

Mean Age of Death, Longevity and Incidence of Violent Death Among Various Elite Sportsmen Categories

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Editorial

There is common opinion that moderate intensity physical activity during leisure time is associated with reduced mortality in general population [1,2]. During last years considerable attention was paid to the athlete life span and longevity [2-7]. It was shown that some elite sportsmen live longer however another sportsman live shortly than people does not involved big sport. These contradictions could be depending on variability of material for investigations of parameters of life span, type of selection groups of different sport and many other factors. 65% to 70% of rate of aging and longevity of humans determined by social and economic conditions and life style [1] whereas genetic factors have an important but significantly smaller impact on aging [8]. Lorry drivers, miners, seamen, and some other professionals have a feature of accelerated aging and increased risk of premature death [6]. At the same time, persons which received public signs of their success or excellence from a state or from professional societies (Nobel prize winners, Oscar or popular competitions winners, members of national academies, etc) live longer than ordinary citizens [8-14].

We analyzed the data on age of death mentioned in Wikipedia 57914 males professionally involved in the 25 of sport disciplines (Table 1). There is significant difference in the mean age of death (MAD) between some of them. Thus, maximum MAD was in yachtsmen (sailors) (77.1 ± 0.88 years) and minimal –in auto- and moto-sportsmen (62.0 ± 0.71 years), that was 15.1 years difference ($p < 0.001$).

Short living sportsmen included the into 4th quartile of MAD was between 62 and 68 years and were presented by auto- and motorsport, climbing, wrestling, heavy athletics, football (soccer), and, surprisingly, chess players. It could be suggested that these extremely physically and psychologically hard sport disciplines are responsible for more short life span. However, among of sportsmen related to the second and the third quartiles (68 to 71 years and 71 to 73 years) were observed such energy consuming sport disciplines as the ice hockey, American football, bike, rugby, rowing, basketball, gymnastics, tennis. The long-living sportsmen, related to the 1st quartile (73 to 77 years) were involved into “aristocratic” sports (sailing, fencing, equestrian) and also into so hard sports as skis and swimming. Chase et al. [3] studied mortality in 40,547 men age 20-90 years who completed a health examination during 1971-2003. Total of 3,386 death occurred during 543,330 man-years of observation. After adjustment for age, body-

mass index, smoking status, alcohol intake, and family history of cardiovascular disease, swimmers had 53%, 50%, and 49% lower all-cause mortality risk than did men who were sedentary, walkers, or runners, respectively ($p < 0.05$ for each).

It is worthy of note that the sportsmen of the 1st quartile more frequently survive the age of 90-years –14,56% (10% to 19%) than the 2nd quartile –11,26% (9% to 14%) or the 3rd –7,11% (5% to 15%) and 4th – 4,70% (4% to 10%). Practically, the same ratio was observed for sportsmen survived 100 and more years: 1,11%; 0,79%; 0,33% and 0,17% in 1st to 4th quartiles (Table 1).

We have analyzed the incidence of violent death among persons involved into various sports.

Incidence of suicides was maximal among tennis players (12.0%) and minimal (0.08%) in rowing sportsmen. The rate of accident-dependent death was maximal among climbing and auto-moto-sportsmen (34.3% and 30.27%) that correlate with high risk of traumas in these sports. 14.7% of accident death was among skis sportsmen, 9.88% of accident death was among bike riders, and 8.29% at equestrian sports and minimal-among fields hockey (1.00) and cricket players (1.13).

In comprehensive review on mortality and longevity in elite athletes [6] it was shown significant differences depending on sport specialty. An important challenge to mortality research in sport is the lack of data on the health behavior of athletes post retirement. Teramoto and Bugnum [2] found a trend towards endurance (e.g., long-distance runners) and mixed-sport (e.g. soccer) athletes having more favorable survival outcomes relative to power sport (e.g. weightlifters) athletes and the general population. Our preliminary analysis of mean age of death, longevity and incidence of violent death (suicide and accident) shows that their variability depends not only on energy flow and intensity but also on psychological factors which are significant for success and victory in each sport discipline. We are open for collaboration in analyses of our database on sportsmen involved in various sport.

Sport category	N	Mean age of death (years)	Persons who lived 90+ years		Persons who lived 100+ years		Suicides		Accidents	
			Abs.	%	Abs.	%	Abs.	%	Abs.	%
Sailing	292	77.1 ± 0.88	55	18.84	10	3.42	4	1.37	14	4.79
Fencing	319	74.9 ± 0.85	44	13.79	1	0.31	3	0.94	7	2.19
Skis	336	74.6 ± 0.87	53	15.77	2	0.60	1	0.30	14	4.17
Shooting	340	73.9 ± 0.84	50	14.71	2	0.59	5	1.47	9	2.65
Equestrian	434	73.0 ± 0.89	72	16.59	5	1.15	11	2.53	36	8.29
Swimming	525	72.8 ± 0.70	53	10.10	5	0.95	4	0.76	16	3.05
Athletics	1509	72.7 ± 0.45	225	14.91	22	1.46	22	1.46	59	3.91
Rugby	3074	72.5 ± 0.30	318	10.34	5	0.16	32	1.04	59	1.92
Golf	679	71.6 ± 0.61	75	11.05	5	0.74	8	1.18	9	1.33
Gymnastics	445	71.6 ± 0.79	47	10.56	11	2.47	5	1.12	6	1.35
Field hockey	498	71.6 ± 0.72	46	9.24	2	0.40	3	0.60	5	1.00
Rowing	1275	70.9 ± 0.49	131	10.27	4	0.31	1	0.08	27	2.12
Basketball	2026	70.8 ± 0.38	205	10.12	11	0.54	19	0.94	58	2.86
Tennis	653	70.6 ± 0.70	79	12.10	8	1.23	11	1.68	23	3.52
Bike	749	70.3 ± 0.74	112	14.95	5	0.67	15	2.00	74	9.88
American football	5151	70.2 ± 0.23	395	7.67	18	0.35	46	0.89	152	2.95
Baseball	9810	68.2 ± 0.17	650	6.63	30	0.31	80	0.82	210	2.14
Cricket	8614	68.1 ± 0.18	481	5.58	18	0.21	35	0.41	118	1.37
Ice hockey	2454	67.9 ± 0.35	150	6.11	3	0.12	24	0.98	120	4.89
Chess	1250	67.3 ± 0.45	69	5.52	3	0.24	11	0.88	24	1.92
Football (soccer)	14586	67.1 ± 0.14	582	3.99	16	0.11	94	0.64	512	3.51
Heavy athletics	394	64.6 ± 0.96	21	5.33	2	0.51	3	0.76	18	4.57
Wrestling	1119	63.4 ± 0.56	57	5.09	2	0.18	39	3.49	60	5.36
Climbing	414	63.0 ± 1.04	41	9.90	5	1.21	6	1.45	142	34.30
Auto and Motorsport	968	62.0 ± 0.71	75	7.75	4	0.41	21	2.17	293	30.27

Table 1: Variation in mean age of death of sportsmen, rate of long-livers sportsmen and incidence of violence death among them.

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