

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が腓腹筋筋腱複合体の他動的性質に及ぼす即時・持続効果の検討
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英文	
Title	Acute and prolonged effect of static stretching on the passive stiffness of the human gastrocnemius muscle tendon unit in vivo.
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Abstract	<p>Static stretching (SS) is commonly used to prevent or improve limited joint mobility. However, it is unclear whether the components of the muscle-tendon unit (MTU) are affected by 5 min of SS. This study investigated the acute and prolonged effect of SS on the mechanical properties of the MTU. The subjects comprised 15 male participants (mean age: 21.5 ± 1.6 years). MTU stiffness, muscle stiffness, tendon stiffness, and fascicle length of the gastrocnemius muscle were measured by ultrasonography and a dynamometer while the ankle was passively dorsiflexed. The measurements were performed prior to the 5 min of SS, immediately after the SS, and 10 min after the SS. MTU stiffness and muscle stiffness significantly decreased at both immediately and 10 min after SS, whereas no significant differences in MTU stiffness and muscle stiffness were found between immediately and 10 min after SS. Tendon stiffness immediately after SS was significantly higher than prior to and 10 min after SS. No significant change in the fascicle length occurred after SS. These results suggest that 5 min of SS affects MTU and muscle stiffness both immediately and 10 min after SS, which may be associated with a change in the connective tissue properties.</p>
keyword	static stretching; muscle tendon unit; stiffness; ultrasonography; connective tissue

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