

Directions: There are 2 passages in this section. Each passage is followed by some questions or unfinished statements. For each of them there are four choices marked A), B), C) and D). You should decide on the best choice and mark the corresponding letter on **Answer Sheet 2** with a single line through the centre.

Passage One

Questions 46 to 50 are based on the following passage.

How can one person enjoy good health, while another person looks old before her time? Humans have been asking this question for thousands of years, and recently, it's becoming clearer and clearer to scientists that the differences between people's rates of aging lie in the complex interactions among genes, social relationships, environments and lifestyles. Even though you were born with a particular set of genes, the way you live can influence how they express themselves. Some lifestyle factors may even turn genes on or shut them off.

Deep within the genetic heart of all our cells are telomeres, or repeating segments of noncoding DNA that live at the ends of the chromosomes(染色体). They form caps at the ends of the chromosomes and keep the genetic material together. Shortening with each cell division, they help determine how fast a cell ages. When they become too short, the cell stops dividing altogether. This isn't the only reason a cell can age—there are other stresses on cells we don't yet understand very well—but short telomeres are one of the major reasons human cells grow old. We've devoted most of our careers to studying telomeres, and one extraordinary discovery from our labs is that telomeres can actually lengthen.

Scientists have learned that several thought patterns appear to be unhealthy for telomeres, and one of them is cynical hostility. Cynical hostility is defined by high anger and frequent thoughts that other people cannot be trusted. Someone with hostility doesn't just think, "I hate to stand in long lines"; they think, "Others deliberately sped up and beat me to my rightful position in the line!"—and then get violently agitated. People who score high on measures of cynical hostility tend to get more heart disease, metabolic disease and often die at younger ages. They also have shorter telomeres. In a study of British civil servants, men who scored high on measures of cynical hostility had shorter telomeres than men whose hostility scores were low. The most hostile men were 30% more likely to have short telomeres.

What this means: aging is a dynamic process that could possibly be accelerated or slowed—and, in some aspects, even reversed. To an extent, it has surprised us and the rest of the scientific community that telomeres do not simply carry out the commands issued by your genetic code. Your telomeres are listening to you. The foods you eat, your response to challenges, the amount of exercise you get, and many other factors appear to influence your telomeres and can prevent premature aging at the cellular level. One of the keys to enjoying good health is simply doing your part to foster healthy cell renewal.

46. What have scientists come to know better today?

- A) Why people age at different rates.
- B) How genes influence the aging process.
- C) How various genes express themselves in aging.
- D) Why people have long been concerned about aging.

47. Why are some lifestyle factors considered extremely important?
- A) They may shorten the process of cell division.
 - B) They may determine how genes function.
 - C) They may affect the lifespan of telomeres.
 - D) They may account for the stresses on cells.
48. What have the author and his colleagues discovered about telomeres?
- A) Their number affects the growth of cells.
 - B) Their length determines the quality of life.
 - C) Their shortening process can be reversed.
 - D) Their health impacts the division of cells.
49. What have scientists learned about cynical hostility?
- A) It may lead to confrontational thought patterns.
 - B) It may produce an adverse effect on telomeres.
 - C) It may cause people to lose their temper frequently.
 - D) It may stir up agitation among those in long lines.
50. What do we learn from the last paragraph about the process of aging?
- A) It may vary from individual to individual.
 - B) It challenges scientists to explore further.
 - C) It depends on one's genetic code.
 - D) It may be controlled to a degree.