

Relationship of Aerobic Maximal Muscular Strength with Endurance-Agility in Young Basketballists

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Success in basketball, one of the excitable sports, depended to many factors. In turn, it seems endurance-agility (repetition of shuttle with highest speed) is one of these factors. Studies have been shown that high levels of endurance-agility depended to aerobic power and muscular strength. But, the relationship of these factors with endurance-agility is not clear. Therefore, the aim of this study was to investigate the Relationship of aerobic power and maximal muscular strength with endurance-agility in young basketballists. For this mean, 47 young basketballists (age=22±1.35 yr and height=191±1.19 cm) participated in this study. Multiple stages 20meter shuttle run test used for determination of aerobic power. Also, subjects performed Squat exercise (1-RM) and endurance-agility test for determination of 1-RM and ability of endurance-agility, respectively. Pearson Liner correlation test used for determination of relationship between aerobic power and 1-RM and endurance-agility. In turn, Relationship between aerobic power and 1-RM as predictive factors and scores of endurance-agility, analyzed in linear regression. Significant level was set at $p \leq 0.05$. In this research, there was a significant relationship between

aerobic power ($p=0.002$) and 1-RM ($p=0.002$) with endurance-agility. Also, the results of regression analyses in this study revealed that 12.2 percent variance related of endurance-agility explained by aerobic power and 1-RM.

The results of this study reveled that there is significant relationship between aerobic fitness and maximal muscular strength with endurance-agility in young men basketballists. Also, according to the linear regression analyses, aerobic power and muscular strength are important factors in prediction and determination of endurance-agility. These results are in a same way with findings of Castagna et al. and in confliction with the reported results of Hoffman et al. [1, 2]. Presumably, this confliction derived from elitness of subjects of Hoffmans study. In summary, possibility and according to the finding of this research, by designing training which increases aerobic fitness and muscular strength such as: moderate to heavy cardiovascular and strength training, improvement and increment of endurance-agility obviously occur.

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