

表のタイトル一覧

Ⅲ. 股関節の定義の相違が股関節伸展筋群の筋-腱複合体長の推定値に及ぼす影響

(研究課題 1)

Table 1 The correlation coefficients between pelvis-based (P-B) and trunk-based (T-B) hip angles, and between pelvis-based (P-B) and pelvis-thigh angles.

Ⅳ. ジャンプ運動における運動開始時の構えの相違が下肢筋群の筋出力およびジャンプパフォーマンスに及ぼす影響 (研究課題 2-1)

Table 2 The correlation coefficients between jumping height and joint kinetics of the lower extremity in the SJ.

Table 3 The correlation coefficients between jumping height and joint kinetics of the lower extremity in the CMJ.

Table 4 The correlation coefficients between jump performance and joint kinetics of the lower extremity in the DJ30.

Table 5 The correlation coefficients between the posture at the start of push off and mEMG of gluteus maximus and biceps femoris long head in the SJ.

Table 6 The correlation coefficients between the posture at the contact and mEMG of gluteus maximus in the DJ30.

Table 7 Comparison about the posture between higher and lower activation groups in biceps

femoris long head.

V. 自転車ペダリング運動における運動開始時の構えの相違が下肢筋群の筋出力およびペダリングパワー出力に及ぼす影響 (研究課題 2-2)

Table 8 The correlation coefficients between maximum power and mEMG of the lower extremity muscles during 5 s pedaling exercise.

Table 9 The correlation coefficients between mEMG of the lower extremity muscles and the posture during 5 s pedaling exercise.

VI. 自転車ペダリング運動におけるシート高の相違が運動開始時の構え, 下肢筋群の筋出力およびペダリングパワー出力に及ぼす影響 (研究課題 3-2)

Table 10 Pedaling performance during 5 s pedaling exercises.

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Table 12 Mean EMG (mEMG) of the lower extremity muscles in the first 3 revolutions during 5 s pedaling exercises.

図のタイトル一覧

III. 股関節の定義の相違が股関節伸展筋群の筋-腱複合体長の推定値に及ぼす影響

(研究課題 1)

Fig. 1 Definition of two types of hip and pelvis-thigh angle.

Fig. 2 Mean curves of normalized hip joint angles, muscle tendon complex (MTC) length of biceps femoris long head and gluteus maximus during the CMJ.

Fig. 3 The relationship between pelvis-thigh and pelvis-based (P-B) hip angles

IV. ジャンプ運動における運動開始時の構えの相違が下肢筋群の筋出力およびジャンプパフォーマンスに及ぼす影響 (研究課題 2-1)

Fig. 4 Force and torque applied to a segment.

Fig. 5 Mean curves of normalized torque (upper) and power (lower) in ankle, knee and hip joint (from left to right) of the lower extremity during the SJ.

Fig. 6 Mean curves of normalized torque (upper) and power (lower) in ankle, knee and hip joint (from left to right) of the lower extremity during the CMJ.

Fig. 7 Mean curves of normalized torque (upper) and power (lower) in ankle, knee and hip joint (from left to right) of the lower extremity during the DJ30.

Fig. 8 Comparison of mEMG of the lower extremity muscles during the SJ.

Fig. 9 The relationships between pelvis and pelvis-thigh angle at the start of push

off, and mEMG of gluteus maximus in the SJ.

Fig. 10 Comparison of mEMG of the lower extremity muscles during the CMJ.

Fig. 11 Comparison of mEMG of the lower extremity muscles during the DJ30.

Fig. 12 The relationships between the posture at the contact and mEMG of gluteus maximus in the DJ30.

Fig. 13 Mean curves of joint and segment angles about higher and lower activation groups in biceps femoris long head.

V. 自転車ペダリング運動における運動開始時の構えの相違が下肢筋群の筋出力およびペダリングパワー出力に及ぼす影響（研究課題 2-2）

Fig. 14 Change of power output in 5 s pedaling exercise.

