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Workshop Presenter

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Prof. Dr. Erika Zemková is a professor in the Department of Biological and Medical Sciences, Faculty of Physical Education and Sport, Comenius University in Bratislava. She also works as a researcher at the Technological Institute of Sport, Faculty of Electrical Engineering and Information Technology, Slovak University of Technology and Faculty of Health Sciences, University of Ss. Cyril and Methodius in Trnava. She completed her Masters Degree in Professional Coaching in 1994, and Doctoral Degree in Sports Kinanthropology in 1999. In 2004, Slovak Academy of Sciences awarded her the Scientific Qualification Degree IIa – Independent Scientist. In 2007, she became Associate Professor and in 2013 Full Professor of Sports Kinanthropology. In 2008, she graduated at the Institute of International Relations and Law Approximation, Faculty of Law, Comenius University in Bratislava. She has received fellowships for conducting research at foreign universities, including the Ronald and Eileen Weiser Professional Development Award (University of Michigan, 2009), Fulbright Award (NeuroMuscular Research Center at Boston University, 2005–2006), Aktion Österreich–Slowakei Stipendium (University of Vienna, 2005), NATO Expert Visit Award (University of Aberdeen, 2005), CIMO Fellowship (Research Institute for Olympic Sports in Jyväskylä, 2003), and for teaching activities through the Erasmus Program and bilateral agreements between Universities (2004–2013). She was awarded by Coventry University Research Committee to be a Visiting Professor in Physical Education and Sport at the Faculty of Health and Life Sciences, Coventry University (2012–2015). Her scientific and academic work was noted for merit by her home Faculty of Physical Education and Sport in 2011, 2012 (Associate Professor of the Year) and 2019 (Professor of the Year), and also by Comenius University in Bratislava in 2018 for her outstanding work in the field of functional diagnostics of athletic performance.

Young and Old Alike: Agility Skills Testing and Training within a Long-term Physical Development Model

Agility is a key quality of physical fitness in both children and the elderly. It is strongly connected to strength, balance and coordination. A great attention is paid to developing agility skills throughout childhood and adolescence, particularly in those playing competitive sports. Examining the effects of growth, maturation and training on essential aspects of agility performance, such as perceptual and decision making processes and change of direction speed, is of special importance. Revealing changes in sensory and motor functions is also important for senior athletes and allows comparisons with those normally attributed to aging. Assessing agility skills in conditions that are similar to demands of the sport of interest is useful in distinguishing within- and between-group differences as well as in revealing acute and adaptive changes during training programs. While exercise-induced fatigue seems to impair cognitive rather than motor functions, faster movement execution rather than response times usually contributes to improved agility performance after the training. The predominant role of either the sensory or the motor component in agility skills depends on demands of particular sport. Their contribution can be estimated using the Agility Index. It is defined as the ratio of reaction time and agility time divided by the previously determined coefficient for each traveling distance. This variable can be applied for assessing agility skills in individuals of various ages and physical fitness within a long-term physical development model. Activities that include generic pattern recognition, hand-eye coordination, and the decision-making are highly recommended for agility training not only for improvement of athlete performance but also for whole well-being and health of both young and older physically active individuals.