

A Comparison of Two Commercially Available Creatine Products On Performance and Selected Anthropometric Measures

Rogerson^{1*}, S. Weatherby¹, R.P. and Nicholson¹, V.

¹ School of Exercise Science and Sport Management Southern Cross University

Introduction

Although creatine has been commercially available for over a decade, supplement manufacturers have begun producing what they have designated as second and third generation creatine products. These products contain creatine in addition to numerous other ingredients that are purported to further enhance the beneficial effects of pure creatine. The purpose of this study was to determine if one such commercial supplement was more effective than creatine alone at altering athletic performance and selected anthropometric measures.

Methods

Twenty resistance-trained males were recruited and randomly allocated into two groups. Group one received 20g of pure creatine monohydrate for six days. Group two received a commercial creatine formulation containing 20g of creatine monohydrate in addition to dextrose, L-taurine, L-glycine, magnesium chelate and electrolytes (Myocytin CVF[®], Body Science[™], Australia). Subjects were tested prior to supplementation (day 1) and after six days supplementation (day 7). Testing consisted of two bench press sets (80% bodyweight) to muscular failure separated by two minutes recovery. Subjects also performed a repeated sprint running test consisting of 10x15m sprints. Anthropometric measures included body mass and a girth measurement of the brachial region. Athletes also completed a questionnaire related to the frequency of side effects such as gastrointestinal distress and muscular cramping.

Results

Results indicated that the commercial creatine formulation Myocytin CVF[®] was superior to pure creatine monohydrate at facilitating bench press performance ($P < .05$) (figures one and two), increasing brachial girth ($P < .05$) and trended towards greater gains in body mass ($P = .07$) (table one). The incidence of side effects was low in both groups and was not significantly different between groups.

Table 1: The effect of Myocytin CVF[®] on 15m sprint times and selected anthropometric measures. All results are expressed as the delta changes (post-pre). ** Significantly different from creatine ($P < .05$)

	Creatine	Myocytin CVF [™]
Brachial Girth (cm) D	0.26 ± 0.5	0.85 ± 0.6 **
Body Mass (kg) D	0.6 ± 1.0	1.3 ± 0.6
Repeated Sprints (sec) D	-0.01 ± 0.06	0.01 ± 0.06

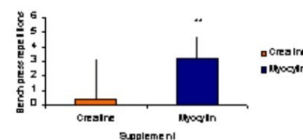


Figure 1: Performance changes (post-pre) for the 1st bench press set to failure. ** Significantly different from creatine ($p < .05$)

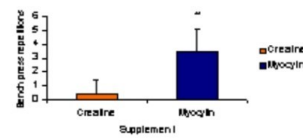


Figure 2: Performance changes (post-pre) for the 2nd bench press set to failure. ** Significantly different from creatine ($p < .05$)

Discussion

These results indicate that the commercial creatine formulation Myocytin CVF[®] is superior to pure creatine monohydrate at facilitating gains in selected performance and anthropometric measures. These findings are in line with previous research on similar commercial creatine formulations (1,2). Together these studies indicate that the ergogenic and physiological effects of pure creatine can be further enhanced via the addition of specific nutrients.

References

1. Kalman, D.S., Colker, C.M., Swain, M.A., Shi, Q. and Maharam, A. (2000). A double blind randomised clinical trial evaluating different creatine monohydrate formulations in resistance-trained males. *Medicine and Science in Sport and Exercise*. 32(5); s136.
2. Stout, J.R., Eckerson, D., Noonan, G., Moore, D. Cullen, D. Omaha, N.E. and Almada, A. (1997). The effects of a supplement designed to augment creatine uptake on exercise performance and fat free mass in football players. *Medicine and Science in Sport and Exercise*. 29(5); s251.

Acknowledgements

This study was funded by Body Science[™] Australia

Appreciation is extended to Dr Sonya Marshal-Gradisnik and Chris Riches for their assistance