

## OPTIMIZATION OF SHOOTERS' INDIVIDUAL TRAINING (DOMINANT SPECIFIC TRAINING)

*Gulbinskiene Vaida, Skarbalius Antanas*

(Lithuanian Academy of Physical Education, Lithuania)

The Meta models are prepared for the representatives of sports performance of which is conditioned by the functional potential of a human body calculated by the quantitative indices (Houmard, Johns, 1994; Kubukeli et al., 2002; Mujika et al., 2002). However there are no publications about the interrelation of training and sport performance models to the shooters. The aim of the one alternative experiment was to determine the efficiency of expert shooter V. M. (3rd place – European junior championship 1997, the best Lithuanian shooter) individual training and sport performance model. The modeling method was applied for composing the dominant specific training 45 weeks model. Sport performance was tested by Rika Home Trainer computer program. Mathematical statistics: mean  $\pm$  SD, Pearson's correlation, regression were used to analyze the interaction of training program and sport performance.

Preparing for 2002 (September) – 2003 (July) competition period results grew up six months and top results were achieved at the most important competitions. The trend line of the competition results was polynomial ( $y = 0,037x^2 - 0,5437x + 371,63$ ;  $R^2 = 0,883$ ). The correlation between the shooting results and the adequate training time (weeks) has allowed to estimate the delay of the adaptation to the training loads and the training influence on the sport performance: the first five weeks were dominant general training ( $r = 0,95 - 0,99$ ), on the 6 – 14th weeks period the training load was increase ( $r = 0,598 - 0,647$ ), late was three weeks rest; on the 18 – 21th weeks the training load was increased twice and decreased 25 – 30% ( $r = 0,543 - 0,621$ ) and the last five weeks was used peaking ( $r = -0,799 - 0,455$ ).

The determined expert shooter V. M. individually optimal 26 weeks training model allowed her to reach the best sport performance during the last tree training model weeks.

### References

1. Houmard, J. A., Johns, R. A. (1994). Effects of taper on swim performance. Practical implications. *Sports Medicine*, 17 (4): 224 – 32.
2. Kubukeli, Z. N., Noakes, T. D., Dennis, S. C. (2002). Training techniques to improve endurance exercise performances. *Sports Medicine*, 32 (8): 489 – 509.
3. Mujika, I., Goya, A., Ruiz, E., Grijalba, A., Sansisteban, J., 61478; Padilla, S. (2002). Physiological and performance responses to a 6-day taper in middle-distance runners: Influence of training frequency. *International Journal of Sports Medicine*, 23: 367 – 373.

*Keywords: Sport Performance, Modeling, Shooting*