

TRACK COACH

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**SPRING
2011**



Running Form

What Type Of "Athletic DNA" Do Elite Decathletes Possess?

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Note that this study does not include the complete 2010 season.

"There must be 50 ways to score a decathlon" announced a headline in a *Track & Field News* article back in 1976, on Bruce Jenner's decathlon score controversy. Indeed, decathletes have different ways of scoring points in elite performances, according to their "Athletic DNA." That term refers to the physique of the athlete and his level of excellence in each of the ten decathlon events.

Has the average "Athletic DNA" of elite decathletes changed over the years?

To answer that we have to define first who is an "elite decathlete." Due to the different scoring tables which have been adopted by the IAAF since 1912, high scorers of the past are considered mediocre performers nowadays. As cruel as it may be, the 8,000 points barrier, according to the contemporary

(1985) tables, defines an elite decathlete. Sadly, athletic figures like 1960 Olympic champ Rafer Johnson and 1964 Olympic winner Willi Holdorf are left on the sidelines in this regard, but the definition is one we'll adhere to.

As a matter of fact, the first performance of 8000-plus is Phil Mulkey's 8,709 pts. (1950 tables) back in 1961, worth only 8,050 pts. on the 1985 tables. C.K Yang's WR, set in Walnut in 1963 – 9,121 points equals 8,010 pts. on the current scale. Since Mulkey's day, more than 300 decathletes have scored 8,000 points or more.

I separated the 49 years into 8 periods for analysis: 1961-1974 (14 decathletes topped 8,000 points); 1975-1979 (13); 1980-1984 (54); 1985-1989 (56); 1990-1994 (32); 1995-1999 (54); 2000-2004 (46) and 2005-2010 (56 decathletes).

Did the physique of the elite decathletes change over the years?

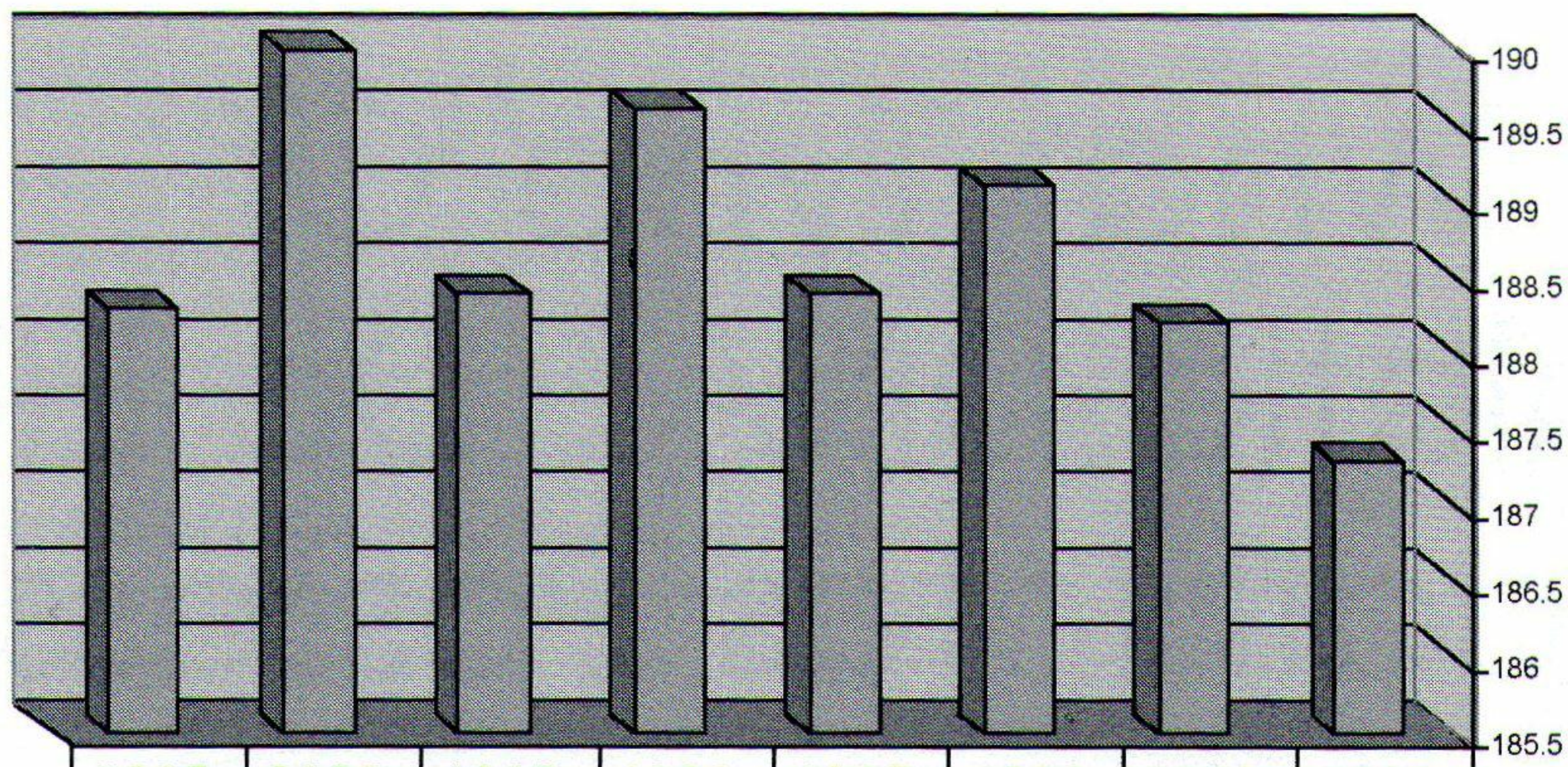
According to the registered height and weight of each athlete, we get the following data: Charts 1 and 2 show that while the height of the decathletes remain roughly the same (with minor ups and downs), elite decathletes tend to get slimmer.

