



Sports Medical Exercise Testing Dr. John Doe, M.D., PhD

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San Diego 30.09.2012

Performance diagnostics for Moe, Martha, b. 12.02.1978

On 30.09.2012, a multi-stage test was performed on the treadmill (1.5% slope). Default load step duration was 3 minutes. The final load step was held by 1:23 min.

Running speed (km/h)	Heart rate (bpm)	Lactate (mmol/L)	Energy expenditure (kcal/h)
(Rest)	55	2,15	-
6,0	112	1,25	376
8,0	124	1,68	502
10,0	129	1,99	627
12,0	135	3,58	752
14,0	141	6,87	878
14,9	148	9,54	935

The following results for training and performance diagnostics has been calculated:

Performance on the so-called individual anaerobic threshold (P(IAT)) **11,59 km/h (3,22 m/s)**

1,000 m time at P(IAT):

5:10 min

Heart rate at the IAT:

133/min

Maximal oxygen uptake (VO₂max, calculated):

3,12 L/min

Rel. maximal oxygen uptake (VO₂max, calculated) :

47,3 ml/min/kg body weight

P(IAT) (per kg) corresponds to the 46th percentile (i.e. 46 percent are behind) within all female middle and long distance runners of your age group and the 91th percentile within the entire female age group.

Individual calculations for training intensities*:

Type of training		Running speed	per 1,000 m	Heart rate	
Regenerative and long jog	LSD/RER	below 8.6 km/h	slower than 7:00 min	below 122 bpm	<input type="checkbox"/>
Medium endurance run	MER	8.6 - 11.0 km/h	7:00 min - 5:26 min	123 - 131 bpm	<input type="checkbox"/>
Speed endurance run	SER	11.0 - 11.7 km/h	5:26 min - 5:07 min	132 - 133 bpm	<input type="checkbox"/>
Extensive interval training	EIT	11.5 - 12.4 km/h	5:13 min - 4:50 min	133 - 135 bpm	<input type="checkbox"/>

*) Recommendations for training heart rates can potentially variate with external conditions (<http://ergonizer.de/en/herzfrequenz>)

Additional information about the body composition:

Body height (cm) / Body weight (kg):
Body-Mass-Index (BMI):

