

POST-EXERCISE HEART RATE

strenuous enough to command near-maximum amounts of pulse acceleration which tend to overshadow disturbing factors in the environment. During the light exercises the mildly accelerated pulse is easily further accelerated by extraneous stimuli which make post-exercise pulse readings at these intensities unreliable.

The Pulse Frequency for Thirty Seconds Following Stool-Stepping Exercises of Graded Intensity.—Following observations of the pulse frequency for thirty seconds after stool-stepping exercises, the relationship between the immediate post-exercise pulse and the resting pulse rate was established. Eleven normal male adults were observed in this experiment. The data collected on these subjects is summarized as follows:

Steps per Minute	Mean Pulse per $\frac{1}{2}$ Min. after Exercise	S.D.	Correlation with Resting Rate
10	41.36	5.65	.534
20	46.45	5.83	.513
30	53.73	4.89	.746
40	62.18	7.14	.603

The correlation of the pulse immediately after thirty and forty steps with the resting rate is significant at the 1 per cent level of confidence. Correlations of resting rate with milder exercises although statistically insignificant are also consistently high. An examination of the mean pulse rates for one-half minute following ten, twenty, thirty, and forty stool steps per minute reveals that a direct relationship exists between the post-exercise pulse and the intensity of the exercise.

The Increase in Pulse Frequency Over the Resting Rate Following Stool-Stepping Exercises of Graded Intensity.—What effect does subtracting the resting rate from the rate immediately after exercise have upon the relationship between the post-exercise rate and the resting rate? Using the data collected from the above subjects, the resting pulse frequency for thirty seconds was subtracted from the pulse frequency for the first thirty seconds immediately after four stool-stepping exercises. Correlations of these products with the resting rates were made and are summarized in the following table:

Steps per Minute	Correlation with Resting Rate
10	— .644
20	— .401
30	— .402
40	— .020

Although the correlations are too low to be highly significant, at every intensity of the exercise, a negative correlation is found to exist between the resting pulse and the increase in the post-exercise