

第210回スポーツサイエンス研究会

日時 2021年9月28日(火) 15:00 より
ZOOMを用いたオンライン形式

研究会会場

ミーティングID: 990 8023 5143

パスコード: 399143

URL: 案内メールに記載

演題

Measurement of core muscles size, activity, pain & disability

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Let's know about core muscles & improve your body image.

Non Specific Chronic Low Back Pain (NSCLBP) is a common type of low back pain with unknown cause. Recently, the studies showed that the core muscles improve pain and functional weakness induced by NSCLBP. This study started from 2014 and it was continued to this time. Thirty two participants with NSCLBP performed 16 core stabilization exercises. The rest and contracted thickness of transversus abdominis, multifidus and gluteus maximus muscles were measured using ultrasound imaging and muscles activities recorded using surface electromyography. Pain and disability were assessed using a visual analogue scale and oswestry disability index, respectively. Core stabilization exercises increased contracted thickness of transversus abdominis and gluteus maximus muscles and decreased disability. Along with this study in 2016, core and lower extremity muscles activities during nordic hamstring exercise at Waseda university were measured. Semitendinosus and biceps femoris muscles activity levels were the greatest and back extensors and internal oblique muscles activities were greater than other muscles in downward and upward motions during nordic hamstring exercise. Gluteus maximus to erector spine muscle activity ratio was decreased significantly in downward motion and increased in upward motion.

