several “magic pills”. Statins for cholesterol and medications for blood pressure and diabetes are longevity drugs that extend life by preventing disease and

preserving function.

Therefore, our challenge is not the absence of longevity medicine but applying it too late.

REDEFINING HEALTHY LONGEVITY

What, then, constitutes healthy longevity?

Consider someone who recovered from cancer and now runs marathons. Is he or she considered unhealthy? Or what about someone with well-controlled hypertension, who is living an active lifestyle? Many of my patients who have undergone bone marrow transplantation for leukaemia are, in fact, healthier than people who never had cancer.

Healthy longevity, in my opinion, should be defined functionally, not by disease history.

As a clinician-scientist involved in regenerative medicine and ageing research, I see this functional definition of health play out daily with my patients. For instance, an individual who is managing daily activities independently and contributing meaningfully, at home, work, or in the community, is living out “healthy longevity”.

My father exemplifies this. At 90, he visits coffee shops daily and reads multiple newspapers. While not “productive” economically, he lives an engaged life with regular medical “tune-ups”, but I would not consider him unhealthy.

Until recently, my mother, at 88, was still working. Her work gave her purpose and allowed her to continue contributing to those around her. A recent fall, however, has meant that she has had to step away from work for the time being.

For me, this has made the meaning of healthy longevity even more tangible. Chronological age tells only part of the story. What matters just as much is

whether we can preserve function, independence, purpose and engagement as we grow older.

POLICY IMPLICATIONS FOR S'PORE

Evidence suggests people should choose when they wish to retire. Many older Singaporeans still have much to offer, making compulsory retirement for well-functioning individuals potentially a loss of human capital.

While some older individuals may take on reduced responsibilities, there is merit in enabling older people to remain engaged, if they wish to, for as long as their health and circumstances allow. Not necessarily through formal employment, but through family, community, volunteering, mentoring or work.

Such engagement gives purpose while allowing society to continue benefiting from their accumulated experience.

The proportion of Singaporeans aged 80 and older has increased by about 60 per cent over the past decade. By 2030, about 24 per cent will be aged 65 and above. If healthy longevity is our goal, our national policies must support not just individuals living longer lives, but also more engaged and purposeful lives.

As a rapidly ageing society, Singapore needs to think about healthy longevity at a systems level, linking biomedical research, preventive care, workforce policy, and social engagement into a cohesive framework that augments cross-sector thinking, where science informs policy and practice.

Achieving this kind of longevity does not require futuristic medicine. Much of it is already within our grasp: going for recommended health screenings, heeding medical advice, staying physically active, and, where

appropriate, taking medications that reduce long-term risk. The barrier is not a lack of knowledge but of consistent implementation and sustained everyday health choices.

FROM LIVING LONGER TO LIVING WELL

Whether we refer to ageing as a disease is ultimately, not as important as how we respond to ageing. The challenge is not adding years to life at all costs but adding life to years.

If we align science, medicine, and policy around function rather than fear, Singapore's ageing population transforms from being a burden to unlocking opportunities. Longevity becomes not something we have to manage but something to steward wisely.

In this way, age will truly be just a number and function is everything.

Healthy longevity, therefore, should not be measured by the absence of disease, but by the presence of function, purpose, and engagement.

So perhaps, to the traditional Chinese blessing “寿比南山”, we might add a wish for “长乐未央” (*chang le wei yang*) – that is, may this longevity be as filled with enduring joy and meaning as it is lasting.

Perhaps healthy longevity is ultimately about preserving, for as long as we can, the things that allow us to remain ourselves – our independence, our relationships, our sense of purpose and our place in the lives of others.

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