

# 2<sup>nd</sup> World Scientific Congress of Combat Sports and Martial Arts



## PROCEEDINGS



September, 17–19 2010

# **PROCEEDINGS**

**ABSTRACT BOOK**

**2<sup>nd</sup> World Scientific Congress of Combat Sports  
and Martial Arts**

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**Faculty of Physical Education University of Rzeszów  
Wydział Wychowania Fizycznego Uniwersytetu Rzeszowskiego  
Rzeszów 2010**

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### Congress Topics

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- ② Biomedical problems of combat sports and martial arts;
- ③ Humanistic, philosophical, socio-cultural issues (during 3<sup>rd</sup> International Symposium “Martial Arts, Combat Sports, Humanism”);
- ④ Workshops I – Practical problems on the mat (3 sessions);
- ⑤ Workshops II – Demonstrations (during the 2<sup>nd</sup> Martial Arts Gala).

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- ① International Association of Sport Kinetics (IASK);
- ② International Martial Arts and Combat Sports Scientific Society (IMACSSS);
- ③ Embassy of Japan in Poland;
- ④ European Academy for Carpathian Euroregion (EACE);
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### **EFFECT OF A SINGLE SESSION EXERCISE IN TWO TIME OF DAY ON PLASMA LIPIDS, LIPOPROTEINS, IMMUNOGLOBULIN AND CORTISOL IN ELITE KARATE KAS**

**Keywords:** Physiology, Circadian rhythm, Immunoglobulin, Cortisol, Karate

**Introduction:** There is a large body research that shown aerobic based Physical exercise has been effect Plasma Lipid and Lipoproteins. Relatively little attention, however, has been directed toward the Lipid and Lipoproteins responses to a single session of exercise in athletes. Furthermore, studies have shown that our bodies follow a daily cycle called the circadian rhythms, which regulate everything from body temperature, metabolism, blood pressure, hormone secretion and performance. Thus, the aim of this study was too examine whether a single session of exercise in different time of day affected Lipid and Lipoproteins levels before and after maximal karate exercise.

**Methods:** twenty karate athletes (mean (SD) age 23 (3.4) years) volunteered to participate in the study and were divided into trial and control groups. The trial group, with a break of 36 hours between test sessions, performed two identical training sessions with %70-90 reserve heart rate at 07 and 19 hours in the same indoor place. Plasma samples were taken pre and post exercise in all subjects.

**Results:** significant decrease observed in afternoon VLDL and TG and increase HDL in posttest versus pretest ( $P < 0.05$ ). The trial and control group comparison showed significant difference in posttest of TC and LDL ( $P \leq 0.05$ ).

**Conclusion:** These results suggest that a single session exercise affect on Lipid and Lipoproteins with circadian variation in some variables.

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### **INFLUENCE OF THE USE OF WEIGHT CONTROL METHODS IN THE DEVELOPMENT OF EATING DISORDERS AND ANXIETY IN A SAMPLE OF ELITE JUDOISTS**

**Keywords:** Body weight control, bulimic symptoms, psychopathology.

**Aim.** To determine if the methods used by elite judoists to reduce body weight can produce anxiety and eating disorders.

**Method.** The sample was composed of 144 judoists (78 males and 66 females): Cadet ( $n=45$ ), Under-20 ( $n = 31$ ), Under-23 ( $n = 37$ ) and Senior ( $n = 31$ ). Participants were grouped according to number of years in high competition: Beginners [less than 6 years: cadets ( $M = 3.07$ ,  $SD = 1.48$ ) and under-20 ( $M = 5.83$ ,  $SD = 2.27$ )] and veterans [more than 6 years: under-23 ( $M = 8.05$ ,  $SD = 2.46$ ) and seniors ( $M = 10.47$ ,  $SD = 4.03$ )]. Beginners consisted of 41 men and 35 women, while veterans were 37 men and 31 women. A broad battery of psychological evaluation tests was administered to all of them including: direct questions about weight control methods they used, *EAT-40* and *STAI-T*.