In what age do decathletes reach their peak performance?

Chart 3 tells us that decathletes reach their best performance earlier in recent years than they did 15-20 years ago.

What specialties among the runs, jumps and throws, became more frequent in the latter periods?

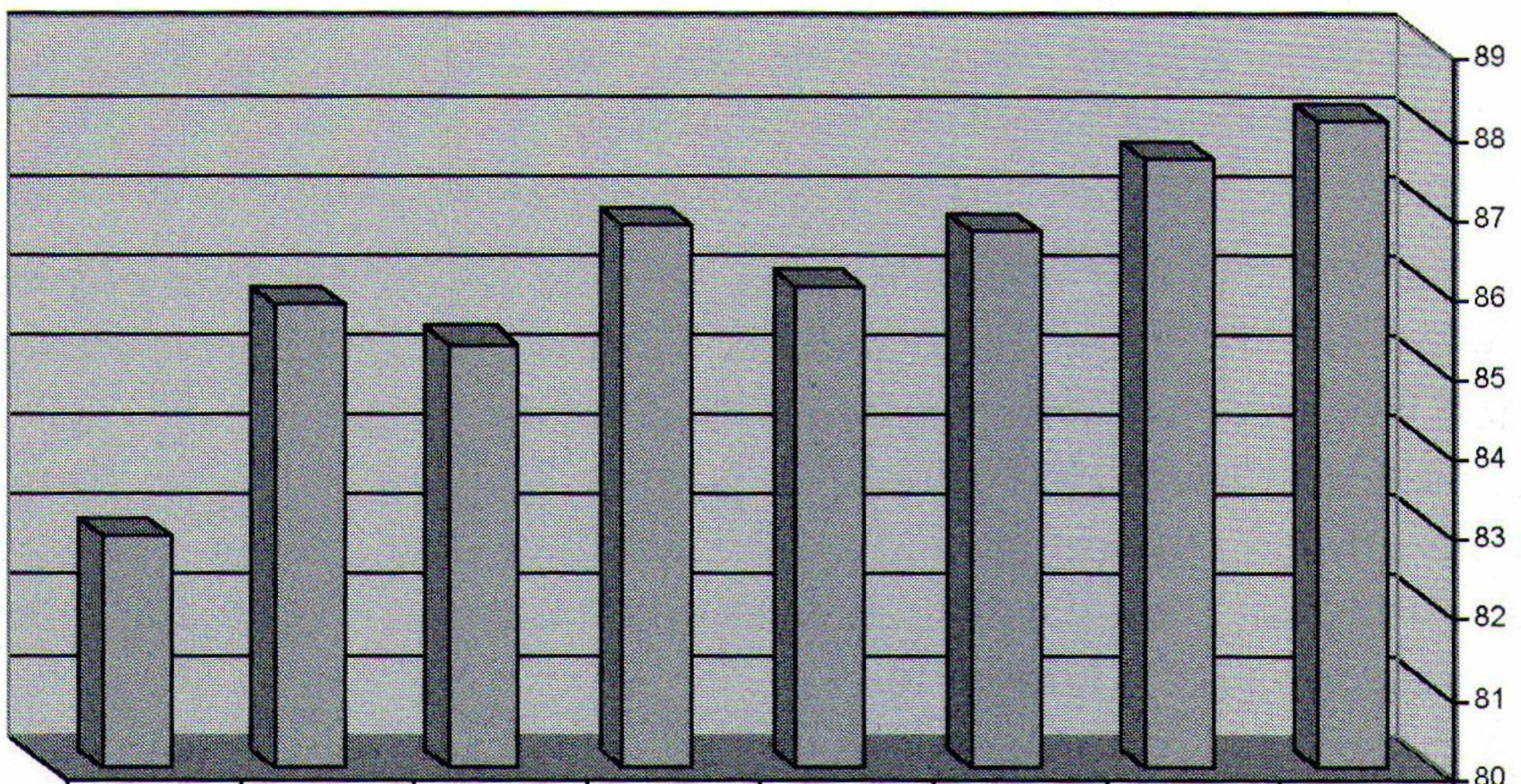
