What does ageing mean?

Qide Han
Peking University, China

People often say that love is an eternal theme. In truth, death is even more so. It is eternal for two reasons. First, it is difficult to understand because no one can truly experience death. Second, it is important. Professor Wang Yifang of the School of Health Humanities of Peking University once said that people who cannot reconcile themselves with death will always live in the fear of death and will suffer horrible agony when they are close to death. The fear of death is also an important reason for the overtreatment and unnecessary treatment of terminal disease.

To clarify my understanding of death, I wrote an article titled ‘Reflection on death’. It is now included in my book, The Temperature of Medicine, published in 2020. My speech at the 2021 Qingming Forum organized by Peking University was also well received when it reached a wider audience as an article titled ‘Live and die with peace’. The reception I received has given me a lot of encouragement. I do not repeat the content of those papers here, but instead focus on another topic that is closely related to death: ageing.

Like death, ageing is inevitable, and it occurs over the long arc of life. With the exception of those who die prematurely, the general population dies through ageing. Ageing is the prelude to death.

What is ageing?

The World Health Organization (2021) defines ageing as the process of ‘the accumulation of a wide variety of molecular and cellular damage over time’. The well-known physician and writer Atul Gawande (2014: 70) illustrated through vivid cases that ‘Old age is a continuous series of losses.’ In his letter to 78-year-old John Adams, 71-year-old Thomas Jefferson, one of the founding fathers of the United States, wrote of ageing:

But our machines have now been running 70 or 80 years, and we must expect that, worn as they are, here a pivot, there a wheel, now a pinion, next a spring, will be giving way; and however we may tinker them up for a while, all will at length surcease motion. (Jefferson, 1814)

Ageing is both an independent stage and one associated with disease. Like two cars driving in two lanes, ageing and disease can run in parallel and merge into the same lane at any time. On the one hand, ageing is a breeding ground that develops or accelerates certain diseases. On the other hand, diseases may accelerate the ageing process. However, regardless of whether or not disease is present, at a certain age, the body will enter a continuous and irreversible weakening process before reaching the end; this process involves multiple organ failure that may or may not be caused by disease. Between ageing and death is a period called deep ageing, or the final terminal phase of life. This is when hospice care, or—to use the preferred term proposed at a session of the Chinese People’s Political Consultative Conference in April 2016—palliative care, comes into play. Palliative

Corresponding author:
Qide Han, Peking University, 5 Yiheyuan Road, Haidian District, Beijing 100871, China.
Email: hanqd@bjum.edu.cn
care is very important because it affects the quality of the last stage of life.

Ageing is a process that spreads throughout the body, though at a different pace and in a different order from person to person. The most common and prominent manifestations of ageing are narrowed blood vessels and a lack of blood supply within the body, which lead to stressed or weakened organs. In particular, severe atherosclerosis of cardiovascular and cerebrovascular arteries leads to myocardial infarction and cerebral stroke. Immunity is generally reduced during ageing, and the ability to resist infection is low. A small number of pathogenic microorganisms invading the body can easily lead to serious infections in multiple organs, especially the lungs. The levels of multiple hormones drop during ageing, leading to muscle atrophy and weakness, osteoporosis, and vulnerability to falls and fractures. The number of brain cells and their connections are reduced, memory is weakened and, in severe cases, mental disorders such as dementia and memory loss occur one after another. Gene replication, transcription and translation errors are more likely to occur, and the superposition and accumulation of errors, coupled with a reduced ability to correct errors due to decreased immunity, greatly increase the chance of cancer development, among other consequences. It is common that elderly patients take seven, eight or even a dozen drugs per day, which is the result of several departments each treating a separate disease without coordinating their treatments. All drugs have side effects that may compound each other; even though side effects are typically insignificant, drugs may offset each other or have conflicting effects. Therefore, taking multiple drugs at once is often harmful to the body. Geriatricians have reached the consensus that elderly patients should not take more than five medications at the same time per day.

Ageing is a systematic process that is accompanied by the progressive loss of organ functions. Elderly persons often suffer from multiple diseases. Therefore, in treating an older patient, it is particularly important to analyse their case systematically and focus on solving the patient’s primary problems. Treating each disease separately inevitably leads to some problems being solved at the expense of others, and even conflicting effects with serious consequences. It is common that elderly patients take seven, eight or even a dozen drugs per day, which is the result of several departments each treating a separate disease without coordinating their treatments. All drugs have side effects that may compound each other; even though side effects are typically insignificant, drugs may offset each other or have conflicting effects. Therefore, taking multiple drugs at once is often harmful to the body. Geriatricians have reached the consensus that elderly patients should not take more than five medications at the same time per day.

Since ageing is accompanied by the progressive—and mostly irreversible—loss of organ functions, we must learn to live with this peacefully. Studies have shown that, as men age, the likelihood of developing cancerous lesions in the prostate increases. A study in which autopsies were conducted of patients who died from diseases other than prostate cancer found that as many as 82% of patients over the age of 70 had such lesions. Autopsies of females also found lesions, such as those associated with cervical or breast cancer, in a high percentage of older women. Compared with other pathological changes, the presence of such cancerous lesions in elderly people is not much of a concern and may well be accepted and lived with. On the other hand, efforts to identify and eliminate all such lesions can be counterproductive and cause tremendous physical and mental harm.

