

VARIABILITY AND PLASTICITY OF MOTOR UNIT PROPERTIES IN MAMMALIAN SKELETAL MUSCLE

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Abstract:

In the majority of mammalian skeletal muscles, contractile properties of motor units are variable and three main types of these units can be distinguished. The present review summarizes: results of studies of motor unit properties in the medial gastrocnemius muscle and their variability in two species, cats and rats, and studies on differences of motor unit properties in two genders. Moreover, plasticity of motor unit properties in rat medial gastrocnemius evoked by two kinds of spinal cord injury, total transection and hemisection, is reviewed, and effects of two types of training, treadmill locomotor and whole-body vibration training, are summarized. Finally, changes in the motor unit properties during the aging process are presented.

Keywords: motor unit, plasticity, contractile properties, motor unit action potentials