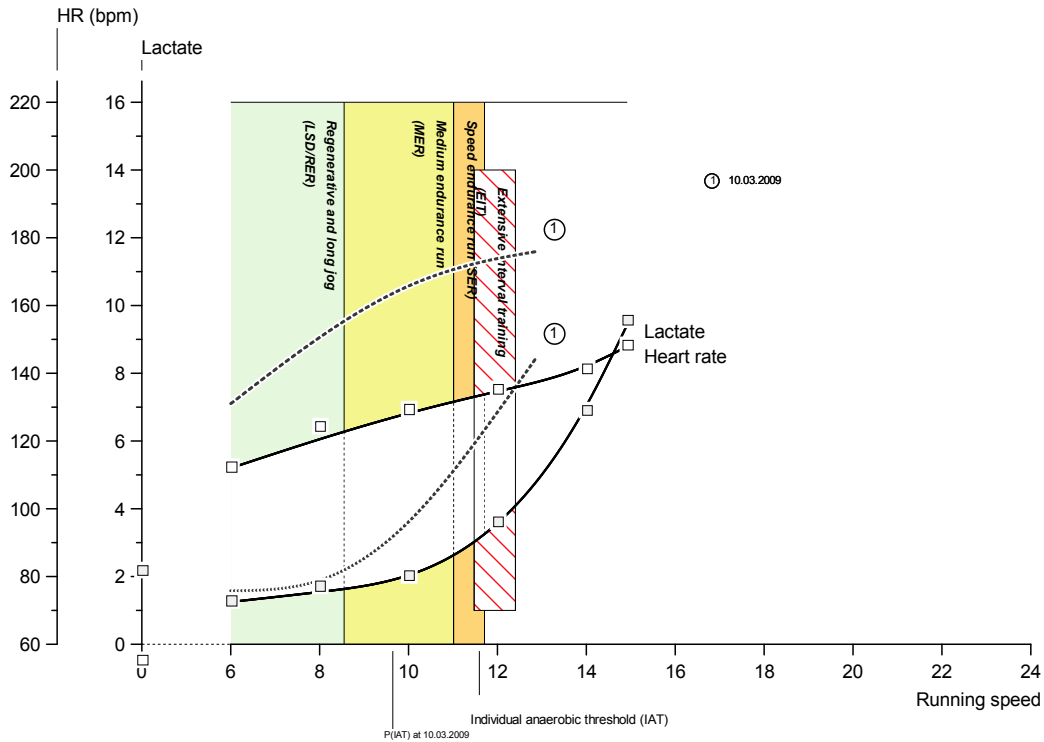
167.0 cm / 66.0 kg
23.7

Performance diagnostics

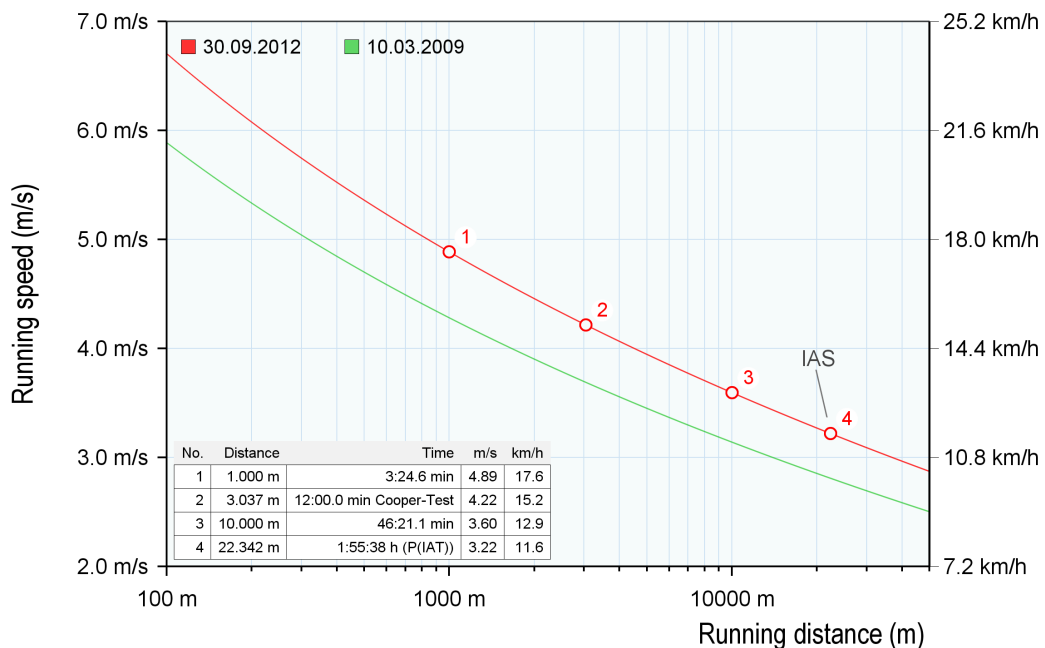


John Doe, M.D.
 Running (treadmill) on 30.09.2012
 Analysis for Moe, Martha b. 12.02.1978
 (Athletics, Marathon)
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Lactate-performance-curve:



Critical-Power Forecast:



Supplemental data

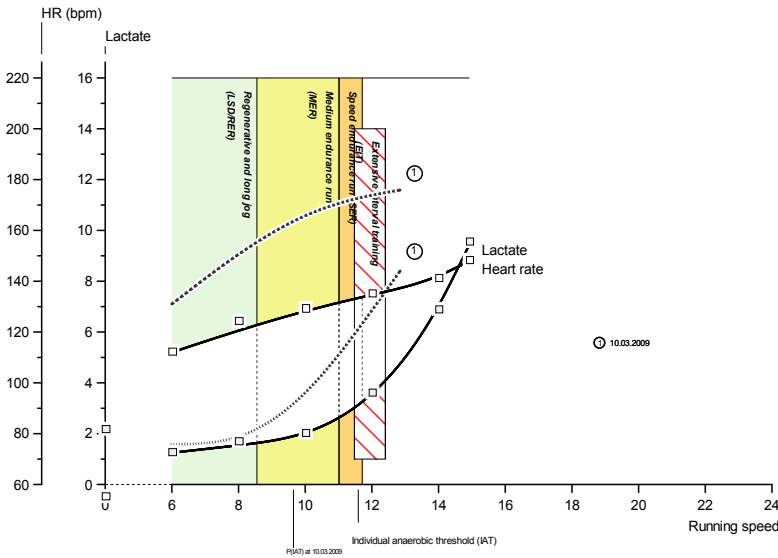
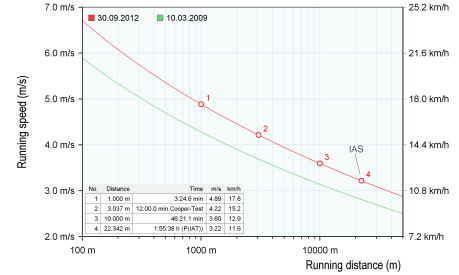