By Elchanan Bar-Lev, Ph.D., Israel



■ Ave. Ht.

	2005-2010	2000-2004	1995-1999	1990-1994	1985-1989	1980-1984	1975-1979	1961-1974
■ Ave. Ht.	188.3	190	188.4	189.6	188.4	189.1	188.2	187.3

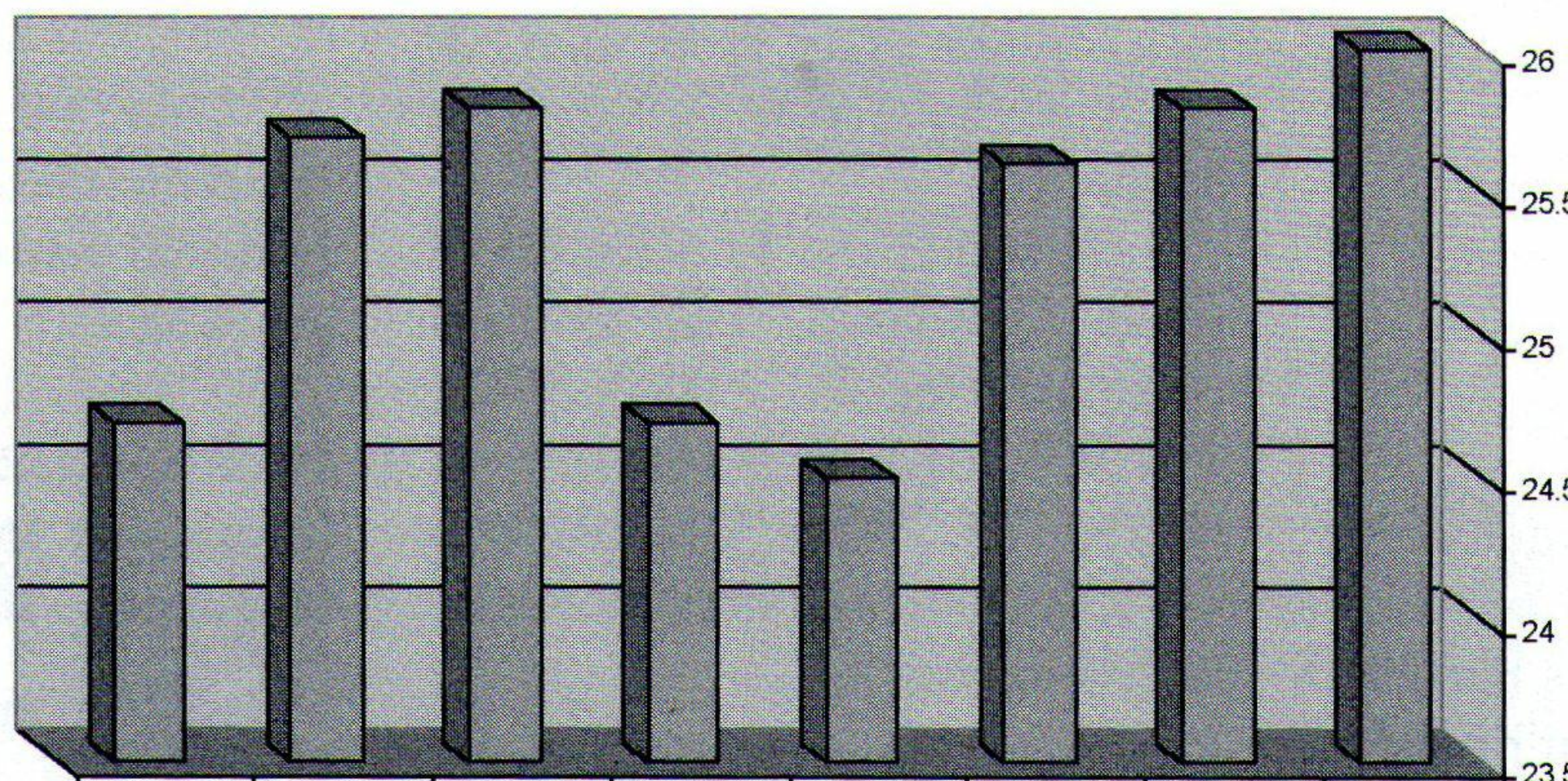
Chart 1: Average height of 8,000-pt. decathletes according to periods



