研究業績　英文表記

和文	
表題	高齢者における 1RM はハンドヘルドダイナモメーターと周径測定で推定できる
著者名	中村雅俊, 清野涼介, 佐藤成, 八幡薫, 森下慎一郎
所属	新潟医療福祉大学
英文	
Title	One-repetition maximum can be estimated with a handheld dynamometer and circumference in community-dwelling older adults.
Author	Nakamura M, Kiyono R, Sato S, Yahata K, Morisita S
Affiliation	Niigata University of Health and Welfare
Abstract	[Purpose] One-repetition maximum is an essential statistic for physical therapists and coaches in rehabilitation and athletic settings. In a previous study, we showed that one-repetition maximum of the knee extensor could be predicted more accurately with the combination of maximal voluntary isometric contraction strength, as measured by a handheld dynamometer, muscle thickness, and thigh circumference, in young adults. However, there has been no study in older adults investigating the relationship between one-repetition maximum and maximal voluntary isometric contraction strength, or muscle thickness, and thigh circumference. Therefore, the aim of this study was to investigate the relationship between one-repetition maximum and maximal voluntary isometric contraction strength, or muscle thickness, and thigh circumference in older adults. [Participants and Methods] Twenty-eight older community-dwelling adults (18 males and 10 females) participated in this study. Muscle strength of the knee extensor was measured using one-repetition maximum and maximal voluntary isometric contraction strength. In addition, muscle thicknesses of the refutes femoris and the vastus intermedius, and thigh circumference were measured using ultrasonography and measuring tape, respectively. [Results] Stepwise regression analysis revealed that body mass, gender, thigh circumference at 15 cm above the patella, and maximal voluntary isometric contraction strength were significant and independent determinants (R2=0.868). [Conclusion] One-repetition maximum could be predicted more accurately using a combination of maximal voluntary isometric contraction strength, as measured with a handheld dynamometer, and thigh circumference in older adults.
keyword	Maximal isometric strength, Muscle thickness, Knee extensor

※本データの英文表記は実際の論文上の表記とは異なります。