

THE EFFECTS OF USING A BERMUDA WITH INFRARED EMISSION IN POST-EXERCISE SORENESS AND PAIN IN YOUTH SOCCER PLAYERS.

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Introduction

Attenuating the signs and symptoms of Delayed Onset Muscle Soreness (DOMS) has been considered a hard task after training and matches. Recently, the use of fabrics for infrared emission have become very useful for decreasing pain in patients with muscular diseases [1]. To investigate the effect of the use of a bermuda made with MIG3® Bioceramics inside the molecules of the fabric (INVEL®) for infrared emission, after intense exercise to attenuate soreness and pain during the recovery period.

Methods

In a double blind study, 20 male youth soccer players, between 16-18 years of age were randomly assigned in Control and Bioceramics (BioC) conditions. In both conditions, the subjects performed 20 repetitions of eccentric contractions (180 deg/sec) in an isokinetic dynamometer (BIODEX® USA) in order to develop DOMS. Maximal strength (MS), serum Creatine Kinase (CK) and Pain (Visual Analogue Scale: VAS) were measured prior, 24, 48 and 72 hours after exercise. During the recovery period (72 hours) the players continuously used a BioC or a CON bermuda. Statistical analysis was done using a t test.

Results

There were no significant baseline differences between groups in CK, VAS and Peak Torque values. When comparing the 24, 48 and 72 hours after exercise between CON and BioC conditions, significant ($p<0.05$) decreases in CK and pain levels were noted when using the BioC. In addition, the peak torque values were significantly ($p<0.05$) higher in the BioC group during the same period.

	Control CKU/L	BioC CKU/L	Control VAS	BioC VAS	Control Peak Torque (psi)	BioC Torque(psi) Peak
Prior	297,02	186,58	6,42	5,45	299,2	293,1
24 h	909,3	350,1*	4,16	1,53*	243,8	312,5*
48 h	563,8	293,9*	1,56	0,62*	243,4	314,3*
72 h	553,7	279,8 *	1,0	0,0*	243,3	317,0*

* $p<0,05$

Conclusions

These results indicate that the use of bermuda shorts with bioceramics with infrared emission can attenuate the signs and symptoms of delayed onset muscle soreness.

Reference

1. Graeme, C. et al. (2004). European Journal of Applied Physiology, 91(5-6): 615- 627.