

## 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間のレスト時間が内側腓腹筋の他動的性質に及ぼす影響の検討
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英文	
Title	Effect of rest duration between static stretching on passive stiffness of medial gastrocnemius muscle in vivo
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Abstract	<p>Context: In clinical and sports settings, static stretching (SS) is usually performed to increase range of motion (ROM) and decrease passive muscle stiffness. Recently, the shear elastic modulus was measured by ultrasonic shear wave elastography as an index of muscle stiffness. Previous studies reported that the shear elastic modulus measured by ultrasound shear wave elastography decreased after SS, and the effects of SS on shear elastic modulus were likely affected by rest duration between sets of SS.</p> <p>Objective: To investigate the acute effects of SS with different rest durations on ROM and shear elastic modulus of gastrocnemius and to clarify whether the rest duration between sets of SS decreases the shear elastic modulus.</p> <p>Design: A randomized, repeated-measures experimental design.</p> <p>Setting: University laboratory.</p> <p>Participants: Sixteen healthy males volunteered to participate in the study (age 21.3 [0.8] y; height 171.8 [5.1] cm; weight 63.1 [4.5] kg).</p> <p>Main outcome measures: Each participant underwent 3 different rest interval durations during SS (ie, long rest duration: 90 s; normal rest duration: 30 s; and short rest duration: 10 s). This SS technique was repeated 10 times, thus lasting a total of 300 seconds with different rest durations in each protocol. The dorsiflexion ROM and shear elastic modulus were measured before and after SS.</p> <p>Results: Our results revealed that dorsiflexion ROM and shear elastic modulus were changed after 300-second SS; however, no effects of the rest duration between sets of SS were observed.</p> <p>Conclusions: In terms of decreasing the shear elastic modulus, clinicians and coaches should not focus on the rest duration when SS intervention is performed.</p>
keyword	dorsiflexion; flexibility; shear elastic modulus; shear wave elastography; ultrasound

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