**Results.** 73.5% of veterans, reported the use of weight control methods compared to 52.6% of beginners. However, only 30.9% of veterans put these methods into practice on the same day as the weigh-in before a competition as against 50% of beginners. In fact, 23.5% of veterans used these practices a week before the competition and 8.8% two weeks before compared to 14.5% and 0% of the beginners, respectively. Moreover, beginners reported increased symptoms of eating disorders ( $M=15.64$ ,  $SD=11.58$ ) than veterans ( $M = 12.22$ ,  $SD = 9.19$ ) ( $F[1, 140] = 4.20$ ,  $p<.042$ ). In addition, women (both veterans and beginners) scored significantly more ( $M = 16.43$ ,  $SD = 13.14$ ) than men ( $M = 11.98$ ,  $SD = 7.40$ ) in the EAT-40 ( $F[1, 140] = 6.29$ ,  $p<.013$ ). Finally, significant differences were found for anxiety in the group by gender interaction ( $F[1, 140] = 6.42$ ,  $p<.012$ ); women beginners reported a higher level of anxiety compared to men ( $F[1, 74] = 9.02$ ,  $p<.004$ ) and the women beginners reported more anxiety compared with women veterans ( $F[1, 64] = 6.30$ ,  $p<.015$ ).

**Conclusions.** Veteran judoists use more weight control methods before competition weigh-in. However, veterans implement such methods over the medium term. The lesser and more imminent use of these methods by beginners may explain why judoists do not effectively control their weight. For this reason, beginners, especially women, present more symptoms of eating disorders and increased anxiety. In conclusion, weight control methods are learned through experience in the practice of judo and reduce general anxiety by achieving the required weight before weigh-in. Thus, beginners are more at risk of developing psychopathology (such as, eating disorders and/or anxiety) as other long-term weight control alternatives for both physical and psychological health are not being recommended in their sporting environment.

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## **EFFECTS OF FOOD RESTRICTION AND PURGATIVE BEHAVIOURS ON FOOD CRAVING AND THE WORST MOOD IN ELITE JUDOISTS**

**Keywords:** Dietary restraint, bulimic symptoms, mood, eating disorders.

**Aims.** To determine the effects of purgative and non purgative behaviors to reduce body weight depending on seniority and gender, and to verify that these habits are learned through experience and may result in eating disorders.

**Method.** The sample was composed of 144 judoists (78 males and 66 females): Cadet ( $N = 45$ ), Under-20 ( $N = 31$ ), Under-23 ( $N = 37$ ) and Senior ( $N = 31$ ). Participants were grouped according to number of years in high competition: Beginners (less than 6 years: cadets ( $M = 3.07$ ,  $SD=1.48$ ) and under-20 ( $M = 5.83$ ,  $SD = 2.27$ )) and veterans (more than 6 years: under-23( $M = 8.05$ ,  $SD = 2.46$ ) and seniors ( $M = 10.47$ ,  $SD = 4.03$ )). Beginners were composed by 41 men and 35 women, while veterans were composed by 37 men and 31 women. A broad battery of psychological evaluation tests was administered to all of them including *Restraint Scale*, *BITE*, *FCQ-T*, *PANAS-R* and *EAT-40*.

**Results.** Veterans were more restrictive in their use of purgatives ( $M = 5.02$ ,  $DT = 5.22$ ) than beginners ( $M = 11.56$ ,  $DT = 5.08$ ) ( $F[1, 140] = 15.82$ ,  $p<.000$ ). In turn, veterans reported a greater severity of typically bulimic symptoms ( $M=5.41$ ,  $SD=3.43$ ) than beginners ( $M = 4.03$ ,  $SD = 3.67$ ) ( $F[1, 140] = 4.95$ ,  $p<.028$ ). Moreover, veterans reported more food cravings ( $M = 106.97$ ,  $SD=30.06$ ) than beginners ( $M = 96.52$ ,  $SD = 29.52$ ) ( $F[1, 140] = 4.59$ ,  $p<.034$ ). The results revealed significant differences in the factors Plans, Positive Reinforcement, Negative Reinforcement and Hunger ( $F[1, 140]> 4.08$ ,  $p<.045$ ), veterans scoring higher in all of them. However, no significant differences were found

ISBN 978-83-7338-571-9