



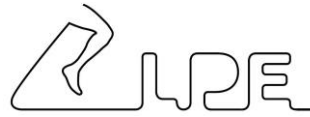
COMPLEX SPORT DRINK ENHANCES RECOVERY FROM PLYOMETRIC EXERCISE

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Introduction



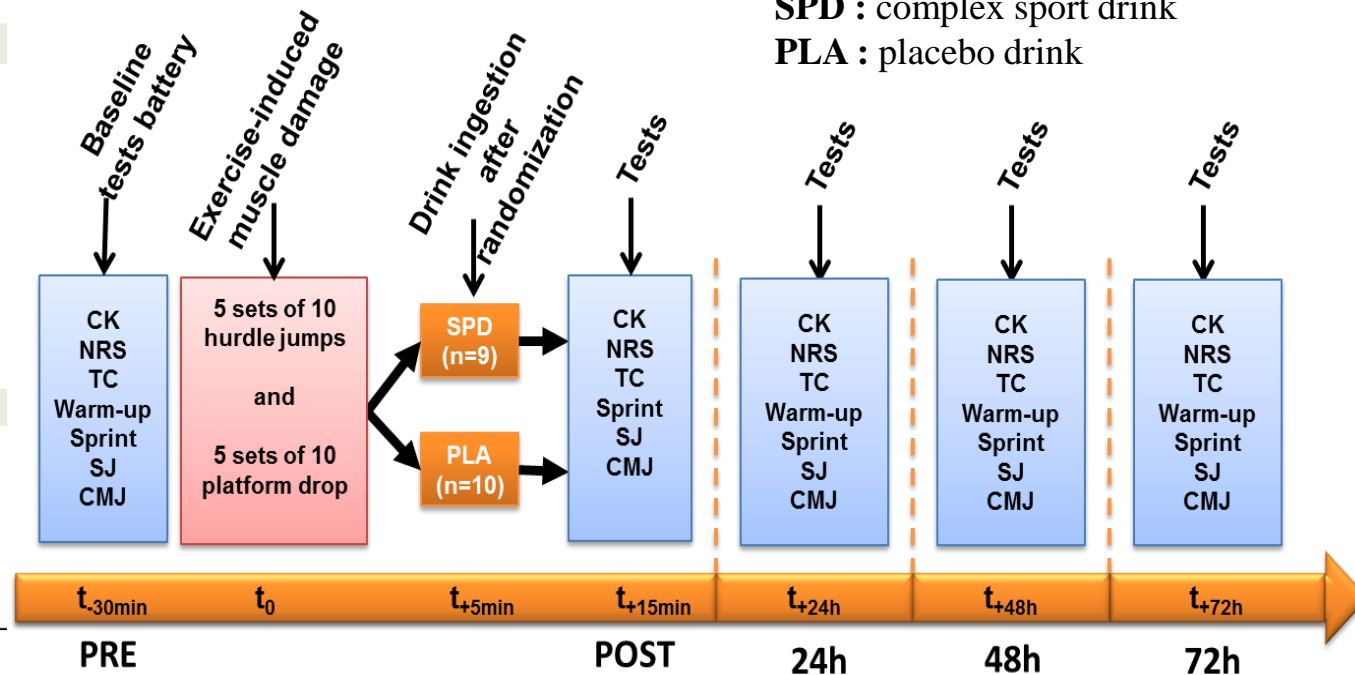
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| Sport Drink Beverage (SPD, Drink N' Recup®) Energy 627 kJ/148 kcal | |
|-----------------------------------------------------------------------|-----------------------------|
| Ingredients | Quantities (in mg/500ml) |
| Plant extracts | |
| Green tea | 396 |
| Ginseng | 200 |
| Curcuma | 84 |
| Amino acids and others | |
| L-Arginine | 2 008 |
| L-Glutamine | 1 936 |
| L-Citrulline | 1 160 |
| L-Leucine | 873 |
| L-Creatine | 512 |
| L-Isoleucine | 522 |
| L-Valine | 522 |
| β-hydroxy β-methylbutyrate (HMB) | 1 168 |
| Macronutrient and others | |
| Carbohydrates | 27 200 |
| Fats | 100 |
| Minerals mixture | 1 306 |
| Vitamins mixture | 118 |
| Fibers | 120 |

