研究業績　英文表記

和文	
表題	異なる時間を用いたスタティックストレッチングが筋腱複合体の他動的性質に及ぼす影響の検討
著者名	中村雅俊 [1)], 佐藤成 [1)], 平泉翔 [1)], 清野涼介 [1)], 深谷泰山 [1)], 西下智 [2)]
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
英文	
Title	Effects of static stretching programs performed at different volume-equated weekly frequencies on passive properties of muscle-tendon unit
Author	Nakamura M[1)], Sato S[1)], Hiraizumi K[1)], Kiyono R[1)], Fukaya T[1)], Nisishita S[2)]
Affiliation	1) Niigata University of Health and Welfare 2) Institute of Rehabilitation Science
Abstract	Whether static stretching (SS) frequency has an effect on increasing the range of motion (ROM) and decreasing muscle stiffness remains unclear. Therefore, this study aimed to investigate the effects of two 6-week SS programs performed with different frequencies but generally the same duration of stretching on the passive properties of the medial gastrocnemius muscle-tendon unit. The study participants comprised 24 male volunteers randomly assigned to either the one-time/week group or the three-times/week group, performing 6 min of SS once per week and 2 min of SS thrice per week, respectively. The dorsiflexion ROM (DF ROM) and muscle stiffness of the medial gastrocnemius during passive ankle dorsiflexion were assessed using a dynamometer and ultrasonography before and after 6 weeks of SS programs. The results show that the DF ROM was increased and muscle stiffness was decreased significantly in the three-times/week group ($P < 0.01$ and $P < 0.01$, respectively), whereas no significant changes were observed in DF ROM and muscle stiffness in the one-time per week group ($P = 0.25$ and $P = 0.32$, respectively). These results suggest that a high-frequency SS program is more effective than a low-frequency SS program in increasing ROM and decreasing muscle stiffness.
keyword	Dorsiflexion; Muscle stiffness; Plantarflexor; Static stretching; Ultrasound.

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