

Biomeccanica II

Lez. BM13

Lunedì 11 Maggio 2009 10:30÷12

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Ostacoli alti/2

Tra gli ostacoli

- 'Atterraggio' 1.37 m (dopo l'ostacolo);
- 1° passo 1.68 m;
- 2° passo 2.06 m;
- 3° passo 1.91 m;
- 'decollo' 2.13 m (prima dell'ostacolo).

Ostacoli medi (400 m [45/.914/35/40])

Tra gli ostacoli

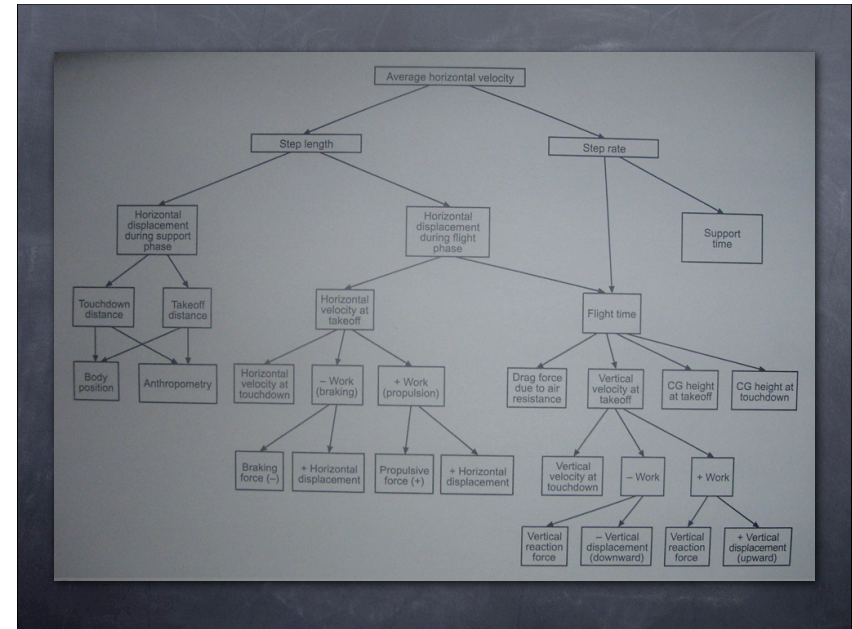
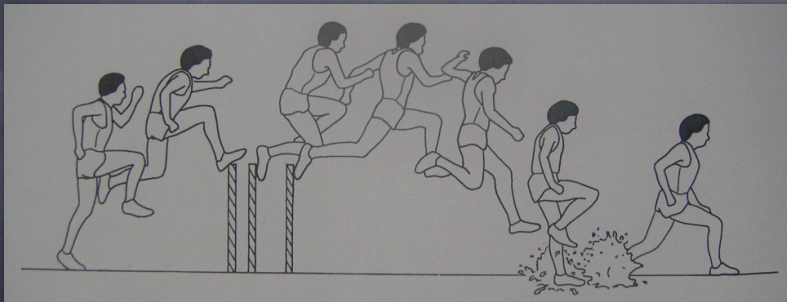
- 13 Passi 2.49 m;
- 14 2.31 m;
- 15 2.13 m;
- 16 1.91 m;
- 17 1.85 m .

46"78 Kevin Young 16/09/1966 USA Barcelona 06/08/1992 12-13 passi
47"02 Edwin Moses 31/08/1955 USA Koblenz 31/08/1983 13(12) passi

Siepi (3,000 m [.914 x 28/.914+3.66 m² x 7])



Siepi/2



EFFECT OF STRIDE LENGTH ON $\dot{V}O_2$ DURING DISTANCE RUNNING

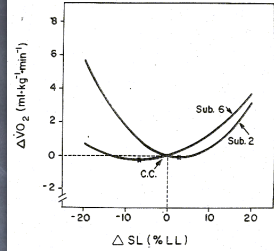


Figure 3—The same data shown in Figure 2, plotted in terms of change of oxygen uptake and stride length from chosen conditions (C.C.). Both curves therefore, pass through the origin. Crosses represent the optimal conditions. See text for further discussion.

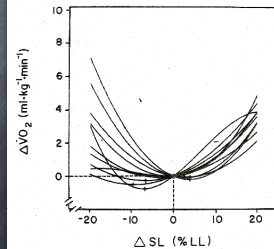


Figure 4—Best-fit curves for all subjects plotted, in terms of change in oxygen uptake and stride length from the chosen conditions. Data from eight subjects were best fit by quadratic equations and from two subjects by cubic equations.

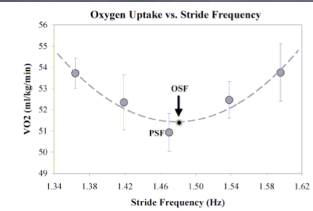


Fig. 1 Method for determining optimal stride frequency (OSF) involved a best fit of a second degree equation to the five data points (see above) with one primary data. OSF corresponded to the minimum $\dot{V}O_2$ of the curve. Preferred stride frequency (PSF) was the best from which the other stride conditions were determined (i.e. 4% and a 4% above PSF). Each runner's actual stride frequency (colored digits) from the origin (recurrence) of the substrate. Mean R^2 values for the best fit equations were 0.71 and 0.73 (colored and final, respectively).

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Preferred and Optimal Stride Frequency, Stiffness and Economy: Changes with Fatigue During a One-Hour, High-Intensity Run

Iain Hunter¹ and Gerald A. Smith^{2,3*}

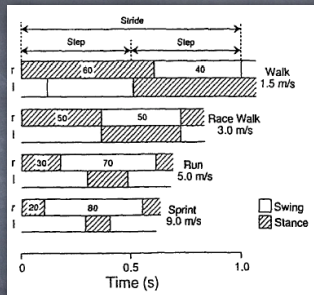


Figure 1.11 The events and phases characterizing walking and running gaits (r = right; l = left).
 Note. From "Biomechanics of Running Gait" by C.L. Vaughan, 1984, *CRC Critical Reviews in Biomedical Engineering*, 12, p. 6. Copyright 1984 by CRC Press, Inc. Adapted by permission.

