

研究業績 英文表記

和文	
表題	高齢者における筋硬度と爆発的な筋力発揮の関連の検討
著者名	中村雅俊 ¹⁾ , 清野涼介 ¹⁾ , 佐藤成 ¹⁾ , 八幡薫 ¹⁾ , 深谷泰山 ¹⁾ , 西下智 ³⁾ , Konrad A ³⁾
所属	1) 新潟医療福祉大学 2) リハビリテーション科学総合研究所 3) University of Graz
英文	
Title	The Associations between Rapid Strength Development and Muscle Stiffness in Older Population
Author	Nakamura M ¹⁾ , Kiyono R ¹⁾ , Sato S ¹⁾ , Yahata K ¹⁾ , Fukaya T ¹⁾ , Nisisita S ²⁾ , Konrad A ³⁾
Affiliation	1) Niigata University of Health and Welfare 2) Institute of Rehabilitation Science 3) University of Graz
Abstract	<p>Background: Previous studies suggest that the capacity for rapid force production of ankle plantar flexors is essential for the prevention of falls in the elderly. In healthy young adults, there were significant associations between rate of force development and muscle stiffness measured by shear wave elastography. However, there has been no study investigating the association of rate of force development with shear elastic modulus in older adults.</p> <p>Methods: The muscle strength and shear elastic modulus of the medial gastrocnemius muscle in both legs were measured in 17 elderly men and 10 elderly women (mean \pm SD; 70.7 \pm 4.1 years; 160.6 \pm 8.0 cm; 58.7 \pm 9.5 kg). We investigated the rate of force development of plantar flexors and shear elastic modulus of medial gastrocnemius muscle using by shear wave elastography.</p> <p>Results: Our results showed that there were no significant associations between normalized rate of force development and shear elastic modulus of medial gastrocnemius muscle.</p> <p>Conclusion: This suggests that the capacity of rapid force production could be related not to muscle stiffness of the medial gastrocnemius muscle, but to neuromuscular function in older individuals.</p>
keyword	plantar flexor; rate of force development; shear elastic modulus; ultrasound

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