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FOUNTAIN OF YOUTH VS. SUPER SIZE ME

by Dr. Lawrence Segel, M.D.

Man's yearning for immortality is arguably a noble endeavour. What isn't arguable is the ever-increasing average life expectancy throughout the ages, that is, if one ignores the blip of Adam, Seth, Noah, Methuselah and their like living 930, 912, 950 and 969 years respectively. Cavemen had a life expectancy of 33 years, while the average Romans fared a little better at 40 years. By the nineteenth century, men were living well into their 50s. Women, for a long time didn't fare as well, because of the perils of pregnancy and childbirth. Yet, today they have leaped ahead of men by about seven or eight years. But can this life expanding trend continue indefinitely?

The genetic limiting lifespan of man has been postulated to be about 120 years. In the real world,



few individuals ever attain this gift. Animals have disease, accidents and predation to blame. Similarly, man has disease, accidents and predation, better known as homicide and war. Efforts to combat aging and extend life date back as far as 3500 BC. Legendary figures such as Alexander the Great and Ponce de Leon all got into the act by searching for the Fountain of Youth, and came up empty. However, there are areas in the world where humans purportedly live well into their 150s and 160s. These areas include Vilacumba, Ecuador; Hunza, Pakistan; and the Caucasus in Russia. Still, no freaks of longevity have ever been objectively documented, and there are reasons to doubt their existence. For

instance, the Caucasus was the birthplace of Stalin. Myths of super vitality flowed from this region like butter over popcorn to stroke Stalin's superman ego, not to mention a forged birth date was an excellent way to avoid conscription into the "longevity demoting" Russian army. The oldest well documented human was Jeanne Louise Calment who lived into her 120s, before passing a few years ago. Contrary to conventional wisdom, she smoked until 100, but gave it up once she couldn't light her own cigarettes.

The chance of becoming a centenarian from birth in an industrialized nation is approximately 1/20,000. But, the odds seem to be getting better. The number of people older than 100 years in the United States has been increasing by more than 7 percent per year since the 1950s. The number of U.S. centenarians is expected to reach almost one million by 2050. And if that isn't food for thought, the fastest growing group of drivers in Florida is over 85 years of age (Note to self: call travel agent today and rebook Florida trip to Mexico).

Throwing a monkey wrench into the idea of ever-increasing life expectancy is a population expert, Dr. Jay Olshansky. Olshansky, a demographer from the University of Chicago, gives new meaning to the term Super Size me. He believes that the trend toward longer life will level off in the coming years and may even turn downward. He blames the future downturn in life expectancy on the epidemic of obesity "creeping through all ages like a human tsunami," as well as the emergence of deadly infectious disease. It seems difficult to believe. Till now, things looked pretty rosy. A baby born today compared to one in 1900 lives on average about 30 years longer, thanks to modern medicine and public health improvements. Still, one cannot summarily discount Olshansky's prophecy. More than 30 percent of Americans are classified as obese. According to the Rand Corporation, if Americans keep getting fatter at current rates, by 2020, one in five health-care dollars will be spent on people aged 50-69 due to the complications of obesity. Also, one has only to look at regions of sub-Saharan Africa to see how

infectious diseases such as AIDS can dramatically alter population life expectancy. If you think industrialized countries are immune, think again. Russians now live seven years less since the collapse of the Soviet Union in 1991.

Olshansky believes the effect of obesity on longevity is currently equivalent to the overall effect of cancer mortality. In other words, if we found “the cure” for cancer, overall average life expectancy would increase by about 3-3.5 years. Further, he feels the effect of the obesity epidemic will double or triple in the future shortening lives by 7-12 years. As for infectious disease, higher rates of drug resistance, air travel, and an aging population will all take its toll. Just look at Asia where a highly virulent strain of influenza is raging through bird populations and killing scores of people. The World Health Organization has warned that it is only a matter of time before this lethal flu strain (H5N1) more easily spreads and infects humans. That development could spark a global flu catastrophe. And, need we remind you of Stanley Prusiner’s Nobel prizewinning prionic disease discovery, best exemplified as “Mad Cow Disease” to the lay public.

For those of you with a sporting interest in aging, the Methuselah Mouse Challenge with a prize of

\$10,000 is available for anyone gifted or crazy enough to vie for developing the longest living laboratory mouse. Typically, a mouse lives about two years. Currently, the record is 1,819 days held by a mouse named GHR-KO11C. Sadly, I must report that he is no longer with us, but will never be forgotten. In the interest of fairness, I have disqualified myself from the competition since I am owned by a black feline who has a particular fondness for rodent flesh. Olshansky, himself, has placed a bet on his predictions. He has wagered \$500 million that no 150-year-old person will be alive and in good health by the year 2150. The bet is in the form of a \$150 endowment to a trust fund that with the magic of compound interest will be worth millions in about 150 years.

So, will medical technology such as organ replacement, gene manipulation and cloning continue to lead to boundless increases in longevity? Or, will man’s predilection for an unhealthy lifestyle, destruction of the environment and emerging infectious disease outpace his science? I’ll let you know in 50 years, but don’t bet on it! ✱



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