Y. Meckel, Y. Gefen, D. Nemet, A. Eliakim. Influence of short versus long repetition sprint training on selected fitness components in young soccer players. Journal of Strength and Conditioning Research. Vol. 26, pp. 1845-1851, 2012.

The aim of this study was to compare the effect of short-sprint repetition and long-sprint repetition training (SST, LST), matched for total distance, on selected fitness components in young soccer players. Thirty young (14-15 years) soccer players were randomly assigned to either the short-sprint training group or long-sprint training group and completed 2 similar sets of fitness tests before and after 7 weeks of training. The 2 training programs consisted of SST (4-6 sets of 4 × 50-m all-out sprint) and LST (4-6 sets of 200-m run at 85% of maximum speed), each performed 3 times a week. Before training, there were no baseline between-group differences in predicted VO2max, standing long jump, 30-m sprint time, 4 × 10-m shuttle running time, and 250-m running time. Both training programs led to a significant improvement in VO2max (predicted from the 20-m shuttle run, $p < 0.01$), with no between-group difference ($p = 0.14$). Both training programs also led to a significant improvement in the anaerobic fitness variables of 30-m sprint time ($p < 0.01$), 4 × 10-m shuttle running time ($p < 0.01$), and 250-m running time ($p < 0.01$), with no between-group differences. Neither of the training programs had a significant effect on standing long jump ($p = 0.21$). The study showed that long, near-maximal sprints, and short, all-out sprint training, matched for total distance, are equally effective in enhancing both the aerobic and anaerobic fitness of young soccer players. Therefore, to maintain a player's training interest and enthusiasm, coaches may alternate between these methods during the busy soccer season