Methods

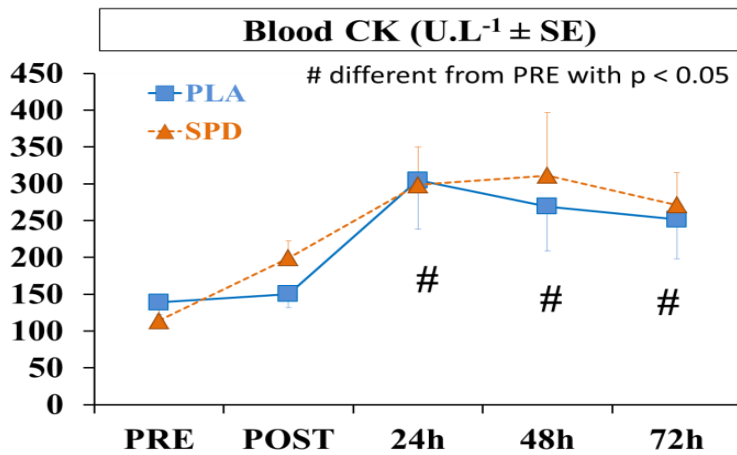
| Groups | SPD (n=9) | PLA (n=10) | p value |
|----------------------------|-------------|-------------|----------|
| Age (year) | 27.2 ± 2.5 | 23.9 ± 2.8 | P = 0.39 |
| Height (cm) | 176.2 ± 1.3 | 176.3 ± 1.9 | P = 0.95 |
| Weight (kg) | 70.1 ± 2.3 | 65.6 ± 1.7 | P = 0.14 |
| BMI (kg/m ²) | 22.6 ± 0.6 | 21.1 ± 0.7 | P = 0.14 |
| Physical activity (h/week) | 7.5 ± 1.1 | 8.9 ± 1.7 | P = 0.49 |

CK : blood creatine kinase assay
NRS : numeric rating scale of soreness
TC : thigh circumference
Sprint : 3x20m sprint
SJ : 3 squat jump trials
CMJ : 3 counter movement jump trials
t : time of protocol
SPD : complex sport drink
PLA : placebo drink

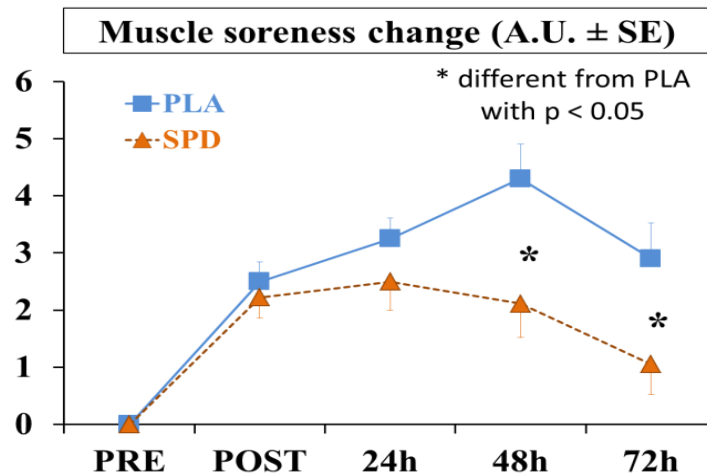


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Results

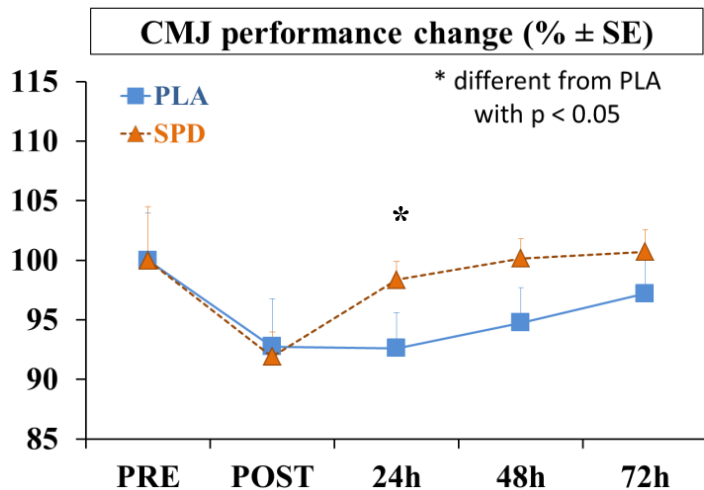


- No group effect
- Time effect on blood CK with higher level at 24, 48 and 72h after exercise.



- Perceived muscle soreness at 48 and 72h is lower with SPD comparatively to PLA

Results



- Counter movement jump performance at 24h is higher in SPD group compared to PLA group

Discussion

- Decrease of muscle pain associated to muscle damages likely due to the use of plant extracts and amino acids in SPD group.

M. Tarazona-Díaz et al. 2012
L. Nicol et al. 2015
- Better recovery of CMJ performance may be caused by a positive action of SPD on muscle elastic components such as titin.

J. Monroy et al. 2012