JOINT MEETING OF THE
BRITISH ASSOCIATION OF SPORT AND MEDICINE
AND THE SOCIETY OF REMEDIAL GYMNASTS

Loughborough July 8th 1967.

ABSTRACTS OF COMMUNICATIONS

A method of calculating stride length from anthropometric data in race walkers.

Farley, G.R. Loughborough College of Education, and
Thomas, V., Loughborough University of Technology.

The total population of international race walkers currently competing in Great Britain (N = 19) was studied in an attempt to discover the existence of a relationship between stride length in racing and leg length. The subjects' leg measurements were taken, using a standard 'Abawerk' anthropometer, from floor to inferior pubic ramus, the subjects standing unshod on the floor in the anatomical position. Stride length was measured physically, from indentations made by the feet within a specially marked piste during an actual race. Cine film was taken of all subjects, a) to ensure that their walking action remained within the definition laid down by the Race Walking Association, and b) to assist in the analysis of the individual subjects.

The statistical analysis included the calculation of a product moment coefficient of correlation, and a regression coefficient to obtain a prediction formula for stride length.
The results were:

a.) There is a correlation between leg. length and racing stride length of international race walkers ($r = 0.556$) which is significant at 0.01.

b.) The racing stride length of international race walkers can be predicted within a mean error of 5% from the formula

$$Y = 1.34 X - 2.15 \text{ cms}$$

where Y = stride length and X = leg length.