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Individual Presentation Abstract

Presentation Title: **THE USE OF PROPRIOCEPTION IN JUDO TRAINING**

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Almost every day sports science offers a new form of training which is ready to be applied in practice. After that, it is up to every coach to recognize the practical value of such program in his sport and, by connecting it with the specific characteristics of his sport makes that new form of training more advanced as well as trying to accomplish better training effects. Proprioception is being achieved by the proprioceptors whom register changes in some body parts and in that way, also with the help of the visual and vestibular system, in the CNS (Central Nervous System) are „forming“ a picture of the body's position in space. In judo bout proprioception is being achieved through surface and opponent contact, therefore first informations come from distant parts of the body, such as palms and feet. Such informations enable quick and quality reaction of the judo player, which is especially important in situations when the opponent is often not seen. Well trained and sensitised proprioceptors enable quick reaction which includes successful, fast and precise performance of the technical elements while attacking and counter-attacking. Throughout this actions the nervous system is constantly reversibly being informed about every muscle and its momentary status through two major proprioceptors: muscle spindle and Golgi tendon organ. Main difference between the functions of the Golgi tendon organ and muscle spindle is in the fact that the spindle registers changes in muscle length, while the tendon organ registers changes in muscle tension. The myotatic reflex that is, the stretching reflex presents the muscle's defensive mechanism and the physiological basis of proprioception development.

The stretching reflex is important in judo bout because it enables dynamic stabilization of the joints. With this it effects indirectly on the stability and speed of performing attacking techniques, and especially counter-attacking techniques which mainly depend on judoka's reflex reaction. Although proprioceptive training can never replace classical physical or technical-tactical training it can represent a quality supplement to this training, whose positive effects would certainly improve judoka's technical and situational efficiency.