

1. Mark your confusion.
2. Show evidence of a close reading.
3. Write a 1+ page reflection.

Here are two recent articles about your health:

The Average Life Expectancy Could Soon Reach Above 90 Years Old

Source: Maria Cheng, Time.com, February 22, 2017

While most people born in rich countries will live longer by 2030 — with women in South Korea projected to reach nearly 91 — Americans will continue to have one of the lowest life expectancies of any developed country, a new study predicts.

Scientists once thought an average life expectancy beyond 90 was impossible but medical advances combined with improved social programs are continuing to break barriers, including in countries where many people already live well into old age, according to the study's lead researcher, Majid Ezzati of Imperial College London.

"I can imagine that there is a limit, but we are still very far from it," he said. Ezzati estimated that people would eventually survive on average to at least 110 or 120 years. The longevity of South Korean women estimated in 2030 is due largely to investments in universal health care, he said. South Korea also led the list for men.

"It's basically the opposite of what we're doing in the West, where there's a lot of austerity and inequality," he said.

Ezzati and his co-authors used death and longevity trends to estimate life expectancy in 35 developed countries. The calculation is for a baby born in 2030. The study was published online Tuesday in the journal *Lancet*.

Women were ahead of men in all countries. Behind South Korea, women in France, Japan, Spain and Switzerland were projected to live until 88. For South Korea men, life expectancy is expected to reach 84. Next were Australia, Switzerland, Canada and the Netherlands at nearly 84.

At the bottom of the list: Macedonia for women at nearly 78, and Serbia for men at about 73.

While some genetic factors might explain the longevity in certain countries, social and environmental factors were probably more important, Ezzati said.

The study estimated that the U.S., which already lags behind other developed countries, will fall even further behind by 2030, when men and women are projected to live to 80 and 83. American women will fall to 27th out of 35 countries, from their current ranking of 25, and men will fall from 23rd to 26th.

The researchers note that among rich countries, the U.S. has the highest maternal and child death rates, homicide rate and is the only high-income country without comprehensive health care.

The researchers also predicted how much longer 65 year olds in 2030 would live; they guessed that among men, those in Canada would live the longest, surviving another 23 years. Among 65-year-old women in 2030, they estimated that South Koreans would live the longest, another 28 years.

Sitting Too Much Ages You by 8 Years

Source: Alice Park, Time.com, January 18, 2017

Sitting too much during the day has been linked to a host of diseases, from obesity to heart problems and diabetes, as well as early death. It's not hard to understand why: being inactive can contribute to weight gain, which in turn is a risk factor for heart attack, stroke, hypertension and unhealthy blood sugar levels.

On top of everything else, sitting has detrimental effects on cells at the biological level, according to a new report published in the *American Journal of Epidemiology*.

In the new study, scientists led by Aladdin Shadyab, a post-doctoral fellow in family medicine and public health at the University of California San Diego, traced sitting's impact on the chromosomes. They took blood samples from nearly 1,500 older women enrolled in the Women's Health Initiative, a long-term study of chronic diseases in post-menopausal women, and focused on the telomeres: the tips of the tightly packed DNA in every cell. Previous studies have found that as cells divide and age, they lose bits of the telomeres, so the length of this region can be a marker for how old a cell (and indirectly the person the cells belong to) is. The researchers compared telomere length to how much the women exercised, to see if physical activity affected aging.

Earlier studies have also looked at telomere length and exercise. But they relied on asking people to report on their activity levels, a process that's often inaccurate. Shadyab instead relied on more objective recordings of physical activity from accelerometers that the women wore for one week. Initially, he did not find any relationship between telomere length and physical activity levels. But when he focused on the women who did not meet the recommended 30 minutes of moderate-to-vigorous physical activity daily, he began to see some interesting trends.

Among women who didn't get the daily half hour of exercise, those who spent more time sedentary (about 10 hours or more) had shorter telomeres than those who spent less time sitting everyday. The amount of shortening added up to about eight years of aging, the scientists estimated—meaning that inactive women who spent more time sitting were about eight years older, on average, than those who were inactive but spent less time sedentary.

Women who got the recommended amount of daily exercise showed no association between how much time they spent sitting and their telomere length, suggesting that physical activity might counteract the shortening that occurs with aging.

“Our results suggest that the combination of being sedentary and not engaging in enough physical activity to prevent the telomeres from shortening leads to the shorter telomere length,” says Shadyab. “Women who did not meet the physical activity guideline and were sedentary for at least 10 hours a day were biologically older; their cells are aging faster than those of women who were less sedentary.”

Exactly how much physical activity is needed to negate the aging effects of sitting on the cells isn't clear yet. But Shadyab's study shows that sedentary behavior has potentially aging effects on the cells, and exercise may be one way to combat that aging process.

Possible Response Questions:

- Explain how the two articles may be related.
- Do you exercise enough? Why? Why not? Explain