Fig. 15 Maximum extension and flexion angles of joints of the lower extremity in the first 3 revolutions during 5 s pedaling exercise.

Fig. 16 Comparison of mEMG of the lower extremity muscles during 5 s pedaling exercise.

VI. ジャンプ運動において運動開始時の構えを意図的に変化させることが下肢筋群の筋出力およびジャンプパフォーマンスに及ぼす影響（研究課題 3-1）

Fig. 17 Instructed posture (expand one's chest and look forward).

Fig. 18 Comparison of jumping distance in the SLJ between normal and instructed

postures.

Fig. 19 Comparison of joint angles of the lower extremity during the SLJ between normal and instructed postures.

Fig. 20 Comparison of segment angles during the SLJ between normal and instructed postures.

Fig. 21 Comparison of muscle tendon complex (MTC) length of gluteus maximus and biceps femoris long head during the SLJ between normal and instructed postures.

Fig. 22 Comparison of muscle contraction velocity of gluteus maximus and biceps femoris during long head during the SLJ between normal and instructed postures.

Fig. 23 Comparison of mean joint angular velocity of the knee joint and pelvis-thigh during the SLJ between normal and instructed postures.

Fig. 24 Comparison of mEMG of the ES, Gmax, RF and BF during the SLJ between normal and instructed postures.

Fig. 25 Comparison of jumping height in the CMJ between normal and instructed postures.

Fig. 26 Comparison of joint angles during CMJ Between normal and instructed postures.

Fig. 27 Comparison of segment angles during the CMJ between normal and instructed

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Fig. 28 Comparison of the muscle tendon complex (MTC) length of gluteus maximus and biceps femoris long head during the CMJ between normal and instructed postures.

Fig. 29 Comparison of muscle contraction velocity of gluteus maximums and biceps femoris long head during the CMJ between normal and instructed postures.

Fig. 30 Comparison of mean joint angular velocity of the knee joint and pelvis-thigh during the CMJ between normal and instructed postures.

Fig. 31 Comparison of mEMG of ES, Gmax, RF and BF during the CMJ between normal and instructed postures.

Fig. 32 Comparison of DJ-index in the DJ30 between normal and instructed postures.

Fig. 33 Comparison of joint angles of the lower extremity during the DJ30 between normal and instructed postures.

Fig. 34 Comparison of segment angles during the DJ30 between normal and instructed postures.

VII. 自転車ペダリング運動におけるシート高の相違が運動開始時の構え、下肢筋群の筋出力およびペダリングパワー出力に及ぼす影響 (研究課題 3・2)

Fig. 35 Changes of power output in 5 s pedaling exercises.

Fig. 36 Difference of sitting posture between High and Low.

Fig. 37 Maximum extension and flexion angles of joint of the lower extremity in the first 3 revolutions during 5 s pedaling exercises.

Fig. 38 Maximum extension and flexion angles of pelvis-thigh and thigh segment in the first 3 revolutions during 5 s pedaling exercises.

関連論文

本論文は、次の投稿論文および投稿予定論文をまとめたものである。

1. 木越清信, 田内健二, 尾縣貢, 大山圭悟, 高松薫 (2003) 短時間の全力自転車ペダリング運動における座位姿勢の相違が筋活動および最大パワーに及ぼす影響. 体力科学 52 : 167-178.
2. 木越清信, 岩井浩一, 島田一志, 尾縣貢 (2004) ドロップジャンプにおける姿勢が下肢関節 Kinetics およびジャンプパフォーマンスに及ぼす影響. 体育学研究 49: 435-445.
3. 運動開始時における構えに関する指示の即時的な効果 –ジャンプ運動に着目して–. 投稿中
4. *Effect of the different definition of hip joint on the estimation of muscle-tendon complex length of the hip extensor muscles : Focusing on eccentric phase of counter movement jump.* 投稿予定