ANNOTATION

WORLD RECORDS IN RUNNING AND SWIMMING — RE-EVALUATION OF DATA

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A comparative analysis of rates of decline of velocities in running and swimming undertaken after the 1976 Olympic Games yielded the results summarised in Table I and Fig. 1. The then existing world records served as bases for the computations. Professor Åstrand of Stockholm and Professor Schuster of Leipzig raised with us the question whether the time difference between the 100 m sprint record (9.9 seconds) and the 100 m free style swimming record (49.9 seconds) justifies the allocation to both the same 100% reference level. They suggested that the data be re-evaluated taking the 400 m running world record of 43.8 seconds instead of the 100 m sprint record as equivalent to the 100 m free style swimming record. We have complied with their proposal and present the results of the calculation in Fig. 2. The difference between the rates of decline of running and swimming speeds is smaller, but does not necessitate reformulation of the hypothesis presented in our original communication.

TABLE I
Running and Swimming World Records after Montreal 1976

	DISTANCE METERS	MEN			WOMEN		
		NAME-YEAR	RECORD TIME	% MAXIMUM VELOCITY	NAME-YEAR	RECORD TIME	% MAXIMUM VELOCITY
RUN	100	J. HINES (1968)	9.95	100.00	A. RICHTER (1976)	11.01	100.00
	200	T. SMITH (1968)	19.80	100.51	I. SZEWINSKA (1974)	22.21	99.14
	400	L. EVANS (1968)	43.86	90.74	I. SZEWINSKA (1976)	49.29	89.35
	800	A. JUANTORENA (1976)	1:43.50	76.91	F. KAZANKINA (1976)	1:54.90	76.66
	1500	F. BAYI (1974)	3:32.20	70.33	F. KAZANKINA (1976)	3:56.00	69.98
	3000	B. FOSTER (1974)	7:35.20	65.58	L. BRAGINA (1975)	8:27.12	65.13
	5000	E. PUTTEMANS (1972)	13:13.00	62.74			
	10000	D. BEDFORD (1973)	27:30.80	60.27	C. VAHLENSIECK (1975)	34:01.40	53.93
	42000	D. CLAYTON (1969)	2:08:34.	54.17	J. HANSEN (1975)	2:38:19.	48.68
SWIM	100	J. MONTGOMERY (1976)	49.99	100.00	K. ENDER (1976)	55.65	100.00
	200	B. FURNISS (1976)	1:50.29	90.65	K. ENDER (1976)	1:59.26	93.33
	400	B. GOODELL (1976)	3:51.93	90.10	P. THUMER (1976)	4:09.89	89.08
	800	S. HOLLAND (1976)	8:02.91	82.81	P. THUMER (1976)	8:37.14	86.09
	1500	B. GOODELL (1976)	15:02.40	83.10	J. TURALL (1974)	16:33.94	83.98

REFERENCE

Jokl, P. and Jokl, E., 1976, Running and Swimming World Records, *Brit. Journ. Sports Med.*, 10, 203-208.