

## Determination of sport results based on special fitness of pole vaulters aged 12 and 17

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**Aim:** The purpose of the study is to indicate the most accurate diagnostic factors of special fitness of athletes training pole vault aged 12 and prognostics for athletes aged 17.

**Materials & Methods:** Experimental studies conducted in 2001–2010 involved 22 athletes aged 12 and 11 athletes aged 17. Athletes participated in sports activities, training pole vault in the following clubs: “Gwardia” Piła, Gdańsk Pole Vault Center, TS “Olimpia” Poznań, SL WKS “Zawisza” Bydgoszcz, and “Śląsk” Wrocław. The studies included the method of teacher’s observation. Tools applied in the studies included assessment of physical fitness and sport results, conducted during the athletic season. Basic statistical methods were used for the analysis of study results.

**Results & Conclusions:** The author determined inter-relation of individual special fitness tests in 12 and 17-year-old athletes and correlation of these tests with pole vault results in the studied age category. It was indicated that in age category 12, diagnostic tests are performed, in which correlation with sport result ranges between -0.45 (15-meter run) to 0.71 (standing long jump). Their purpose is to determine basic parameters justifying continuation of pole vault athletic training. Seventeen-year-old pole vaulters undergo prognostic tests in which correlation with sport results ranges between 0.64 (shot put 4 kg thrown back over the head) to 0.94 (“flying” over the bar from a backward roll); their purpose is to predict development of an athlete within training, and ultimately – sport results.

### Biography

Mariusz Klimczyk has studied in Kazimierz Wielki University in Bydgoszcz, Department of Physical Education, Health and Tourism and has published many articles in the field of Sports and Physics Education. He has published more than 100 articles in reputed journals.

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