



By Dr. Walter M. Bortz, II, MD

We wrote an article in the *Journal of Gerontology* in 1996 with "How Fast Do We Age?" as its title. Our design was obvious. We surveyed all the records that we could find about the performance in the athletic events--running, biking, rowing and swimming. We found adequate information for males aged 20 to 70. There were not enough records for women or other ages to include them.

When we lined up these results of the four events, we discovered that the rate of decline from ages 20 to 70 was the same for all four events, ½% per year. Critically, this rate of 0.5% per year is exactly the same as the rate of decline of our most vital biomarker, VO2 max that directly represents the body's ability to extract oxygen from the atmosphere and convey it to all the cells where it is used to combust the foodstuffs.

We conclude, therefore, that the **0.5% decline** per year represents the final answer to this simple question.

BUT, and this is the big BUT, this number represents the figure for **the fittest** people, the record holders. If you look at how rapidly the athletic records and VO2 Max decline in unfit people, you get a totally different answer. For unfit people, maybe **5% to 10%** per year.

Now if you start to deduct 0.5% per year from the maximum 100% capacity you see what a shallow price aging per se exacts on the person's capacity.

At 84 years of age, I'm no longer 24. But I am fit. So my performance now 60 years after 24 years of age times 0.5% per year yields the understanding that my capacity due to age is only 70% of my 24 year old capacity. Yet this is still adequate to sustain marathon efforts.

Good news and bad news. But it surely puts fitness in the prime slot of determining performance as we age and not the calendar.

Secrets of Longevity



Dr. Walter M. Bortz, II is one of America's most distinguished scientific experts on healthy aging and longevity. He spent his entire career at Stanford University where he holds the position of Clinical Associate Professor of Medicine. An active marathoner, he has written seven books including "Dare to Be 100" and "Next Medicine." To learn more, visit walterbortz.com or email: DRBortz@aol.com.

Editor's Note: For more insight on how the body ages over time, Dr. Walter M. Bortz has written an excellent book on the topic: "Dare To Be 100." Available from Amazon.com.