Should We Live to 1,000?

By Editor Test *Mon, Dec 17, 2012*

Instead of trying to find a cure for age-related diseases like cancer, at least one scientist is working on a way to slow down the aging process and delay the onset of those maladies. This article first appeared at Project-Syndicate.com

On which problems should we focus research in medicine and the biological sciences? There is a strong argument for tackling the diseases that kill the most people—diseases like malaria, measles, and diarrhea, which kill millions in developing countries, but very few in the developed world.

Developed countries, however, devote most of their research funds to the diseases from which their citizens suffer, and that seems likely to continue for the foreseeable future. Given that constraint, which medical breakthrough would do the most to improve our lives?

If your first thought is “a cure for cancer” or “a cure for heart disease,” think again. Aubrey de Grey, Chief Science Officer of SENS Foundation and the world’s most prominent advocate of anti-aging research, argues that it makes no sense to spend the vast majority of our medical resources on trying to combat the diseases of aging without tackling aging itself. If we cure one of these diseases, those who would have died from it can expect to succumb to another in a few years. The benefit is therefore modest.

In developed countries, aging is the ultimate cause of 90% of all human deaths; thus, treating aging is a form of preventive medicine for all of the diseases of old age. Moreover, even before aging leads to our death, it reduces our capacity to enjoy our own lives and to contribute positively to the lives of others. So, instead of targeting specific diseases that are much more likely to occur when people have reached a certain age, wouldn’t a better strategy be to attempt to forestall or repair the damage done to our bodies by the aging process?

De Grey believes that even modest progress in this area over the coming decade could lead to a dramatic extension of the human lifespan. All we need to do is reach what he calls “longevity escape velocity” – that is, the point at which we can extend life sufficiently to allow time for further scientific progress to permit additional extensions, and thus further progress and greater longevity.

Speaking recently at Princeton University, de Grey said: “We don’t know how old the first person who will live to 150 is today, but the first person to live to 1,000 is almost certainly less than 20 years younger.”

What most attracts de Grey about this prospect is not living forever, but rather the extension of healthy, youthful life that would come with a degree of control over the process of aging. In developed countries, enabling those who are young or middle-aged to remain youthful longer would attenuate the looming demographic problem of an historically unprecedented proportion of the population reaching advanced age – and often becoming dependent on younger people.

On the other hand, we still need to pose the ethical question: Are we being selfish in seeking to extend our lives so dramatically? And, if we succeed, will the outcome be good for some but unfair to others?

People in rich countries already can expect to live about 30 years longer than people in the poorest countries. If we discover how to slow aging, we might have a world in which the poor majority must face death at a time when members of the rich minority are only one-tenth of the way through their expected lifespans.

That disparity is one reason to believe that overcoming aging will increase the stock of injustice in the world. Another is that if people continue to be born, while others do not die, the planet's population will increase at an even faster rate than it is now, which will likewise make life for some much worse than it would have been otherwise.

Whether we can overcome these objections depends on our degree of optimism about future technological and economic advances. De Grey's response to the first objection is that, while anti-aging treatment may be expensive initially, the price is likely to drop, as it has for so many other innovations, from computers to the drugs that prevent the development of AIDS. If the world can continue to develop economically and technologically, people will become wealthier, and, in the long run, anti-aging treatment will benefit everyone. So why not get started and make it a priority now?

As for the second objection, contrary to what most people assume, success in overcoming aging could itself give us breathing space to find solutions to the population problem, because it would also delay or eliminate menopause, enabling women to have their first children much later than they can now. If economic development continues, fertility rates in developing countries will fall, as they have in developed countries. In the end, technology, too, may help to overcome the population objection, by providing new sources of energy that do not increase our carbon footprint.

The population objection raises a deeper philosophical question. If our planet has a finite capacity to support human life, is it better to have fewer people living longer lives, or more people living shorter lives? One reason for thinking it better to have fewer people living longer lives is that only those who are born know what death deprives them of; those who do not exist cannot know what they are missing.

De Grey has set up SENS Foundation to promote research into anti-aging. By most standards, his fundraising efforts have been successful, for the foundation now has an annual budget of around $4 million. But that is still pitifully small by the standards of medical research foundations. De Grey might be mistaken, but if there is only a small chance that he is right, the huge pay-offs make anti-aging research a better bet than areas of medical research that are currently far better funded.