With the loss of a succession of organ functions as we age, it is inevitable that we will suffer from various diseases, of varying severity, leading to our death. In fact, we do not die from a specific disease; we die from ageing itself—from the exhaustion of vital forces, from the unavoidable eventual collapse of our body systems. However, we are accustomed to assigning death a specific pathological cause, resisting the idea of dying from ageing and dying of old age.
How to slow ageing?

That ageing is inevitable does not mean that we can do nothing about it. By rejecting unhealthy lifestyles, we can prevent early ageing and even slow the process to some extent. Unhealthy habits, such as smoking, alcohol abuse, gluttony and sedentariness, certainly accelerate ageing; by overcoming those habits, we can slow the ageing process. We can also actively explore healthy lifestyles. There have already been many discussions in this respect. Here, I would like to share a personal experience.

Twenty years ago, my lumbar spine showed degenerative lesions, which then developed progressively and caused serious symptoms eight years ago. Despite some abatement after conservative treatment, back pain became part of my daily life. The cast-iron stomach that I used to have began to experience digestion issues, and I became thinner, with increasingly lean arms and legs. My vision, which I had been proud of, gradually dropped from 1.5 to 0.7, and I developed cataracts. My physical examination report identified more than 20 abnormalities, including four or five suspicious imaging findings (that were highly indicative of prostate cancer), elevated levels of multiple tumour markers and abnormal immune-cell functioning. That significant acceleration of the ageing process prompted me to start fitness training two or three times a week three years ago. Since then, I have happily noted positive changes in my body, such as increased muscle strength, improved posture and substantial enhancements in other areas. Not only do my friends praise me as looking young for my age, but I also genuinely feel the slowed pace of ageing within me. When reading Jin Yong’s martial arts novels in my youth, I was often amazed by the centenarian Kung Fu master characters, with white hair and ruddy complexions, who delivered powerful punches and kicks at will. I think they could do so not because they had read any mysterious Kung Fu secrets or taken any celestial pills, but because they continued training, from day to day and from year to year.

The spiritual aspect of ageing

Besides the physical aspects discussed above, I think that ageing also has a spiritual dimension that deserves in-depth consideration, since mental and physical health are tightly correlated. I have observed that people have different attitudes and responses to their ageing, with all its manifestations, including decreasing physical functions and increasing chronic diseases. Some accept ageing with an inner serenity and grace and retain their love and passion for life, as represented by the elder members of the Shanghai Alumni Association Art Troupe of Tsinghua University. Others live in a constant state of anxiety about their bodies and health and are dejected, disoriented and frustrated about the changes in their lives. Those different attitudes are determined by people’s mental states and how they see life and death; those perspectives in turn influence their quality of life and the ageing process.

It is true that ageing is accompanied by the loss of physical functions and the agony of disease, but, from the perspective of mental development, old age is also a time of reaping what was sown during the previous stages of life—in childhood, in youth and in middle age. In our later years, we are blessed with a mature mind, ripe experience and deeper insights into life and the world, and we experience an inner calmness and serene joy that young people generally cannot attain. This idea is well captured in the Tang Dynasty poet Liu Yuxi’s poem about old age. In the first part, he describes the physical state of old age: ‘人谁不顾老，老去有谁怜。身疲带频减，发稀冠自偏。废书为惜眼，多灸为随年。’ (Who is not afraid of ageing? Who will pity you when you get old? As the body becomes thin, the belt tightens up. As the hair turns sparse, the hat is skewed. I give up reading books to protect my eyes. I often use moxibustion to preserve my health.) In the next section, he describes his true spiritual world in his old age: ‘经事还谙事，阅人如阅川。细思皆委矣，下此便翛然。莫道桑榆晚，为霞尚满天。’ (The more I experience, the more I understand. The more people I meet, the better I know humanity. After I think carefully about ageing, I feel lucky and carefree. Do not say it is late when the setting sun shines on the tips of mulberries and elms, since the glow still shimmers all over the sky.) This describes an ideal state of old age, a wonderful part of life, in which people could live happily with fulfilment and satisfaction.
We are living in the information age. Every day, we are flooded with various information, including information about advances in life sciences and new ideas about how life should be lived. Being thus bombarded with such knowledge, how should we approach ageing, this eternal topic of humanity, in particular? How should we navigate the old and new concepts? Modern knowledge of life is certainly new and illuminating, but do you agree that our time-honoured and vibrant traditional wisdom about life, or our traditional attitude towards life, also has its fair place in guiding us spiritually and taking care of us as we progress through our journey?

My dear older friends, let’s age and be happy!

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Author biography
Qide Han is an Academician of the Chinese Academy of Sciences, the Honorary President of the China Association for Science and Technology, and a Professor of the Health Science Center at Peking University. He is mainly engaged in medical research and research on the culture of science.