■ Ave. Wt.

	2005-2010	2000-2004	1995-1999	1990-1994	1985-1989	1980-1984	1975-1979	1961-1974
■ Ave. Wt.	82.9	85.8	85.3	86.8	86	86.7	87.6	88.1

Chart 2: Average weight according to periods



■ Ave. Age

	2005-2010	2000-2004	1995-1999	1990-1994	1985-1989	1980-1984	1975-1979	1961-1974
■ Ave. Age	24.7	25.7	25.8	24.7	24.5	25.6	25.8	26

Chart 3: Average age according to periods

Table 1: Types of decathletes according to periods

Period/Type	Runner	Jumper*	Thrower	Run+ Jump	Run+ Throw	Jump+ Throw	All-Around	Totals-periods
1961-1974	1	1	3	2	6	1	0	14
1975-1979	1	1	4	0	5	1	1	13
1980-1984	9	4	15	6	12	5	3	54
1985-1989	9	7	8	9	9	13	1	56
1990-1994	6	4	2	9	2	9	0	32
1995-1999	6	14	4	14	4	11	1	54
2000-2004	7	8	6	13	5	3	4	46
2005-2010	9	7	11	12	8	8	1	56
Totals-Types	48	46	53	65	51	51	11	325

*- common type in each period is highlighted.

Table 2: Current U.S. athletes and their athletic types

Name	Points	Year set	Age	Height	Weight	% Runs	% Jumps	% Throws	Type
						Decathletes' % average			
						40.80	31.24	27.96	
Bryan Clay	8832	2008	28	182	79	39.74	30.53	29.73	Thrower
Trey Hardee	8790	2009	25	196	86	39.91	31.66	28.43	Jumper+ Thrower
Ashton Eaton	8457	2010	22	185	86	45.11	31.64	23.25	Runner+ Jumper
Jake Arnold	8253	2010	26	191	79	40.41	30.87	28.72	Thrower
Mustafa Abdur-Rahim	8175	2008	26	175	85	43.83	29.25	26.92	Runner
Chris Helwick	8143	2008	23	193	82	40.10	31.45	28.45	Jumper+ Thrower
Chris Randolph	8066	2008	24	191	88	40.26	32.8	26.94	Jumper
Jangy Addy	8025	2008	23	188	84	41.53	29.41	29.06	Runner+ Thrower

pics he was just a young athlete who had just won the British decathlon title. His talent and lack of experience was evident, as he stormed to a 10.79 100m and 48.15 400m, but knocked down most of the hurdles in the 110H to clock only 15.98. Afterward he concentrated on his weak events, reaching in the apex of his career a result of 14.04 in the hurdles, almost two full seconds faster. He improved every event in a balanced manner, to break the world record four times, and to win many major championships.

A similar program can lead any talented decathlete to excel.



Daley Thompson at Götzis in 1982.