

研究業績 英文表記

和文	
表題	スタティックストレッチング後の他動的性質の変化と筋力変化の関連の検討
著者名	中村雅俊 ¹⁾ , 佐藤成 ¹⁾ , 清野涼介 ¹⁾ , 八幡薫 ¹⁾ , 吉田麗玖 ¹⁾ , 深谷泰山 ¹⁾ , 西下智 ²⁾ , 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	Relationship between changes in passive properties and muscle strength after static stretching
Author	Nakamura M ¹⁾ , Sato S ¹⁾ , Kiyono R ¹⁾ , Yahata K ¹⁾ , Yoshida R ¹⁾ , Fukaya T ¹⁾ , Nishisita 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: The association between decreased muscle strength of rate of force development (RFD) immediately after static stretching (SS) and change in muscle stiffness or muscle slack has remained unclear.</p> <p>Objective: This study aimed to investigate the association between changes in muscle strength and RFD and muscle stiffness or muscle slack immediately after SS.</p> <p>Methods: Sixteen healthy male non-athlete volunteers participated in this study. The maximal voluntary contraction torque and shear elastic modulus of medial gastrocnemius muscle were measured before and after 300 s of SS intervention.</p> <p>Results: The results showed that maximal voluntary contraction torque and RFD at 100, 150, and 200 ms decreased significantly after the 300-s SS ($p < 0.01$). Additionally, shear elastic modulus at 0° (decrease in muscle stiffness) and slack angle decreased (increase in slack length) significantly after the 300-second SS ($p < 0.01$). However, no significant association was observed between changes in muscle strength and changes in mechanical properties of the MG.</p> <p>Conclusion: These results suggested that the decrease in muscle strength and RFD could not be associated with changes in the passive mechanical properties of the medial gastrocnemius muscle.</p>
keyword	Plantar flexor; Rate of force development; Shear wave elastography; Slack length; Ultrasound.

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