



**Survival of the fittest-participation in the tour de france significantly enhances longevity**

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**Introduction:** It is widely held that moderate exercise is a healthy practice but exhaustive exercise is not. We hypothesized that exhaustive exercise is bad and might shorten life span.

**Material and methods:** We focused on the three countries with the largest contingent of Tour de France participants and compared the longevity of their cyclists with that of the average population in their respective countries. Of the 1229 cyclists who have run the Tour de France between the years 1930 and 1964, 834 came from France (n=465), Italy (n=196) and Belgium (n=173). The remainder came from a large number of countries, each represented by only a small number of cyclists. Dates of birth and death and the percentage of survivors for each age, on December 31st 2007, were recorded. These were plotted and compared with the calculated values for the pooled general population of France, Italy and Belgium for the appropriate age cohorts.

**Results:** The major finding is that repeated grueling exercise prolongs life span. We found a very significant increase in longevity (17%) of the cyclists when compared with the general population. The age at which 50% of the general population died was 73.5 vs 81.5 years in Tour de France participants, i.e. 11% increase.

**Conclusions:** Our findings underpin the importance of exercising without the fear that becoming exhausted might be bad for one's health. This study shows that elite athletes exhibit increased life span and runs counter to previous beliefs that the gruelling exercise associated with training and competition has deleterious effects.

**Key words:** Tour de France, Life span, Training.