

Relationship between Dynamic Balance and Explosive Leg Power in Young Female Gymnasts

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Abstract : The aim of this study was to investigate the relationship between variables of dynamic balance and countermovement jump in young, female gymnasts. A single-group design was used. Forty-seven young, female gymnasts (Mean±SD; age: 8-12 years, height: 42.88±10.38 cm, mass: 35.59±8.15 kg; body mass index: 17.18±1.62 kg/m²; training hours per week: 15-18 h/week) performed measurements of dynamic balance and countermovement jump with and without arm swing. Significant, but small to medium associations were observed between variables of balance and height of the jump in both protocols of the countermovement jump ranging from $r = +0.313$ to $+0.426$. No significant associations were observed between variables of dynamic balance and relative power and peak power of countermovement jump with or without arm swings. The data indicate that dynamic balance and leg power imply that balance and power are independent of each other and may have to be tested and trained complementarily in young gymnasts.

Keywords : artistic gymnastics, countermovement jump, jump height, testing

Conference Title : ICSR 2020 : International Conference on Scientific Research and Development

Conference Location : Chicago, United States

Conference Dates : December 12-13, 2020