



Never Say Die

Want to increase your lifespan? Scientists and longevity experts are proposing ways to add decades or even centuries to a person's life. Are their claims fantasy - or your future?

By Nick Kolakowski

"Okay, but do it by e-mail," said Dr. Roy Walford when recently approached by "Hi" for an interview. Although affected with Lou Gehrig's disease, a degenerative nerve disorder, the 79-year-old pathology professor at the UCLA School of Medicine was still actively pursuing research into increasing human life spans. He felt that a calorie-restricted diet was the possible secret to longevity, and that by following it he would live much longer.

A few days later he was dead.

Therein lies the central problem of human longevity research, which aims to conquer aging and even death: there are no guarantees. You can eat right and exercise to the point where you're already planning your 100th birthday party, only to step outside and promptly get run down by a runaway truck. Some scientists, however, think that, accidents aside, there's a chance that the youth of today could live far longer than people just a few decades ago - and they're pursuing the science to make extreme longevity a reality.

Dr. Leonid Gavrilov, a professor and researcher at the Center on Aging at the National Research Center at the University of Chicago, is relatively optimistic about the latest advances. "Many specialists in aging are revising their traditional view that aging will remain essentially immutable for many decades to come," he says. "We are at an unprecedented turning point."

One of the more interesting advances in longevity research is in the area of caloric restriction, the area in which Dr. Walford had been a pioneer. "Studies on laboratory animals found that caloric restriction increases lifespan even if implemented at older ages," says Dr. Gavrilov.

When put on the diet, which cuts daily calories by 30 percent 19-month-old mice lived up to 42 percent longer than their littermates. Mice on the diet since birth lived almost twice as long as normal mice, even if they never achieved full size. The question is, can these results be applied to humans?

Before his death, Dr. Walford advocated a diet that cut daily calories by as much as 50 percent. "Even 10 percent restriction will lead to a mild increase in life span and other benefits," he said in an online forum with pbs.org. A recent medical study by the Washington University School of Medicine in St. Louis shows that people who went on calorie-restricted diets found that their cholesterol and blood pressure plummeted.

But it will probably be years or even decades before it's known if the diet truly extends life spans.



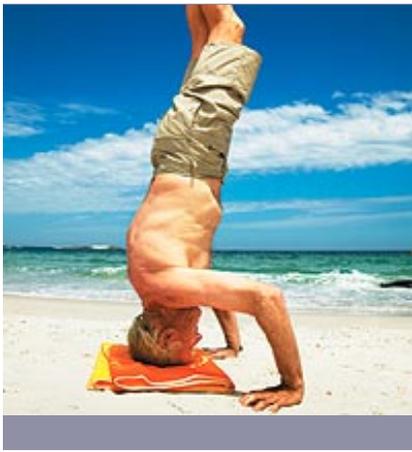
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One thing is for certain: life spans are lengthening. Life expectancy from birth in the United States has gone up from around 48 years in 1900 to 77.4 years in 2002. But that's nothing compared to what's to come, believes Aubrey de Grey, a theoretical biologist at the University of Cambridge. He thinks that someone born in 2025 can expect to live 5,000 years.

"If you're young enough, and we fix human aging soon enough, then we will be able to extend your lifetime to 150 years," he said in an interview with MIT's Technology Review. "Then basically we're going to be able to get you out to infinity, depending on your not walking in front of buses and stuff like that."

That's the stuff of science fiction, counters Dr. S. Jay Olshansky, a professor at the University of Illinois at Chicago's School of Public Health and prominent researcher of human aging and mortality. "Five thousand is outside the realm of rational thinking," he says. "The fact is, the vast majority of all humans die before the age of 100. That's been the case throughout human history. The existence of a wall is no more evident than that death is all around us."

By 'wall,' Dr. Olshansky means that people are programmed for growth, development, and reproduction, and that the inadvertent byproduct of those programs is aging. In other words, people simply aren't built to last.

Most scientists realize this. "Then there are some scientists like Aubrey," Olshansky says. "I think it's being done for the publicity."

Whether or not any of these anti-aging efforts eventually bear fruit, if you want to improve your chances of living longer, doctors have a few unsurprising recommendations: quit smoking, get exercise, eat well, and avoid excess weight and accidents. Even then, there's no guarantee that you'll join the ranks of centenarians.

Perhaps the biggest factor in living to 100 is your genes. "It's true that children of long-lived parents tend to live longer on average," says Dr. Gavrilov of the University of Chicago. "This is particularly true when a parent lives longer than 85 years." For every decade that your parents live beyond 85 years, you could reasonably expect to gain an additional two to four years of life span.

Dr. Olshansky would be happy if we could add seven more years to the average life span. "That'd be a major medical miracle. Average life span will continue to inch up, but once it gets up into the 80s, it gets very difficult to move it further." That's why the life expectancy of people on Okinawa, a Japanese island known for its residents' exceptional longevity, has largely leveled off in recent years.

The current record-holder for the world's oldest person is Frenchwoman Jeanne Calment, who died in 1997 at the age of 122. Some sources have claimed that Pasikhat Dzhukalayeva, a woman living in Chechnya, is at least that age or older, but there's no reliable documentation.

Whether or not anyone alive today will celebrate New Year's on 2100 is very much open to debate. The future may hold no guarantees, but as scientists have shown, taking care of yourself now will let you live a healthier and better life.



▶ **"What's the average lifespan of people around the world, by country?"**
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