

[Arch Phys Med Rehabil.](#) 2002 Jul;83(7):1009-12.

Does wearing a functional knee brace affect hamstring reflex time in subjects with anterior cruciate ligament deficiency during muscle fatigue?

[Lam RY](#), [Ng GY](#), [Chien EP](#).

Source

Department of Rehabilitation Sciences, Hong Kong Polytechnic University, Hong Kong.

Abstract

OBJECTIVE:

To evaluate the effects of wearing a functional knee brace and muscle fatigue on hamstring reflex time in subjects with anterior cruciate ligament (ACL) deficiency.

DESIGN:

Repeated-measures clinical trial.

SETTING:

Outpatient physical therapy department.

PARTICIPANTS:

Sixteen subjects with ACL deficiency.

INTERVENTION:

Subjects tested with and without a functional knee brace before and after an exercise protocol designed to fatigue the knee muscles.

MAIN OUTCOME MEASURE:

Latency of hamstring reflex muscle activity after sudden perturbation of the knee.

RESULTS:

Wearing a knee brace shortened the hamstring reflex latency regardless of fatigue ($F(1,15)=20.62$, $P<.001$). Muscle fatigue lengthened the hamstring reflex time regardless of the bracing condition ($F(1,15)=7.57$, $P<.015$).

CONCLUSION:

Wearing a functional knee brace facilitated hamstring muscle reflex, but muscle fatigue lengthened the hamstring reflex latency. Subjects with ACL deficiency should not rely on the knee brace to facilitate hamstring reflex for joint protection during prolonged sporting activities when muscles are fatigued.

Copyright 2002 by the American Congress of Rehabilitation Medicine and the American Academy of physical Medicine and Rehabilitation

PMID:

12098163

[PubMed - indexed for MEDLINE]