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# Biomedical aspects of sport and exercise

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Research on physiological changes during the exercise or adaptation changes that are caused by regular sports activity has a long tradition at Faculty of Physical Education and Sport. The importance of this research affects not only athletes, but also the child, adult, and normal population of elderly. Physiological parameters are investigated as such, but they also serve to evaluate the effectiveness of many interventions. Moreover, research attention is also paid to the molecular-genetic aspects of performance. The predispositions for movement and sport performance at different levels of performance are evaluated, starting with children and ending with seniors and at the same time an effect of applied training and regime measures is evaluated with the aim of adaptation of lifestyle, reduction of negative contemporary lifestyle, increase in performance, cultivation of movement skills, reduction of weight, etc.

## Selected outputs

- Bunc, V. c., & Skalska, M. (2014). Are the Children's Predispositions for Physical Exercise Influenced by Their Body Mass? American Journal of Sports Science and Medicine, 2(5), 177-180.
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- Petr, M., Stastny, P., Zajac, A., Tufano, J., & Maciejewska-Skrendo, A. (2018). The Role of Peroxisome Proliferator-Activated Receptors and Their Transcriptional Coactivators Gene Variations in Human Trainability: A Systematic Review. International Journal of Molecular Sciences, 19(5), 1472.
- Petr, M., St'astny, P., Pecha, O., Stefl, M., Seda, O., & Kohlikova, E. (2014). PPARA Intron Polymorphism Associated with Power Performance in 30-s Anaerobic Wingate Test. PLoS One, 9(9), e107171.