Performance diagnostics

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Running (treadmill) on 30.09.2012
Analysis for Moe, Martha b. 12.02.1978
(Athletics, Marathon)

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Critical-Power Forecast:



Running speed (km/h)	Heart rate (bpm)	Lactate (mmol/L)	Energy expenditure (kcal/h)
(Rest)	55	2.15	-
6.0	112	1.25	376
8.0	124	1.68	502
10.0	129	1.99	627
12.0	135	3.58	752
14.0	141	6.87	878
14.9	148	9.54	935

Running (treadmill), Duration of load step 3 min:			
Results	10.03.2009	30.09.2012	Difference
Body weight	64.0 kg	66.0 kg	+2.0 kg
Lactate Threshold (LT)	7.3 km/h / 2.04 m/s	8.6 km/h / 2.38 m/s	+1.2 km/h / +0.34 m/s
1000m running time at the LT	8:11 min	7:00 min	-70.2 s
Lactate at LT (Lactate Threshold)	1.68 mmol/L	1.63 mmol/L	-0.05 mmol/L
Heart rate at the LT (Lactate Threshold)	144 bpm	123 bpm	-22 bpm
LT as a percentage of IAT	76 %	74 %	-2 %
Individual anaerobic threshold (IAT)	9.6 km/h / 2.68 m/s	11.6 km/h / 3.22 m/s	+1.9 km/h / +0.54 m/s
Percentile (P(IAT))	66.7 %	90.7 %	+24.0 %
1,000 m time at P(IAT)	6:13 min	5:10 min	-62.6 s
Lactate concentration at P(IAT)	3.18 mmol/L	3.14 mmol/L	-0.04 mmol/L
Heart rate at the IAT	164 bpm	133 bpm	-30 bpm
P(IAT) as a percentage of P(max)	75 %	78 %	+3 %
Performance at 2.0 mmol/L lactate	8.2 km/h / 2.29 m/s	9.9 km/h / 2.75 m/s	+1.7 km/h / +0.46 m/s
Heart rate at 2.0 mmol/L lactate	153 bpm	128 bpm	-25 bpm
1.000m running time at 2.0 mmol/L lactate	7:17 min	6:03 min	-73.8 s
Performance at 3.0 mmol/L lactate	9.5 km/h / 2.64 m/s	11.5 km/h / 3.18 m/s	+2.0 km/h / +0.55 m/s
Heart rate at 3.0 mmol/L lactate	163 bpm	133 bpm	-30 bpm
1.000m running time at 3.0 mmol/L lactate	6:19 min	5:14 min	-65.3 s
Performance at 4.0 mmol/L lactate	10.3 km/h / 2.86 m/s	12.3 km/h / 3.43 m/s	+2.1 km/h / +0.57 m/s
Heart rate at 4.0 mmol/L lactate	167 bpm	136 bpm	-32 bpm
1.000m running time at 4.0 mmol/L lactate	5:49 min	4:51 min	-58.2 s
VO2max (estimated)	2.62 L/min	3.12 L/min	+0.50 L/min
Relative VO2(max) (calculated)	39.7 ml/min/kg	47.3 ml/min/kg	+7.6 ml/min/kg
Training age	2.44 Years	6.00 Years	+3.56 Years
Prediction for 1,500 metres	6:09.8 min	5:23.9 min	-1
Prediction for 5,000 metres	24:08.6 min	21:06.9 min	-3
Prediction for 10,000 m run	53:03.2 min	46:21.1 min	-7
Prediction for Half marathon	2:04:09 h	1:48:20 h	-1
Prediction for Marathon	4:34:05 h	3:58:52 h	-1

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