

# The secrets to aging well? Fewer calories, more smiling



**CHRISTIAAN LEEUWENBURGH, Ph.D.**

By Ann Griswold

Some things get better with age. The human body isn't one of them. But it doesn't have to be that way, says Christiaan Leeuwenburgh, Ph.D., chief of the division of biology of aging in UF's Institute on Aging. Leeuwenburgh investigates the problem of age-related muscle loss, or sarcopenia, in a quest to find new solutions to an old problem. An avid surfer, cyclist and a former All-American pole vault champion, Leeuwenburgh can't help but take his findings seriously — his future depends on it. Here's what he has to say about health, longevity and the art of aging gracefully.

Aubrey de Grey, a Cambridge University geneticist, has predicted that the first person to live past age 1,000 is alive right now. Do you think that's possible?

(Laughs) Yeah, we know de Grey; we know what he said. He has some good aspects, but he's a little extreme. I always say we need those extremes, but we also need basic scientists to balance them out. People are making huge progress in the science of aging, but I think de Grey's theory is a little far-fetched.

What do you consider the secret to longevity? Dieting? Exercise? A positive attitude?

I think those three key concepts have been helpful in increasing health span. That's more important than increasing the maximum life span, which is what Aubrey de Grey is trying to do. Health span is more relevant. If you take the French lady, Jeanne Calment, she was 122 when she died. She obviously had a very positive attitude; you could see it from her smile in her pictures. She was modestly active, she exercised past the age of 100 and she was very independent. And she looked like she had a good French diet and enjoyed a nice glass of wine.

Your research shows low-calorie diets extend life by reducing waste in older cells. But American diets are expanding and our life spans continue to increase. How long do you suppose we can go on like this?

You're right on the money. We can't keep doing this. Eventually, it's going to catch up. People love food. I love food. But their intake is probably 50 to 60 percent above calorie requirements for that day. All of the studies on longevity show you need to restrict the diets of animals anywhere from 10 to 40 percent in a very controlled environment and then you see an extension to longevity.

So the answer is yes, people are living longer, but people are also getting more obese. Some people predict there's going to be a decrease in longevity. This might also impact future generations, when children will have similar habits and live very indoor lifestyles. People need to enjoy nature and interact with the outdoors. That is disappearing, and that's the saddest aspect.

Your findings suggest that oxidation within our cells exacerbates the aging process. Does that mean we should start eating more antioxidant-laden foods, such as dark chocolate?

There are two ways to think about it. One is to boost your system with antioxidants and try to alleviate the oxidative stress and apoptosis that accumulates. But I think it's much more efficient to think in the other direction (by preventing the problem before it starts). It's kind of like you have a fire in your cells. You can't just splash a couple drops of water on it and expect to extinguish it. You really need to attack that internal fire. It comes down to people making the right choices. Have a piece of fruit and go for periods of fasting a few times a week. If you start doing that to begin with, then yes, some additional chocolate and herbs will be beneficial.

What steps have you taken to extend the span of your own life?

I enjoy a lot of outdoor activities, like mountain biking and running. And it's important to be consistent in your nutritional intake. Again, you're getting fooled because every meal has 50 percent too many calories. So you've got to modify that. You've got to be strong, and sometimes you've simply got to skip a meal and substitute a piece of fruit or juice for the hunger you're experiencing. **P**